



# INTEGRATED MANAGEMENT SYSTEM

## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL (QHSEM)

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**RESPONSIBLE DEPARTMENT: Corporate QHSE**

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### RECORD OF AMENDMENT

Only the Quality, Health, Safety and Environment Management Representative (QHSE MR) or his designee is authorized to amend this Quality, Health, Safety and Environment Manual (QHSEM). All amendments in this manual shall be approved by MD & CEO of MMHE.

Tabulated below are the amendment records of this manual:

Date	Version	Description of Updates	Author
17/08/2015	0	New issue (Integrate Quality and HSE Manual)	Norzahari Bin Arshad
03/02/2016	1	Amendment on: 5.3.1, 5.6.1, 5.6.2(c), 5.6.3, 5.8.1, 5.8.2, 5.9.8, 5.10.4, 5.10.5	Hj. Norzahari Bin Arshad
04/04/2017	2	Amendment based on QMS and EMS 2015 version, Company organization structure and review on clauses as follows: 2, 3.2, 3.1, 3.2, 2, 5.5, 5.6, 6.1.3, 6.1.4, 6.1.5, 6.1.6, 6.1.7, 6.2.1, 7.1, 7.2, 7.3.1, 7.4.1, 7.5.1	Ahmad Bin Shukor
14/01/2019	3	Amendment on 1.1, 1.2, 2, 3.1- 3.3, 3.5, 4.2, 4.12, 4.17.1, 5.4.2, 6.1.1, 6.1.6, 6.2.2(c), 4.2.2, 8.4.4(i), 9.2.2, 9.8.1, 9.9.2, 9.9.7 and change company logo.	Ahmad Bin Shukor

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## **1 INTRODUCTION**

### **1.1 Background**

Malaysia Marine and Heavy Engineering Sdn. Bhd (hereafter, named as MMHE in this manual), a leading offshore and marine services provider in Malaysia, focused primarily on the oil and gas sector. It offers a wide spectrum of offshore and onshore construction, conversion and marine repair services at two yards in Pasir Gudang, Malaysia, namely MMHE East and MMHE West.

- PLO 3, Jalan Pekeliling, P.O.Box 7, 81700 Pasir Gudang, Johor, Malaysia (MMHE West)
- PLO 336, Jalan Suasa, 81707 Pasir Gudang, Johor, Malaysia (MMHE East)

For over 40 years, MMHE has grown organically while enhancing its capabilities and service offering through strategic partnerships with global leaders such as Technip SA of France and ATB Riva of Italy. Today, the group has a track record of delivering integrated and complex services, including deepwater oil and gas structures and support services, to local and international oil and gas Clients. It is also recognised for its expertise in liquefied natural gas (LNG) carrier repair and drydocking, and as a one-stop centre for offshore conversion.

The current core business activities are supported with advanced infrastructure such as two dry docks, one of which is able to accommodate up to 450,000 DWT, a ship lift system, LNG tanker repair facilities, automated cutting and assembly workshop, centralize piping workshop, dedicated RT bunker and others. These facilities are part of the essential entities to achieve MMHE corporate vision to consistently provide better marine and heavy engineering related solutions and services.

MMHE's permanent manpower strength with diverse skill is maintained at about two thousand (2 000), which is supplemented by a pool of skilled and specialised contract labour to sustain its operation.

In order to meet new challenges in the demanding world of marine, oil and gas industries, MMHE has full commitment to achieve the required customers' Quality standard, strive for Quality excellence and recognizes that Safety, Health and Environment are prime importance in the management of its business. The achievement of high standards of Integrated Management System considerations throughout all its activities are essential, as it results in greater efficiency, better working conditions and enhancement of its reputation as an employer and service provider.

A documented Integrated Management System Manual for Quality, Health, Safety and Environment Manual includes a range of diverse and pertinent information that will aid all levels of management and employees in their daily operations. Emphasis is directed to the continual improvement and the implementation of productive and safe systems of work associated with everyday activity and specific job tasks.

## 1.2 Organisation Structure

### a) Group Structure

MMHE is wholly-owned subsidiary of Malaysia Marine and Heavy Engineering Holdings Berhad (MHB). The structure for MHB is as shown in Appendix 12.1.

### b) MMHE Corporate Organization Chart

- MMHE is made up of the following Business Group, Operations Group, Support Group and Enabler Group, each is playing an integral role in the overall MMHE's operations, as shown in Appendix 12.2.

#### a) Business Group

- i) Marine Business
- ii) Heavy Engineering Business

#### b) Operations Group

- i) Marine Operations and Divisions under it
- ii) Heavy Engineering Operations and Divisions under it
- iii) Chief Operating Officer (COO Office)

#### c) Support Group

- i) Finance
- ii) ICT
- iii) Legal
- iv) Corporate Secretarial Affairs
- v) Corporate Communications
- vi) Security
- vii) Human Resources (HR)
- viii) Corporate Planning and Risk Management
- ix) Group Internal Audit
- x) Corporate Quality and HSE (CQHSE)

#### d) Enabler Group

- i) Supply Chain Management (SCM)
- ii) Facilities and Administration Services (FAS)
- iii) Cost Controller

- MMHE organization structure is described in Appendix 12.3. It consists of Business Group, Operations Group and Support Group that report directly to the Managing Director & Executive Officer (MD&CEO). It also shows each Group's main functional authority for relevant activities to support MMHE business.

## 2 SCOPE

This Integrated Management System Manual is intended to cover all activities carried out by MMHE's employees, subcontractors, Clients and third parties associated with MMHE's activities in order to strive Quality excellence and protect them against risks to Safety or Health and minimize the impact of its operation on the Environment arising out of the activities.

The scope of Quality and HSE Management System are:

No.	Scope	MMHE Sdn Bhd. (West)	MMHE Sdn. Bhd. (East)	MMHE Epic Marine Services (MEMS)
2.1	Repair, construction, refurbishment and conversion of ships and marine vessels.	√		
2.2	Fabrication, hook up, testing and commissioning and maintenance of onshore and offshore production system and its facilities.	√	√	
2.3	<i>Repair and refurbishment of ships and marine vessels</i>			√
2.4	<i>Design and manufacture of pressure vessels and other heavy industrial process equipment.</i>	√		

*The Element 8.3 (Design and development of products and services) of ISO 9001:2015 is not applicable to any of scope for Quality and HSE Management System as specified in 2.1, 2.2 and 2.3 as all drawings are provided by customers and no design and development being carried out directly by MMHE.*

## 3 REFERENCES

- 3.1 ISO 9000:2015 Quality Management Systems -Fundamentals and vocabulary
- 3.2 ISO 9001:2015 Quality Management Systems - Requirement
- 3.3 ISO 14001:2015 Environmental Management System – Requirement
- 3.4 OHSAS 18001:2007 Occupational Health & Safety Assessment Series Requirement
- 3.5 ISO 9000:2015 Quality Management System – Fundamentals and vocabulary (Second revision)

**4 DEFINITIONS / ABBREVIATIONS**

- 4.1 For the purposes of this document, the terms and definitions given in *ISO 9000:2015*, *ISO 9001:2015*, *OHSAS 18001: 2007* and *ISO 14001: 2015* apply. The specific and common terms and definitions are mentioned in 4.2 and onward, of clause 4 of this document.
- 4.2 *Company*  
*Malaysia Marine and Heavy Engineering Sdn. Bhd, its subsidiaries and joint controlled entity.*
- 4.3 *Continual Improvement*  
Process of enhancing the HSE Management System to achieve improvements in overall HSE performances in line with MMHE's HSE Policy.
- 4.4 *Environment*  
Surrounding in which MMHE operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation.
- 4.5 *Environmental aspect*  
Elements of MMHE's activities or products or services that can interact with the environment.
- 4.6 *Environmental impact*  
Any change to the environment, whether adverse or beneficial, wholly or partially resulting from the environmental aspects of MMHE activities, products or services.
- 4.7 *Hazard*  
Source, situation or act with a potential for harm in terms of human injury or ill health, damage to property, damage to the workplace environment or a combination of these.
- 4.8 *Hazard Identification*  
Process of recognizing that a hazard exists and defining its characteristics.
- 4.9 *Incident*  
An undesired event or a series of events of work related, that results in fatality, injury or illness to people, environmental damage, property damage/loss, or business interruption
- 4.10 *Integrated Management System*  
Integration of Quality, Health, Safety and Environment Management System and processes in to one complete framework, enabling an organization to work as a single unit with unified objectives.
- 4.11 *Non-conformance*  
Non-fulfillment of a requirement or any deviation from work standards, practices, regulations, management system performance etc. that could either or indirectly lead to injury or illness, property damage, damage to the workplace environment, or a combination of these.
- 4.12 *Objectives*  
*Goals in terms of Quality and HSE performance that MMHE sets itself to achieve. Objective should be quantified whenever practical and consistent with relevant Policies.*

### 4.13 Performance

Measurable results of the Quality and HSE Management System related to MMHE's control of quality, health, safety risk and environment impacts, based on its Policy, objectives and targets

### 4.14 Prevention action

Action to eliminate the cause of the potential non-conformity or other undesirable potential situation

### 4.15 Prevention of pollution

Use of processes, practices, materials or products that avoid, reduce or control pollution in order to reduce adverse environmental impacts that may include recycling, treatment, process changes, control mechanisms, efficient use of resources and material substitution.

### 4.16 Record

Document stating results achieved or providing evidence of activities performance

### 4.17 Risk

*4.17.1 Effect of uncertainty where effect is a deviation from the expected (positive or negative) and Uncertainty is the state, even partial, of deficiency of information (3.8.2) related to, understanding or knowledge of, an event, its consequence, or likelihood.*

4.17.2 Combination of the likelihood of an occurrence of a hazardous event or exposure(s) and the severity of injury, ill health, damage to property or damage work place environment that can be caused by the event or exposure(s) and consequence(s) of a specified hazardous event occurring

### 4.18 Risk Assessment

Process of evaluating risk(s) arising from a hazard(s) taking into account the adequacy of the existing controls, and deciding whether or not the risk is acceptable

### 4.19 Safety

Freedom from unacceptable risk of harm

### 4.20 Target

Detailed performance requirement, quantified where practicable, applicable to MMHE or parts thereof, that arises from the Health, Safety and Environmental objectives and that needs to be set and met in order to achieve those objectives.

### 4.21 Tolerable Risk

Risk that has been reduced to a level that can be endured by MMHE having regard to its legal obligations and its own HSE policy

### 4.22 Traceability

Ability to trace the history, application or location of that which is under consideration.



## **5 CONTEXT OF THE ORGANIZATION**

### **5.1 General Requirements of Integrated Management System**

- 5.1.1 A documented MMHE's Integrated Management System that consists of Quality, Health, Safety and Environment Management System shall be established and maintained in order to achieve MMHE's objectives and targets.
- 5.1.2 Standards related to these elements shall be established and executed as procedures to ensure the efficient and effective implementation of the Integrated Management System.

### **5.2 Correspondence between Integrated Management System Elements**

- 5.2.1 This Integrated Management System is developed based on PDCA loop – Plan, Do, Check, and Act concept that derived from ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007.
- 5.2.2 Within the context of PDCA continual improvement loop, this Integrated Management System is divided by 7 core elements:
  - a) Context of the Organization
  - b) Leadership
  - c) Planning of Integrated Management System
  - d) Resource, Communication and Document Management
  - e) Operational Control
  - f) Performance Monitoring, Measurement, Analysis and Evaluation
  - g) Improvement

Refer to Appendix 12.1: Correspondence between the sub-elements of ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007

### **5.3 Management System Model**

- 5.3.1 MMHE developed this Integrated Management System via the application of continuous improvement system in the daily operations which is derived from the Plan-Do- Check-Act (PDCA) concept as per Figure 3. PDCA can be briefly described as follows:
  - a) Plan – establish the objectives, targets and processes necessary to deliver the result in accordance with MMHE policies.
  - b) Do – implementation of the process
  - c) Check – monitor and measure the processes against MMHE policies, objectives, legal and other requirements and data analysis.
  - d) Act – actions to continuously improve overall performance.

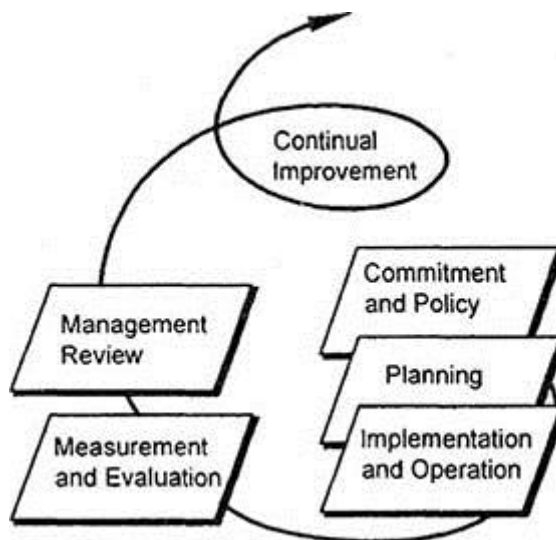


Figure 3: PDCA Concept

#### 5.4 Overall Business Interaction

5.4.1 MMHE has outlined the Business Process Interaction in order to visualize the overall business activities with the main objective of fulfilling the customer satisfaction, prevent injury, ill health and promotes environmental protection.

5.4.2 *Appendix 12.3 describes the overall business interactions within MMHE.*

#### 5.5 Company and Its Context

5.5.1 Corporate Planning & Risk Management (CPRM) through identified Risk Champion has determined external and internal issues that are relevant to its purpose and its strategic direction which may affect the ability to achieve the intended result(s) of Quality and HSE Management System.

5.5.2 CPRM and identified Risk Champion will periodically monitor and review information about these external and internal issues.

#### 5.6 The Needs and Expectations of Interested Parties

5.6.1 Due to their effect or potential effect on MMHE's ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, Divisions or Departments within MMHE determine:

a) The interested parties that relevant to the Quality and HSE management system;

b) The requirements of these interested parties that are relevant to the Quality and HSE management system.

5.6.2 Divisions or Departments within MMHE through CPRM and Risk Champions will monitor and review the information about these interested parties and their relevant requirements.

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- 5.6.3 The interested parties of MMHE are persons or organizations that can affect, be affected by, or perceive itself to be affected by a decision or activity. Among of the interested parties are listed below but not limited to:
- a) Employees, shareholders, parent companies and contractors or supplier
  - b) Customer  
MMHE's customers includes:
    - i) Owner of oil and gas companies or their agents
    - ii) Ship owners or their agents
    - iii) Owners or Client Site Representative (CSR) of onshore or offshore engineering industries / companies or their agent
  - c) Regulatory and Statutory bodies  
MMHE is committed to comply with all prevailing regulatory and statutory requirements related to fabrication, conversion, repair of ships and other marine vessels.
    - i) Department of Occupational Safety and Health (DOSH)
    - ii) Department of Environment (DOE)
    - iii) Local government (MPPG)
    - iv) Other applicable national or international authority bodies
  - d) Standardization and Classification bodies
    - i) International Maritime Organisation
    - ii) International Association of Classification Societies
      - American Bureau of Shipping
      - Nippon Kaiji Kyoki
      - Other Classification Societies
    - iii) Certification Body for relevant management system such as Quality (ISO 9001:2015, Occupational Health & Safety (OHSAS 18001) and environment (ISO14001:2015)
  - e) Surrounding Communities
    - i) Nearby residents
    - ii) Nearby factories

## 6 LEADERSHIP

### 6.1 Policies and Strategic Objectives

- 6.1.1 *MMHE has established several policies to show commitment in complying requirement that stipulated in Quality and HSE management system.*
- 6.1.2 *The policies are Quality Policy, HSE Policy, Drug, Alcohol and Smoking Policy and Stop Work Policy. These policies has been implemented, maintained and communicated to all workers and interested parties. MMHE reviews the policies periodically in management review meeting to ensure that it remains relevant and appropriate to MMHE's activities and risks.*
- 6.1.3 *Quality Policy*  
*The Corporate Quality Policy, as referred to Appendix 12.4, shall be adopted and implemented throughout MMHE covering all activities and levels of personnel.*

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### 6.1.4 Health, Safety, Environment Policy

*MMHE's Policy on Health, Safety and Environment (here in after also referred to as HSE Policy), as referred to Appendix 12.5, provides an overall sense of direction and sets the principles of action relating to HSE which are to be integrated into the overall business process throughout MMHE.*

### 6.1.5 Stop Work Policy

*Stop work policy, as referred to Appendix 12.6, gives right to workers to stop work when there is potential of threat to safety and environment. Workers also have the right to refuse to carry out the hazardous or unhealthy task without adequate control measure in place*

### 6.1.6 Drug and Alcohol and Smoking Policy

Alcohol policy, as referred to Appendix 12.7, is established to addresses the use of illegal drugs, misuse of medications and inappropriate use of alcohol within its business activities

### 6.1.7 Objective and Target

- a) This element defines MMHE's QHSE objectives and provides a framework on how the intents and objectives of MMHE's Policies shall be implemented throughout MMHE's business operation.
- b) When establishing and reviewing its objectives, each Division / Department shall consider:
  - i) Target shall be measurable, where practicable, and consistent with MMHE's Policy.
  - ii) Core function or product / services requirement
  - iii) Legal and other requirements that can be referred to the legal register which are relevant to respective activities.
  - iv) Internal and external issues to sustain or improve the business.
  - v) OH&S hazards, environmental aspects, risks and opportunities, that is based on HIRAC register, significant aspects register and business.
  - vi) Technological options
  - vii) Financial requirements
  - viii) Operational and business requirements, and
  - ix) The views of stakeholders such as MMHE's Client, corporate, etc.
  - x) Commitment for preventive measurement and continual improvement

### 6.1.8 QHSE Management Programme(s)

- a) Quality and HSE Management programme(s) element defines MMHE's requirement on the creation, documentation and use of the Management programmes, which is a key factor to the successful implementation of the Integrated Management System.
- b) The requirement to participate in the QHSE Management programme(s), shall apply equally to MMHE's employees, subcontractors, Clients and third parties associated with MMHE activities.

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- c) The programme(s) shall describe how the organization's objectives and targets will be achieved, including time scales and personnel responsible for delivering the organization's QHSE objectives and targets at each relevant level.
- d) Prior to implementation of QHSE programme(s), MMHE shall provide or allocate suitable resources e.g. financial, human, equipment and logistic.
- e) The programme(s) shall be reviewed at regular intervals and amended (where necessary) to address changes or modifications in working practices, processes, equipment or material for ensuring continual improvement.
- f) The programme(s) shall be devised to further encourage employees' participation in HSE programme(s). This could be done through recognition of their contributions in MMHE publications or through awards programme(s).

#### **Supporting Document**

- i) Annual MMHE QHSE Plan
- ii) MMHE/SC/CQHSE/02 - QHSE Performances Measurement

## **6.2 Commitment and Resources Management**

### **6.2.1 General Responsibilities**

#### **(A) Quality and HSE Management Committee**

In conjunction with the implementation of the Integrated Management System, appointed Heads of Business Group, Operations Group and Support Group shall be accountable and responsible for:

- a) Member of Quality and HSE Management Committee Meeting to review strategies and provide direction to raise QHSE excellence.
- b) Review MMHE's Policies and align Division's / Department's Objectives, Targets and Performances.
- c) Resource planning to meet the requirements of the functions of each Division / Department.
- d) Define responsibilities of all positions indicated and organizational chart in respective Division / Department.
- e) Planning and developing each respective activity and interface.
- f) Ensuring availability, compliance and maintenance of relevant procedures with respect to the business process, functions and operations through adequate and effective communication system.
- g) Ensuring adequate promotion on Quality and HSE management system and programme and review its effectiveness.
- h) Ensuring corrective actions and continual improvement are implemented for non-conformance, incident investigation or audit findings.
- i) Ensuring Quality and HSE requirements are fully complied in respective activities through but not limited to workplace inspection and unsafe act and condition reporting.

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- j) Review and recommend on areas for improvement.
- (B) All employees / Vendors / Client / Third Parties
 

Participate and cooperate for any Quality and HSE activities organized by the management and aware of the following:

  - a) General Quality and HSE requirements.
  - b) Quality policy, HSE Policy, Drug, Alcohol & *Smoking* Policy, and Stop Work Policy
  - c) Potential significant Quality and HSE precaution of their activities
  - d) Potential consequences of deviation from Integrated Management System (IMS).
- 6.2.2 Specific Responsibilities
  - (A) Managing Director (MD) & Chief Executive Officer(CEO)
 

MD & CEO report directly to Board of Director and shall be accountable for:

    - a) Accountable for the effectiveness of the QHSE Management System (QHSEMS).
    - b) Ensuring MMHE Policies and objectives are compatible with the context and strategic direction of the organization.
    - c) Ensuring the integration of QHSEMS requirement into the organization's business process.
    - d) Promoting the use of process approach and risk-based thinking.
    - e) Ensuring applicable resources are available in maintaining the QHSEMS companywide.
    - f) Communicating the importance of the effective QHSEMS and of conforming to the QHSEMS requirements.
    - g) Ensuring that the QHSEMS achieves its intended results.
    - h) Engaging, directing and supporting management team and employees to contribute to the effectiveness of the QHSEMS.
    - i) Promote continual improvement in the process or activity within MMHE operations.
    - j) Support other relevant management team roles to demonstrate their leadership with respect to their roles and responsibilities coverage area.
  - (B) Heads of Business Group, Operations Group and Support Group (Divisions)
 

Each Heads reports to MD & CEO and shall be responsible and accountable for:

    - a) Implementation of the Integrated Management System within respective Division or Department
    - b) Ensuring the commitment to MMHE Policies and achievement of annual QHSE Plan, objectives and targets for respective Division or Department
    - c) Ensuring that adequate and competent resources are available including those from supporting Division / Department and contractors

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- d) Ensuring safe working procedures are at all times and promoting quality and HSE awareness amongst all subordinates
- e) Planning, implementing QHSEMS programmes and ensuring that its objectives are met within the stipulated time frame
- f) Monitor and improve overall Quality and HSE performance of their respective Division or Department including contractors
- g) Promoting the use of process approach, risk-based thinking and continual improvement.
- h) Monitor and manage risk associated with their Division or Department operations and ensure necessary control measures.
- (C) *Chief Operating Officer (COO)*  
*Besides the accountability as Head of operation group, COO shall also be responsible and accountable to assume command of the Emergency Management Team (EMT) as Incident Commander.*
- (D) **Head of Corporate QHSE**  
 Head of Corporate QHSE is reporting to the MD & CEO and shall be responsible and accountable for the following:
  - a) Responsible as MMHE Quality and HSE Management Representative and the custodian of MMHE-wide Integrated Management System.
  - b) Drive the implementation of effective Integrated Management System within MMHE and its operations area.
  - c) Coordinate appropriate preparation for QHSE quarterly Steering Committee Meeting and annual Management Review
  - d) Maintaining a capable organization with adequate resources to provide advisory and specialist support on quality for the implementation of the Integrated Management System throughout MMHE.
  - e) Maintaining the Corporate QHSE as the focal point of contact with the interested parties such as customers, government regulatory authorities and other external parties on all quality and HSE matters
  - f) Measuring performance for Integrated Management System elements (e.g. objective and target, internal audit, product non-conformity, customer satisfaction and others) and recommend for improvement
  - g) Promoting the use of process approach, risk-based thinking and continual improvement.
  - h) Ensuring provision of adequate safe working procedures and adequate promotion on Quality and HSE awareness amongst all Divisions or Departments
  - i) Provide Quality and HSE direction or strategies for development of annual MMHE QHSE Plan



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(E) Head of Human Resource

Head of Human Resource is reporting to the CEO and shall have the responsibility and accountability for matters relating to human resource development and administration throughout MMHE which includes:

- a) Ensuring that recruitment for relevant positions is in line with the respective Divisions or Departments function and project requirement.
- b) Provision of support in maintaining job description and organization charts up to date throughout MMHE
- c) Coordination for competency needs and annual training programme as part of promoting Quality and HSE awareness amongst all Divisions or Departments
- d) Maintaining executive, non-executive and workers development within MMHE.

(F) Heads of Department within Division

Each Head of Department reports to their respective Head of Division and shall be responsible and accountable for the implementation of the Integrated Management System within his respective Department

- a) Responsible and accountable for production/ construction activities including agreed quality objectives, plans and targets to the respective Head of Section and Project Managers within their respective Department
- b) They shall be accountable for:
  - Meeting the quality objectives within the respective Department
  - Preparation of the respective Department's Quality Plan / Objectives
  - Quality Management System Internal Audits that demonstrate compliance with the Integrated Management System (IMS).

(G) Project Managers / Project Operation

Each Project Manager / Project Operations reports to their respective Head of Division / Department and shall be responsible and accountable for:

- a) Implementation of the Integrated Management System within his/ her project
- b) Delegating the responsibility and assigning the accountability for project activities, including agreed Quality and HSE objectives, plan and targets to the respective Technical Executive within his/ her project
- c) Preparation of Project Execution Plan incorporating the relevant requirements of the Quality and HSE Management System
- d) Execution of the Project in accordance with requirements of relevant standards, legislations, MMHE's procedures and the Quality and HSE Management System
- e) Managing Quality and HSE performance of the project in accordance with relevant procedures, guidelines and instructions



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(H) Heads of Departments, Corporate QHSE

Heads Departments are responsible to the Head of Corporate QHSE and shall be responsible and accountable for the following:

- a) Develop annual QHSE Plan for MMHE
- b) Monitor the effectiveness of QHSE programs
- c) Strategize and plan Quality and HSE development to standardize good practices across MMHE thru procedures or guidelines.
- d) Develop and manage QMS and HSEMS program to verify system implementation and its effectiveness
- e) Guide the development and monitor the implementation of Divisions / Departments QHSE plans to achieve its objectives.
- f) Compile the required documentation such as performance and other agenda as required by QHSE Management System for Quarterly Quality Steering Committee Meeting (QSC), HSE Management Committee Meeting and Annual QHSE Management Review
- g) Strategize, manage and guide Client and external audits to ensure compliance to requirements.
- h) Monitor and improve MMHE QHSE Plan to enhance Quality and HSE culture in MMHE.
- i) Manage effective system for document and record control.

(I) Head of Quality / Quality Representative in Divisions / Departments

Head of Quality / Quality Representative in Divisions/ Departments is an appointed staff to provide guidance to lead the implementation of the credible Quality Management System and to ensure Quality issues are proactively managed at any operational level. He/ She shall be responsible for;

- a) Ensure the implementation of the Quality Management System within the Division / Department.
- b) Establish effective Quality Objectives or Quality Key Performance Index in Division / Department, perform tracking and provide solution to identified quality issues.
- c) Develop Quality Plan for the Division / Department in line with the Corporate Quality and HSE Plan and ensure implementation of the activities in the plan
- d) Plan and develop strategies for the effective implementation of quality procedures and guidelines in the Division / Department in line with legal requirements and industry best practices for continual improvement
- e) Plan and conduct Quality communication sessions within the Division / Department to ensure that all personnel including subcontractors are well informed and comply with Quality Policy, procedures and regulations
- f) Plan and develop strategies on the development of Quality competencies for staff and contractors working within the Division / Department
- g) Plan and Implementation Internal Quality Audit in the Division / Department to verify effectiveness of Quality Management System implementation.

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- h) Ensure that valid non conformances in the Division / Department are reported and investigated with the aim to eliminate the root cause and prevent recurrence by ensuring that corrective actions recommended are implemented.
- i) Participate in quality investigation, give recommendations on corrective/preventive action measures and follow-up on its implementation
- j) Prepare periodic reports for Head of *Corporate* QHSE on the overall Quality performance of the Division / Department such as quarterly submission for QSC Meeting and Yearly submission for Management Review Meeting.
- k) Participate in Quarterly Quality Steering Committee Meeting (QSC) and Annual Quality Management Review, if required.

(J) Heads of HSE / Project HSE Focal Person

Heads of HSE / Project HSE Focal Person is an Executive Staff that report to respective Head of Division or Department / Project Manager and responsible to implement the HSE Management System

- a) Monitor the implementation of the Division or Department / Project HSE Plan and ensure the implementation of the activities in the plan
- b) Ensure that management walkabouts, site inspections and HSE promotional activities are conducted as scheduled to ensure a safe and healthy work environment
- c) Monitor the effective implementation of HSE procedures and guidelines in the Division or Department / Project in line with legal requirements and industry best practices for continual improvement
- d) Plan and conduct HSE communication sessions within the Division or Department / Project to ensure that all personnel including Subcontractors are well informed and comply with HSE procedures and regulations.
- e) Ensure that all incidents in the Division or Department / Project are reported and investigated with the aim to prevent recurrence by ensuring that corrective actions recommended are implemented.
- f) Work with Emergency Response Team to ensure management, staff and subcontractors within the Division or Department / Project are trained to manage emergency situations.
- g) Assist the Division or Department / Project HSE Committee in the resolution of HSE site issue
- h) Participate in incident investigation; give recommendation on corrective / preventive action measures and follow-up on its implementation.
- i) Conduct the necessary training of HSE awareness, HSE programme(s) and safety induction to staff and subcontractors
- j) Prepare weekly or monthly reports on the overall HSE performance for Heads of Division or Department or Project Manager.

(K) Employees representatives

Four (4) of the Union Office bearers shall act as the employees' representatives and will sit in the HSE MC meeting.

- a) Appointment of employees' representatives is done through voting by employees. However, in the event where no representative being nominated by the employees, selected Division / Department will nominate their representative.
- b) The function of the committee is based on the requirements outlined in the OSHA Act 1994, Employment Act 1955 and other applicable requirements
- c) Communicate on Health, Safety & Environmental information to all employees
- d) Discuss and deliberate Occupational Health, Safety & Environmental related problems and complaints arising from the employees within own function during meeting
- e) Assist their respective Head of Division / Department to coordinate all HSEMS related activities within their function
- f) Promote Occupational Health, Safety & Environmental activities within their function

## **7 PLANNING OF INTEGRATED MANAGEMENT SYSTEM**

### **7.1 Risk and Opportunities Management**

7.1.1 When planning for the quality management system, MMHE considered:

- a) The internal and external issues referred to in 5.5
- b) The requirements referred to in 5.6
- c) Scope of IMS

7.1.2 MMHE has determined the risks and opportunities related to its environmental aspects, compliance obligations and other issues and requirements, identified in 5.5 and 5.6 that need to be addressed to:

- a) Give assurance that the quality management system can achieve its intended results;
- b) Enhance desirable effects;
- c) Prevent, or reduce, undesired effects; and
- d) Achieve improvement.

7.1.3 MMHE plans appropriate actions on identified risk and opportunities by integrating into its integrated management system processes.

7.1.4 MMHE evaluates the effectiveness of the actions periodically to minimize the potential impact on the conformity of products and services.

### **7.2 Business Risk and Opportunities**

7.2.1 Corporate Planning and Risk Management (CPRM) Department through Risk Champion will determine risks and opportunities based on feedback and discussion

process conducted in periodic basis. The register is updated and significant items will be presented to Risk Committee for reviewing purpose.

- 7.2.2 Corporate Planning and Risk Management (CPRM) Department through Risk Champion shall communicate on the identified risks and opportunities to divisions for incorporation into existing processes to ensure adequate control and mitigation for the risks and enhancing the opportunities.

***Supporting Document***

*MMHE/SG/FIN/CPD/RMU/01 – Business Continuity Management (BCM)  
Framework*

**7.3 Hazard Identification, Risk Assessment and Risk Control**

**7.3.1 Hazards Identification, Risk Assessment and Determining Control**

- a) The hazard identification, risk assessment and determining control element defines MMHE's requirements to have a total appreciation of HSE hazards and risks through applicable tool such as Hazard Effect Management Process (HEMP) or others.
- b) All OH&S risks (hazard and effects) that may arise out of MMHE's and/or our subcontractors' activities that are under MMHE's control and any hazards or risk that may arise from the material or substances used or encountered in these activities shall be reduced to a level that is as low as reasonably practicable (ALARP)
- c) The OH&S hazard identification, risk assessment and risk control processes within MMHE's business require the participation of all levels within MMHE.
- d) Processes should be carried out as proactive rather than as reactive measures, i.e. it should precede the introduction of new or revised activities or procedures, and the risk reduction and control measures identified should be implemented before the changes are introduced
- e) An overview of the overall process is illustrated in Table 1.

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**Table 1: Hazard Identification, Risk Assessment and Determining Control**

BASIC PRINCIPLES	MAIN STEP/PROCESS	BRIEF DESCRIPTION
<b>IDENTIFY</b>	Identify hazards and effects	What is the hazard? What could go wrong?
	Establish screening criteria	Define the screening criteria Define level of acceptance and unacceptable risk
<b>ASSESS</b>	Assess hazards and effects	How serious can it be? How probable is it?
	Document significant hazards and effects and applicable Statutory requirements Define detailed objectives and performance criteria	Include hazard created in the vicinity of work place, hazard originating from external, list priority of risk
<b>CONTROL</b>	Identify and evaluate risk reduction measures	Prevent / Eliminate the hazard: Is there a better way? How to prevent it?
<b>RECOVER</b>	Implement selected Risk reduction measures	Mitigate consequence: How to limit the consequences? How to recover? How to restore?

- f) Identification of hazards and effects typically requires the application of tools and techniques such as Health Risk Assessment (HRA) and Job Hazard Analysis (JHA) / Job Safety Analysis (JSA),
- g) Once the hazard or effects have been identified and assessed, it shall be considered against an OH&S risk screening criteria.
- h) Screening criteria are values or standards against which the identified hazards or effect can be judged; examples – occupational exposure limits, engineering standards and environmental quality standards
- i) In managing OH&S risks, MMHE shall adopt the principle of ALARP; i.e. to minimize risk to a risk that is As Low as Reasonably Practicable.
- j) Risk Assessment
  - i) It is essential to make subjective assessment of risk associated with each hazard, assuming that planned or existing control in place.
  - ii) The risk from the hazard should be determined by estimating the potential likelihood of harm and the severity that harm will occur.
  - iii) Each risk rating shall have proper monitoring and control measure.
- k) Risk Control
 

When determining control or considering changes to existing control, consideration shall be given to reducing the risks according to the following hierarchy:

  - i) Eliminate
  - ii) Substitution
  - iii) Isolation

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- iv) Engineering Isolation / Control
- i) Administration Control
- ii) Personal Protection Equipment (PPE)
- l) The basic philosophy on how ALARP can be achieved is as follows:  
ALARP (As Low as Reasonably Practicable) means practicable having regarded to:
  - i) The severity of the hazard or risk in question;
  - ii) The state of knowledge about that hazard or risk and any ways of removing or mitigating it;
  - iii) The availability and suitability of ways to remove or mitigate that hazard or risk; and
  - iv) The cost of removing or mitigating that hazard or risk
- m) The risk register should be reviewed regularly. The register will be yearly reviewed and additional review will be done based on following:
  - i) Expansion, construction, or modification of plant or work area;
  - ii) Change to the operation;
  - iii) Incident occurrence or findings
  - iv) Post mortem of emergency response.
- n) MMHE identifies potential opportunities from the addressed significant hazards and provides necessary resources to ensure it gives benefit to MMHE.

#### **Supporting Document**

MMHE/SC /CQHSE /07 – Risk Management

### **7.4 Environmental Aspect and Impact**

#### **7.4.1 Environmental Aspect**

- a) This Environmental Aspect element defines MMHE's requirement to have a process to determine environmental aspect that have or can have significant impacts to the environment.
- b) This process shall allow MMHE to identify, evaluate and control the aspects and impacts on an ongoing basis and be applicable to all activities carried out throughout all operations by MMHE's employees, subcontractors, Clients and third parties associated with MMHE's activities. These shall cover but not limited to:
  - i) Routine and non-routine activities
  - ii) Potential emergency conditions
  - iii) New projects before its implementation
  - iv) Introduction of new operational procedures
  - v) Chemical / material procurement
  - vi) Service procurement

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- vii) Changes / modifications of system and process including utilities before its implementation and
  - viii) Pre-commissioning of equipment, system, processes, etc.
- c) The relationship between environmental aspects and impacts is one of the cause and effect as follows:
  - i) Environmental Aspect refers to an element of MMHE's activities, products or services that can have beneficial or adverse impact on the environment. For example it could involve a discharge, an emission, consumption or reuse of material or the creation of excessive noise.
  - ii) Environmental Impact refers to any change to the environment, whether adverse or beneficial, wholly or partially from MMHE's activities, products or service.
- d) An aspect identification and impact evaluation procedure shall be established implemented and maintained to identify the environmental aspects of MMHE's activities, product and services that it can control and over which it can be expected to have an influence, in order to determine those which may have significant impacts on the environment.
- e) The process of identifying the environmental aspects should consider where relevant:
  - i) Air Pollution
  - ii) Inland water Pollution
  - iii) Marine water pollution
  - iv) Scheduled wastes
  - v) Soil contamination
  - vi) Resource depletion
  - vii) Climate change (e.g. global warming)
  - viii) Authentic Effect (noise, vibration etc)
  - ix) Ground Water Contamination
- f) The significant aspects shall be evaluated based on the following criteria but not limited to:-
  - i) Condition
  - ii) Applicable legal
  - iii) Applicable Policy
  - iv) Interested party concern
  - v) Severity
  - vi) Frequency
  - vii) Reputation
- g) Any aspect which falls under the statutory and other requirement criteria or Environmental aspect with high and very high as defined in the procedure shall be considered as Significant and to ensure the activity is carried out under controlled condition.
- h) The significant aspects shall be considered when setting specific environmental objectives, targets and programs of Division or Department.



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- i) Review of environmental aspect and impact in risk register shall be carried out at least 5 years or as and when a new product, material, activity or service is introduced into the system.
- j) The register will be yearly reviewed and additional revision will be done based on following:
  - i) Introduction of new product or material and activity or service
  - ii) Expansion, construction, or modification of plant or work area;
  - iii) Change to the operation;
  - iv) Incident occurrence or findings
  - v) Post mortem of emergency response.
- k) MMHE identifies potential opportunities from the addressed significant aspects and provides necessary resources to ensure it gives benefit to MMHE.

#### **Supporting Document**

- a) MMHE/SC /CQHSE /07 – Risk Management
- b) MMHE/SC /CQHSE /15 – *Environment Minimum Requirement*

### **7.5 Compliance Obligation**

#### **7.5.1 Legal and Other Requirements**

- a) This legal and other requirements element defines MMHE's requirement to comply with Malaysian Acts and Regulations as well as applicable legislation of the Country in which MMHE operates
- b) The requirements also includes compliance to International Conventions and Protocols ratified by the Malaysian Government and by the respective host country
- c) The compliance of all applicable HSE legislation shall apply for all activities, which includes activities carried out by MMHE's employees, subcontractors, Clients and third parties associated with MMHE activities
- d) A procedure shall be established, implemented and maintained for identifying, assessing and communicating the Malaysian Acts and Regulations and other relevant legislation that are applicable to Health, Safety and Environment matters related to MMHE's activities, products and services.
- e) Head of Corporate QHSE shall be responsible for identifying the legal and other requirements and shall maintain regular contacts with the relevant authorities and companies with similar business nature within the region to keep fully informed of any changes in Legislation or Codes of Practice which may affect the way MMHE operates
- f) A register of all Acts and Regulations relevant to HSE matters shall be developed and the relevant Division or Department within MMHE that do have legal requirements mapped to their activities, products or services are responsible to ensure that their activities, products or services are in compliance to the relevant Legislative Acts, Regulations and Codes of Practice
- g) Head of Corporate QHSE shall be responsible to initiate the update of the Register of HSE Acts and Regulations upon the publishing of any new legal



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requirements or in the events of amendments of the existing legal requirements.

- h) The new identified and updated legal requirements shall be discussed as an agenda in the Management Review to determine its applicability to MMHE's activities, products and services
- i) Head of Corporate QHSE is responsible to ensure that the latest copy of selected Legislative Acts, Regulations, Codes of Practice, guidelines and other requirements on Quality and HSE are made available.
- j) Communication sessions shall be conducted throughout the organization for all employees. This information will also be made available to the subcontractors
- k) The applicable Acts, Regulations and codes of practice shall be referred to and applied in MMHE's operations. A list of applicable Acts, Regulations, code of practices, guidelines and applicable International Standards is available from Corporate QHSE on request.
- l) MMHE identifies potential opportunities from the addressed compliance obligation and provides necessary resources to ensure it gives benefit to MMHE.

### **Supporting Document**

MMHE/SC/CQHSE/08 – Legal and Other Requirement Compliance Evaluation

## **7.6 Management of Change**

- 7.6.1 MMHE deals with changes and presents a strategy for ensuring that such changes do not adversely affect HSE, other business aspects and success of the changes within MMHE.

### **Supporting Document**

- a) MMHE/SC/CQHSE/09 – Management of Change
- b) MMHE/SP/PMU/CNS/03 - Subcontractor Site Instruction and Change Management Procedure

## **8 RESOURCE, COMMUNICATION AND DOCUMENT MANAGEMENT**

### **8.1 Resources**

- 8.1.1 MMHE recognizes that the key success of Quality and HSE Management System implementation is the allocation of sufficient and competent resources
- 8.1.2 Resource allocation shall include, amongst others
  - a) Facilities, plant and equipment to meet Client requirement and all statutory requirements
  - b) Personnel and equipment to respond to and mitigate emergency situations e.g. oil spill and firefighting equipment
  - c) Availability of management personnel for managing Quality and HSE activities including audit and reviews; and

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- d) Funds and personnel for Quality and HSE activities, upgrading and new development

### **8.2 Infrastructure**

8.2.1 Head of Division / Department shall determine the infrastructure needs and liaise with Facilities and Asset and Services Division (FAS) or other relevant departments to ensure product conformity meet the requirements and safe to work. The infrastructures include:

- a) Building, workspace and associated utilities.
- b) Process equipment (both hardware and software)
- c) Supporting Services (such as transport, communication or information system)
- d) The critical data or information shall be securely stored in dedicated server with periodic back up and appropriate protection from threats such viruses or others.

#### **Supporting Document**

- a) MMHE/SP/YSO/FAS/AFF/01 – Provision of FAS Services
- b) MMHE/SC/CQHSE/17 – Equipment and Tools Integrity
- c) MMHE/SG/FSP/ICT/15 – Application Services

### **8.3 Work Environment**

8.3.1 Head of Division / Department shall responsible to study and determine the work environment such as physical, environmental and other factors (such as noise, temperature, humidity, lighting or weather) that is conducive for achieving conformity to the product requirements and safe for workers.

### **8.4 Communication, Participation and Consultation**

8.4.1 The top management of MMHE shall ensure that appropriate internal and external communication processes are established within the organization including the communication related to the effectiveness of the Quality and HSE Management system.

8.4.2 The communication, participation and consultation element defines MMHEs requirements for effective communication of QHSE information throughout the organization, involvement / participation of employees and consultation of external interested parties on QHSE matters.

8.4.3 The communication, participation and consultation processes shall apply for all MMHE's employees, subcontractors, Clients and third parties associated with MMHE activities.

8.4.4 The various means of communication required to be in place are the following:

- a) Quality and HSE Management Committee meeting
- b) Division / Department Quality and HSE Committee meeting
- c) Project Quality and HSE Committee meeting

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- d) Subcontractors Dialogue
  - e) HSE Induction program for new employees and subcontractors
  - f) HSE refresher program (s) for MMHE's employees and subcontractors
  - g) Training session for key QHSE procedures, e.g. Permit To Work (PTW)
  - h) Communication and cascading of information through QHSE campaigns, workshops and MMHE's newsletter
  - i) Issuance of lesson learnt from any incidents through internal communication systems i.e. e-mail or *e-portal*.
  - j) Issuance of HSE rules and regulations handbook
- 8.4.5 Communication related to MMHE policies, significant HSE impacts and risks, legal and other requirements, and accident report and statistic to the external parties and interested parties including customers, regulatory authorities, visitor and vendors are conveyed through:
- a) E-mail
  - b) Official Letter / Memorandum / Notice
  - c) Meeting
  - d) Briefing
- 8.4.6 Employee input will be sought in the following participation process:
- a) Involvement in risk management input such as HIRADC and Aspect Impact.
  - b) The development and review of policies, objectives and procedures
  - c) Consultation over changes affecting workplace QHSE e.g. the introduction of new or modified equipment, material, chemicals, technologies and processes.
  - d) Participation in incident investigation
- 8.4.7 Arrangement for consultation between employer representative and employee representative is done through the following process:
- a) Development of Quality and HSE Policies through Management Review.
  - b) Development of procedure and guidelines related to operation.
  - c) Carrying out of HEMP and Aspect Impact.
  - d) Changes affecting the workplace.
  - e) Other Quality and HSE related matters as and when necessary.
- 8.5 Competence
- 8.5.1 The respective business unit shall determine the necessary competence required by the personnel performing works affecting the product requirements and specific HSE trades or competent person.
- 8.5.2 Respective head of department of the core business units shall be responsible for training their staff on the necessary on-job training (OJT) and including the

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awareness and importance of their activities toward achieving quality and HSE objectives.

- 8.5.3 The continuing competency of personnel to perform their duties shall be reviewed regularly and training shall be provided for changing activities and technologies.

#### **8.6 Training and Awareness**

- 8.6.1 Human Resource through Learning and Development Department shall:

- i) Provide induction training on safety, MMHE rules and regulations, policies and organization structure for the new employees
- ii) Identify training needs analysis associate with legal statutory, QHSE Management System, procedure and others.
- iii) Provide training to the employees according to the annual training plan
- iv) Provide training and awareness on significant aspects and significant hazards to minimize the potential of having accident or incident.
- v) Advise and guide for the preparation of the job/ position descriptions and competency requirements.
- vi) Maintenance of training records and as necessary the competency assurances of all employees.

- 8.6.2 The requirement for sufficient training and awareness on significant aspect of Quality and HSE is applied equally to MMHE's employees, subcontractors / specialists and Clients associated with MMHE's activities.

- 8.6.3 Managers and supervisors are responsible for ensuring that the employees under their control are aware on their responsibilities and accountabilities by the annual performance appraisal and providing inputs on their training needs to Human Resources Division (HR)

- 8.6.4 The effectiveness of training and the resulting level of awareness shall be evaluated through the assessment of training exercise or on the job or field check to monitor the long term impact of training delivered

#### **Supporting Document**

- a) MMHE/SP/HR/LD/01 – Learning & Development

#### **8.7 Documentation**

- 8.7.1 Documented Information in MMHE Integrated Management System is either controlled as document or record. Division / Department within MMHE is responsible to manage generated documented information.

#### **8.7.2 Control of Document**

- a) Document in MMHE is classified in four (4) level documentation system. This following hierarchy shows the document level.

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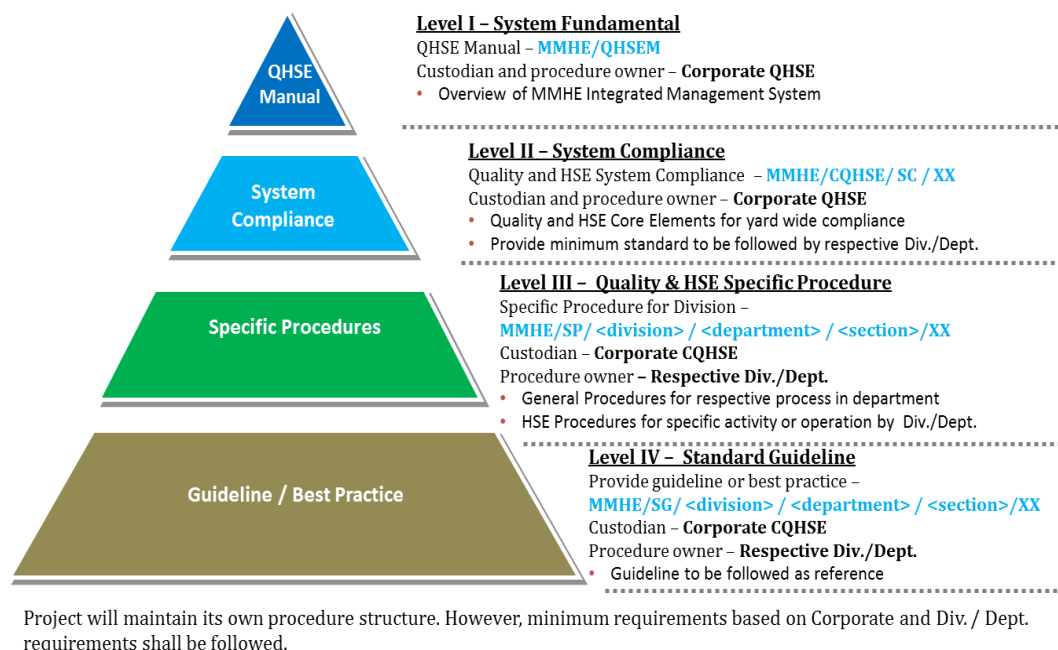


Figure 9: IMS Hierarchy

- b) The control of document describes the requirements for identifying, managing and preserving information that affecting the Integrated Management System. A procedure has been established, implemented and maintained for controlling all internal and external documents relevant to the Integrated Management System to ensure that:
  - i) They can be located
  - ii) They are periodically reviewed, revised as necessary and approved for adequacy by authorized personnel
- c) Current revisions of relevant documents are available at all locations where operations essential to the effective functioning of the Quality and HSE system are performed
- d) The approval parties will be based on the document hierarchy who are from Heads of Division / Department or previously known as Head of Business Unit (BU) / Service Unit (SU).
- e) Obsolete documents are promptly removed from all points of issue and points of use
- f) Archival documents retained for legal or knowledge preservation purposes or both, are suitably identified
- g) All revisions shall be documented and revision status assigned. The nature of changes to the document shall be identified.
- h) Documents shall be reissued after a practical number of changes have been made.
- i) Documentation and data shall be available and accessible, under routine or non-routine conditions including emergencies e.g. Safety Data Sheet, shipyard fire system, drawings, procedures and instructions.

**Supporting Document**

- a) MMHE/SC/CQHSE/01 – Document and Record Control

**8.7.3 Control of Record**

- a) All Quality and HSE records shall be maintained by the respective departments. These records are documented in approved formats. All records shall have unique identification and running numbers established for each project by respective departments and filed systematically.
- b) All inspection and test records shall be approved by the relevant authority prior to release for next stage of activity. All records shall be filed and be assessable at any time during project execution. On project completion, all project records shall be compiled as final documentation and submitted to the Client.

**Supporting Document**

- a) MMHE/SC/CQHSE/01 – Document and Record Control

**8.8 Monitoring of measurement traceability**

- 8.8.1 A procedure has been established, implemented and maintained for the calibration or verification of measuring and monitoring resources. This shall include the following item:
- a) List of resources
- b) The frequency of calibration or verification
- c) Reference to test method (where applicable)
- d) Identity of the calibration or verification status of measuring equipment
- e) Action to be taken when equipment is out of calibration
- f) Records of calibration, maintenance activities and results
- g) Safeguard the measuring resources from adjustment, damage or deterioration that would invalidate the calibration status and subsequent measurement results.
- 8.8.2 The requirement for calibration of equipment shall equally apply to all equipment used by subcontractors engaged by MMHE.

**Supporting Document**

- a) MMHE/CQHSE/17: Equipment and Tools Integrity
- b) MMHE/SG/PMU/TNC/04: Instrumentation Calibration Method

**8.9 Organizational Knowledge**

- 8.9.1 MMHE addressed the need to determine and manage the knowledge maintained by the respective Division / Department, to ensure the operation of its processes can achieve conformity of products and services
- 8.9.2 The programmes cover wide spectrum of lesson learnt, engagement and conference and the records are being maintained by respective Division and Department

**Supporting Document**

- a) MMHE/SG/PMU/PMU/01: Project Lesson Learnt Procedure

## **9 OPERATIONAL CONTROL**

### **9.1 Operational Planning and Control**

- 9.1.1 MMHE has planned, implemented and controlled the processes to meet the requirements for the provision of products and services, and to implement the actions determined in planning stage by:
- a) Determining the requirements for the products and services;
  - b) Establishing criteria for processes and the acceptance of products or services
  - c) Determining the resources needed to achieve conformity to the product and service requirements;
  - d) Implementing control of the processes in accordance with the criteria;
  - e) Determining, maintaining and retaining documented information to the extent necessary for providing assurance of product or services.
  - f) Identifying MMHE's requirement of operational control element for those operations and activities that are associated with identified risks and environmental aspects fulfilling its QHSE Policy, objectives and targets and conforming to legal and other requirements where control and counter measures need to be applied.
- 9.1.2 The requirement for the operational control shall apply for all activities carried out throughout MMHE, including operation, production, fabrication, maintenance and purchase or hire of goods, equipment and services.
- 9.1.3 This requirement shall apply equally in all activities carried out by MMHE's employees, subcontractor, Clients and third parties associated with MMHE's activities.
- 9.1.4 Procedures shall be established, implemented and maintained to control identified risks and significant environment impact to cover:
- a) Situations where its absence could lead to deviations from the HSE Policy, Objectives and Target
  - b) Aspects of purchase, transfer and hire of goods, equipment or services used by MMHE. The requirements of this procedure shall be documented to suppliers, contractors and Clients.
  - c) Design of workplace, process, installations, machinery, operating procedures and work organization, including their adaptation to human capabilities, in order to eliminate health and safety risks and environmental significant impact at their source
- 9.1.5 The procedures shall be reviewed regularly for its suitability and effectiveness and any identified changes shall be implemented



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9.1.6 In situations where risks extend into Clients' or other external parties' premises or areas of control; for example, when MMHE's employee is working at a Client's site, consultation with the external party on HSE in such circumstances is required

9.1.7 MMHE manages the control of planned changes and review the consequences of unintended changes, taking action to mitigate any adverse effects, as necessary.

### **Supporting Document**

- a) MMHE/SC/CQHSE/12: HSE Minimum Requirement (Volume 1)
- b) MMHE/SC/CQHSE/13: HSE Minimum Requirement (Volume 2)
- c) MMHE/SC/CQHSE/15: MMHE Environmental Standard
- d) MMHE/SP/PMU/PMU/01: Project Management Manual
- e) MMHE/SP/MBU/PR/02: Contract Execution, Monitoring and Control Process

## **9.2 Prequalification and Bidding**

9.2.1 Prequalification of respective Business Unit with prospective Clients shall be initiated by Business Development. Prior to the prequalification, the Business Development Manager shall coordinate a discussion with related personnel in the respective Business Unit to determine requirements specified by the project, customer / Client and any statutory and regulatory applicable to the activities in the project.

9.2.2 *The Business Development Manager shall liaise with customer to obtain necessary information and conveys the information to Commercial Department, relevant operational department and/or Legal Department for capability studies on MMHE's ability to undertake projects and legal advice respectively.*

9.2.3 BD will prepare summary of Bid preparation schedule. The "Invitation to Bid" documents shall be reviewed and all requirements are identified with assistance of other Departments, if required.

9.2.4 On completion of the review, the Tender Bid Packages shall be compiled by the Commercial Department for further reviewed by bid committee to decide on the disposition of either to proceed with Bid Submission or any other actions as required. The bid committee shall review the overall MMHE's capability and other business justification including resources and pricing strategy.

9.2.5 Upon approval by the bid committee, Business Development Manager shall submit the Tender Bid Packages to the customer and provide any clarification required by the customer. Copies of such Tender Bid Packages shall be retained in Business Development Department for further reference.

9.2.6 On award of project, Business Development Manager shall coordinate contract review with related parties such as designated Project Management Team (PMT) and respective Departments to identify any variance between the awarded contract and Bid packages. Any changes shall be identified, documented, addressed to the Client and resolved accordingly by the PMT. All variation/change orders for a project shall be submitted to Finance for processing and filling.

9.2.7 Prior to implementation of the project, the required budget shall be prepared and submitted for approval. Upon approval, the project budget be handed over to Project Management Team (PMT) for implementation stage.



### **Supporting Document**

- a) MMHE/SP/OBU/COMM/01: Commercial Bidding Procedure
- b) MMHE/SP/MBU/C/01: Bidding Process
- c) MMHE/SP/MBU/CC/01: Contract Review Process
- d) MMHE/SC/CQHSE/12: HSE Minimum Requirement (Volume 1)
- e) MMHE/SC/CQHSE/13: HSE Minimum Requirement (Volume 2)

### **9.3 Design & Engineering**

- 9.3.1 On project award, the Engineering department shall review and verify all specifications and Approved for Construction (AFC) drawings against the tender documents. Difference between these and tender documents shall be identified and documented. Engineering department shall then clarify these differences via the Site Technical Queries (STQ) process.
- 9.3.2 Engineering Department shall prepare fabrication engineering analysis and procedure for the fabrication requirement till load-out.
- 9.3.3 Engineering Department shall prepare fabrication drawings, drawing list and the drawings submission schedule.
- 9.3.4 Engineering Department shall prepare the actual Material Take-Off (MTO) based on AFC drawings and latest revision of fabrication shop drawings and raise Material Requisition (MR). All variations and changes initiated at site shall be updated on the MTO by Engineering Department. PMT shall use the latest revision of the MTO to monitor their material status.
- 9.3.5 Engineering Department shall review and prepare Technical Bid Evaluation (TBE) based on vendor's technical proposal to ensure the offers are technically comply with the project requirement and Client specification.
- 9.3.6 Engineering Department shall prepare and verify all drawings and design calculations based on Client's requirements. Potential clashes shall be identified, rectified and verified by Engineering Department.
- 9.3.7 All drawings shall be distributed thru PMT. Engineering Department shall ensure that all interfacing parties are kept current with the latest IFC drawings via an updated drawing list.
- 9.3.8 Design changes shall be recorded and filed by Engineering Department. All changes shall be verified and approved by Engineering Department and Client prior to release to Project Management Team.
- 9.3.9 Engineering Department may assign and approve Design Consultant to carry out partial or a complete design activities required by the Client.
- 9.3.10 The Engineering Manager shall assign engineers to review relevant design deliverables from Design Consultant such as Inter-discipline Check (IDC) drawing and AFC drawing prior to issuance to Client or fabrication team. Like any other subcontractor, the performance of Design Consultant shall be appraised at the end of project for further reference.

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### **Supporting Document**

- a) MMHE/SP/OBU/ENG/G/05 : Engineering Control
- b) MMHE/SP/OBU/ENG/G/06 : Engineering Changes

### **9.4 Control on Externally Provided Process, Product and Services**

#### **9.4.1 General**

- a) MMHE has ensured the externally provided processes, products and services conform to requirements.
- b) MMHE has determined the controls to be applied to externally provided processes, products and services when:
  - i) products and services from external providers are intended for incorporation into the organization's
  - ii) own products and services;
  - iii) products and services are provided directly to the customer(s) by external providers on behalf of MMHE,
  - iv) a process, or part of a process, is provided by an external provider as a result of a decision by the organization.

#### **9.4.2 Purchasing**

- a) Supply Chain Management responsibilities includes related activities required in vendors sourcing, initiating inquiries, selecting suppliers/subcontractors, monitoring vendor performance, purchasing, expediting, inspection, coordination, logistic/transportation, import, receiving, storage, issuance and related activities in connection with materials or services transactions as well as coordination with Finance on insurance and payment processing.
- b) Purchase orders (PO) shall contain all information indicating the Division's / Department's and Client's requirements of the item being purchased.
- c) Buyer to ensure environmental requirement is identified for the purchased products.
- d) Vendor selection for the purchase of items or services shall be based on the project sourcing list prepared by Supply Chain Management. Final selection of vendor for the purchase of particular item/services shall be based on technical & commercial evaluations and approval based on the respective level of authority.
- e) Vendor performance and assessments records shall be maintained by Supply Chain Management. Source inspection at manufacturer's premises shall be carried out by appointed third party inspection agency, when specified in the contract.
- f) On receipt of all purchased items, they shall be verified against PO and Delivery Order (DO) by Material Management and Logistics (warehouse section) of Supply Chain Management.

### **Supporting Document**

- a) MMHE/SP/ FSP/SCM/01: Procurement Process (Material/ Services)
- a) MMHE/SP/ FSP/SCM/02: Project Procurement Management
- b) MMHE/SP/ FSP/SCM/03: Vendor Performance Management
- c) MMHE/SP/ FSP/SCM/05: Bidding Process

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- d) MMHE/SP/FSP/SCM/07: Strategic Sourcing
- e) MMHE/SC/CQHSE/12: HSE Minimum Requirement (Volume 1)
- f) MMHE/SC/CQHSE/13: HSE Minimum Requirement (Volume 2)

### 9.4.3 Subcontracting Work

- a) Scope of sub-contracting works shall be clearly defined by the Project Management Team (PMT) and documented/processed by Subcontracting Services Department prior to awarding to subcontractors
- b) A list approved subcontractors and their records shall be maintained by Subcontracting Service team.
- c) The selection of these subcontractors is based on their performance and capability to support MMHE's projects subcontracting requirements inclusive of Quality and HSE requirement.
- d) Subcontracting Services Department to ensure environmental requirement is identified for the provided services.
- e) Engagement of subcontractors can be from a competitive bidding, single sourcing or through frame agreement.
- f) The performance assessment of these subcontractors shall be done by respective recipients, such as PMT of the services and consolidated/managed by Vendor Registration and Performance section of Supply Chain Services Department under the Supply Chain management.

### **Supporting Document**

- a) MMHE/SP/FSP/SCM/01: Procurement Process (Material/ Services)
- b) MMHE/SP/FSP/SCM/03: Vendor Performance Management
- c) MMHE/SC/CQHSE/12: HSE Minimum Requirement (Volume 1)
- d) MMHE/SC/CQHSE/13: HSE Minimum Requirement (Volume 2)

## 9.5 Execution of project or production

### 9.5.1 General Requirement of Work execution

- a) The activities executed by the subcontractors and other related parties based on planning given by Planning section of Project Management Team or Production department.
- b) The mobilization of resources such as manpower, equipment and others are implemented and monitored by Project Management Team or Production.

### 9.5.2 Project Management and Implementation

- a) All activities in the project execution from award to delivery shall be maintained and controlled through the use of documented quality general and detailed procedures.
- b) The project shall be coordinated by Project Manager interfacing with the Client Site Representative. All activities shall be planned and controlled by the Project Management Team (PMT) in conjunction with Client's site team to ensure compliance to the quality plan, contract requirements and project schedule.

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- c) Regular in-house meetings shall be conducted with the Client to address site problems, Client requests, schedule, non-conformances on projects, HSE requirements and to initiate the appropriate corrective actions required.

### **Supporting Document**

- a) MMHE/SP/PMU/PSC/02: IPCO and Client Order Administration
- b) MMHE/SP/PMU/PMU/01: Project Management Manual
- c) MMHE/SP/MBU/PR/02: Contract Execution, Monitoring and Control Process
- d) MMHE/SP/MBU/PR/06: Allocation of Work and Manpower to Ships
- e) MMHE/SP/MBU/PR/07: Work Execution Methods Upon Ship's Arrival
- f) MMHE/SP/MBU/QA/05: Inspection and Test Plan
- g) MMHE/SP/MBU/PR/03: Management of Variation Orders, Additional Work Order, and Change Order
- h) MMHE/SP/MBU/PR/04: Project Cost Monitoring & Control Process
- i) MMHE/SP/MBU/DP/01: Productivity Measurement and Enhancement
- j) MMHE/SC/CQHSE/12: HSE Minimum Requirement (Volume 1)
- k) MMHE/SC/CQHSE/13: HSE Minimum Requirement (Volume 2)

### **9.5.3 Construction/ Fabrication/ Repair/ Conversion**

- a) The construction/fabrication/repair/conversion shall be carried out sequentially as per work sequence prepared for the project with consent by Client and within the time frame allocated in Project Schedule. This will ensure the optimization of manpower and facilities.
- b) Special processes are referred to activities such as welding, painting and heat treatment shall be qualified prior to implementation by appropriate personnel. These processes shall be identified, monitored and documented for future reference.
- c) Facility and Asset Department (FAS) shall coordinate on the relevant equipment & facilities required for repair and conversion work. Such equipment and facilities shall be inspected to ensure their safety and functionality is acceptable.

### **Supporting Document**

- a) MMHE/SG/PSU/CST/01: General Construction Procedure
- b) MMHE/SP/MBU/PR/06: Allocation of Work and Manpower to Ships
- c) MMHE/SP/MBU/PR/07: Work Execution Methods Upon Ship's Arrival
- d) MMHE/SC/CQHSE/12: HSE Minimum Requirement (Volume 1)
- e) MMHE/SC/CQHSE/13: HSE Minimum Requirement (Volume 2)

### **9.5.4 Identification and Traceability**

- a) During handling the material, the responsible parties uses suitable means to identify outputs when it is necessary to ensure the conformity of products and services.
- b) The status of outputs identifies with respect to monitoring and measurement requirements throughout production and service provision.
- c) Respective parties control the unique identification of the outputs when traceability is a requirement, and shall retain the documented information necessary to enable traceability.

### 9.5.5 Testing and Pre-Commissioning

- a) The testing and pre-commissioning activities are under taken by Testing & Commissioning Department. The activities involved are calibration of gauges, preparation of work instruction, Pre-start-up Check, Function test and Hook-Up activities.
- b) The manager of Testing & Commissioning shall approve Testing and commissioning procedure prior to implementation and each testing activity shall be recorded in check sheets agreed by the Client.

#### **Supporting Document**

- a) MMHE/SP/PMU/TNC/07: Testing and Commissioning
- b) MMHE/SP/MBU/PR/05: Acceptance By Customer

### 9.5.6 Offshore Hook-Up and Commissioning

- a) Hook-up and Commissioning is carried out by Testing and Commissioning (T&C) personnel or appointed subcontractor with supervision from Testing Commissioning Dept.
- b) Prior to commissioning of a system the Commissioning team ensured that all items are individually tested and accepted, punch lists are resolved and system demarcation is approved by Client. Once all systems are commissioned to the acceptance of Client Operation personnel, the systems are ready to be handed over to the Client and Acceptance Certificate shall be issued.

#### **Supporting Document**

- a) MMHE/SG/PMU/HUC/01: Hook Up and Commissioning

### 9.5.7 Sea Acceptance Trial / Harbour Acceptance Trial / Inclining Test

- a) Sea trial and inclining test processes are only applicable for new ship after construction or ship after conversion that requires validating the ship's performance by classification surveyor and Client's approval / witness.
- b) Harbour acceptance trial, sea acceptance trial and inclining experiment are subject to quality plan, and failure to any inspection hold point is subject to non- conformance procedure and shall be documented.
- c) The test result shall be recorded and approved by Client representative and / or classification society and / or regulatory bodies. The copies of the trial records shall be extended to QA Department for record purposes.

### 9.5.8 Client Free Issue / Customer Property

- a) All Client free issue or customer property shall be identified during bidding stage and documented by Commercial Department. In case of discrepancies identified in contract documents, Commercial Department to highlight the discrepancies to respective Project Manager for subsequent action or follow up with Client.
- b) Upon receipt of all Client free issue or Client properties, the detail of items shall be identified against relevant documents supplied by Client and managed

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according to specified procedures. Traceability of such Client items or properties shall be via inspection other relevant documents.

- c) In addition, all Client free issues items or customer property shall be stored in designated areas. Material Management and Logistics Department responsible for monitoring and controlling of such items until those items are issued out to Project Management Team.
- d) Non-conformance, damage and loss of Client free issue items or customer property shall be identified, documented and brought to the attention of the Client for further action. Material Management and Logistics Department, Supply Change Management shall coordinate all related activities.

#### **Supporting Document**

- a) MMHE/SP/FSP/SCM/08: Material Management
- b) MMHE/SP/FSP/SCM/09: Logistic Management

### **9.6 Material Management**

- 9.6.1 Material Management and Logistics of Supply Chain Management shall identify, verify, segregate and inspect the material/equipment from vendors/suppliers prior to acceptance. Non-conforming items shall be identified, documented, segregated and returned to vendor/suppliers for replacement if appropriate.
- 9.6.2 Accepted items shall be clearly labeled or marked for materials traceability, tagging of equipment, preservation and storage in assigned areas until they are issued to specified projects. These items shall be issued by Material management and Logistics Department, Supply Chain Management.
- 9.6.3 Materials on site are identified by corresponding specifications the material during acceptance. Materials are traceable by verification records indicating use of a particular material for an intended fabricated part. Such records are verified and maintained by Quality Department.
- 9.6.4 Surplus items shall be identified by Project Management Team (PMT) during and after fabrication and handed over to Material Management and Logistics, for labeling and storage or to be disposed as scrap. Records of surplus material and scrap disposed shall be maintained by Material Management and Logistics team labeling and storage or to be disposed as scrap.
- 9.6.5 Handling of items including packing of ship loose shall be monitored by Material Management and Logistics team, and shall be based on the handling specifications/ requirements for each identified material/ equipment.

#### **Supporting Document**

- a) MMHE/SP/FSP/SCM/08: Material Management
- b) MMHE/SP/FSP/SCM/09: Logistic Management
- c) MMHE/SP/MBU/PO/01: Incoming Inspection



### 9.7 Control of Non-Conforming Output

- 9.7.1 Project Management Team ensured that outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.
- 9.7.2 PMT to work closely with Subcontractors or other parties to take appropriate action based on the nature of the nonconformity and its effect on the conformity of products and services. This shall also apply to nonconforming products and
- 9.7.3 PMT to manage nonconforming outputs in one or more of the following ways:
  - a) Correction;
  - b) Segregation, containment, return or suspension of provision of products and services;
  - c) Informing the customer;
  - d) Obtaining authorization for acceptance under concession.
- 9.7.4 Conformity to the requirements shall be verified when nonconforming outputs are corrected

#### **Supporting Documents**

- a) MMHE/SC/CQHSE/03: Control of Non-Conformance
- b) MMHE/SC/CQHSE/04: Corrective Action and Continual Improvement

### 9.8 Delivery / Warranty

- 9.8.1 After the acceptance of the product by the Client representative and /or classification society *and/or the authority bodies such as Maritime Department (Jabatan Laut) or others, the vessel or product (Topside, Jacket or others)* is due for delivery.
- 9.8.2 All documents that are necessary for delivery and contract requirement shall be compiled at the respective Business Unit. This includes drawings, manuals, inspection report and certificates. Warranty is given to the product after delivery and is based on the contract agreement, inspection report and certificates.

#### **Supporting Document**

- a) MMHE/SP/MBU/PR/05: Acceptance By Customer
- b) MMHE/SP/PMU/PSC/04: Warranty Claims Management

### 9.9 Emergency Response and Preparedness

- 9.9.1 The emergency preparedness and response elements defines MMHE's requirements for an effective emergency response to manage incidents and emergency situations for preventing and mitigating the likely illness, injury, damage to property and environmental pollution that may arise in the course of MMHE's activities.
- 9.9.2 The emergency responses in the yard are classified as follows:-

#### **TIER 1 – Minor Emergency**

This is a situation where there is a danger to life and where risk of damage to property and the environment is within MMHE's control. In the case of oil spill, it is minor and within MMHE's control.

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### **TIER 2 – Major Emergency**

This is a situation where there is a danger to life and risk of damage to property and the environment. The incident is within the control of MMHE with limited external assistance. In the case of oil spill, it is a large spill and response is beyond the capability of MMHE alone.

### **TIER 3 – Crisis**

This is a situation where there is a potential for multiple fatalities and severe damage to property and the environment involving neighboring sites and surrounding community. The incident is beyond the capacity of MMHE to control and shall be referred to MISC or *PETRONAS* for further action.

- 9.9.3 The requirement for an effective emergency response shall apply for all MMHE's activities carried out by MMHE's employees, Subcontractors, Clients and Third Parties associated with MMHE activities.
- 9.9.4 An emergency response plan shall be established, implemented and maintained to comprise of fire, accident and chemical spill.
- 9.9.5 General Manager, QHSE shall develop and maintain the required ERP to cater for any major risk or emergencies that may occur in MMHE.
- 9.9.6 The Emergency Response Plan (ERP) shall address among others, the following areas:
- a) Organization, responsibilities and authorities for emergency coordination and response, including the maintenance of internal and external communications system
  - b) Communications with authorities and other relevant parties i.e. neighboring plants and public
  - c) Mobilization of equipment, facilities and personnel
  - d) Mobilization of third party resources for emergency support
  - e) Provision of personnel refuge, evacuation, rescue and medical treatment
  - f) Prevention, mitigation and monitoring of environmental impacts resulting from the emergency actions
  - g) Training arrangement for response teams and for testing the Emergency Response Plan
  - h) Availability of necessary information during the emergency e.g. plant layout drawings, hazardous material data, procedures, work instructions and contact telephone numbers



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- 9.9.7 *Head of Corporate QHSE or in his absence, the Head of Department, HSE, will respond immediately to the scene and shall decide the severity of the incident. He shall then consult the MD & CEO on the declaration of emergency status to Tier 2, Tier 3 or remain at Tier 1. In normal situation, the emergency status is at Tier 1.*
- 9.9.8 *Head of Corporate QHSE or in his absence, the Head of Department, HSE, will respond immediately to the scene and shall decide the severity of the incident. He*
- 9.9.9 Head of Corporate QHSE shall inform all Emergency Management Team (EMT) members to report to the ECC located at the Security Department (under Tier 2).
- 9.9.10 The COO shall assume command of the EMT members as the Incident Commander. He shall be based at the ECC.
- 9.9.11 A copy of the Emergency Response Plan shall be kept at the Emergency Control Center (ECC).
- 9.9.12 The Crisis Management team shall be established if the incident has escalated and it is beyond the capacity of MMHE to control. Refer to MISC Group Interim Crisis Management Plan for further action.
- 9.9.13 Drills and exercises are to be conducted at regular intervals as stipulated in the annual HSE Plan to test the response and the participation of external emergency services capability (if necessary) both at MMHE level and the specific locations.
- 9.9.14 Post mortem of the drill/exercises and actual emergency responses shall be carried out to review the preparedness and the effectiveness of the Contingency Plans. Changes that are identified as being necessary shall be implemented

### **Supporting Document**

- a) MMHE/SC/CQHSE/16 – Emergency Preparedness and Response Plan

## **9.10 Accident, Incidents and investigation**

- 9.10.1 The requirement for incident notification shall apply for all incidents, including near misses involving MMHE's employees, subcontractors, Clients and third parties associated with MMHE's activities
- 9.10.2 A procedure shall be established, implemented and maintained to ensure that all incidents, including serious near misses are investigated, reported and rectified to mitigate any consequences arising from the incidents
- 9.10.3 The investigation and reporting of all incidents, including the implementation of recommendations is a Division / Department responsibility
- 9.10.4 Lessons learnt from any incident shall be disseminated as widely as possible to prevent recurrence through HSE meeting, daily toolbox talk, HSE training case study etc.
- 9.10.5 All findings and recommendations from identified incident investigation shall be presented to MMHE HSE Management Committee

### **Supporting Document**

- a) MMHE/SC/CQHSE/10: Incident Notification, Investigation and Reporting

## **10 PERFORMANCE MONITORING, MEASUREMENT, ANALYSIS AND EVALUATION**

### **10.1 Performance Standard**

#### **10.1.1 Performance Measurement and Monitoring**

- a) The performance measurement and monitoring elements defines MMHE's requirement of identifying key performance parameters for Quality and HSE performance across MMHE.
- b) The requirement for the implementation of Quality and HSE monitoring activities shall apply for all MMHE's activities, which includes activities carried out by MMHE's employees, subcontractors, Clients and third parties associated with MMHE's activities.
- c) A procedure shall be established, implemented and maintained to monitor and measure QHSE performance on a regular basis. The procedure shall :
  - i) Provide for qualitative and quantitative measures
  - ii) Determine the achievement of Policy, Objectives and Targets
  - iii) Determine the effective implementation of risk controls and environmental prevention measures.
  - iv) Determine the effectiveness of awareness, training, communication and consultation programmes
  - v) Determine whether lessons are being learnt from Quality and HSE Management System failures
  - vi) Provide for proactive measures of performance that monitor compliance with Quality and HSE Management programmes, operational criteria and applicable legislation and regulatory requirements
  - vii) Provide for reactive measures of performance to monitor product non-conformity, accidents, ill health, accident / incidents (including near misses) and other historical evidence of deficient QHSE performance
  - viii) Ensure the sufficient recording of data and results of monitoring and measurement to facilitate corrective and preventive action analysis
- d) The methods of measuring QHSE performance shall include but not limited to the following:
  - i) Result of QKPI and HSE Statistics
  - ii) Results of hazards identification, risk assessment and risk control processes.
  - iii) Results of environmental aspects identification and impact evaluation.
  - iv) Systematic workplace inspection
  - v) Inspections of specific machinery and plant to check that safety related parts are fitted and in good conditions
  - vi) Availability and effectiveness of use of personnel with recognized Quality and HSE experience or qualifications

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- vii) Benchmarking against good QHSE practices in other organizations
- viii) Surveys to determine employee attitudes towards the Integrated Management System and good practices
- e) Any statistical or other theoretical techniques used to assess, investigate or assist in decision making on HSE matters shall be based on sound scientific principles

#### **Supporting Document**

- a) MMHE/SC/CQHSE/02: CQHSE Performance Measurement

### 10.2 Evaluation of Compliance

- 10.2.1 The evaluation of compliance element defines MMHE's requirement of periodically evaluating compliance with applicable legal requirements and other requirements to which MMHE subscribes to.
- 10.2.2 The evaluation shall be done at least once a year or every time the requirements change.
- 10.2.3 The evaluation shall include:
  - a) Compliance of applicable Legal and Other Requirements
  - b) Compliance of organizational and industry standard, contractual relationship and agreements with community groups or non-governmental organizations.
  - c) Variance in implementation across MMHE.
  - d) Action plan for full compliance.

#### **Supporting Document**

- a) MMHE/SC/CQHSE/08: Legal and Other Requirements Compliance Evaluation

### 10.3 Customer Satisfaction

- 10.3.1 Business Development and Project Management Team monitored customers' perceptions of the degree to which their needs and expectations have been fulfilled.
- 10.3.2 The methods for obtaining, monitoring and reviewing this information was determined and periodically reviewed.

#### **Supporting Document**

- a) MMHE/SC/CQHSE/18: Handling of Customer Feedback

### 10.4 Analysis and Evaluation

- 10.4.1 Analysis of the data shall be conducted and presented but not limited to the following:
  - a) Customer satisfaction
  - b) Conformity to product requirements
  - c) Supplier / vendor assessment
  - d) Characteristic and trend of processes / products

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- 10.4.2 Valid conclusions from the analysis shall be drawn and corrective action taken. The analysis is recommended to be presented to the management and included in the management review.

#### **10.5 Assurance**

- 10.5.1 The assurance element defines MMHE's requirement of Integrated Management System assurance to establish the degree of conformity to the QHSE Management System and to assess the effectiveness in meeting the Quality and HSE objectives and targets.
- 10.5.2 The minimum standard for an internal Integrated Management System assurance shall be the QHSE Management System with its associated procedures and instructions.
- 10.5.3 An internal Integrated Management System assurance of MMHE shall cover:
- a) All operation and non-operation Division / Department in MMHE (including subcontractor)
  - b) All subsidiary companies (including subcontractor)
- 10.5.4 An Internal Integrated Management System assurance programme and procedure shall be established, implemented and maintained to verify whether the Management System
- a) Conforms to planned arrangements
  - b) Has been properly implemented and maintained
  - c) Is effective in meeting organization's policy and objectives
  - d) Review the results of previous audits
  - e) Provide information on the results of audits to management
- 10.5.5 The assurance programme, including any schedule, shall be based on the assurance matrix, results of risk assessments of the organization's activities, and the results of previous audits and external complaints.
- 10.5.6 Assurance shall be conducted by competent personnel, independent of the part of the Division / Department or the activity that is to be audited.
- 10.5.7 The results of the assurance shall be documented and brought to the attention of the respective Division / Department management having responsibility in the area audited.

#### **Supporting Document**

- a) MMHE/SC/CQHSE/05 – QHSE Assurance
- b) MMHE/SP/CQHSE/CSD/01 – Internal Audit
- c) MMHE/SG/CQHSE/CSD/04 – Quality and HSE Assessment

#### **10.6 Management Review**

- 10.6.1 The management review element defines MMHE's requirement for a documented management review of the Quality and HSE Management System to be undertaken periodically and as and when necessary to ensure its continuing suitability, adequacy and effectiveness.
- 10.6.2 The management review shall address the possible need for changes to MMHE's policies, objectives and other elements of the Quality and HSE Management System, with a view to ensuring the achievement and sustenance of continual improvement of performance.

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- 10.6.3 A procedure shall be established, implemented and maintained for management review. This shall be carried out at MMHE level to review the overall performance of the Quality and HSE Management System.
- 10.6.4 MMHE management review shall be carried out by the QHSE Management Committee according to a prepared agenda at least once a year.

### **Supporting Document**

- a) MMHE/SC/CQHSE/06 – Management Review

## **11 IMPROVEMENT**

### **11.1 Non-conformity and Corrective Action**

- 11.1.1 The management of Non-conformity and Corrective Action shall apply for all MMHE's employees, subcontractors, suppliers, Clients and third parties associated with MMHE's activities. Once any non-conformity is identified, the line management shall take necessary action to correct the non-conformity and to mitigate its consequence to health and safety of employees and workplaces environment.
- 11.1.2 Within the procedure, a system shall be implemented to ensure that all proposed corrective actions are reviewed through the risk assessment process prior to any implementation
- 11.1.3 Controls measure shall be applied to confirm that the corrective actions taken are effective
- 11.1.4 Changes in the documented procedure resulting from corrective action shall be recorded
- 11.1.5 In general, the following actions are in place to manage the non-conformity;
  - a) Immediate action to be taken to inform all parties upon observation of non-conformances, accident and incident.
  - b) Record of factual information and the result of the immediate and detailed investigation
  - c) Investigation processes
  - d) Correction action taken to eliminate the root cause(s) of identified non-conformances, accidents or incidents, in order to prevent recurrence
  - e) Follow up on corrective action to ensure its effectiveness
- 11.1.6 Identified causes of non-conformances, accidents and incidents shall be classified and analyzed on a regular basis. Accident frequency and severity ratings shall be calculated in accordance with accepted industrial practice for comparison purposes.
- 11.1.7 Valid conclusions from the analysis shall be drawn and corrective action taken. This analysis shall be circulated to top management and included in the management review
- 11.1.8 All findings, recommendations and lessons learnt from the investigation shall be communicated to all employees and relevant interested parties and the implementation of remedial controls monitored.

### **Supporting Documents**

- a) MMHE/SC/CQHSE/03: Control of Non-Conformance
- b) MMHE/SC/CQHSE/04: Corrective Action and Continual Improvement
- c) MMHE/SC/CQHSE/10: Incident Notification, Investigation and Reporting

**11.2 Continual Improvement**

- 11.2.1 MMHE continually improve the suitability, adequacy and effectiveness of the integrated management system.
- 11.2.2 MMHE considered the results of analysis and evaluation, and the outputs from management review, to determine if there are needs or opportunities that shall be addressed as part of continual improvement.

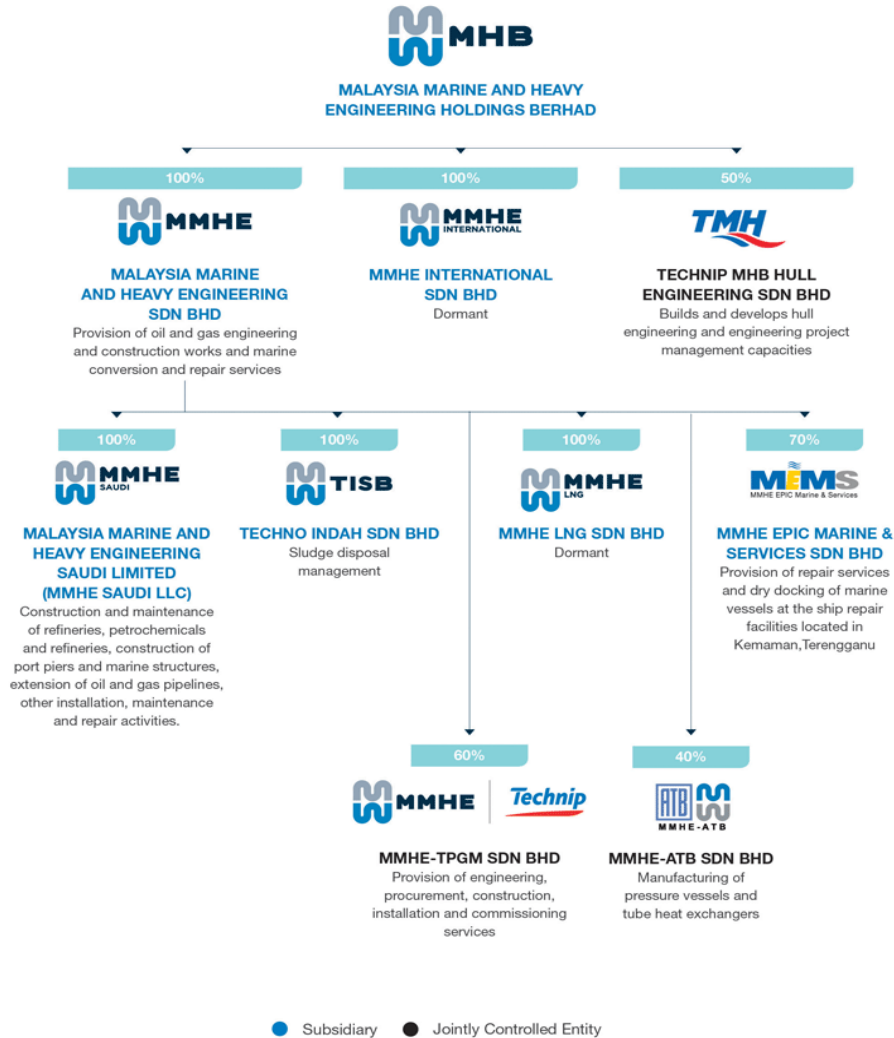
**12 APPENDICES**

- 12.1 MHB Group Structure
- 12.2 MMHE Organization Structure
- 12.3 Business Process Interaction
- 12.4 Quality Policy
- 12.5 HSE Policy
- 12.6 Stop Work Policy
- 12.7 Drug, Alcohol and Smoking Policy
- 12.8 Correspondence between the sub-elements of ISO 9001:2015, OHSAS 18001-2007 and ISO 14001: 2015

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### Appendix 12.1: MHB Structure





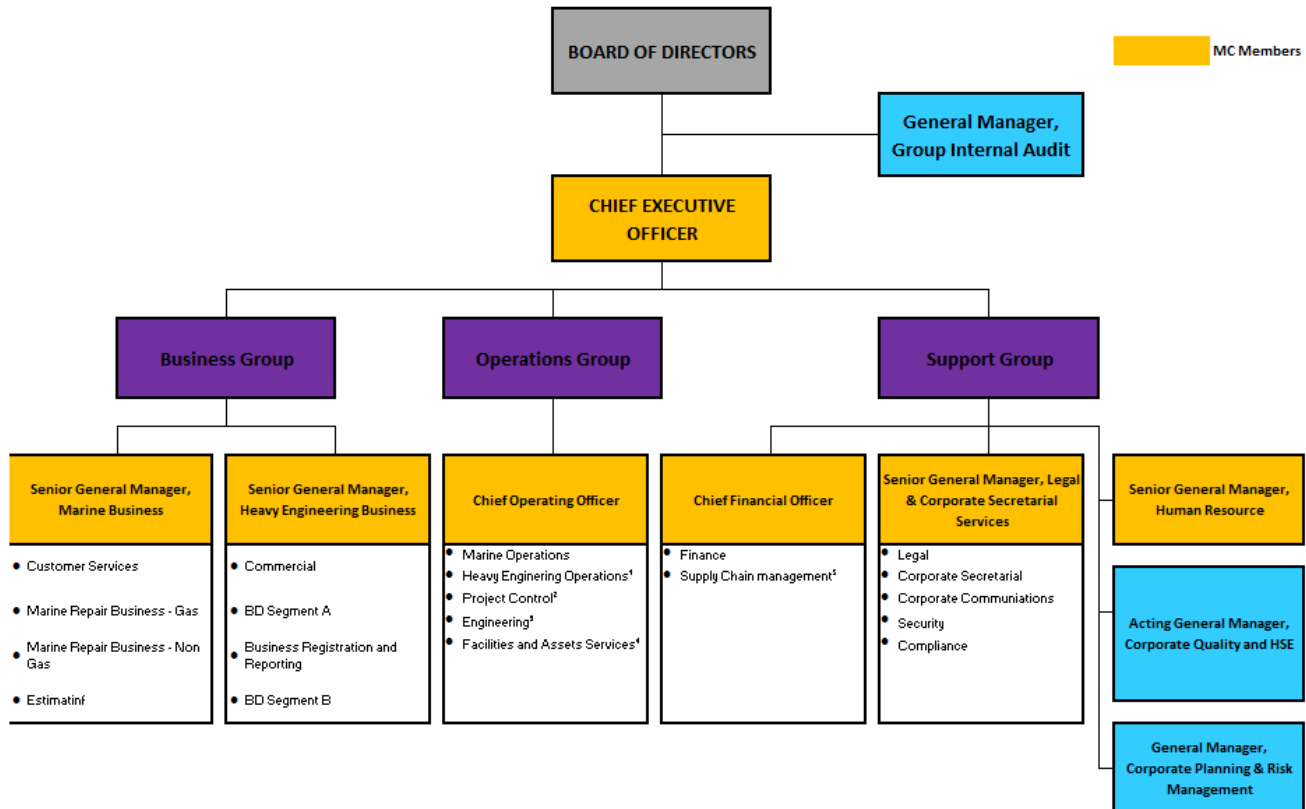
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### Appendix 12.2: MMHE Organization Structure



MMHE High Level Organisation Structure and Reporting Lines



1. Includes operations for offshore and onshore projects

2. Includes operations manpower & asset planning and utilization, production planning & productivity monitoring contract management and cost control

3. Fabrication Engineering (e) and Project Engineering Servicesn Pasir Gudang

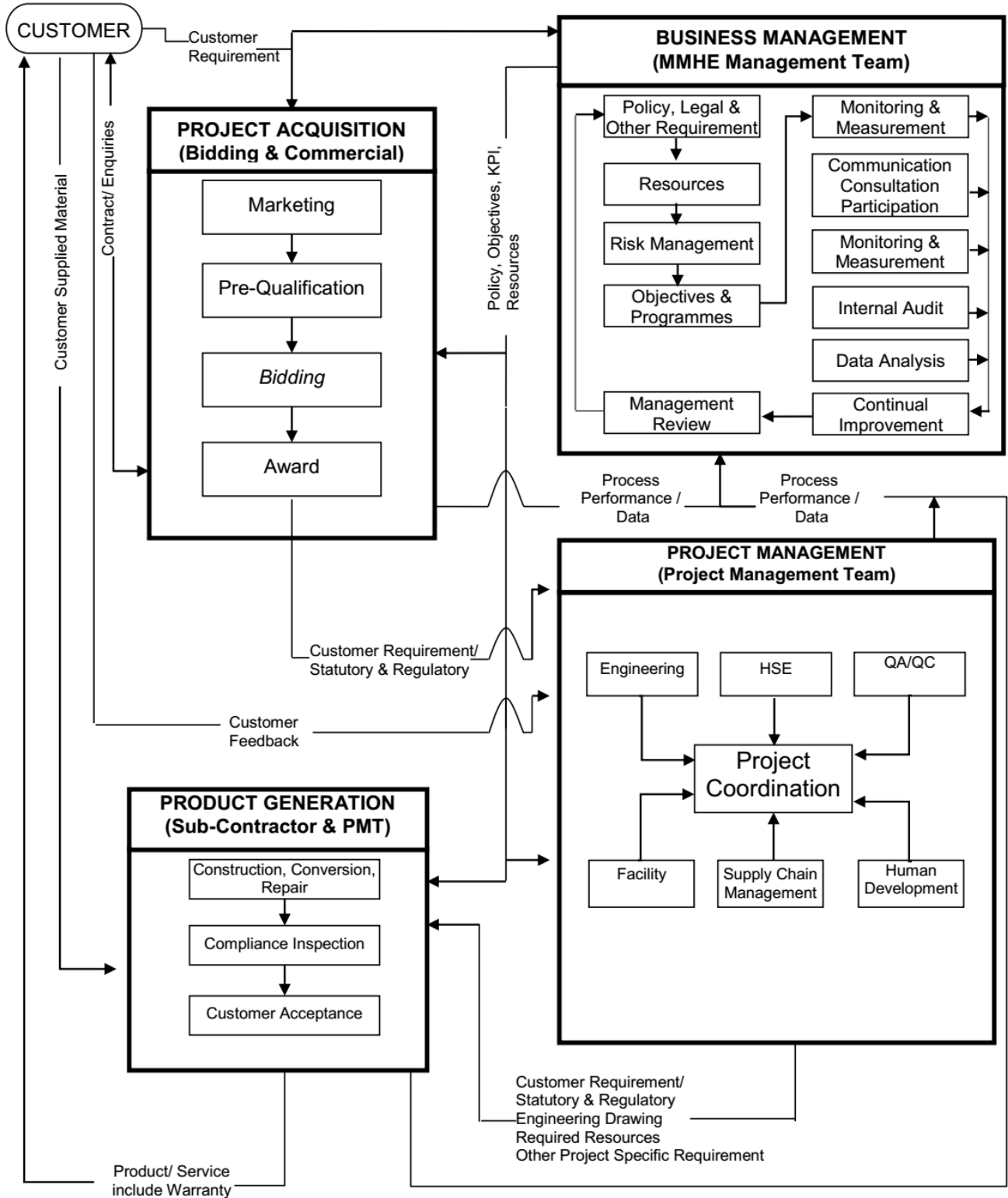
4. Inclusive of Yard Optimisation (YO)

5. Inclusive Information Communication Technology (ICT)

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### Appendix 12.3: Business Process Interaction



### Appendix 12.4: Quality Policy



## Statement of Quality Policy

Malaysia Marine and Heavy Engineering Sdn. Bhd. (MMHE) is a globally trusted energy industry and marine solutions provider for a wide range of heavy engineering facilities and vessels.

In pursuit of Quality Excellence, our quality statements are :

- We supply quality products and services that meet applicable requirements
- We implement and maintain an effective Quality Management System based on the relevant standard
- We practise a corporate culture of continual improvement
- We are committed to continuously develop our human capital to be competent and motivated

All levels of employees are committed to promote and implement this policy in every phase of the Company's activities.

## Kenyataan Dasar Kualiti

Malaysia Marine and Heavy Engineering Sdn. Bhd. (MMHE) merupakan organisasi yang dipercayai di peringkat global dalam perkhidmatan industri tenaga dan marin merangkumi kemudahan kejuruteraan berat dan kapal.

Demi mencapai Kecemerlangan Kualiti, kenyataan kualiti kami adalah :

- Kami menyediakan produk serta perkhidmatan berkualiti yang memenuhi kehendak pihak-pihak yang berkenaan
- Kami melaksanakan serta mengekalkan Sistem Pengurusan Kualiti yang efektif berasaskan piawaian yang berkaitan
- Kami mengamalkan budaya korporat yang berteraskan penambahbaikan berterusan
- Kami komited untuk terus membangunkan modal insan untuk menjadi cekap dan bermotivasi

Semua peringkat pekerja adalah komited untuk mempromosi dan melaksanakan dasar ini dalam setiap fasa aktiviti Syarikat.



**Wan Mashitah Wan Abdullah Sani**  
Managing Director & Chief Executive Officer  
Pengarah Urusan & Ketua Pegawai Eksekutif  
1 October 2017

### Appendix 12.5: HSE Policy



### Health, Safety & Environment Policy

It is the policy of Malaysia Marine and Heavy Engineering Sdn. Bhd. (MMHE) that all our activities shall be conducted in a manner which safeguards the Health, Safety and Welfare of all persons, as far as practicable and the conservation of the natural Environment.

Every employee of MMHE is obligated to work safely, to co-operate and act responsibly in preventing injury to himself and to others.

Our Health, Safety and Environment (HSE) objective shall bear equal importance with our fundamental business objectives.

In pursuance of this policy and in adherence to applicable legislative and other requirements with the commitment to achieve continual improvement, MMHE will endeavour to :

- Prevent all accidents, occupational diseases and fire
- Prevent damage to plant, equipment and property
- Protect and preserve the environment
- Implement safe system of work
- Promote Health, Safety and Environment (HSE) awareness and provide training to MMHE employees to achieve our HSE objectives
- Provide forum to employees, customers and contractors to actively participate in our HSE programmes
- Safeguard the relevant interest of the applicable interested parties
- Ensure that appropriate contingency measures are in place to deal with emergencies

### Dasar Kesihatan, Keselamatan & Persekitaran

Adalah menjadi dasar Malaysia Marine and Heavy Engineering Sdn. Bhd. (MMHE) supaya aktiviti yang dikendalikan, hendaklah dalam bentuk yang melindungi Kesihatan, Keselamatan dan Kebajikan semua individu, setakat yang praktik serta memelihara persekitaran semulajadi.

Setiap pekerja MMHE adalah berkewajipan bekerja dengan selamat, bekerjasama dan bertindak dengan bertanggungjawab bagi mengelakkan kecederaan kepada diri mereka dan orang lain.

Objektif Kesihatan, Keselamatan dan Persekitaran kita adalah sama penting dengan objektif perniagaan yang asas.

Dalam melaksanakan dasar ini dan mematuhi perundangan serta lain-lain keperluan yang berkenaan dengan komitmen untuk mencapai kemajuan yang berterusan, MMHE akan berusaha untuk :

- Mencegah semua kemalangan, penyakit pekerjaan dan kebakaran
- Mencegah kerosakan kepada loji, peralatan dan harta benda
- Melindungi dan memelihara persekitaran semulajadi
- Melaksanakan sistem pekerjaan yang selamat
- Menggalakkan kesedaran Kesihatan, Keselamatan dan Persekitaran serta menyediakan latihan kepada semua pekerja MMHE untuk mencapai objektif Kesihatan, Keselamatan dan Persekitaran kami
- Menyediakan forum kepada semua pekerja, pelanggan dan kontraktor untuk sama-sama mengambil bahagian dengan aktif dalam semua program Kesihatan, Keselamatan dan Persekitaran
- Melindungi kepentingan yang berkaitan dengan pihak-pihak yang berkenaan
- Memastikan langkah-langkah kontingensi yang sesuai disediakan untuk menghadapi situasi kecemasan



**Wan Mashitah Wan Abdullah Sani**  
Managing Director & Chief Executive Officer  
Pengarah Urusan & Ketua Pegawai Eksekutif  
1 October 2017

### Appendix 12.6: Stop Work Policy



## Stop Work Policy

Malaysia Marine and Heavy Engineering Sdn. Bhd. (MMHE) is committed to safeguard the safety and health of all persons and to conserve the natural environment.

It is the Company's policy that all persons have the right to stop work when there is an immediate threat to the safety and health of the workforce or to the natural environment.

The individual's right to stop work has the full support of Management. Where there is any doubt whether work should stop, employees, including contractor staff should immediately notify the hazardous situation to the immediate supervisor.

## Dasar Memberhentikan Kerja

Malaysia Marine and Heavy Engineering Sdn. Bhd. (MMHE) bertanggungjawab melindungi keselamatan dan kesihatan semua individu dan memulihara persekitaran semulajadi.

Adalah menjadi dasar Syarikat bahawa semua individu berhak memberhentikan kerja apabila terdapat keadaan yang menggugat keselamatan dan kesihatan pekerja-pekerja atau persekitaran semulajadi.

Pihak pengurusan memberi sokongan penuh terhadap individu yang memberhentikan kerja-kerja apabila terdapat keadaan yang membahayakan dan melaporkannya kepada penyelia bertugas dengan segera.



**Wan Mashitah Wan Abdullah Sani**  
Managing Director & Chief Executive Officer  
Pengarah Urusan & Ketua Pegawai Eksekutif  
1 October 2017

### **Appendix 12.7: Drug, Alcohol and Smoking Policy**



## **Drug, Alcohol & Smoking Policy**

Malaysia Marine and Heavy Engineering Sdn. Bhd. (MMHE) is fully committed to ensure that:

- All its employees, contractors, other personnel and facilities are free from drug and alcohol abuse in all its business activities
- All its employees, contractors and other personnel are not allowed to smoke conventional or electronic cigarette except at the designated areas

This is to foster and maintain a safe and healthy working environment wherever it operates. To achieve the above, MMHE shall:

- Comply with applicable local laws, rules and regulations, and industry code of practices
- Ensure all its workplaces are free from drug & alcohol by prohibiting the illicit use, possession, distribution, sale, storage, procurement or manufacture of the same
- Require all its employees and contractors to undergo drug and alcohol testing in accordance with Company's procedure
- Encourage employees who are drug and alcohol dependant to voluntarily seek professional counseling and rehabilitation
- Take proactive steps to promote awareness among employees on the hazards and ill effects of drug, alcohol and cigarette abuse
- Require all employees and contractors to strictly adhere to this policy

## **Dasar Dadah, Alkohol & Merokok**

Malaysia Marine and Heavy Engineering Sdn. Bhd. (MMHE) adalah komited sepenuhnya dalam memastikan:

- Semua pekerja, kontraktor, lain-lain kakitangan dan kawasan tempat kerja adalah bebas dari penyalahgunaan dadah dan alkohol dalam setiap aktiviti
- Semua pekerja, kontraktor dan lain-lain kakitangan adalah dilarang merokok sama ada rokok konvensional atau elektronik kecuali di kawasan yang dikhususkan

Ini adalah untuk memupuk dan mengekalkan persekitaran selamat dan sihat di mana-mana ia beroperasi. Bagi mencapai matlamat di atas, MMHE akan:

- Mematuhi segala perundangan tempatan, peraturan dan kod amalan kerja yang berkaitan
- Memastikan semua tempat kerja adalah bebas daripada dadah & alkohol dengan melarang penyalahgunaan, pemilikan, pengedaran, penjualan, penyimpanan, pembelian atau pembuatan dadah dan alkohol
- Memerlukan semua pekerja dan kontraktor untuk menjalani ujian dadah dan alkohol berdasarkan prosedur Syarikat
- Menggalakkan pekerja yang mengalami masalah dadah dan alkohol agar secara sukerela mendapatkan khidmat kaunseling profesional dan pemulihan
- Mengambil langkah proaktif bagi meningkatkan kesedaran tentang bahaya dan kesan negatif penyalahgunaan dadah, alkohol dan rokok di kalangan pekerja
- Memerlukan semua pekerja dan kontraktor mematuhi dasar ini dengan sepenuhnya



**Wan Mashitah Wan Abdullah Sani**  
Managing Director & Chief Executive Officer  
Pengarah Urusan & Ketua Pegawai Eksekutif  
1 October 2017

## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL

#### Appendix 12.8: Correspondence between the sub-elements of ISO 9001: 2015, OHSAS 18001:2007 and ISO 14001:2015

IMS Manual			Equivalent ISO 9001:2015			Equivalent ISO 14001:2015			Equivalent ISO 18001:2007		
Item	Sub-Clause	Item	Clause	Sub-Clause	Item	Clause	Sub-Clause	Item	Clause	Sub-Clause	Item
Introduction		Introduction	0.1		Introduction	0.1		Introduction	N/A	N/A	N/A
Background	1.1	Background	-	-	-	-	-	-	-	-	-
Organization Structure	1.2	Organization Structure	-	-	-	-	-	-	-	-	-
Scope		Scope	4	4.3	Determining the scope of QMS	4	4.3	Determining the scope of QMS	1		Scope
References		References	2		Normative Reference	2		Normative Reference	2		Reference Publication
Definition		Definition	3		Term & Definition	3		Term & Definition	3		Term & Definition
Integrated Management System		Integrated Management System	4	-	Understanding the organization and its context	4	-	Understanding the organization and its context	-	-	-
	5.1	General Requirement of IMS		4.4	Quality management system and its processes		4.4	Environmental management system and its processes	-	-	-
	5.2	Overall Business Interaction		4.4	Quality management system and its processes		4.4	Environmental management system and its processes	-	-	-



## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL

IMS Manual			Equivalent ISO 9001:2015			Equivalent ISO 14001:2015			Equivalent ISO 18001:2007		
	5.3	MMHE and its context		4.1	Understanding the organization and its context		4.1	Understanding the organization and its context	-	-	-
	5.4	The needs and expectation of interested parties		4.2	Understanding the needs and expectations of interested parties		4.2	Understanding the needs and expectations of interested parties	-	-	-
6		Leadership	5		Leadership	5		Leadership	-	-	-
	6.1, 6.1.1~6.1.5	Policies and strategic objectives, QP, HSEP, Stop Work Policy, D&A Policy		5.2, 5.2.1, 5.2.2	Policy, Establishing the quality policy, Communicating Policy		5.2, 5.2.1, 5.2.2	Environmental Policy		4.2	OH & S Policy
	6.2, 6.2.1, 6.2.2	Commitment & Resource Management, General Responsibility, Specific Responsibility		5.1.1, 5.1.2, 5.3	General, Customer Focus, Organizational roles, responsibilities and authorities		5.1.1, 5.1.2, 5.3	General, Customer Focus, Organizational roles, responsibilities and authorities		4.4.1	Resources, roles, responsibilities, accountabilities and authorities
7		Planning of IMS	6		Planning	6		Planning		4.3	Planning

## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL

IMS Manual			Equivalent ISO 9001:2015			Equivalent ISO 14001:2015			Equivalent ISO 18001:2007		
	7.1	Risk & Opportunities Management (General)		6.1	Actions address Risk & Opportunities		6.1	Actions address Risk & Opportunities	-	-	-
	7.1.1	Business		6.1, 6.1.1, 6.1.2	Actions address Risk & Opportunities	-	-	-	-	-	-
	7.1.2	HIRADC		-	-	-	-	-		4.3.1	Hazard Identification, Risk Assessment and determining Control
	7.1.3	Environmental Aspects		-	-		6.1.2, 6.1.4	Environmental Aspects, Planning Action	-	-	-
	7.1.4	Compliance Obligation		-	-		6.1.3, 6.1.4	Compliance Obligation, Planning Action	-	4.3.2	Legal & Other Requirement
	7.1.5	Objective & Target		6.2, 6.2.1, 6.2.2	Quality objectives and planning to achieve them		6.2, 6.2.1, 6.2.2	Environmental objectives and planning to achieve them		4.3.3	Objectives and Programmes
	7.1.6	QHSE Management Program		6.2.2	Planning Action		6.2.2	Planning Action	-	-	-
	7.1.7	Management Of Change	6.3		Planning Of Changes		8.1	Organization shall control planned changes and review the consequences	-	-	-

## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL

IMS Manual			Equivalent ISO 9001:2015			Equivalent ISO 14001:2015			Equivalent ISO 18001:2007		
								of unintended changes, taking actions to mitigate any adverse effects			
8		Resource, communication and Document Management	7		Support	7		Support	-	-	-
	8.1, 8.1.1, 8.1.2, 8.1.3	Resource Management, Resources, Infrastructure, Work Environment for operation		7.1.1, 7.1.2, 7.1.3, 7.1.4	Resource, General, People, Infrastructure, Environment for operation		7.1	Resource		4.4.1	Resources, roles, responsibilities, accountabilities and authorities
	8.1.4	Monitoring of measurement traceability		7.1.5, 7.1.5.1, 7.5.1.2	Monitoring and measuring resources, General, Measurement Traceability		-	-		4.5.1	Performance measurement and Monitoring
	8.1.5	Organizational Knowledge		7.1.6	Organizational Knowledge		-	-	-	-	-
	8.2	Competence		7.2	Competence		7.2	Competence		4.4.2	Competence, Training and Awareness
	8.3	Awareness		7.3	Awareness		7.3	Awareness		4.4.2	Competence, Training and Awareness

## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL

IMS Manual			Equivalent ISO 9001:2015			Equivalent ISO 14001:2015			Equivalent ISO 18001:2007		
	8.4	Communication, Participation and consultation		7.4	Communication		7.4	Communication		4.4.3.1	Communication
	8.5	Documentation, Control Of Document, Control Of Record		7.5	Documented Information		7.5	Documented Information		4.4.4, 4.4.5	Documentation, Control of documents
9		Operation Control	8		Operation	8		Operation		4.4.6	Operational Control
	9.1	Operational Planning & Control		8.1	Operational Planning & Control		8.1	Operational Planning & Control		4.4.6	Operational Control
	9.2	Prequalification & Bidding		8.2, 8.2.1, 8.2.2, 8.2.3, 8.2.4	Determining requirement for Product & Services, Review of the requirement for Product & Services, changes to requirement for Product & Services		-	-	-	-	-
	9.3	Design & Engineering		8.3, 8.5.6	Design and Development of Product & Services, Control Of Change		8.1(a)	Establish control to ensure environment requirement addressed in Design	-	4.3.1 (j)	the design of work areas, processes, installations, machinery/ equipment, operating procedures and work organization

## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL

IMS Manual			Equivalent ISO 9001:2015			Equivalent ISO 14001:2015			Equivalent ISO 18001:2007		
	9.4, 9.4.1,9.4.2	Control of externally provided processes (General) , products and services, Purchasing, Subcontracting Work		8.4,8.4.1,8.4.2, 8.4.3	Control of externally provided processes, products and services		8.1(b)	Environment requirement in procurement of product & services		4.4.6 (b), 4.4.6 (c )	Control Of Purchased goods, Control of Contractors
	9.5,9.5.1, 9.5.2,9.5.2.1,9.5.2.2, 9.5.2.3, 9.5.2.4, 9.5.2.5, 9.5.2.6	Work Execution, Project Management, Site and Production Control, Identification & traceability, Testing & Pre-comm, Hook-up & Commissioning, Sea Trial /Harbour Acceptance Test/ Inclining Test, Sludge and Slop Treatment, Customer Property		8.5, 8.5.1, 8.5.2, 8.5.3	Control of production and service provision, Identification & traceability, Property belonging to Customer or external providers		8.1	establish operating criteria for the process		4.4.6	Operational Control
	9.6	Material Management		8.5.4	Preservation		8.1(b)	Environment requirement in procurement of product & services		4.4.6 (b)	Control Of Purchased goods
	9.7	Control of non-conforming output		8.7,8.71,8.72	Control of non-conforming output		8.1	Implementing Control of the processes, in accordance to operating criteria		4.5.3.2	Nonconformity, corrective action and preventive action
	9.8	Delivery and Warranty		8.5.5	Release Of Product & Services		-	-		-	-

## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL

IMS Manual			Equivalent ISO 9001:2015			Equivalent ISO 14001:2015			Equivalent ISO 18001:2007		
	9.9	Emergency preparedness & Response	-	-	-		8.2	Emergency preparedness & Response		4.4.7	Emergency preparedness & Response
	9.1	Incident and investigation	-	-	-		-	-		4.5.3	Incident and investigation
10		Performance Monitoring, measurement, Analysis and Evaluation		9.1, 9.1.1	Performance Evaluation / Monitoring, measurement, analysis and evaluation		9.1, 9.1.1	Performance Evaluation / Monitoring, measurement, analysis and evaluation		4.5.1	Performance measurement and Monitoring
	10.1	Evaluation Of Compliance	-	-	-		9.1.2	Evaluation Of Compliance		4.5.2	Evaluation Of Compliance
	10.2	Customer Satisfaction		9.1.2	Customer Satisfaction		-	-		-	-
	10.3	Analysis and Evaluation		9.1.3	Analysis and Evaluation		9.1.1 ( e )	Determine when the results from monitoring and measurement shall be analysed		4.5.1 ( f )	Recording of data to facilitate corrective action and preventiveaction analysis
	10.4	Assurance		9.2	Internal Audit		9.2	Internal Audit		4.5.6	Internal Audit

## SYSTEM FUNDAMENTAL

### QUALITY, HEALTH, SAFETY AND ENVIRONMENT MANUAL

IMS Manual			Equivalent ISO 9001:2015			Equivalent ISO 14001:2015			Equivalent ISO 18001:2007		
	10.5	Management Review		9.3	Management Review		9.3	Management Review		4.6	Management Review
11		Improvement	10		Improvement	10		Improvement		-	-
	11.1	Non-Conformity and Corrective Action		10.2	Non-Conformity and Corrective Action		10.2	Non-Conformity and Corrective Action		4.5.3.2	Non-Conformity, Corrective Action and Preventive Action
	11.2	Continual Improvement		10.3	Continual Improvement		10.3	Continual Improvement		-	-