



OPERATION AND MAINTENANCE MANUAL

VOLUME I (GENERAL EQUIPMENT)

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1	IFI	31/05/2018	Rao Zhong Ming (Chief Engineer)	Xiao Chun Bao (Manager)	Chen Lian Cai (Chief Executive Officer)



Hengyi Industries Sdn Bhd
恒逸实业（文莱）有限公司

HYBN-T3-08-0001-2018-1

HSE Comprehensive Management System

HSE 综合管理制度

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Prepared by: Rao Zhong Ming

编 写：饶仲明

Reviewed by: Xiao chun bao

审 核：肖春宝

Approved by: Chen lian cai

批 准：陈连财

 HENGYI	Hengyi Industries Sdn Bhd 恒逸实业（文莱）有限公司				
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1 Purpose 目的

This System is hereby formulated in order to establish HSE policies and objectives, ensure that all HSE tasks are legal and compliant, and avoid a variety of production safety accidents.

建立公司 HSE 方针目标,确保各项 HSE 工作合法合规, 防范各类生产安全事故的发生, 特制定本制度。

2 Scope of Application 适用范围

This System is applicable to all departments and external contractors of the Company.

本制度适用于公司各部门及外来承包商。

3 Terms and Definitions 术语和定义

3.1 HSE laws and regulations as well as other relevant requirements: laws, regulations, national and industrial standards, and requirements of government and superior company concerning HSE. HSE 法律法规及其他有关要求: 指与 HSE 相关的法律法规、国家、行业标准以及政府、上级公司的 HSE 相关要求。

3.2 Three simultaneities of HSE: HSE facilities are designed, conducted and put into use with the main works at the same time.

“HSE”三同时: 指 HSE 设施与主体工程同时设计、同时施工、同时投入使用。

3.3 Change: changes in content or scope due to process, equipment, management, personnel, standards and systems. Such changes may exert impact or cause hazard to quality, health, environmental protection and safety.

变更: 指因工艺、设备、管理、人员、标准体系等发生内容的改变或范围的变化, 并且这些改变有可能导致质量、健康、环保、安全方面产生影响或危害。

3.4 Major change: change occurring in the course of production which leads to resubmission of safety case or causes risk evaluation value to be 70 points or more.

重大变更: 指生产过程中导致必须重新提交安全例证 (safety case) 或风险评价分值为 70 分及以上的变更。

3.5 Hidden danger: hazardous conditions of a thing, unsafe behavior of a person and management defect which may cause accident or magnify accident consequence due to nonconformity to HSE laws, regulations, standards, procedures and management systems or existence of other factors in production & operation activities.

隐患: 指不符合 HSE 法律、法规、标准、规程和 HSE 管理制度, 或者因其他因素在生产经营活动中存在可能导致事故发生或导致事故后果扩大的物的危险状态、人的不安全行为和管理上的缺陷。

3.6 Accident: accident which leads to loss of life or personal injury, property loss, environmental disruption and negative impact on corporate image in the course of production and operation for work-related reasons.

事故：指公司生产经营活动中因工作原因造成人员伤亡、财产损失、环境破坏或企业形象受到负面影响的意外事件。

4 Management Responsibilities 管理职责

4.1 Specified administrative authority 归口管理部门

4.1.1 HSE Dept. is responsible for preparation and amendment of this System and monitoring of implementation of this System by all departments.

HSE 管理部负责制（修）定本制度并监督各部门的执行情况。

4.1.2 Be responsible for preparation of HSE guidelines and policies, target indicators, annual HSE work plans of the Company. 负责制定公司 HSE 方针政策、目标指标、年度 HSE 工作计划。

4.1.3 Be responsible for identification, acquisition, updating, communication and implementation of HSE laws and regulations as well as other related requirements.

负责 HSE 法律法规及其他有关要求的识别、获取、更新、传达与落实。

4.1.4 Be responsible for monitoring and implementation of HSE-related three simultaneities of construction project and technical improvement project, organization and implementation of HSE assessment for construction project and handling of related HSE permits as required by the government. 负责监督落实建设项目和技改项目 HSE “三同时”工作，组织开展建设项目相关 HSE 评估，按照政府规定办理相关 HSE 许可。

4.1.5 Organize corporate HSE meeting at regular interval and be responsible for routines of the Office of Production Safety Committee.

定期组织公司 HSE 会议，负责安全生产委员会办公室的日常工作。

4.1.6 Be responsible for organization and implementation of HSE education and training.

负责组织开展 HSE 教育和培训。

4.1.7 Be responsible for supervision and inspection of implementation and management of a variety of changes; organize preparation of HSE hidden danger identification plan, and monitor implementation of rectification of hidden dangers. 负责监督、检查各类变更的实施与管理；组织制定 HSE 隐患排查计划，监督隐患问题的整改落实。

4.1.8 Take the lead to organize preparation of various emergency plans of the Company and organize and conduct exercise and review-based revision at fixed period.

负责牵头组织公司各类应急预案的编制，并定期组织开展演练和评审修订。

4.1.9 Be responsible for investigation and handling of HSE accidents and collection, statistics and reporting of all accidents. 负责公司 HSE 事故的调查处理和各类事故汇总、统计、上报。

4.1.10 Be responsible for implementation of HSE inspection, assessment and punishment and reward for all departments and contractors of the Company.

负责对公司各部门和承包商实施 HSE 检查、考核与奖惩。

4.2 Collaborative management departments 协同管理部门

4.2.1 CEO's Office 总经理办公室

4.2.1.1 Transfer related HSE laws, regulations and documents issued by the Government of Brunei and the superior company to leaders and departments concerned in a timely manner. 负责将文莱政府和上级公司下发的有关 HSE 法规和文件及时传送给相关领导和部门。

4.2.1.2 Be responsible for hazard identification, risk assessment and control, change management, HSE-related information release and HSE routine management within its scope of duty. 负责职责范围内的危险源辨识、风险评价和控制、变更管理、HSE 相关信息对外发布、HSE 日常管理等。

4.2.2 HR Dept. 人力资源部

4.2.2.1 Equip HSE management organization and HSE management personnel satisfying job requirements as required. 按要求配备 HSE 管理机构及满足岗位要求的 HSE 管理人员。

4.2.2.2 Make overall plan for employee training of the Company, in order to enable them to meet HSE skill requirements. 统筹公司员工培训工作，使其满足 HSE 技能要求。

4.2.2.3 Include HSE work of all departments into performance assessment of the Company. 将各部门 HSE 工作，纳入公司绩效考核。

4.2.2.4 Participate in investigation of related HSE accidents, and implement Work Safety Committee's assessment of units and personnel responsible for such accidents. 参与相关 HSE 事故调查，落实安委会对事故责任单位和人员的考核。

4.2.2.5 Be responsible for HSE management within its scope of business. 负责本部门业务范围内的 HSE 管理工作。

4.2.3 Finance Dept. 财务管理部

Implement HSE production expenses and guarantee enough funds and HSE management within its scope of business.

负责落实 HSE 生产费用，确保资金到位以及本部门业务范围内的 HSE 管理工作。

4.2.4 Commercial Dept. 商务部

Be responsible for review of HSE qualifications of related parties of raw materials/products regarding production, operation and transportation and HSE management within its scope of business. 负责核查原料、产品相关方的生产、经营、运输等 HSE 资质以及本部门业务范围内的 HSE 管理工作。

4.2.5 Materials & Supplies Dept. 物资装备部

4.2.5.1 Ensure that materials and suppliers provided by contractors satisfy related HSE requirements of China, the Government of Brunei and the Company and there shall be definite HSE liability clauses in contracts. 确保承包商提供的物资和服务符合国家、文莱政府和公司相关 HSE 要求，合同中要有明确的 HSE 责任条款。

4.2.5.2 Undertake corresponding emergency tasks in accordance with emergency management duties assigned by the Company and be responsible for procurement, storage and supply of emergency materials and supplies. 按照公司应急管理职责，承担相应的应急工作，负责公司应急物资的采购、保管和供应。

4.2.5.3 Be responsible for HSE management within its scope of business including warehouse. 负责仓库等本部门业务范围内的 HSE 管理工作。

4.2.6 Scheduling & Dispatch Dept. 计划调度部

4.2.6.1 Be responsible for production technology review and process change management regarding “three simultaneities” of construction and technical improvement projects.

负责建设和技改项目 HSE“三同时”生产技术审查和工艺变更管理。

4.2.6.2 Be responsible for organization of hidden danger identification and treatment in the fields of production, quality, and process & technology.

负责组织生产、质量及工艺技术专业隐患排查和治理。

4.2.6.3 Be responsible for organization of preparation and implementation of production emergency plan, and production command and coordination in the course of emergency response in accordance with emergency management responsibilities assigned by the Company.

负责组织编制生产预案并演练，按照公司应急管理职责，负责应急响应时的生产指挥和协调。

4.2.6.4 Be responsible for investigation, handling and statistical reporting of production accidents and engagement in investigation and disposal of other kinds of accidents.

负责生产事故调查处理、统计报告，参与其它各类事故的调查处理。

4.2.6.5 Be responsible for operation management of environmental protection devices and facilities, inclusion of environmental protection indicators into process control so as to ensure discharge standards are met.

负责环保装置和设施的运行管理，将环保指标纳入工艺运行控制，确保达标排放。

4.2.6.6 Implement all process measures and requirements concerning safety and environmental protection in the course of start-up, shutdown and commissioning.

在开停工和试车过程中，落实安全、环保各项工艺措施和要求。

4.2.6.7 Participate in tasks related to process safety management.

参与工艺安全管理的相关工作。

4.2.7 Equipment Management Dept. 机械动力部

4.2.7.1 Be responsible for HSE management of all equipment and facilities and enable them to satisfy HSE technical specifications, standards and systems.

负责各种设备、设施的 HSE 管理，使其符合 HSE 技术规范、标准和制度的要求。

4.2.7.2 Be responsible for management of changes in equipment and facilities.

负责设备、设施变更管理。

4.2.7.3 Be responsible for management of static sealing point of equipment and organize equipment leakage detection and repair. 负责设备静密封点管理，组织设备泄漏检测与修复。

4.2.7.4 Be responsible for examination and management of contractors' qualifications within

its scope of duties and supervise and urge contractors to implement HSE programs for construction. 负责职责范围内承包商资格审查和管理，督促承包商落实工作业 HSE 方案。

4.2.7.5 Be responsible for organization of professional hidden danger identification and control. 负责组织设备专业隐患排查和治理。

4.2.7.6 Be responsible for organization of preparation and implementation of equipment emergency plan, and urgent repair in the course of emergency response in accordance with emergency management responsibilities assigned by the Company. 负责组织编制设备预案并演练，按照公司应急管理职责，负责应急响应时的抢修工作。

4.2.7.7 Be responsible for investigation, handling and statistical reporting of equipment accidents and engagement in investigation and disposal of other kinds of accidents. 负责设备事故调查处理、统计报告，参与其它各类事故的调查处理。

4.2.8 Information Management Dept. 信息管理部

Be responsible for establishment and maintenance of HSE information system as well as HSE management within its scope of business. 负责 HSE 信息化系统的建立和维护及本部门业务范围内的 HSE 管理工作。

4.3 Executive departments 执行部门

4.3.1 All production operation departments act as executive departments and they shall establish their own HSE management organizations, implement all HSE management systems and requirements of the Company, and examine and monitor implementation of HSE systems. 各生产运行部门为执行部门，负责建立本部门 HSE 管理组织，落实公司各项 HSE 管理制度和要求，检查监督 HSE 制度的落实。

4.3.2 Implement their “three simultaneities” tasks regarding construction and technical improvement projects, prepare their own HSE training plans and organize implementation as planned. 负责落实本部门建设和技改项目 HSE“三同时”工作，制定本部门 HSE 培训计划，并按计划组织实施。

4.3.3 Be responsible for daily inspection and operational maintenance of their own HSE facilities, conduct HSE hidden danger identification and control, and guarantee stable operation of production devices; be responsible for HSE management of contractors within their scope of duties. 负责本部门 HSE 设施的日常检查及运行维护工作，开展 HSE 隐患排查和治理，保证生产装置的平稳运行；负责所辖区域承包商 HSE 管理。

4.3.4 Be responsible for preparation of their onsite emergency response plans and organization of regular exercise as planned; be responsible for investigation, handling and statistical reporting of accidents at the level of operational department. 负责编制本部门现场处置预案，按计划定期组织演练；负责运行部级事故的调查处理，统计报告。

5 Management Content 管理内容

5.1 Management principles and content 管理原则和内容

5.1.1 As for comprehensive HSE management, each performs its own functions and undertakes its own responsibilities within its scope of work in accordance with the principles of “One in charge shall assume the responsibilities” and “One in charge of production must also be responsible for HSE”. HSE 综合管理按照“谁主管、谁负责”、“管业务必须管 HSE”原则，在各自工作范围内，各司其职、各负其责。

5.1.2 In order to further define HSE responsibilities and requirements, the Company has prepared HSE Responsibility System for which please see appendix. 为进一步明确 HSE 职责要求，公司制定《HSE 责任制》，见附件。

5.1.3 Comprehensive HSE management content includes: identification of HSE organizational system, policies & objectives, HSE commitments and HSE laws and regulations, management of three simultaneities, HSE facility management, HSE meeting, HSE training, HSE signs and labels, change management, work permit management, accident management, HSE management for contractors (suppliers), HSE hidden danger identification, HSE assessment, emergency plans, HSE permits from government, management of project-related three simultaneities, etc. HSE 综合管理的内容包括 HSE 组织体系、方针目标、HSE 承诺、HSE 法律法规识别、三同时管理、HSE 设施管理、HSE 会议、HSE 培训、HSE 标识标牌、变更管理、作业许可管理、事故管理、承包商（供应商）HSE 管理、HSE 隐患排查、HSE 考核、应急预案、政府 HSE 许可、项目 HSE “三同时”管理等。

5.2 HSE organization HSE 组织机构

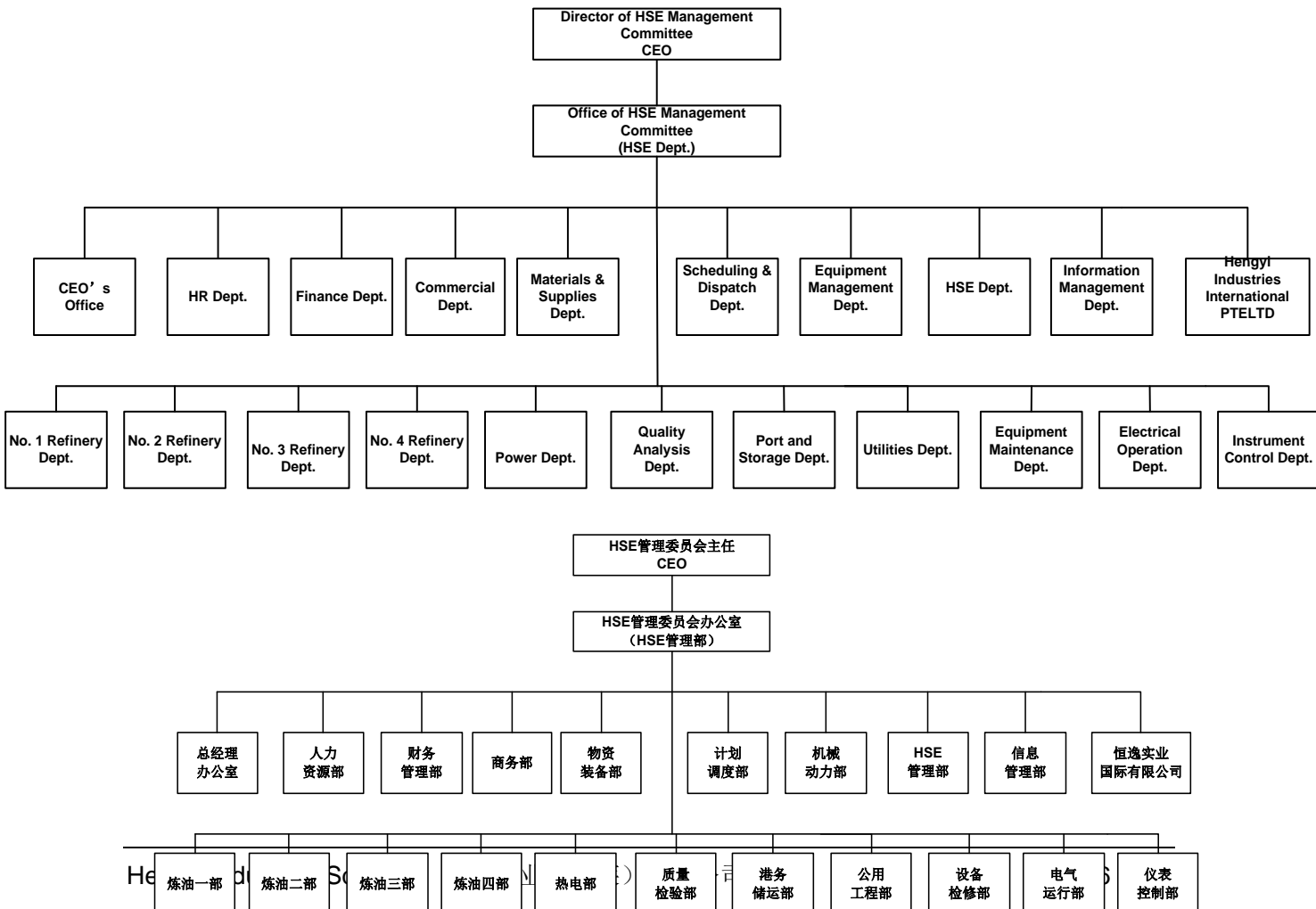


Fig. 1 HSE organization 图 1 HSE 组织机构

HSE Management Committee, the highest decision making body for HSE management of the Company, reviews and determines major HSE matters of the Company. It is composed of leadership of the Company and principals of all departments and CEO of the Company serves as Director of HSE Management Committee. Office of HSE Management Committee is located in HSE Dept.

HSE 管理委员会作为公司 HSE 管理最高决策机构，审议决定公司 HSE 工作重大事项。HSE 管理委员会由公司领导班子和各部门正职组成，公司 CEO 担任 HSE 管理委员会主任。HSE 管理委员会办公室设在 HSE 管理部。

5.3 HSE policies and objectives HSE 方针目标

5.3.1 HSE Policies of the Company 公司 HSE 方针

HSE management of Hengyi Industries Sdn Bhd is committed to implementing and continuously facilitating health, safety, security and environmental protection for our own activities and surrounding communities. 恒逸实业（文莱）有限公司 HSE 管理致力于为我们的活动和社区周边地区实施和不断促进健康、安全、安保和环境保护。

5.3.1.1 Health: ensure health and welfare of employees and surrounding communities;

健康：确保员工和周围社区的健康和福利；

5.3.1.2 Safety: ensure all risks and hazards are reduced to a level as low as reasonably practicable (ALARP); 安全：确保所有风险和危害降低到合理可行的最低水平（ALARP）；

5.3.1.3 Security: ensure there are safe systems and sound organizations;

安保：确保拥有安全的系统和良好的组织；

5.3.1.4 Environment: ensure that the environment is protected as required by the Government of Brunei and international requirements.

环境：根据文莱政府和国际要求确保环境受到保护。

5.3.2 HSE objectives of the Company 公司 HSE 目标

Zero damage, zero pollution and zero accident, world leading in terms of HSE performance.

零伤害、零污染、零事故，创国际一流的 HSE 业绩。

5.4 HSE commitment HSE 承诺

It shall observe all HSSE laws, regulations and requirements of the Government of Brunei, establish HSE management system, seek for zero damage, zero pollution and zero accident, and establish a world leading position in terms of HSE performance. 遵守文莱政府各项 HSSE 法律法规和要求，建立 HSE 管理体系，追求零伤害、零污染、零事故，创国际一流的 HSE 业绩。

5.5 Identification and conformity assessment of HSE laws, regulations and other related requirements HSE 法律法规及其他有关要求识别与符合性评价

5.5.1 Scope 范围

International convention, constitution, laws and regulations of Brunei, and national and industrial standards. 国际公约、文莱宪法和法律法规，国家、行业标准。

5.5.2 Approach of acquisition 获取途径

Notices, announcements and databases of the Government of Brunei and superior company 文莱政府和上级公司通知、公告、数据库。

5.5.3 Identification, acquisition, updating and communication 识别、获取、更新、传达

5.5.3.1 All functional departments shall obtain HSE laws, regulations and other related requirements concerning all production & operation links of the Company from competent government departments and superior company in a timely manner. 各职能部门从政府主管部门和上级公司及时获取与公司生产经营各环节相关的 HSE 法律法规及其他有关要求。

5.5.3.2 All functional departments shall update and submit list of HSE laws, regulations and other related requirements applicable to themselves to HSE Dept. within one week prior to the end of half a year. 各职能部门应在每半年结束前 1 周内更新并向 HSE 管理部报送本部门适用的 HSE 法律法规及其他有关要求清单。

5.5.3.3 All functional departments shall identify and obtain HSE laws, regulations and other related requirements and communicate them to all related parties. 各职能部门应将识别、获取的 HSE 法律法规及其他有关要求传达到各相关方。

5.5.3.4 HSE Dept. shall collect and update lists of HSE laws, regulations and other related requirements. HSE 管理部汇总和更新 HSE 法律法规及其他有关要求清单。

5.5.4 Implementation 执行

5.5.4.1 All functional departments shall include HSE laws, regulations and other related requirements into management systems related to their disciplines. 各职能部门应当将 HSE 法律法规及其他有关要求纳入到本专业相关管理制度中。

5.5.4.2 All departments shall implement HSE laws, regulations and other related requirements in a strict manner. 各部门应严格执行 HSE 法律法规及其他有关要求。

5.5.5 Conformity assessment 符合性评价

5.5.5.1 All functional departments shall, in accordance with lists of HSE laws, regulations and other related requirements applicable to themselves, conduct conformity assessment of HSE laws, regulations and other related requirements, and submit their forms for such conformity assessment to HSE Dept. within one week prior to the end of half an year. 各职能部门应按照本部门适用的 HSE 法律法规及其他有关要求清单开展 HSE 法律法规及其他有关要求符合性评价，并在每半年结束前 1 周内向 HSE 管理部报送 HSE 法律法规及其他有关要求符合性评价表。

5.5.5.2 HSE Dept. shall collect and update such forms for conformity assessment of HSE laws, regulations and other related requirements. HSE 管理部汇总和更新 HSE 法律法规及其他有关要求符合性评价表。

5.5.5.3 HSE Dept. shall prepare and issue report on conformity assessment of HSE laws, regulations and other related requirements of the Company at least annually according to such lists and forms. HSE 管理部应每年至少一次依据 HSE 法律法规及其他有关要求清单和符合性评价表编制和发布公司 HSE 法律法规及其他有关要求符合性评价报告。

5.5.6 Handling of results of conformity assessment 符合性评价结果的处理

All departments shall immediately correct and rectify problems found by conformity assessment. 各部门应对符合性评价中发现的问题立即纠正和整改。

5.6 HSE management for construction project 建设项目 HSE 管理

5.6.1 Feasibility study stage 可行性研究阶段

It is necessary to entrust qualified appraisal organizations to prepare safety risk assessment report, pre-assessment report on occupational disease hazards and environmental impact report. It shall manage and control project risks through systematic hazard identification and assessment. All reports shall satisfy requirements of the Government of Brunei for declaration. 应委托具有相应资质的评价机构编制安全风险评估报告、职业病危害预评价报告及环境影响报告，并组织评审。通过系统的危害识别评价，对项目的风险加以管理及控制。各类报告应满足文莱政府的申报要求。

5.6.2 Design stage 设计阶段

5.6.2.1 Design of HSE facilities of a construction project shall be implemented by designer with corresponding design qualification which shall implement national design standards and those required by the Government of Brunei in a strict manner. 建设项目 HSE 设施设计应当由取得相应设计资质的设计单位进行，设计单位应严格执行国家和文莱政府要求的设计标准。

5.6.2.2 It is imperative to include special articles regarding safety, environmental protection, occupational health and fire control, implement HSE-related pre-assessment conclusions approved in a strict manner, and organize experts for review. 设计文件应编制安全、环保、职业卫生、消防等专篇，应严格落实经批准的 HSE 相关预评价结论，并组织专家审查。

5.6.2.3 It shall complete hazid\hazop\qra\sil risk evaluation in a timely manner and design notification as required by laws and submit them for approval in accordance with time limit specified by the Government of Brunei. 及时完成 hazid\hazop\qra\sil 等风险评估，依法完成设计通知，按照文莱政府的规定时限报审。

5.6.2.4 At detailed design stage, it shall complete safety case report in accordance with laws and submit it for approval in accordance with time limit specified by the Government of Brunei. 详细设计阶段，应依法完成 safety case 报告，按照文莱政府的规定时限报审。

5.6.3 Construction stage 施工阶段

5.6.3.1 On-site construction can be conducted only when related HSE permits have been obtained from departments of the Government of Brunei. 在取得文莱政府部门 HSE 相关许可后，方可开展现场施工。

5.6.3.2 Construction of a construction project shall be implemented by units with corresponding engineering construction qualification which shall be responsible for engineering quality of the construction project. 建设项目的施工应当由取得相应工程施工资质的单位进行，并对建设项目工程质量负责。

5.6.3.3 During the construction period of a construction project, it shall establish HSE management systems and plans. 建设项目的施工期应建立 HSE 管理体系和方案。

5.6.3.4 As for construction project, it shall organize designer, constructors and its own personnel engaged in engineering technology and HSE to conduct “three examination and four determination” work (examination of design omission, engineering quality and hidden engineering danger, and determination of tasks, personnel, time and rectification measures). As for problems founded in such examination, it is important to put personnel, measures, time and funds in place and conduct timely rectification. 建设项目应组织设计、施工、监理和本单位工程技术和 HSE 人员开展“三查四定”工作（查设计漏项、查工程质量、查工程隐患，定任务、定人员、定时间、定整改措施）。针对检查存在的问题，落实人员、措施、时间、资金等并及时进行整改。

5.6.3.5 During the construction period of construction project, it shall conduct environmental monitoring. 建设项目施工期应开展环境监测。

5.6.3.6 At the time of signing of construction project contracts with engineering contractors, there shall be HSE related contents in such contracts. Contracts shall define HSE responsibilities of all parties to these contracts and it is also necessary to supervise and inspect implementation of HSE measures by constructors. 与工程承包单位签订工程建设项目合同时，应有 HSE 方面的内容。合同中应明确合同各方承担的 HSE 责任，并监督检查施工单位 HSE 措施的执行情况。

5.6.3.7 For specific requirements for HSE management of construction project, please refer to relevant HSE management regulations for construction project. 有关建设项目施工 HSE 管理具体要求参照建设项目 HSE 管理相关规定。

5.6.4 Trial production stage 试生产阶段

After mechanical completion and joint commissioning of a construction project, it shall organize and implement trial production safety inspection and submit trial production to competent departments under the Government of Brunei. Please see 5.18 for permission formalities. 建设项目机械完工并联合调试之后，应组织开展试生产安全检查，并按照要求向文莱政府主管部门进行试生产报批，许可手续见 5.18。

5.6.4.1 Steps for trial production safety inspection 试生产安全检查步骤

(1) Establishment of trial production safety inspection team 成立试生产安全检查小组

The team shall be chaired by executive leadership of the Company and composed of personnel engaged in such disciplines as technology, equipment, electric, instrument, maintenance and

repair and main operation and HSE. If necessary, contractors, equipment manufacturers and external experts with specific knowledge and experience may be included. It shall conduct trial production safety inspection based on checklist prepared in advance. For main inspection contents, please see Pre-startup Safety Checklist.

检查组长由公司主管领导担任，小组成员由工艺、设备、电气、仪表、检维修、主要操作和 HSE 等专业人员组成。必要时可包括承包商、装置制造商、具有特定知识和经验的外部专家。按照事先编制好的检查清单进行试生产安全检查，主要检查内容见《启动前安全检查表》。

(2) Inspection implementation 实施检查

The inspection is divided into documentation review and site inspection. Inspection team members shall carry out the inspection of processing equipment as per the inspection list, and record any problem found in written and determine the inspection contents, inspection place and inspector within the specified scope of responsibilities. 检查分为文件审查和现场检查。检查组成员应根据任务分工，依据检查清单对工艺设备进行检查，将发现的问题形成书面记录并明确检查内容、检查地点、检查人。

(3) Review 审议

After completion of inspection of all items in the trial production checklist, all team members shall report problems founded in the course of inspection, review and classify them into those compliant and those non-compliant, form General Report on Pre-startup Safety Inspection, and confirm rectification item and personal responsible for non-conformances. 完成试生产检查清单的所有项目后，各组员汇报检查过程中发现的问题，审议并将其分类为符合项和不符合项，形成《启动前安全检查综合报告》，确认不符合项整改时间和责任人。

(4) Approval and follow-up 批准和跟踪

After completion of rectification of all non-conformances, team leader can transfer the inspection report to the Project Principal. According to project management authority, related principals can review and approve the start-up of trail production. 所有不符合项完成整改后，检查组长将检查报告移交给项目负责人。根据项目管理权限，由相应责任人审查并批准启动。

(5) Documentation filing 文件整理

As for non-conformances involving change, related drawings and design documents shall be updated and filed. After completion of rectification of left items, it is necessary to produce written records which shall, together with safety checklist and general report, be filed. 对于涉及变更的不符合项，应将相关图纸、设计文件等进行更新并归档。遗留项整改完成后，应形成书面记录，与安全检查清单、综合报告一并归档。

5.7 Management of HSE facilities HSE 设施管理

5.7.1 Classification of HSE facilities HSE 设施分类

HSE facilities can be divided into safety facilities and environmental protection facilities.

HSE 设施分为安全设施和环保设施。

5.7.1.1 Safety facilities 安全设施

(1) Accident prevention facilities 预防事故设施

1) Detection & monitoring alarm facilities: monitoring alarm facilities for pressure, temperature, liquid level, flow and component, detection & monitoring alarm facilities for flammable gas, toxic

and harmful gas and oxygen, and testing & detection equipment and instruments for safety inspection and safety data analysis. 检测、监测报警设施：压力、温度、液位、流量、组份等监测报警设施，可燃气体、有毒有害气体、氧气等检测、监测报警设施，用于安全检查和数据分析等检验检测设备、仪器。

2) Equipment safety protection facilities: shield, protective screen, load limiting device, stroke limiter, facilities regarding braking, rate limiting, thunder prevention, moisture resistance, sun blocking, frostbite prevention, corrosion prevention and seepage defense, secure locking facilities for transmission equipment, overload protection facilities, and electrostatic grounding facilities. 设备安全防护设施：防护罩、防护屏、负荷限制器、行程限制器，制动、限速、防雷、防潮、防晒、防冻、防腐、防渗漏等设施，传动设备安全锁闭设施，电器过载保护设施，静电接地设施。

3) Blasting protection facilities: blasting protection facilities for all electrical supplies and instruments, facilities for inhibition of mix of combustion supporting items (i.e., nitrogen sealing) and formation of flammable and combustible gases and dusts, barrier blasting prevention devices, and blasting prevention tools and instruments. 防爆设施：各种电气、仪表的防爆设施，抑制助燃物品混入（如氮封）、易燃易爆气体和粉尘形成等设施，阻隔防爆器材，防爆工器具。

4) Safeguard facilities for workplace: radiation-resistant, anti-static, soundproof, ventilation (dedusting and toxicant elimination), guard railing (net), skid-resistance and thermal injury-resistance facilities for workplace. 作业场所防护设施：作业场所的防辐射、防静电、防噪音、通风（除尘、排毒）、防护栏（网）、防滑、防灼烫等设施。

5) Safety warning mark: including all warning marks for indication and alarming of work safety, evacuation and wind direction. 安全警示标志：包括各种指示、警示作业安全和逃生避难及风向等警示标志。

(2) Accident control facilities 控制事故设施

1) Pressure relief and non-return facilities: valves, rupture disks, blow-down pipes and other facilities used for pressure relief, valves and other facilities for discharge check, and sealing facilities for vacuum system. 泄压和止逆设施：用于泄压的阀门、爆破片、放空管等设施，用于止逆的阀门等设施，真空系统的密封设施。

2) Emergency response facilities: emergency power supply, emergency facilities for shutdown, shunting, discharge (torque), absorption, neutralization and cooling, facilities for addition or inletting of inert gases and action inhibitors, and facilities for emergency shutdown and instrument interlocking. 紧急处理设施：紧急备用电源，紧急切断、分流、排放（火炬）、吸收、中和、冷却等设施，通入或者加入惰性气体、反应抑制剂等设施，紧急停车、仪表联锁等设施。

(3) Facilities for reducing and eliminating accident influence 减少与消除事故影响设施

1) Facilities for prevention of fire spread: back-fire relief valve, safety water seal, flashback arrestor, greaseproof (fireproof) bank, blast wall, explosion door and other explosive-proof facilities, firewall, fire door, steam curtain, water curtain and other facilities, and fireproof material coatings. 防止火灾蔓延设施：阻火器、安全水封、回火防止器、防油（火）堤，防爆墙、防爆门等隔爆设施，防火墙、防火门、蒸汽幕、水幕等设施，防火材料涂层。

2) Fire extinguishing facilities: fire extinguishing facilities including sprinkler, inert gases, steam and foam release, fire hydrant, high-pressure water torch (cannon), fire fighting truck, fire control water pipe network, fire station, etc. 灭火设施：水喷淋、惰性气体、蒸气、泡沫释放等灭火设施，消火栓、高压水枪（炮）、消防车、消防水管网、消防站等。

3) Emergency facilities for individuals: eye bath, spray thrower, escape device, escape rope, emergency lighting and other facilities. 紧急个体处置设施: 洗眼器、喷淋器、逃生器、逃生索、应急照明等设施。

4) Emergency rescue facilities: leakage stoppage and engineering rescue equipment and medical treatment and rescue equipment for injured field personnel. 应急救援设施: 堵漏、工程抢险装备和现场受伤人员医疗抢救装备。

5) Escape & shelter facilities: exit passageway (ladder) for escape and shelter, safe shelter with air breathing system, and refuge signal. 逃生避难设施: 逃生和避难的安全通道(梯)、安全避难所(带空气呼吸系统)、避难信号等。

6) Articles and equipment for labor protection: fireproof, anti-toxin, thermal injury-resistant, anti-corrosion, soundproof, sun-protective, fall resistant, anti-smash and puncture-proof articles and equipment for labor protection protecting head, face, eyes, respiratory organ and auditory organ from harm of physical and chemical factors at workplace. 劳动防护用品和装备: 包括头部, 面部, 视觉、呼吸、听觉器官, 四肢, 躯干防火、防毒、防灼烫、防腐蚀、防噪声、防光射、防高处坠落、防砸击、防刺伤等免受作业场所物理、化学因素伤害的劳动防护用品和装备。

5.7.1.2 Environment protection facilities 环保设施

A variety of treatment (disposal), purification, emergency and comprehensive utilization facilities built for the prevention and control of pollution to the environment caused by three wastes in the production process, and their supporting facilities and equipment, such as the sewage lifting pump station, sewage pipe network, deodorization device, sewage draining exit, exhaust funnel, emergency lagoon and automatic monitored control system. 为防止生产过程排放的“三废”对环境的污染而建造的各种处理(处置)、净化、应急、综合利用设施, 以及与这些设施配套安装的污水提升泵站、污水管网、除臭装置、排污口、排气筒、应急池、自动监控系统等设施设备。

5.7.2 Daily management of safety facilities 安全设施日常管理

5.7.2.1 Personnel using safety facilities shall be subject to special training and they shall use such facilities in a proficient and correct way. 使用安全设施的人员应进行专项培训, 并熟练正确使用。

5.7.2.2 Safety facilities shall be managed in strict accordance with the system of “three fixed and one shift”, i.e., such facilities shall be stored at fixed place, maintained by specially assigned personnel, examined at regular interval and included in shift change, so as to ensure good conditions of such facilities. 安全设施的管理应严格执行“三定一交”制度: “定点存放、定人维护、定期检查, 列入交接班”, 确保完好备用。

5.7.2.3 All departments shall conduct regular inspection of safety facilities and those required verification shall be verified by all competent departments periodically. 各部门应对安全设施定期检查, 需校验的安全设施由各主管部门定期校验。

5.7.2.4 Safety facilities shall not be left unused, out of service, transformed, used for other purposes or removed without causes. 安全设施不得无故闲置、停用、改造、挪作它用或拆除。

5.7.2.5 It is strictly prohibited to stack cats and dogs around fire control, emergency and electric fire protection facilities which shall be available at any time. 消防、应急、气防设施周围严禁堆放杂物, 保持随时可以取用的良好状态。

5.7.2.6 Maintenance, care, maintenance and repair of safety facilities shall be included in management work of all departments and safety facilities shall be included when equipment overall and repair plan is prepared. 安全设施的维护保养、检维修工作应纳入各部门专业管理，在制定设备检维修计划时应涵盖安全设施。

5.7.2.7 If a department has to remove safety facilities, it shall organize professionals to discuss and implement removal in accordance with requirements of the Company for fixed assets management.

各部门确需拆除安全设施的，应组织专业人员进行论证，并按公司固定资产管理要求执行。

5.7.3 Scrapping and change of safety facilities 安全设施的报废及变更

When any of the following conditions is met, safety facilities shall be scrapped and shall not be used any more. 当符合下述条件之一时，安全设施应予以报废，不得继续使用。

5.7.3.1 Those failing to meet relevant standards; 不符合相关标准的；

5.7.3.2 Those failing to reach functional indicators specified by standards; 未达到标准所规定的功能指标；

5.7.3.3 Those damaged or out of validity during the period of service or storage; 在使用或保管贮存期间遭到损坏或超过有效期；

5.7.3.4 If safety facilities haven't be expired but lose their protective effect due to working environment, they are allowed to apply for scrapping; 因工作环境导致安全设施未到报废日期但失去防护作用的，可以申请报废；

5.7.3.5 Safety protection equipment which can be repaired are allowed to apply for scrapping after verification; 无法维修的安全防护用品，经核实后可以申请报废；

5.7.3.6 Scrapping of safety facilities shall be implemented in accordance with requirements of the Company for fixed assets management. 安全设施的报废按公司固定资产管理要求执行。

5.7.3.7 Change in safety facilities shall be implemented in accordance with 5.11.安全设施变更按 5.11 要求执行。

5.7.4 Daily management of environmental protection facilities 环保设施日常管理

It shall be implemented according to Environmental Protection Management System. 参照《环保管理制度》执行。

5.8 HSE meeting HSE 会议

5.8.1 Meeting category and attendees 会议分类及出席人员

5.8.1.1 Meetings of HSE Management Committee: attendees shall be members of HSE Management Committee and these meetings shall be chaired by CEO.

HSE 管理委员会会议：参加人员为公司 HSE 管理委员会成员，由 CEO 主持。

5.8.1.2 Regular HSE management meetings: attendees shall be leaders of the Company in charge of HSE, those of each department in and HSE engineers. Such meetings shall be chaired by leaders of the Company in charge of HSE. HSE 管理例会：参加人员为公司 HSE 分管领导、各部门分管 HSE 领导，HSE 工程师等。由公司 HSE 分管领导主持。

5.8.1.3 Special HSE meetings: attendees shall be determined subject to meeting contents.
HSE 专题会议：视会议内容确定参会人员。

5.8.2 Meeting frequency 会议频次

5.8.2.1 Meetings of HSE Management Committee shall be held semi-annually. HSE 管理委员会会议每半年召开 1 次。

5.8.2.2 Regular HSE management meetings shall be held in the last week of each quarter. HSE 管理例会在每季度最后一周召开 1 次。

5.8.2.3 Special HSE meetings shall be held if necessary. HSE 专题会根据需要召开。

5.8.3 Meeting content 会议内容

5.8.3.1 Contents of meeting of HSE Management Committee HSE 管理委员会会议内容

(1) Communicate and implement relevant HSE policies, laws and regulations as well as spirit of relevant conferences of the Government and superior company. 传达贯彻政府和上级公司有关 HSE 政策、法律法规及有关会议精神。

(2) Summarize work done in the previous year, solve problems found in HSE work, and plan HSE work of the next year. 进行上年度工作总结，解决 HSE 工作中存在的问题，布置下年度 HSE 工作计划。

(3) All members of the Committee shall report major problems existing in HSE work or to be solved. 各委员会成员汇报 HSE 工作中存在或需要解决的主要问题。

(4) Moderator shall make the final decision on current work arrangement and existing problems. 会议主持人就当前工作安排与存在的问题做出最后决策。

5.8.3.2 Regular HSE management meetings HSE 管理例会

(1) Communicate and implement relevant HSE policies, laws and regulations as well as spirit of relevant conferences of the Government and superior company. 传达贯彻政府和上级公司有关 HSE 政策、法律法规及有关会议精神。

(2) Make brief summary and comment on important HSE work in the current quarter. 对本季度 HSE 重要工作进行简要总结、讲评。

(3) All departments shall report existing HSE work and major problems existing in HSE work and share their experience. 各部门汇报当前 HSE 工作情况和存在的主要问题，开展经验分享。

(4) HSE Dept. shall report implementation of work arrangement made in the previous regular meeting, and give suggestions and preliminary handling opinions for current HSE work arrangement and problems reported by all departments. HSE 管理部通报上次例会布置工作的落实情况，对当前 HSE 工作安排和各部门反映的问题提出建议与初步处理意见。

(5) Moderator shall make the final decision on HSE work arrangement and existing problems. 会议主持人就 HSE 工作安排与当前存在的问题做出最后决策。

5.9 HSE training HSE 培训

5.9.1 Training requirements 培训要求

5.9.1.1 HSE Dept. shall be responsible for preparing and implementing corporate annual HSE training plan. HSE 管理部负责编制和实施公司级 HSE 年度培训计划。

5.9.1.2 All departments shall be responsible for preparing and implementing their own annual HSE training plans and establishing HSE training records.

各部门负责编制和实施本部门 HSE 年度培训计划、建立 HSE 培训档案。

5.9.1.3 Personnel failing to pass HSE training shall not take their posts.

未经 HSE 培训合格的人员不得上岗。

5.9.2 Training of HSE managerial personnel HSE 管理人员培训

5.9.2.1 Training scope 培训范围

(1) Principals and leaders in charge of HSE in the Company. 公司主要负责人、分管 HSE 领导。

(2) Principals and leaders in charge of HSE in operational departments. 运行部门负责人、分管 HSE 领导。

(3) Full-time HSE managerial personnel 专职 HSE 管理人员

5.9.2.2 The above personnel shall participate in special training organized by the Company and pass the examination. 以上人员应参加由公司组织的专项培训，并经考试合格。

5.9.2.3 Full-time safety managerial personnel shall be qualified as registered safety engineers or have corresponding qualifications required by the Government of Brunei.

专职安全管理人员应当具备注册安全工程师资格或文莱政府规定的相应资质。

5.9.3 HSE training for employees in operator role 操作岗位员工 HSE 培训

5.9.3.1 New employees in operator role shall receive HSE training at three levels, with a credit hours of 72 hours. For specific requirements, please see HSE Education Card for Employees.

生产操作岗位新员工应接受三级 HSE 培训，时间为 72 学时。具体要求见《员工 HSE 教育卡》。

5.9.3.2 Before taking their posts, employees engaged in operation of hazardous chemicals shall receive qualification training for operation of hazardous chemicals and shall take their posts only when they pass the examination.

危险化学品操作的员工上岗前应接受危险化学品操作资格培训，考试合格后方可上岗。

5.9.3.3 Employees subject to occupation mobility or job transfer or leaving their posts for more than six months shall receive HSE trainings at levels of operation dept. and team.

员工在公司内工作调动、转岗以及脱离岗位六个月以上者，应进行运行部、班组级 HSE 培训，经考试合格后方可上岗。

5.9.4 Special HSE training HSE 专项培训

Special HSE training shall be implemented in accordance with employees' needs, different characteristics of each post and training plans prepared by HSE Dept. and Operation Dept. , including but not limited to safety, environmental protection, occupational health, fire control and accident cases, emergency plans, laws and regulations, HSE operational procedures, etc. HSE 专项培训应根据员工需求和各岗位不同特点按照 HSE 管理部及运行部制定的培训计划实

施,包括但不限于安全、环保、职业健康、消防、事故案例、应急预案、法律法规、HSE 操作规程等。

5.9.5 Team-based HSE activities 班组 HSE 活动

5.9.5.1 All departments shall conduct department-based and team-based HSE activities.

各部门应开展以部门、班组为单位的 HSE 活动。

5.9.5.2 Team-based HSE activities shall be organized at least twice a month and each shall last for at least 1 credit hour. Department-based HSE activities shall be organized once a month and last for at least 1 credit hour. 班组 HSE 活动每月不少于二次,每次学习时间不少于 1 学时。部门 HSE 活动每月 1 次,每次不少于 1 学时。

5.9.5.3 HSE Dept. shall prepare study program for team-based HSE activities quarterly. HSE 管理部每季度制定班组 HSE 活动学习大纲。

5.9.6 HSE training for contractors and visitors 承包商及访客 HSE 培训

5.9.6.1 Personnel from contractors shall receive primary HSE training implemented by HSE Dept. before their entry into the plant and then receive secondary HSE training implemented by Operation Dept before their entry into each equipment area. All operation departments shall keep training records well. 承包商人员入厂前由 HSE 管理部实施一级 HSE 培训,进入各装置区域作业前由运行部实施二级 HSE 培训,各运行部门应做好培训记录。

5.9.6.2 Visitors shall handle entry permit only when they have received entry training. 访客经入厂培训后方可办理入厂通行证。

5.10 HSE signs HSE 标识

5.10.1 Classification of HSE signs HSE 标识分类

Based on their nature, signs can be divided into the following six types: equipment sign; safety sign; occupational disease hazard warning sign; environmental protection sign; fire control sign; traffic sign. 依据标识性质,可划分为以下六种类型:设备标识;安全标识;职业病危害警示标识;环保标识;消防标识;交通标识。

5.10.2 Usage requirements for HSE signs HSE 标识使用要求

5.10.2.1 HSE signs specified by national specifications are those composed of graphic symbols or characters characterized by safety color, frame and graphics and they are used to express specific information. Their character-type supplementary signs shall be used in combination with HSE sign board. 国家规范规定的 HSE 标识:是由安全色、边框和以图形为主要特征的图形符号或文字构成的标志,用以表达特定的信息,其文字类补充标识,必须与 HSE 标识牌同时使用。

5.10.2.2 Basic patterns and parameters of such signs are shown as follows:

标识的基本型式参数要求如下：

(1) For safety sign, it shall implement relevant regulations in Safety Signs and Guideline for Use (GB2894-2008)安全标识应执行 GB2894-2008 《安全标志及其使用导则》的相应规定；

(2) As for occupational disease hazard warning sign, it shall implement relevant regulations in Occupational Disease Hazard Warning Sign at the Workplace (GBZ158-2003) and Warning Specification for Occupational Disease Hazards of Highly Toxic Substances at the Workplace (GBZT203-2007); 职业病危害警示标识应执行 GBZ158-2003 《工作场所职业病危害警示标识》和 GBZT203-2007 《高毒物品作业岗位职业病危害告知规范》的相应规定；

(3) As for fire control sign, it shall implement relevant regulations in Requirements for the Placement of Fire Control Sign (GB15630-1995);

消防标识应执行 GB15630-1995 《消防安全标志设置要求》的相应规定；

(4) As for environmental protection sign, it shall implement relevant regulations in Graphical Signs for Environmental Protection (GB15562.2-1995);

环保标识应执行 GB15562.2-1995 《环境保护图形标志》的相应规定；

(5) Relevant regulations of the Government of Brunei. 文莱政府相关规定。

5.10.2.3 HSE signs not included in national specifications: 国家规范未包括的 HSE 标识:

(1) HSE signs not included in national specifications mean those not within the scope of national standards and specifications and they are composed of simple words and used in the course of production. Such signs are as effective and functional as HSE sign boards specified by national specifications, such as process pipeline sign and equipment sign;

国家规范未包括的 HSE 标识, 指没有国家标准规范内的标识, 为生产过程中使用的以简单文字构成的标志, 此类 HSE 标识牌与国家规范规定的 HSE 标识牌具有同等的功效和作用。如工艺管线标识、设备标识等;

(2) These HSE sign boards shall be manufactured by sign contractors and submitted to HSE Dept. for approval. Their basic patterns and parameters shall be consistent in a plant-wide manner.

此类 HSE 标识牌由标识承包商统一制作, HSE 管理部审批, 其基本形式与参数做到全厂统一。

5.10.3 Management of HSE signs HSE 标识管理

5.10.3.1 Standards for HSE signs in production area shall be prepared by HSE Dept. and such signs shall be manufactured and installed by commissioned contractors. All operation departments shall be responsible for demand submission and daily management.

生产区域内的 HSE 标识由 HSE 管理部制定标准, 委托承包商统一制作安装, 各运行部负责提报需求和日常管理。

5.10.3.2 It is not allowed to remove or damage HSE signs without permission and it shall replace missed or damaged ones in a timely manner. Personnel who cause intentional damage shall be punished in accordance with the Company's related assessment regulations.

HSE 标识不得擅自拆动或损坏, 若发现缺损, 应按要求及时更换, 故意损害者, 按照公司考核相关规定进行处罚。

5.11 Change management 变更管理

5.11.1 Content of change management 变更管理内容

5.11.1.1 Change in management 管理变更

- (1) Change in organizational framework. 组织机构变更。
- (2) Change in scope of duty of a department. 部门职责范围变更。
- (3) Change in management system and management institution. 管理体系、管理制度变更。
- (4) Change in fixed number of employees and personnel of a department.
部门定员和人员变更。

5.11.1.2 Change in process and technology 工艺技术变更

- (1) Building of new production unit, and transformation or expansion of existing unit.
生产装置新建、改建、扩建。
- (2) Change in production process and technical route. 生产工艺技术路线改变。
- (3) Modification of process control indicators and change in alarm interlock.
工艺控制指标修订、报警联锁改变。
- (4) Processing of new crude oil for the first time. 首次加工原油新品种。
- (5) Change in variety of chemical raw material. 化工原材料品种变化。
- (6) Change in process & technology procedures and job operational practices.
工艺技术规程、岗位操作法改变。

5.11.1.3 Change in equipment and facilities 设备、设施变更

- (1) Updating and transformation of key parts of equipment and facilities;
设备、设施的关键部位更新、改造；
- (2) Substitution of equipment and materials. 设备、材料的代用。
- (3) Temporary addition of electrical equipment. 临时增加的电气设备。
- (4) Change in power system and utilities. 电力系统及公用工程的变化。
- (5) Change in equipment alarm interlock. 设备报警联锁的改变。
- (6) Amendment to equipment operation procedures. 设备操作规程的修订。

5.11.2 Application and approval of changes 变更申请和审批

5.11.2.1 Application for changes 变更申请

In the course of corporate system management, if changes are not consistent with requirements of management systems and documents and have or will exert impact on system management, change formalities shall be handled and departments prone to these changes shall complete Application and Approval Form for Changes.

在公司体系管理过程中，凡与管理体系文件规定要求不符的，已经或将对体系管理产生影响的变更事项，均应办理变更手续，由变更所在部门填写《变更申请审批表》。

5.11.2.2 Approval of changes 变更审批

- (1) General change: after the application for changes, competent department shall organize relevant technicians and managerial personnel to joint conduct analysis of necessity, feasibility and risk of changes and submit it to leader in competent department for approval.

一般变更：主管部门接到变更申请后应组织相关技术、管理人员，对变更项目共同进行必要性、可行性及风险评估的分析，并由主管部门领导审批。

- (2) Major change: competent department shall organize relevant departments to joint conduct

risk evaluation and prepare and submit corresponding emergency plan to principals of the Company for approval.

重大变更：主管部门应组织相关部门共同进行风险评估，并编制相应的应急预案报公司主管领导审批。

(3) Whether application for changes is approved or not, department in charge of changes shall feed approval result back to change applicant department and related departments.

不论变更申请是否批准，变更主管部门都应将审批结果及时反馈给变更所在部门和相关部门。

5.11.3 Change implementation 变更实施

5.11.3.1 Department in charge of changes shall prepare change implementation plan or change program to define change content, person in charge and control objective.

变更主管部门制定变更实施计划或变更方案,明确变更内容、责任人和控制目标。

5.11.3.2 Change applicant department shall prepare implementation plan after receipt of such change implementation plan or change program.

变更所在部门接到变更实施计划或变更方案后，制定实施方案。

5.11.3.3 Change applicant department shall inform relevant departments and post holders of implementation plan and emergency plan for changes in written form, define division of labor and responsibilities, and provide necessary skill training for relevant personnel.

变更所在部门应及时将变更项目实施方案和应急预案以文字形式通知相关部门和岗位人员，明确分工和职责，并对相关人员进行必要的技能培训。

5.11.3.4 As for changes in documents and data caused by changes and their resulting records, it shall implement requirements of the Company's systems.

变更引起文件和资料的变化以及产生的记录应执行公司体系要求。

5.11.4 Supervision and management of changes 变更监督管理

Process management shall be conducted for changes and department in charge of changes and change applicant department shall arrange professional technicians and managerial personnel to carry out on-site monitoring and supervision. In case of any emergency in the course of change, it shall implement emergency plan prepared.

变更项目实施过程管理，应由变更主管部门及变更所在部门安排专业技术和管理人员进行现场监督和监护。变更过程中，如出现紧急情况，应按所编制的应急预案执行。

5.11.5 Acceptance of changes 变更验收

5.11.5.1 After the completion of change implementation, department in charge of changes shall organize acceptance which mainly covers integrity, applicability, effectiveness, safety and reliability of change items and their impacts on environment. 变更实施结束后，应由变更主管部门组织验收，验收内容主要包括项目的完整性、适用性、有效性、安全可靠性及对环境的影响。

5.11.5.2 As for acceptance, it shall assess implementation of changes to determine their compliance with requirements. As for changes which doesn't conform to requirements, it shall find their causes, propose improvement program and implement it, then organize review after

completion, and complete the Acceptance Form for Change Items. 验收应对变更的实施做出评价, 以确定变更是否符合要求。对不符合要求的变更, 应找出原因, 提出改进方案后并再次实施, 完成后再组织复审, 并填写《变更项目验收表》。

5.12 Management of High Risk Work Permit 高风险作业许可管理

5.12.1 Management of work permit shall be implemented for high risk work of the Company. 公司高风险作业实施作业许可管理。

5.12.2 High Risk Work Permit 高风险作业许可证

It means written certificate used for control of work which has potential hazard and causes damage to other activities and acquisition of effective basis for permission of such work. 指对某些具有潜在危险并对其他活动造成危害的作业实行控制的文字凭证, 以及获得允许该项作业的有效依据。

5.12.3 Scope of application of High Risk Work Permit 高风险作业许可证使用范围

The following work done in the production area of the Company shall be subject to work permit management. 在公司生产区域内进行下列工作均应实行作业许可管理。

5.12.3.1 Hot work; 动火作业;

5.12.3.2 Work in confined space; 进入受限空间作业;

5.12.3.3 Work at heights; 高处作业;

5.12.3.4 Earthwork; 动土作业;

5.12.3.5 Hoisting work; 吊装作业;

5.12.3.6 Blind plate vacuum pumping operation; 盲板抽堵作业;

5.12.3.7 Work with road closed 断路作业;

5.12.3.8 Radiography operation; 射线作业;

5.12.3.9 Temporary power supply; 临时用电;

5.12.3.10 Maintenance and repair work; 检维修作业;

5.12.3.11 Scaffolding erection and dismantling 脚手架搭设与拆除。

Earthwork, hoisting work, temporary power supply, scaffolding erection and dismantling, and maintenance and repair work shall be implemented in accordance with special management system of Equipment Management Dept. and blind plate vacuum pumping operation shall be implemented according to special management system of Scheduling & Dispatch Dept. 其中, 动土作业、吊装作业、临时用电、脚手架搭设与拆除、检维修作业按照机械动力部专项管理制度执行, 盲板抽堵作业按照计划调度部的专项管理制度执行。

5.12.4 For term of validity of High Risk Work Permit, please see Table 1. 高风险作业许可证有效期限, 见表 1。

Table 1 Term of validity of High Risk Work Permit 表 1 高风险作业许可证有效期限

S/N 序号	Work permit 作业许可证	Term of validity (continuous) 有效期限 (连续)
1	Special hot work 特级动	≤8 hours ≤8 小时

	火	
2	Primary hot work 一级动火	≤8 hours ≤8 小时
3	Secondary hot work 二级动火	≤72 hours ≤72 小时
4	Confined space 受限空间	≤24 hours ≤24 小时
5	Radiography operation 射线作业	Unit operation≤10 hours 运行装置≤10 小时 Shutdown and overhaul shall be approved and determined based on actual situations 停工大修根据实际情况审批确定
7	Work at heights 高处作业	Unit operation≤12 hours 运行装置≤12 小时 Shutdown and overhaul≤72 hours 停工大修≤72 小时
8	Work with road closed 断路作业	≤72 hours ≤72 小时

5.12.5 Approval of High Risk Work Permit 高风险作业许可证审批

5.12.5.1 Approval of High Risk Work Permit is composed of three parts, i.e., application, review (countersigning) and approval. Approvers at all levels shall fulfill responsibilities of the management body and improve approval effectiveness while guarantee controlled HSE risk. See Table 2. 高风险作业许可证审批分为申请、审核（会签）、批准三个层次，各层次审批人员必须落实管理主体责任，在保证 HSE 风险受控的同时提高审批效率。见表 2。

Table 2 Details of Approval of High Risk Work Permit 表 2 高风险作业许可证审批明细表

S/N 序号	High Risk Work Permit 高风险作业许可证	Application 申请	Review or countersigning 审核或会签	Approval 批准
1 1	Special hot work 特级动火	Applicant of Operation Dept. 运行部申请人	Deputy Director in charge of HSE in Operation Dept. 运行部主管 HSE 副部长 Safety managerial personnel in HSE Dept. HSE 管理部安全管理人员	Director of Operation Dept. 运行部部长
2	Primary hot work 一级动火	Applicant of Operation Dept. 运行部申请人	HSE Engineer of Operation Dept. 运行部 HSE 工程师	Deputy Director in charge of HSE in Operation Dept. 运行部主管 HSE 副部长
3	Secondary hot work 二级动火	Applicant of Operation Dept. 运行部申请人	HSE Engineer of Operation Dept. 运行部 HSE 工程师	Deputy Director in charge of HSE in Operation Dept. 运行部主管 HSE 副部长

4	Entry in confined space 进入受限空间	Applicant of Operation Dept. 运行部申请人	HSE Engineer of Operation Dept. 运行部 HSE 工程师	Deputy Director in charge of HSE in Operation Dept. 运行部 主管 HSE 副部长
5	Radiography operation 射线作业	Applicant of Operation Dept. 运行部申请人	HSE Engineer of Operation Dept. /Safety managerial personnel in HSE Dept. 运行部 HSE 工程师/HSE 管理部安全管理人员	Deputy Director in charge of HSE in Operation Dept. 运行部 主管 HSE 副部长
6	General work at heights 一般高处作业	Applicant of Operation Dept. 运行部申请人	Professional Engineer of Operation Dept. 运行部 专业工程师	HSE Engineer of Operation Dept. 运行部 HSE 工程师
7	Special work at heights 特殊高处作业	Applicant of Operation Dept. 运行部申请人	HSE Engineer of Operation Dept. 运行部 HSE 工程师	Deputy Director in charge of HSE in Operation Dept. 运行部 主管 HSE 副部长
8	Work with road closed (i.e., application form for occupation of public area/road) 断路作业(即公共区域/道路占用申请单)	Operation department (unit) 作业部门 (单位)	Department in charge of closed road area/Scheduling & Dispatch Dept. 断路区域所在部门/计划调度部	Fire Control Director of HSE Dept. HSE 管理部 消防主管

5.12.5.2 If High Risk Work Permit involves changes in key personnel, personnel subject to change shall sign the High Risk Work Permit after consent is obtained from approver. When there are a lot of personnel subject to change, it shall handle such permit again.

高风险作业许可证涉及关键人员变动时，应经审批人同意后，变更人员在高风险作业许可证上签字。变更人员较多时，应重新办理。

5.12.5.3 As High Risk Work Permit is the basis for work, related personnel must implement approval formalities in a strict manner, personnel engaged in application, review and approval shall sign their names on the ground, and confirmation after signing is strictly prohibited; it is not allowed to obliterate or sign by proxy; if amendment is required, approver shall confirm it by signing such amendment.

高风险作业许可证是作业的依据，相关人员必须严格履行审批手续，申请、审核、批准人员必须现场签字，严禁先签字后确认；不得涂改、代签，确需修改时，应经批准人在修改处签字确认。

5.12.5.4 If emergency repair is required under emergency circumstances, work permit shall be handled according to the following requirements:

发生紧急突发情况，需要紧急抢修作业时申请作业许可证按照以下要求办理：

(1) Crew Leader of Operation Dept. shall serve as operation applicant after authorized by phone. 运行部班组长在接到电话授权后作为作业申请人。

(2) Vacation taking or business trip of an approver shall be approved by personnel in charge of her or his work. 批准人休假或公出，由主持其工作的人员批准。

5.12.6 Cancellation of High Risk Work Permit 高风险作业许可证取消

In case of any of the following conditions, both applicant department and operation department are obligated to immediately terminate operation and cancel High Risk Work Permit. If operation continues, it shall handle such permit again. 当发生下列任何一种情况时，申请部门和作业部门都有责任立即终止作业，取消高风险作业许可证，若要继续作业应重新办理。

5.12.6.1 Changes in working environment, conditions and contents; 作业环境和条件、作业内容发生变化；

5.12.6.2 Great deviation of the actual work from the requirements in work plan; 实际作业与作业计划的要求发生重大偏离；

5.12.6.3 Major potential safety hazards found by on-site operating personnel; 现场作业人员发现重大安全隐患；

5.12.6.4 Act in violation of regulations; under emergency conditions. 发现有违章行为；突发事件状态下。

5.12.7 Closure of High Risk Work Permit 高风险作业许可证关闭

After completion of work, High Risk Work Permit can be closed and returned to HSE Engineer for filing only when Supervisor of applicant department signs for confirmation of qualified acceptance. 作业完成后，申请部门监护人在现场验收合格后签字确认，方可关闭高风险作业许可证，并返回 HSE 工程师存档。

5.12.8 Completion of High Risk Work Permit 高风险作业许可证填写

5.12.8.1 Before work, operation applicant shall prepare relevant materials, use testing analysis form as a basis for analysis results, and fill such results in High Risk Work Permit, tick the box with “√” for items to be confirmed, and tick the box with “×” or un-check the box for inapplicable items. If there is no need to complete columns, you can use “/” to indicate. 作业前作业申请人应准备好相关资料，分析结果可以使用化验分析单，将结果填入高风险作业许可证，对需要的确认选项在□划“√”，不适用的选项前的□划“×”或者不选择“□”，有的栏目不需要填写时，一律用“/”表示。

5.12.8.2 Materials related to High Risk Work Permit include but are not limited to: 高风险作业许可证涉及的相关资料包括但不限于：

(1) Related attached figures; 相关附图；

(2) Results of risk evaluation; 风险评估结果；

(3) Programs and measures; 方案措施。

5.12.8.3 Operation applicant shall work on the ground on all tasks covered by High Risk Work Permit. When operation involves in several principals, all principals involved shall be listed in Application Form for High Risk Work Permit. 作业申请人应实地参与高风险作业许可证所涵盖的工作，当作业涉及多个负责人时，涉及的负责人均应列在高风险作业许可证申请表内。

5.12.8.4 After receipt of work permit from operation applicant, reviewer and approver shall verify the following contents including: 在收到作业申请人的作业许可证申请后, 审核人、批准人应确认的内容包括:

- (1) Confirm detailed work contents; 确认作业详细内容;
- (2) Confirm all supporting documents, including task risk analysis, construction safety program, relevant sketch map of work area, and qualifications of operation team; 确认所有的支持文件, 包括工作任务风险分析、安全施工方案、作业区域相关示意图、作业单位资质等;
- (3) Confirm whether all HSE risk reduction measures taken before and after operation are applicable, including system isolation, detection time and frequency for oxygen deficit, harmful and toxic gases, flammable and combustible gases and gases in working environment, and emergency measures; 确认作业前、作业后应采取的所有削减 HSE 风险措施是否适用, 包括系统隔离, 缺氧、有毒有害气体、易燃易爆气体、作业环境气体检测时间和频次, 应急措施等;
- (4) Analyze and assess interplay of surrounding environment or adjacent working area, and confirm HSE reduction & control measures; 分析、评估周围环境或相邻作业区域的相互影响, 并确认控制削减 HSE 风险的措施;
- (5) Confirm validity of High Risk Work Permit and others. 确认高风险作业许可证期限和其他。

5.12.8.5 If a signal of emergency stop or withdrawal for ongoing work is received, all work permits shall immediately cease to be effective. Where operation is required to continue after emergency lifting, it shall handle such permits again. 正在进行的作业接到紧急停止或撤离信号时, 所有的作业许可证立即失效。如紧急情况解除后需要继续作业, 应重新办理。

5.12.9 Management of High Risk Work Permit for holidays and festivals (statutory holidays, Saturday and Sunday) 节假日 (法定节日、周六、周日) 高风险作业许可证管理

5.12.9.1 All departments shall act based on the principle of "keeping production at holidays and festivals stable and smooth". During the period other than holidays and festivals, it shall earnestly conduct hidden danger identification, deal with all hidden dangers in a timely manner, carry out preventive and corrective maintenance and repair well, and try to avoid all high risk operations at holidays and festivals, especially hot work, so as to reduce risks exposed to production plants. 各部门要以“维持节假日平稳生产”为原则。在非节假日生产期间, 应认真开展隐患排查, 及时处理各类隐患, 做好预防性、补救性检维修工作, 尽量避免在节假日期间安排各类高风险作业尤其是动火作业, 从而降低生产装置的风险。

5.12.9.2 Before holidays and festivals, operation dept. shall truthfully report all high risk operations arranged by itself and implement such operations only when competent specialized department gives approval. 节假日前夕, 运行部门应如实上报本部门安排各类高风险作业, 经专业主管部门审批后方可实施。

5.12.9.3 In principle, from 20: 00 pm to 8: 00 am at holidays and festivals as well as everyday, high risk operations regarding production operation plants, wharf and tank field are not allowed. 原则上节假日和日常夜间 20: 00 至次日 8: 00, 生产运行装置和码头、罐区不允许进行高风险作业。

5.12.9.4 From 20: 00 pm to 8: 00 am at holidays and festivals as well as everyday, in case of high risk operations which require emergency repair due to their impact on normal operation, it shall raise the approval level to next level. 节假日和日常夜间 20: 00 至次日 8: 00, 当出现影响

正常生产运行须紧急抢修的高风险作业时，审批级别需提高一个档次。

5.12.9.5 High risk operations conducted during the period of plant shutdown and overhaul at holidays and festivals need not to raise their approval levels. 节假日逢装置停工大修期间的风险作业不升级。

5.12.10 Filing and management of High Risk Work Permit 高风险作业许可证存档与管理

5.12.10.1 Work permit shall be in triplicate, with one kept by applicant department, one kept by supervisor and one kept by operators. 作业许可证一式三联：第一联：申请部门保存；第二联：监护人员保存；第三联：作业人员保存。

5.12.10.2 After High Risk Work Permit is signed and issued, any revision is not allowed. Operation dept. shall regularly conduct summary statistics of all High Risk Work Permits and report number of each kind of High Risk Work Permit to HSE Dept. 高风险作业许可证签发后，不得再做任何修改。运行部门定期对各类高风险作业许可证进行汇总，统计，每月将各类高风险作业许可证数量上报 HSE 管理部。

5.12.10.3 All High Risk Work Permits shall be kept for one year. 所有高风险作业许可证保存期为一年。

5.13 HSE management for contractors (suppliers)承包商（供应商）HSE 管理

5.13.1 Qualification review 资质审查

HSE Dept. shall engage in HSE qualification review for contractors which shall satisfy the following basic requirements:

HSE 管理部参与承包商 HSE 资质审查，承包商 HSE 资质应满足以下基本要求：

5.13.1.1 Business capacity and business scope of contractors shall meet requirements and their management capacity, technical strengths, mechanical equipment and HSE protective devices, equipment and facilities shall satisfy HSE requirements; 承包商营业能力和经营范围符合要求，管理能力、技术力量、机械装备、HSE 防护器具和装备设施满足 HSE 要求；

5.13.1.2 No major HSE accident occurred in recent years and construction contractors shall have a proven record of HSE for more than two year;

近年来未发生 HSE 重大事故，施工承包商应有 2 年以上的良好 HSE 业绩；

5.13.1.3 They shall have corresponding professional qualification certificates, special trade licenses and HSE system certification certificates;

具有相应的专业资质等级证书、特殊行业许可证、HSE 体系认证证书等；

5.13.1.4 No department is allowed to employ contractors which haven't undergone qualification review or fail to pass such review. 各部门不得使用未经资质审核或是资质审核不合格的承包商。

5.13.2 Contractor access management 承包商出入厂管理

5.13.2.1 As for access of personnel, goods, vehicles, machines and tools from contractors, it shall implement in accordance with Security Management System.

承包商人员出入厂、物资、车辆和机具管理按照《治安保卫管理制度》执行。

5.13.2.2 As for industrial refuses and industrial wastes from contractors, it shall implement Environmental Protection Regulation.

承包商工业垃圾和工业废弃物等废弃物按照《环境保护管理制度》执行。

5.13.3 Access management for hazardous chemicals and radioactive substances

危险化学品和放射性物品入厂管理

5.13.3.1 Transport vehicles, drivers, supercargoes and handling personnel for hazardous chemicals entering the plant shall have corresponding qualifications.

入厂的危险化学品的运输车辆、运输司机、押运员、装卸人员应有相应的资质。

5.13.3.2 Transport vehicles shall be equipped with warning marks and fire extinguisher corresponding to chemicals loaded. Gas cylinders shall be provided with sunshade.

运输车辆应配备警示标志和与装载化学品相对应的灭火器，气瓶类应配备遮阳棚。

5.13.3.3 As for access of radioactive devices and equipment, it shall not handle access formalities in HSE Dept. until permit from Equipment Management Dept. is obtained.

放射性装置和设备入厂应取得机械动力部许可后方可到 HSE 管理部办理入厂手续。

5.13.4 HSE training for contractors 承包商 HSE 培训

Before work, contractors shall organize all employees engaged in work to receive HSE induction training and these employees shall not work until they pass exams, which shall be implemented in accordance with 5.9.6. 作业前，承包商应组织参加作业的所有员工接受入厂 HSE 培训，考试合格方可作业，具体按照 5.9.6 执行。

5.13.5 Management of operation scheme and permit 作业方案和许可证管理

5.13.5.1 Prior to temporary power supply, earthwork, hot work, work in confined space, work at heights, radiography operation and work with fire fighting access blocked, it shall handle relevant work permits in departments concerned. 临时用电、破土、动火、受限空间作业、高处作业、射线作业、占断消防通道前都要到有关部门办理相关作业许可证。

5.13.5.2 If a vehicle enters the plant, it shall handle access to plant permit, which shall be implemented in accordance with Security Management System.

车辆进入装置，要办理装置进车许可，具体参照《治安保卫管理制度》执行。

5.13.5.3 Operators shall carry all certificates with themselves for check.

各种票证、作业人员要随身携带，以备检查。

5.13.5.4 Before work, contractors shall conduct risk identification and assessment, propose work risk reduction measures and prepare HSE scheme and operational procedures. 承包商作业前必须进行风险识别和评价，提出作业风险削减措施，制定作业 HSE 方案和操作规程。

5.13.6 On-site HSE management for contractors 承包商现场 HSE 管理

5.13.6.1 As for operations, contractors shall strictly observe all HSE management systems of the Company and be subject to management of the Company. 承包商作业必须严格遵守公司各

项 HSE 管理制度，服从公司管理。

5.13.6.2 Contractors shall set up safety warning marks in working site. Dangerous areas in working site such as pit and well shall be provided with hazard signs and red lights at night. Inhabitancy in production area is strictly prohibited. 承包商在作业现场要设有安全警示标志。作业现场危险区域如坑、井等，必须设置危险标志，夜间要设红灯警示，生产区域内严禁有人居住。

5.13.6.3 Contractors are strictly prohibited to have access to working area other than those in their charge and meddle with or disassemble equipment parts or accessories, and damage buildings, equipment pipelines and fire control facilities within working area. 承包商严禁进入非本单位作业区域，不得乱动乱碰或拆卸任何设备零件或附件，不得损坏作业区域内的建筑物、设备管线和消防设施。

5.13.6.4 Contractors having access to working site shall wear PPE as specified. 进入作业现场承包商必须按规定穿戴 PPE。

5.13.6.5 It is strictly prohibited to use gasoline and other highly volatile flammable liquids to wash equipment, accessories, tools and clothes. 严禁使用汽油等挥发性强的易燃液体擦洗设备、配件、工具和衣物等。

5.13.6.6 It is not allowed to occupy fire fighting access without permission. If occupation or road breakage is required, it must handle formalities as required; after completion within specified time, it shall immediately restore roads in order to ensure that fire fighting access is unblocked. 未经允许，不准占用消防通道。需占用或破路时，必须按规定办理手续，在规定时间内完工后，应立即恢复道路，以保证消防通道畅通。

5.13.6.7 Vehicles having access to production area shall be equipped with arc arrester, drive along the specified route and park in indicated location. In case of any abnormal condition, such vehicle shall turn off engines and park. 车辆进入生产区域要配戴火花熄灭器，按规定路线行驶，在指定位置停放。遇有异常要立即熄火停车。

5.13.6.8 In case of any danger case or accident in the course of operation, it shall immediately take rescue measures and inform HSE Dept. and relevant departments. 在作业过程中发生险情或事故时，应立即采取措施施救，并通知 HSE 管理部及相关部门。

5.13.6.9 During the period of operation, it shall realize that materials shall be used up and the site shall be clean upon the completion of work; after operation, relevant departments of the Company shall conduct inspection and acceptance. 作业期间要做到工完料净场地清，作业结束后，须经公司有关部门检查验收。

5.13.7 Assessment of contractors 承包商考核

5.13.7.1 HSE Dept. shall punish contractors for their violation of HSE rules at the construction site in accordance with relevant assessment management provisions of the Company and issue HSE Punishment Ticket. HSE 管理部对承包商现场 HSE 违章按公司相关考核管理规定进行处罚，同时开具《HSE 处罚单》。

5.13.7.2 In case of accident occurring in the course of operation, contractors shall be dealt as contracted and in accordance with relevant assessment provisions of the Company. 承包商在作业中发生事故的，按照合同约定和公司相关考核规定处理。

5.14 HSE hidden danger identification HSE 隐患排查

5.14.1 Classification of hidden dangers 隐患分级

5.14.1.1 General hidden danger 一般隐患

It means hidden danger which can be rectified in a timely manner and is not enough to cause personal injury or death or property loss.

是指能够及时整改，不足以造成人员伤亡、财产损失的隐患。

5.14.1.2 Major hidden danger 重大隐患

It means hidden danger which can't be rectified in a timely manner and may cause personal injury or death or property loss. 是指无法立即整改且可能造成人员伤亡、较大财产损失的隐患。

5.14.2 Classification of hidden danger identification 隐患排查分类

5.14.2.1 Daily hidden danger identification 日常隐患排查

It means duty shift inspection and midway patrol inspection conducted by crews and post holders as well as daily inspection made by leaders of all departments and professional technicians engaged in process, equipment, electrical engineering, instruments and

HSE. 是指班组、岗位员工交接班检查和班中巡回检查，以及各部门领导和工艺、设备、电气、仪表、HSE 等专业技术人员的日常性检查。

5.14.2.2 Professional and special hidden danger identification 专业、专项隐患排查

It means inspection of area locations, general layout, process, equipment, electrical engineering, instruments, storage & transportation, fire control, utilities, thunderstorm protection and high temperature resistance. 是指对区域位置及总图布置、工艺、设备、电气、仪表、储运、消防和公用工程以及防雷暴、防高温进行的检查。

5.14.2.3 Hidden danger identification prior to important events and holidays

重大活动及节日前隐患排查

It means inspection of status of standby equipment, spare parts, reservation of production and emergency materials, cadres on duty and emergency work before important events and holidays. 是指在重大活动和节日前，对备用设备状态、备品备件、生产及应急物资储备、干部值班、应急工作等进行的检查。

5.14.3 Frequency of hidden danger identification 隐患排查频次

5.14.3.1 interval of on-site patrol inspection made by equipment operators shall not exceed two hours. 装置操作人员现场巡检间隔不得大于 2 小时。

5.14.3.2 Production managerial personnel of Operation Dept. shall carry out relevant daily on-site professional inspection of equipment.

运行部生产管理人员每天对装置现场进行相关专业检查。

5.14.3.3 All departments shall organize professional and special hidden danger identification at once a quarter. 各部门每季度至少组织一次专业、专项隐患排查。

5.14.3.4 Before important events and holidays, all departments shall conduct a hidden danger identification. 重大活动及节日前各部门必须进行一次隐患排查。

5.14.3.5 All departments shall prepare hidden danger identification form based on their

discipline characteristics and actual production conditions and continue to improve such form in practice.

各部门应根据专业特点和实际生产情况制定隐患排查表，并在实际应用中不断持续改进。

5.14.4 Hidden danger control 隐患治理

5.14.4.1 Control requirements 治理要求

(1) For general hidden danger, departments prone to such danger shall immediately organize rectification. 对于一般隐患，由隐患所在部门立即组织整改。

(2) In terms of general hidden danger which can't be rectified for the time being, professional department in charge of such danger shall issue Hazard Identification and Control Form to hazard rectification department to require it to rectify such danger within a definite time. 对于暂不能整改的一般隐患，由隐患专业主管部门向隐患整改部门下达《隐患排查治理表》限期整改。

(3) As for major hidden danger identified, it shall immediately report to HSE Dept and HSE Dept shall organize assessment and certification of its inclusion into major hidden danger management, submit it to principals of the Company for approval and then implement it. 对于排查出的重大隐患，应立即上报 HSE 管理部，HSE 管理部组织评估认定其是否纳入重大隐患管理，报公司主管领导审批后实施。

(4) For major hidden danger, hidden danger rectification department shall organize preparation of hidden danger control program and implement it after discussion. Major hidden danger control program shall include: 对于重大隐患，隐患整改部门应组织制定隐患治理方案，经论证后实施。重大隐患治理方案应包括：

- 1) Control objectives and tasks; 治理的目标和任务；
- 2) Methods and measures taken; 采取的方法和措施；
- 3) Implementation of funds and materials; 经费和物资的落实；
- 4) Organizations and personnel in charge of control; 负责治理的机构和人员；
- 5) Time limit and requirements of control; 治理的时限和要求；
- 6) Safety measures used to avoid accidents occurring during the period of rectification. 防止整改期间发生事故的安全措施。

5.14.4.2 If hidden danger control involves changes in process, equipment and management, it shall implement 5.11. 隐患治理涉及工艺、设备、管理变更的，应按照 5.11 要求执行。

5.14.5 Hidden danger acceptance 隐患验收

5.14.5.1 After completion of control of general hidden danger, hidden danger rectification department shall organize acceptance by itself and such danger can be closed and cancelled only when it passes acceptance. 一般隐患治理完成后，由隐患整改部门自行组织验收，验收合格后予以关闭销项。

5.14.5.2 After completion of control of major hidden danger, department in charge of such danger shall organize relevant departments and personnel for acceptance and such danger can be closed and cancelled by department in charge of such danger when it passes acceptance. 重大隐患治理完成后，由隐患专业主管部门组织相关部门、人员进行验收，验收合格后由隐患专业主管部门予以关闭销项。

5.14.6 Hidden danger record 隐患记录

5.14.6.1 All departments shall establish Hidden Danger Identification & Control Account and hidden danger records. 各部门应建立《隐患排查治理台账》和隐患档案。

5.14.6.2 Hidden danger records shall include the following information: name, content, number, department, discipline type, functional department in charge, assessment level, rectification deadline, control plan, rectification performance and acceptance report of hidden danger. 隐患档案应包括以下信息：隐患名称、隐患内容、隐患编号、隐患所在部门、专业分类、归属职能部门、评估等级、整改期限、治理方案、整改完成情况、验收报告等。

5.15 HSE assessment HSE 考核

HSE Dept. shall punish, reward and assess Operation Dept. and contractors in accordance with relevant regulations of the Company. HSE 管理部对运行部、承包商的奖惩和考核参照公司相关规定执行。

5.16 Emergency plan 应急预案

5.16.1 Risk evaluation 风险评估

It shall, through hazard identification and environmental factor identification, prepare emergency plans for risks and environmental impacts of all production units, major parts, change items, major hazardous facilities and major hazardous operations as well as emergencies and disastrous accidents which may lead to fire, explosion, leakage of hazardous chemicals, personal injury and water pollution. 通过危险源辨识和环境因素识别，针对所有生产装置、重点部位、变更项目、重大危险设施、重大危险作业存在的风险 and 环境影响，可能引起火灾爆炸、危险化学品泄漏、人身伤害、水体污染等突发事件以及灾害性事故，编制应急预案。

5.16.2 Classification of emergency plans 应急预案分类

Emergency plans of the Company are divided into comprehensive emergency plan, special emergency plan and field disposal plan for production safety accident.

公司应急预案分为分生产安全事故综合应急预案、专项应急预案和现场处置预案。

5.16.2.1 HSE Dept. shall organize and coordinate preparation of comprehensive emergency plan and special emergency plan for production safety accident and Scheduling & Dispatch Dept., Equipment Management Dept. and CEO's Office shall engage in it.

HSE 管理部负责组织、协调生产安全事故综合和专项预案的编制，计划调度部、机械动力部、总经理办公室等部门参与。

5.16.2.2 All operation departments shall be responsible for preparation of onsite disposal plan. 各运行部负责现场处置预案的编制。

5.16.3 Audit, issuance, filing and revision of emergency plan

应急预案审核、发布、备案与修订

5.16.3.1 Onsite disposal plans prepared by all operation departments shall be audited by their relevant professional engineers, reviewed by deputy directors and submit to HSE Dept. for filing after approved by directors. 各运行部编制的现场处置预案由各部门相关专业工程师审核、副部长审定，部长批准后报公司 HSE 管理部备案。

5.16.3.2 Comprehensive emergency plan and special emergency plan of the Company shall be submitted to HSE Dept. for audit and then to leader in charge of HSE of the Company for review and issued and implemented after approved by the General Manager. 公司综合预案和专项预案报 HSE 管理部审核后报公司 HSE 分管领导审定，总经理批准后发布实施。

5.16.3.3 Emergency plans shall be revised once three years and such revision shall be recorded and filed. 预案至少每三年修订一次，预案修订情况应有记录、归档并备案。

5.16.3.4 In case of any of the following circumstances, emergency plans shall be revised in a timely manner: 有下列情形之一的，应急预案应当及时修订：

(1) Membership, business pattern and legal representative change due to merge, restructuring and transformation of production operation unit; 生产经营单位因兼并、重组、转制等导致隶属关系、经营方式、法定代表人发生变化的；

(2) Production processes and technologies of production operation unit change; 生产经营单位生产工艺和技术发生变化的；

(3) Changes in surrounding environment cause new major hazards; 周围环境发生变化，形成新的重大危险源的；

(4) Emergency organization & command system or responsibilities have been adjusted; 应急组织指挥体系或者职责已经调整的；

(5) Laws, regulations, rules and standards acting as a basis have changed; 依据的法律、法规、规章和标准发生变化的；

(6) Revision is required by exercise and assessment report on emergency plan; 应急预案演练评估报告要求修订的；

(7) Revision is required by relevant regulations and documents of superior company. 上级公司相关规定文件要求修订的。

5.16.4 Exercise of emergency plan 应急预案演练

HSE Dept. shall prepare Emergency Exercise Plan for next year prior to each January 10. HSE 管理部每年 1 月 10 前制定下一年度《应急演练计划》。

5.16.4.1 Exercise frequency 演练频次

(1) Corporate special emergency plan shall be subject to exercise at least semi-annually. 公司级专项预案每半年演练不少于 1 次。

(2) As for onsite disposal plan, operation department shall exercise such plan at least once a month for each shift, including one onsite actual emergency exercise. 现场处置预案运行部每班每月演练不少于 1 次，其中必须包括 1 次现场实战应急演练。

5.16.4.2 HSE Dept. shall be responsible for exercise and assessment of special HSE emergency plan. HSE 管理部负责 HSE 专项预案的演练、评估等工作。

5.16.4.3 Scheduling & Dispatch Dept. , Equipment Management Dept. and CEO's Office shall be responsible for exercise and assessment of special emergency plans within their scope of business. 计划调度部、机械动力部、总经理办负责其主管业务范围内的专项预案的演练、评估等工作。

5.16.4.4 All operation departments shall be responsible for exercise and assessment of onsite disposal plan. 各运行部负责现场处置预案的演练、评估等工作。

5.16.4.5 At the end of exercise, all departments shall immediately complete Emergency Exercise Record. 各部门演练结束后, 应及时填写《应急演练记录》。

5.16.4.6 Exercise assessment and records shall be submitted to HSE Dept. 演练评估、记录等应上交至 HSE 管理部。

5.17 Accident management 事故管理

5.17.1 Accident category 事故分类

5.17.1.1 Personal injury and death accident: personal injury or death, acute poisoning, occupational disease harm and radiation injury occurring in the course of production & operation activities. 人身伤亡事故: 指在生产经营活动中发生的人身伤亡、急性中毒、职业病伤害、辐射伤害等事故。

5.17.1.2 Fire and explosion accident: fire and explosion resulting from different reasons in the course of production and operation and causing loss of life and personal injury or property loss. 火灾爆炸事故: 指生产经营活动中, 由于各种原因引起的火灾爆炸, 并造成人员伤亡或财产损失的事故。

5.17.1.3 PMB internal traffic accident: loss of property or life or personal injury occurring when vehicles drive in the plant area. 厂内交通事故: 指车辆在厂区内行驶过程中造成的财产损失或人身伤亡的事故。

5.17.1.4 Radioactive source accident: status of accident caused by personal injury or process fluctuation occurring in the course of application, transportation, maintenance and detection of radioactive source. 放射源事故: 用放射源在使用、运输、维修、检测过程造成人员伤害、工艺波动引发的事故状态。

5.17.1.5 Water pollution accident: water environment pollution, ecological damage or property loss due to discharge of materials or water pollutants into water or accident causing adverse social impact. 水污染事故: 由于物料或水污染物排入水体, 引起水域环境污染、生态破坏或财产损失, 或造成不良社会影响的事故。

5.17.1.6 Air pollution accident: air pollution, damage to human health or property loss due to discharge of materials or air pollutants or accidents causing adverse social impact. 大气污染事故: 由于物料或空气污染物的排放, 引起空气污染、人体健康损害或财产损失, 或造成不良社会影响的事故。

5.17.2 Accident classification 事故分级

Due to severity, accident can be divided into three levels: operation department-level accident, company-level accident and offsite accident. 按事故的严重程度, 事故等级分为三级: 运行部级事故、公司级事故、厂外级事故。

5.17.2.1 Operation department-level accident 运行部级事故

In case of any of the following conditions, it is deemed as an operation department-level accident: 凡出现下列情形之一，为运行部级事故：

- (1) An accident causes minor injury (including acute poisoning) to one or two people and knock-off for no more than three working days; 一次事故造成 1-2 人轻伤（包括急性中毒），歇工均不超过 3 个工作日；
- (2) An accident leads to direct economic loss of below RMB200,000; 一次事故造成的直接经济损失在 20 万元以下；
- (3) Pollutants haven't gone beyond the jurisdiction of the department or high-concentration/special sewage is directly discharged to salt-containing/oily sewage system without permission, which causes impact on processing capacity of sewage treatment plant; or diffusion of toxic and harmful gases causes discomfort of personnel within the Company; 污染物未进入部门管辖区域外，或者未经许可直接排放高浓度/特殊污水至含盐/含油污水系统，造成污水场处理冲击；或有毒有害气体扩散造成公司内人员不适；

5.17.2.2 Company-level accident 公司级事故

In case of any of the following conditions, it is deemed as company-level accident: 凡出现下列情形之一，为公司级事故：

- (1) An accident causes minor injury (including acute poisoning) to three or more people and knock-off for more than three working days; 一次事故造成 3 人及以上轻伤（包括急性中毒）；歇工均超过 3 个工作日以上；
- (2) An accident causes serious injury to one or more people; 一次事故造成 1 人及以上重伤；
- (3) An accident leads to direct economic loss of more than RMB200,000; 一次事故造成的直接经济损失在 20 万元及以上；
- (4) Pollutants haven't gone beyond the jurisdiction of the department or high-concentration/special sewage is directly discharged to salt-containing/oily sewage system without permission, which causes impact on processing capacity of sewage treatment plant; or diffusion of toxic and harmful gases causes slight poisoning of personnel within the Company; 污染物进入部门管辖区域外，或者未经许可直接排放高浓度/特殊污水至含盐/含油污水系统，造成污水处理场严重冲击；或有毒有害气体扩散造成公司内人员轻微中毒。

5.17.2.3 Offsite accident 厂外级事故

- (1) An accident causes death to one or more people; 一次事故造成 1 人及以上死亡；
- (2) Pollutants enter into surrounding environment of the plant or ocean and oil spill quantity at sea reaches two tons or more; 污染物进入厂区周边或海洋环境，海上溢油量 2 吨及以上；
- (3) Unauthorized direct discharge of high-concentration/special sewage to salt-containing/oily sewage system causes breakdown of sewage treatment plant; or diffusion of toxic and harmful gases causes poisoning of personnel within the Company or complaints from residents outside the island. 未经许可直接排放高浓度/特殊污水至含盐/含油污水系统，造成污水处理场瘫痪；或有毒有害气体扩散造成公司内人员中毒，或引起岛外居民投诉。

5.17.3 Accident report 事故报告

5.17.3.1 After operation department-level accident, crew leader (or internal operator) shall immediately report to the dispatch room and simultaneously report to personnel in charge of the department. The dispatch room shall follow the procedure to inform principals of relevant departments and leadership in the Company. 运行部级事故发生后，由班组长（或内操）立即向调度室报告，同时报告本部门负责人。由调度室按程序通报各相关部门负责人及公司领导。

5.17.3.2 In case of company-level fire or explosion accident or offsite accident, accident affected department shall report accident details, preliminary cause analysis and precautionary measures to HSE Dept. and HSE Dept. shall complete Preliminary Accident Reporting Form which shall be signed by General Manager of the Company and submitted to the Government of Brunei within 24 hours. 凡发生公司级火灾、爆炸事故或报厂外级事故，事故部门要尽快将事故经过、原因初步分析、防范措施情况报告 HSE 管理部，由 HSE 管理部填写《事故初步报告表》，经公司总经理签发，在 24 小时内报文莱政府。

5.17.3.3 In case of fire or explosion of equipment, abnormal discharge and serious leakage of combustible materials and toxic and harmful gases which endangers security of surrounding community, CEO's Office and HSE Dept. shall, in accordance with directives of Emergency Command Center of the Company, immediately report to relevant competent departments of the Government of Brunei in simple language or by phone. 当装置发生火灾、爆炸，可燃物质、有毒有害气体非正常排放和严重泄漏，且危及周边社会安全时，总经理办、HSE 管理部、按公司应急指挥中心指令，立即用简明文字或电话分别报告文莱政府相关主管部门。

5.17.4 Accident investigation 事故调查

5.17.4.1 In case of operation department-level accident, all operation departments shall organize investigation by themselves and competent department of the Company are allowed to participate in such investigation. When an accident involves several departments, investigation shall be organized by competent department. 发生运行部级事故，由各运行部门自行组织调查，公司主管部门可参与调查，事故涉及到几个部门的，由主管部门组织调查。

5.17.4.2 In case of company-level accident, competent department of the Company shall take the lead to organize investigation. If it is difficult to determine accident category, leader in charge shall assign functional department to lead investigation organization. 发生公司级事故，由公司主管部门牵头组织进行调查。事故类别一时难以确定的，由公司分管领导指定职能部门牵头组织调查。

5.17.4.3 In case of offsite accident, leader in charge or competent department shall take the lead to establish accident investigation team to conduct accident investigation. The team shall be composed of leader in charge, HSE Dept. , Scheduling & Dispatch Dept. , Equipment Management Dept. and HR Dept. 发生厂外级事故，由公司分管领导或主管部门牵头成立事故调查组对事故进行调查，事故调查组由公司分管领导及 HSE 管理部、计划调度部、机械动力部、人力资源部等部门组成。

5.17.4.4 If it is difficult to determine accident level, investigation shall be organized at a high level firstly. 如事故等级一时难以确定的，则先按高等级组织调查。

5.17.4.5 In the course of accident liability investigation, it shall make a thorough investigation of direct cause, indirect cause, primary cause and minor cause of the accident, and define

personnel directly responsible for the accident and those mainly responsible for the accident. 在调查事故责任时，要查清事故的直接原因、间接原因、主要原因、次要原因，分清事故的直接责任者、主要责任者。

5.17.4.6 In case of any accident of contractor, competent business department shall organize investigation and report information about accident investigation and handling to HSE Dept. 承包商发生的事故，由业务主管部门组织调查，并将事故调查处理情况上报 HSE 管理部。

5.17.4.7 Content of accident investigation report: overview of accident affected department, time, place, detail and rescue of accident, personal injury or death and economic loss caused by accident, cause and nature of accident, accident liability identification and suggested treatment of personnel responsible for accident. 事故调查报告内容：事故发生部门概况，事故发生时间、地点、经过和事故救援情况，事故造成的人员伤亡和经济损失情况，事故发生的原因和事故性质，事故责任的认定以及对事故责任者的处理建议。

5.17.4.8 Accident investigation report shall be provided with relevant evidence materials such as accident scene diagram, process flow diagram, equipment structure diagram, chart, photos, images, and technical appraisal materials. 事故调查报告应当附具（如事故现场示意图、工艺流程图、设备结构图、图表、照片、图像、技术鉴定资料等）有关证据材料。

5.17.5 Handling of accidents 事故处理

5.17.5.1 In the course of handling of accidents, the principles of “Four No-allowings”, namely, not allowing any existence of unclear accident causes, not allowing any missing of punishment on accountable parties of the accident, not allowing any failure in implementing the rectification measures and not allowing any failure in mass education targeting relevant liable personnel. 事故处理要坚持“四不放过”原则，即事故原因未查清不放过、责任人员未处理不放过、整改措施未落实不放过、有关人员未受到教育不放过；

5.17.5.2 In case of cover-up, false reporting and deliberate delay in reporting of an accident, intentional destruction of accident site, concealing of accident truth, objection to receive investigation or provide any information and data without justified reasons, punishment shall be aggregated. 事故发生后隐瞒不报、谎报、故意拖延不报、故意破坏事故现场、隐瞒事故真相，或者无正当理由，拒绝接受调查以及拒绝提供有关情况和资料的，加重处理。

5.17.6 Accident assessment 事故考核

Such assessment shall be implemented in accordance with relevant assessment regulations of the Company. 参照公司相关考核规定执行。

5.18 Government formalities for HSE permit 政府 HSE 许可手续

Before trial production, it shall obtain or complete the following work permits: 试生产前应取得或完成下列工作许可：

5.18.1 All environmental impact approval letters of the project 项目所有的环评批准书

5.18.2 All approval letters for environmental management and monitoring plans of the project 项目所有的环境管理与监测计划批准书

- 5.18.3 All approval letters for sewage, drainage and coast drainage of the project 项目所有的污水、排水及海岸排水批准书
- 5.18.4 Approval letters for waste disposal of the project 项目所有的废物处理批准书
- 5.18.5 All design notices of the project shall be submitted in accordance with applicable laws 项目所有的设计通知按照适用法律提交
- 5.18.6 All Safety Case Certificates of the project to be obtained in accordance with applicable laws 项目所有根据适用法律应获取的“Safety Case”证书
- 5.18.7 All approval letters for import, collection, storage, transportation and use of oil, radioactive substances, toxic substances, corrosive substances, and inflammable and explosive substances 项目所有石油、放射性物质、有毒物质、腐蚀性物质、易燃、易爆物质的进口、收集、存储、运输和使用批准书
- 5.18.8 HSE management system HSE 管理系统
- 5.18.9 Emergency and accident monitoring system 应急和事故监测系统
- 5.18.10 HSE nonconformity monitoring system HSE 不合规监测系统
- 5.18.11 Environmental monitoring system 环境监测系统
- 5.18.12 QRA assessment and report QRA 评价和报告
- 5.18.13 HAZID assessment and report HAZID 评价和报告
- 5.18.14 HAZOP assessment and report HAZOP 评价和报告

5.19 Policies for forbiddance of abuse of alcohol, medicines and drugs 禁止滥用酒精、药品及毒品政策

5.19.1 Alcohol management 酒精管理

5.19.1.1 All staffs of the Company (including contractors and visitors) are prohibited to drink alcohol or alcohol-based drinks during the period of working in the plant (including noon, duty period and duty period at holidays and festivals). 公司全体工作人员（包括承包商、访客），在厂区内工作期间（包括中午、值班和节假日值班时间）禁止饮酒或饮含有酒精的饮料。

5.19.1.2 All departments of the Company are not allowed to drink alcohol during lunch if they hold internal meetings or organize various events in working days (except for special events organized by the Company). 公司各部门在工作日召开内部会议或组织各类活动等，午餐一律不得饮酒（公司组织的特殊活动期间除外）。

5.19.1.3 All personnel are forbidden to drink alcohol in offices and workplace of the Company and have access to working area when they are influenced by alcohol. 禁止任何人员在公司办公室、工作场所饮酒；禁止在受到酒精影响时进入工作区域。

5.19.1.4 In the workplace, if any person works after drinking alcohol or is smelled of alcohol, it shall immediately advise her or him to leave the workplace. 在工作场所，发现有酒后上班的人员或闻到满身酒气的人员，应立即劝其离开工作场所。

5.19.1.5 It is strictly prohibited to drink excessively and drive under the influence of alcohol anytime and anywhere. 严禁任何时间、任何场合下酗酒和酒后驾驶。

5.19.2 Management of medicines and drugs 药品、毒品管理

5.19.2.1 All employees are strictly forbidden to use, own, sell, transfer, accept, demand or buy controlled medicines, anesthetics, stimulants and drugs. 严禁任何员工在公司范围内使用、持有、出售、转让、接受、索要或购买管制药品、麻醉剂、兴奋剂及毒品；

5.19.2.2 Personnel taking drugs leading to drowsiness is not allowed to enter working area, except for medicines prescribed by a doctor or bought from drugstore for the purpose of medical care and health. 服用能引起嗜睡症状药物的人员禁止进入工作区域，因医疗和健康目的由医生开处方或从药店购得的药品除外。

5.19.2.3 It is forbidden to use (take) any controlled medicines or drugs which may cause or lead to unacceptable job performance and abnormal behaviors in working area. 禁止在工作区域内使用（食用）任何可能引起或者造成不可接受的工作表现、异常行为的受控药品或毒品。

5.19.2.4 In the workplace, if any person is found to be absent-minded or behave in an abnormal manner, it shall immediately advise her or him to leave the workplace (post). 在工作场所，发现有精神恍惚或举止异常的人，要立即劝其离开工作场所（岗位）。

5.19.3 Preventive actions 预防措施

5.19.3.1 The Company shall establish and improve these policies and implement actions in order to ensure that the Company will not involve in any event regarding drugs, medicines and alcohol. 公司建立健全本政策，落实措施，确保公司不发生任何涉毒、药品和酒精事件。

5.19.3.2 All employees of the Company shall earnestly learn and implement Bruneian laws and regulations related to drugs, medicines and alcohol. It is imperative to indicate their severe damage and enhance employees' safety awareness, legal sense and prevention & control capability. 公司全体员工应认真学习、贯彻文莱有关禁止毒品、药品和酒精的法律法规，说明其严重危害性，增强员工安全意识、法制观念和预防控制能力；

5.19.3.3 Personnel in charge of HSE Dept. and Operation Dept. shall conduct regular inspection of working status of their employees and pay great attention to and track anyone suspicious. 公司HSE管理部和运行部门负责人需定期对部门员工的工作状态进行检查，对可疑人员进行重点关注和跟踪。

5.19.4 Testing 测试

HSE Dept. of Hengyi has the right to carry out reasonable testing of controlled goods and alcohol for personnel in the workplace of the Company without any prior notice. If testing result is positive, such personnel must immediately leave the workplace until permitted by Hengyi. If she or he refuses testing or fails to be tested as required, she or he will be treated in this way equally. Hengyi has the right to determine whether it will agree reinstatement of personnel with positive testing result or refusing testing. 恒逸HSE管理部有权对公司工作场所内的人员进行合理的、无需事先通知的受控物品和酒精测试。如测试结果为阳性，则该人员必须立即离开工作场所直至得到恒逸许可。如该人员拒绝或者未能按要求进行测试，该人员亦将被同等对待。恒逸有权决定是否同意测试结果呈阳性或者拒绝测试的人员复职。

5.19.5 Punishment 处罚

5.19.5.1 All personnel having access to working area of the Company shall strictly observe policies of the Company regarding alcohol, medicines and drugs; in case of violation of these policies, she or he shall immediately leave the working area until she or he is not under the influence of alcohol, medicines and drugs any more; in case of breach of laws and regulations of the Government of Brunei, she or he will be referred to local law enforcement department. 所有进入公司工作区域的人员需严格遵守公司酒精、药品、毒品政策，如有违反本政策的，应立即离开工作区域，直至不再受到酒精/药品/毒品的影响；如违反文莱政府法律法规的，将移交当地执法部门。

5.19.5.2 The Company reserves the right to alter, correct or revise these policies. 本公司保留对该政策进行变更、更正或修改的权利。

(1) Testing of controlled goods or alcohol means collection and analysis of urine, breath or other samples for the purpose of determination of existence of controlled goods or alcohol. 受控物品或者酒精测试系指采集和分析尿液、呼吸或者其他样本以确定体内是否存在受控物品或酒精。

(2) "Under the influence of alcohol" or "positive alcohol testing result" means that alcohol content in the blood exceeds standard specified. 受到酒精的影响或者阳性酒精测试系指血液中酒精含量超过规定标准的。

6 Inspection and supervision 检查及监督

HSE Dept. shall be responsible for inspecting and supervising the implementation of HSE comprehensive management system, and present the results in the performance assessment. HSE 管理部负责对 HSE 综合管理制度执行情况进行监督检查，并将检查结果在绩效考核中体现。

7 Associated Procedures and Records 关联程序和记录

7.1 Associated procedures 关联程序

7.1.1 Management Procedures for Identification and Compliance Evaluation of Laws and Regulations HYBN-T2-08-0001-2018-1 法律法规识别与合规性评价管理程序 HYBN-T2-08-0001-2018-1

7.1.2 Management Procedures for HSE Three Simultaneities HYBN-T2-08-0002-2018-1 HSE 三同时管理程序 HYBN-T2-08-0002-2018-1

7.1.3 Pre-startup Safety Inspection Procedure HYBN-T2-08-0003-2018-1 启动前安全检查程序 HYBN-T2-08-0003-2018-1

7.1.4 HSE Hidden Danger Identification & Control Procedure HYBN-T2-08-0004-2018-1 HSE 隐患排查治理程序 HYBN-T2-08-0004-2018-1

7.1.5 Management Procedures for HSE Training HYBN-T2-08-0005-2018-1 HSE 培训管理程序 HYBN-T2-08-0005-2018-1

7.1.6 Application Procedures for HSE Signs and Labels HYBN-T2-08-0006-2018-1 HSE 标识标牌申请程序 HYBN-T2-08-0006-2018-1

7.1.7 Management Procedures for HSE Facilities HYBN-T2-08-0007-2018-1 HSE 设施管理程序 HYBN-T2-08-0007-2018-1

7.1.8 Management Procedure for High Risk Work Permit HYBN-T2-08-0008-2018-1 高风险作业许可证管理程序 HYBN-T2-08-0008-2018-1

7.1.9 Approval Procedure for High Risk Operations HYBN-T2-08-0009-2018-1 高风险作业审批程序 HYBN-T2-08-0009-2018-1

7.1.10 Change Management Procedure HYBN-T2-08-0010-2018-1 变更管理程序
HYBN-T2-08-0010-2018-1

7.1.11 Change Approval Procedure HYBN-T2-08-0011-2018-1 变更审批程序
HYBN-T2-08-0011-2018-1

7.1.12 Management Procedure for Emergency Plan HYBN-T2-08-0012-2018-1 应急预案管理程序
HYBN-T2-08-0012-2018-1

7.1.13 Accident Management Procedure HYBN-T2-08-0013-2018-1 事故管理程序
HYBN-T2-08-0013-2018-1

7.2 Associated records 关联记录

7.2.1 List of Applicable HSE Laws and Regulations and Other Relevant Requirements (International Conventions, Laws and Regulations) HYBN-T6-08-1001-001-2018 适用的 HSE 法律法规与其他有关要求清单（国际公约、法律法规） HYBN-T6-08-1001-001-2018

7.2.2 List of Applicable HSE Laws and Regulations and Other Relevant Requirements (Standards) HYBN-T6-08-1002-001-2018 适用的 HSE 法律法规与其他有关要求清单（标准）
HYBN-T6-08-1002-001-2018

7.2.3 List of Applicable HSE Laws and Regulations and Other Relevant Requirements (Requirements of the Government and Superior Company) HYBN-T6-08-1003-001-2018 适用的 HSE 法律法规与其他有关要求清单（政府、上级公司要求） HYBN-T6-08-1003-001-2018

7.2.4 Conformity Assessment Form of Applicable HSE Laws and Regulations and Other Relevant Requirements HYBN-T6-08-1004-001-2018 适用的 HSE 法律法规与其他有关要求符合性评价表 HYBN-T6-08-1004-001-2018

7.2.5 Pre-startup Safety Inspection Form HYBN-T6-08-1005-001-2018 启动前安全检查表
HYBN-T6-08-1005-001-2018

7.2.6 General Report on Pre-startup Safety Inspection HYBN-T6-08-1006-001-2018 启动前安全检查综合报告
HYBN-T6-08-1006-001-2018

7.2.7 Employees' HSE Education Card HYBN-T6-08-1007-001-2018 员工 HSE 教育卡
HYBN-T6-08-1007-001-2018

7.2.8 Crew HSE Activity Record HYBN-T6-08-1008-001-2018 班组 HSE 活动记录本
HYBN-T6-08-1008-001-2018

7.2.9 Approval Form for Change Application HYBN-T6-08-1009-001-2018 变更申请审批表
HYBN-T6-08-1009-001-2018

7.2.10 Change Risk Assessment Form HYBN-T6-08-1010-001-2018 变更风险评价表
HYBN-T6-08-1010-001-2018

7.2.11 Acceptance Form for Change Items HYBN-T6-08-1011-001-2018 变更项目验收表
HYBN-T6-08-1011-001-2018

7.2.12 HSE Punishment Ticket HYBN-T6-08-1012-001-2018 HSE 处罚单
HYBN-T6-08-1012-001-2018

- 7.2.13 Hidden Danger Identification & Control Form HYBN-T6-08-1013-001-2018 隐患排查治理表 HYBN-T6-08-1013-001-2018
- 7.2.14 Application Form for Accident Avoidance Award HYBN-T6-08-1014-001-2018 避免事故奖励申请表 HYBN-T6-08-1014-001-2018
- 7.2.15 Emergency Exercise Plan HYBN-T6-08-1015-001-2018 应急演练计划 HYBN-T6-08-1015-001-2018
- 7.2.16 Emergency Exercise Record HYBN-T6-08-1016-001-2018 应急演练记录 HYBN-T6-08-1016-001-2018
- 7.2.17 Preliminary Accident Reporting Form HYBN-T6-08-1017-001-2018 事故初步报告表 HYBN-T6-08-1017-001-2018
- 7.2.18 Registration Form of Four No-allowings HYBN-T6-08-1018-001-2018 四不放过登记表 HYBN-T6-08-1018-001-2018
- 7.2.19 Application Form for Production of HSE Signs and Labels HYBN-T6-08-1019-001-2018 HSE 标识标牌制作 HYBN-T6-08-1019-001-2018 申请表
- 7.2.20 Application Form for HSE Training HYBN-T6-08-1020-001-2018 HSE 培训申请单 HYBN-T6-08-1020-001-2018
- 7.2.21 HSE Training Record (for Employees) HYBN-T6-08-1021-001-2018 HSE 培训记录表 (员工) HYBN-T6-08-1021-001-2018
- 7.2.22 HSE Training Record (for Contractors) HYBN-T6-08-1022-001-2018 HSE 培训记录表 (承包商) HYBN-T6-08-1022-001-2018
- 7.2.23 Hidden Danger Identification & Control Account HYBN-T6-08-1023-001-2018 HSE 隐患排查治理台账 HYBN-T6-08-1023-001-2018

8 Supplementary Rules 附则

- 8.1 This System is under the jurisdiction of HSE Dept. 本制度由 HSE 管理部归口管理。
- 8.2 This System is drafted by HSE Dept. 本制度起草部门：HSE 管理部。
- 8.3 HSE Dept. is responsible for the interpretation of this System. 本制度解释权归 HSE 管理部拥有。
- 8.4 Revision, preparation and approval of this System are shown in table 3. 本制度版本编制和审批情况见表 3。

Table 3 Revision, preparation and approval of document 表 3 文件版本编制和审批情况

1	2018-05-01	Rao Zhongming 饶仲明	Xiao Chunbao 肖 春宝	Chen Liancai 陈 连财
Revision 版本	Issued date 颁 布日期	Prepared by 编 制人	Reviewed by 审 核人	Approved by 批 准人

9 Appendix 附件

Appendix HSE Responsibility System 附件 HSE 责任制

Appendix 附件

HSE Responsibility System HSE 责任制

1 Duties of HSE management committee of the Company 公司 HSE 管理委员会职责

1.1 Earnestly study and implement HSE guidelines, policies, laws, regulations, standards, specifications, rules, systems and other requirements of the Government of Brunei and superior company, and all departments shall organize implementation. 认真学习贯彻文莱政府和上级公司的 HSE 方针、政策、法律、法规、标准、规范、规章制度和其他要求，并由各部门组织落实和实施。

1.2 Study and determine major HSE issues of the Company, determine annual HSE work arrangement, reward personnel making prominent contributions to production safety and punish personnel responsible for accident. 研究和决定公司 HSE 工作的重大问题，决定年度 HSE 工作部署，对安全生产做出突出贡献的人员进行奖励，对事故责任者进行处罚。

1.3 Regularly hold meetings of HSE management committee and listen to HSE work reports of all departments. 定期召开 HSE 管理委员会会议，听取各部门 HSE 工作情况汇报。

1.4 Examine completion of annual HSE work arrangement. 检查年度 HSE 工作部署的完成情况。

2 HSE responsibilities of leadership in the Company 公司领导 HSE 职责

2.1 CEO

2.1.1 CEO, the first person responsible for HSE of the Company, shall assume full responsibility for HSE of the Company and establish and implement HSE responsibility system. CEO 是公司 HSE 第一责任人，对公司 HSE 工作全面负责；负责建立并落实全员 HSE 责任制。

2.1.2 Consciously implement relevant HSE laws and regulations of the Government of Brunei, and always grasp HSE guidelines and policies; do a good job of implementation of HSE responsibility system level by level; supervise and examine production safety work of the Company, and eliminate production safety accident hazards in a timely manner; make great efforts to three simultaneities regarding transformation of production units, facilities and technologies and HSE management for capital construction. 自觉执行文莱政府相关 HSE 法律法规，始终把握好 HSE 方针、政策；逐级抓好 HSE 责任制的落实；督促、检查公司安全生产工作，及时消除生产安全事故隐患；抓好生产装置、设施技术改造和基本建设 HSE 管理的“三同时”。

2.1.3 Chair and hold meetings of HSE management committee of the Company to determine HSE objectives of the Company; review HSE work plan and program; sign and issue HSE rules and systems; practically guarantee input of production safety funds and continuously improve labor conditions. 主持召开公司 HSE 管理委员会会议，确定公司 HSE 目标；审定 HSE 工作规划和计划；签发 HSE 规章制度；切实保证安全生产资金投入，不断改善劳动条件。

2.1.4 Improve HSE management organization and augment number of full-time HSE managerial personnel. Listen to reports on HSE work at regular intervals, organize investigation and handling of major accidents, and determine important rewards and punishments of

production safety work. 负责健全 HSE 管理机构，充实专职 HSE 管理人员。定期听取 HSE 工作汇报，组织对重大事故的调查处理，决定安全生产工作的重要奖惩。

2.1.5 Be responsible for examination and assessment of implementation of HSE responsibility system by lateral deputies and principals of all departments. 负责同级副职和各部门主要负责人 HSE 责任制落实情况的检查和考核。

2.1.6 Earnestly implement HSE contact responsibilities for key plants and major parts, and attend a grass-roots HSE event quarterly. 认真履行关键装置重点部位 HSE 联系职责，每季度参加一次基层 HSE 活动。

2.1.7 Participate in HSE training assessment and do a good job of HSE education and training for employees. 参加 HSE 培训考核，同时抓好员工的 HSE 教育培训工作。

2.1.8 Organize preparation and implementation of emergency rescue plan for production safety accident of the Company; report production safety accident to the Government of Brunei in a timely and truthful manner as required. 组织制定并实施公司生产安全事故应急救援预案；按规定及时、如实向文莱政府报告生产安全事故。

2.2 Deputy General Manager in charge of Sales 分管销售副总经理

2.2.1 Be responsible for HSE work regarding sales system according to the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”的原则，对销售系统内的 HSE 工作负责。

2.2.2 Implement related HSE guidelines, laws, regulations and policies of superior company and the Government of Brunei and effectively implement them in her or his post. Strictly control safety of product sales link. 贯彻执行文莱政府和上级公司有关 HSE 方针、法律、法规、政策在本岗位得到有效落实。把好产品销售环节安全关。

2.2.3 Implement HSE responsibility regarding supervision of suppliers and contractors and strictly control access in accordance with the principle of “production, supply and marketing”. Examine HSE qualifications of suppliers and contractors and assess their performances in a practical manner, and associate their HSE performances with credit rating. 按照“产供销”的原则，落实供应商、承运商 HSE 监管责任，严把准入关。切实做好供应商、承运商 HSE 资质审查及业绩考评，将供应商、承运商的 HSE 业绩与信用等级挂钩。

2.2.4 Be responsible for verification of production, operation and transportation qualification permits of suppliers and carriers of hazardous chemicals sold, and prevent carriers without corresponding qualification from transporting hazardous chemicals. 负责核查危险化学品销售供应商、承运商的生产、经营、运输资质许可证，禁止无相应资质的承运商运输危化品。

2.2.5 Conduct large-scale inspection of sales system at regular intervals, implement rectification of major potential accident hazards, and assist leaders of the Company with consultation and explanation of sales policies, laws and regulations. 定期开展销售系统 HSE 大检查，落实重大事故隐患的整改；协助公司领导做好销售政策和法律、法规的咨询解答工作。

2.2.6 Participate in investigation and handling of product quality accident and take effective measures to avoid repeated accidents. 参与产品质量事故的调查处理，采取有效措施，防止发生重复事故。

2.2.7 Earnestly implement HSE contact responsibilities for major parts of key plants, and attend a grass-roots HSE event quarterly. 认真履行关键装置重点部位的 HSE 联系职责，每季

度参加一次基层 HSE 活动。

2.2.8 Assume corresponding HSE management responsibility for production safety accident within her or his scope of business. 对分管业务范围内发生的生产安全事故，承担相应的 HSE 管理责任。

2.3 Deputy General Manager in charge of Production 分管生产副总经理

2.3.1 Assume main responsibility for production safety of the Company according to principles of one in charge of production must also be responsible for safety and one in charge shall assume the responsibilities. 按照“管生产必须管安全”、“谁主管、谁负责”的原则，对公司的安全生产负主要责任。

2.3.2 Organize preparation, revision and review of HSE rules and systems, technical specifications and technical measures and plans, and implement them. 组织制定、修订和审查 HSE 规章制度、技术规程和技术措施计划，并组织实施。

2.3.3 Supervise and examine implementation of HSE responsibilities and all HSE rules and systems of production functional departments, and correct dereliction of duty and violations found in the course of production. 监督检查生产职能部门的 HSE 职责履行情况和各项 HSE 规章制度的执行情况，及时纠正生产中的失职和违章行为。

2.3.4 Organize relevant functional departments to conduct timely investigation and handling of offsite production safety accident and report to competent department of the Government of Brunei in a timely manner. 组织相关职能部门及时对厂外级生产安全事故进行调查处理，并向文莱政府主管部门报告。

2.3.5 Be responsible for management of technology interlock for production safety protection plants of the Company, organize preparation of corresponding management systems, and be responsible for approval regarding application and termination of such systems. 负责公司安全生产保护装置工艺联锁的管理，组织制定相应的管理制度，并负责其投用、停用的审批。

2.3.6 Earnestly implement HSE contact responsibilities for key plants and major parts, and attend a grass-roots HSE event quarterly. 认真履行关键装置重点部位的 HSE 联系职责，并每季度参加一次基层 HSE 活动。

2.3.7 Intensify HSE technology management, actively adopt advanced technologies and protective equipment, be responsible for organization of major production safety inspection and implement rectification of major production accident hazards. 加强 HSE 技术管理，积极采用先进技术和防护装备；负责组织安全生产大检查，落实重大生产事故隐患的整改。

2.3.8 Be responsible for organization and implementation of HSE training, education and assessment. 负责组织落实 HSE 培训、教育和考核工作。

2.3.9 Hold HSE working meeting at regular interval, analyze production safety dynamics of the Company, and solve problems found in safety production in a timely way. 定期召开 HSE 工作会议，分析公司安全生产动态，及时解决安全生产中存在的问题。

2.3.10 In accordance with the above responsibilities, prepare annual HSE work plan and implement it in real practice. 按照上述职责，制定年度 HSE 工作计划，并在具体工作中逐项落实。

2.4 Deputy General Manager in Charge of Equipment Management 分管机械动力副总经理

2.4.1 Be responsible for HSE work regarding power-driven (equipment) system according to the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”的原则，对机动（设备）系统的 HSE 工作负责。

2.4.2 Organize preparation, revision, review and implementation of HSE management rules and systems as well as technical specifications for equipment safety of Equipment Management Dept. 组织制定、修订和审定机械动力部 HSE 管理规章制度、设备安全技术规程，并组织实施。

2.4.3 Supervise and examine implementation of safety responsibilities and inclusion of special HSE funds of departments in charge of power-driven (equipment) system, and correct dereliction of duty and violations in a timely manner. 监督检查机动（设备）主管部门的安全职责履行、HSE 专项资金列入情况，以及各项机动（设备）的 HSE 管理规章制度的执行情况，及时纠正失职和违章行为。

2.4.4 Organize functional departments in charge of power-driven (equipment) to investigate and handle offsite equipment accidents, and report to competent department of the Government of Brunei in a timely manner. 负责组织机动（设备）职能部门对厂外级设备事故的调查、处理，并及时向文莱政府主管部门报告。

2.4.5 Organize major HSE inspection for power-driven (equipment) system, implement rectification of major equipment accident hazards, and prepare safety precautions. 负责组织机动（设备）系统 HSE 大检查，落实设备重大事故隐患的整改，制定安全防范措施。

2.4.6 Be responsible for HSE management regarding equipment maintenance and repair. 负责设备检维修的 HSE 管理。

2.4.7 Hold HSE work meetings of power-driven (equipment) at regular intervals to analyze production safety status of power-driven (equipment) and promptly solve existing problems. 定期召开机动（设备）HSE 工作会议，分析机动（设备）安全生产动态，及时解决存在的问题。

2.4.8 Organize review of qualifications of contractors and constructors of maintenance and repair projects; sign construction contract and simultaneously include appendixes to HSE contracts in it. 负责组织审查检维修项目承包单位、施工单位的资质；签订施工承包合同时必须包括 HSE 合同附件

2.4.9 Be responsible for management of equipment interlock for production safety protection plants of the Company, organize preparation of corresponding management systems, and be responsible for approval regarding application and termination of such systems. 负责公司安全生产保护装置设备联锁的管理，组织制定相应的管理制度，并负责其投用、停用的审批。

2.4.10 Earnestly implement HSE contact responsibilities for key plants and major parts, and attend a grass-roots HSE event quarterly. 认真履行关键装置重点部位的 HSE 联系职责，每季度参加一次基层 HSE 活动。

2.4.11 In accordance with the above responsibilities, prepare annual HSE work plan and implement it in real practice. 按照上述职责，制定年度 HSE 工作计划，并在具体工作中逐项落实。

2.5 Deputy General Manager in charge of Finance 分管财务副总经理

2.5.1 Be responsible for HSE work within her or his scope of business in accordance with the

principle of “one in charge shall assume the responsibilities”. 按照 “谁主管、谁负责” 的原则，对分管业务范围内 HSE 工作负责。

2.5.2 Review withdrawal and use plan for production safety expense of the Company, realize that a fixed sum is for a fixed purpose, and practically guarantee fund investment into production safety. 负责审核公司安全生产费用提取和使用计划，做到专款专用，切实保证对安全生产的资金投入。

2.5.3 Give priority to get money to rectification of all hidden dangers, and review payment of all accident expenses. 优先保证各类隐患整改资金的需求，审核各类事故费用支出。

2.5.4 Earnestly implement HSE contact responsibilities for key plants and major parts, and attend a grass-roots HSE event quarterly. 认真履行关键装置重点部位的 HSE 联系职责，每季度参加一次基层 HSE 活动。

2.5.5 Prepare annual production safety work plan for each fiscal year and implement it in specific work arrangement item by item. 每年制订财务信息年度安全生产工作计划，逐条落实到当年具体工作安排中。

2.6 Deputy Chief Engineer in charge of Production, Machine, Power, Instrument and Planning
分管生产、机、电、仪、规划副总工程师

2.6.1 Assist leaders in charge and be responsible for HSE work within her or his scope of responsibility in accordance with the principle of “one in charge shall assume the responsibilities”. 按照 “谁主管、谁负责” 的原则，协助公司分管领导对所协助分管范围内 HSE 工作负责。

2.6.2 Implement HSE guidelines, laws and regulations of Brunei and superior company, and guarantee effective implementation of relevant safety specifications, standards, systems and requirements in her or his post. 贯彻执行文莱和上级公司 HSE 方针政策、法律法规，确保有关安全规范、标准、制度和要求在本岗位得到有效落实。

2.6.3 Direct HSE technical work which she or he assists with or is in charge of, positively promote implementation of advanced HSE technology and protection measures, and realize that it is technologically practical and feasible. 负责指导协管、分管业务范围的 HSE 技术工作，积极推进先进 HSE 技术、防护措施的实施，做到技术上切实可行。

2.6.4 Strictly implement “three simultaneities” of construction projects, and ensure three simultaneities between HSE facilities and main work in the course of organization of scheme design, feasibility research, preliminary design, construction and implementation of construction engineering project, technical innovation project and technical (scientific research) development project. 严格执行建设项目 HSE “三同时”，在组织建设工程、技措项目、技术（科研）开发项目的方案设计、可行性研究、初步设计、施工和投用时，确保 HSE 设施与主体工程“三同时”。

2.6.5 At the time of preparation of technical research plan, include HSE technology R&D plan. At the time of organization of preparation of fixed asset investment plan, take production safety demand into full consideration, and give priority to rectification projects regarding potential safety hazard. 在组织编制技术研究计划时，应包括 HSE 技术的研究开发计划。在组织编制固定资产投资计划时，要充分考虑到安全生产的需要，应优先考虑安排涉及安全隐患的整改项目。

2.6.6 Earnestly implement HSE contact responsibilities for key plants and major parts, and

attend a grass-roots HSE event quarterly. 认真履行关键装置重点部位的 HSE 联系职责，每季度参加一次基层 HSE 活动。

2.6.7 Assume corresponding HSE management responsibility for production safety accident within her or his scope of business. 对所分管业务范围内的生产安全事故，承担相应的 HSE 管理责任。

2.7 Chief Safety Officer 安全总监

2.7.1 Assist leader in charge of HSE in assuming responsibility for the General Manager and lead HSE Dept. to implement corresponding responsibilities. 协助公司分管 HSE 领导对总经理负责，领导 HSE 管理部门履行相应的职责。

2.7.2 Implement relevant HSE guidelines, laws, regulations, policies and corporate HSE management systems of the Government of Brunei and superior company, and be responsible for office of HSE management committee of the Company under the leadership of the General Manager and Deputy General Manager in Charge. 贯彻执行文莱政府和上级公司有关 HSE 方针、法律、法规、政策和企业 HSE 管理制度，在公司总经理、分管副总经理的领导下，负责公司 HSE 管理委员会办公室工作。

2.7.3 Assist the General Manager of the Company in improving HSE regulatory system, organize preparation of HSE responsibility system of the Company and supervise and urge its implementation. 协助公司总经理健全完善 HSE 监管体系，组织制定公司 HSE 责任制，并督促落实。

2.7.4 Be responsible for integrity of HSE management system of the Company. Organize preparation and revision of HSE management system and technical rules, and supervise and inspect implementation of all units and departments. 对公司 HSE 管理制度体系完整性负责。组织制定、修订 HSE 管理制度和技术规程，并监督检查各单位、各部门贯彻执行。

2.7.5 Organize regular HSE management meetings of the Company at fixed period, and coordinate and solve all problems found in the course of safety production. 负责定期组织公司 HSE 管理例会，协调解决安全生产工作中出现的各类问题。

2.7.6 Assist leader in charge of HSE to organize enterprise production safety performance assessment. 协助公司 HSE 分管领导组织企业安全生产绩效考核。

2.7.7 Have the right to order production halt and shutdown in terms of major potential safety hazards or equipment (facilities) and construction operations without production safety conditions. 对重大安全隐患或不具备安全生产条件的设备（设施）、施工作业等有责令停产、停工的权利。

2.7.8 Organize investigation and handling of production safety accident and reporting of offsite production safety accidents. 负责组织调查处理生产安全事故，负责组织厂外级生产安全事故的汇报工作。

2.7.9 Earnestly implement HSE contact responsibilities for key plants and major parts, and attend a grass-roots HSE event quarterly. 认真履行关键装置重点部位的 HSE 联系职责，每季度参加一次基层 HSE 活动。

2.7.10 Assume corresponding HSE responsibility for production safety accident within her or his scope of business. 对所分管业务范围内的生产安全事故，承担相应的 HSE 责任。

3 Functional departments of the Company 公司职能部门

3.1 CEO's Office 总经理办公室

3.1.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of "one in charge shall assume the responsibilities". 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.1.2 Assist leadership of the Company in implementing HSE work instructions of superior company, and distribute relevant HSE documents and materials of superior company and the Government of Brunei in a timely way. Organize timely collection, review, printing and distribution of relevant HSE materials. 协助公司领导贯彻上级有关 HSE 工作指示，及时转发上级和文莱政府有关 HSE 文件、资料。对有关 HSE 材料及时组织汇审、打印、下发。

3.1.3 Actively coordinate HSE Dept. to organize publicity of HSE guidelines, policies, orders and instructions of superior company. 积极配合 HSE 管理部组织宣传 HSE 方针、政策、法令和上级指示。

3.1.4 Organize and carry out HSE publicity event to publicize and report situation and task of production safety as well as advanced experience and deeds regarding safety management. 组织开展 HSE 宣传活动，宣传报道安全生产形势与任务、安全管理先进经验和事迹。

3.1.5 Highlight the idea of "safety first" in overall corporate management (reform) plan, and ensure that safety management strength is continuously enhanced. 在企业管理（改革）总体规划中突出“安全第一”的思想，确保安全管理力量不断加强。

3.1.6 Be responsible for registration and access-to-plant safety education of personnel who temporarily visits the plant, learns in the plant or handles their affairs. 负责对临时来厂参观学习、办事人员进行登记和进厂安全教育。

3.1.7 Be responsible for daily management of post inspection of the Company, focus on inspection of implementation of post responsibility system, and enhance HSE awareness of employees. 负责公司岗检的日常管理工作，重点检查岗位责任制执行情况，提高职工 HSE 意识。

3.1.8 Include safety culture of the Company into corporate culture construction of the Company, and organize preparation and implementation of implementation plan. 将公司安全文化建设纳入公司企业文化建设内容，组织制订实施方案，并组织实施。

3.1.9 At the time of work arrangement and summary, include HSE work content, and supervise and promote modernization of HSE management. 在安排、总结工作时，应包括 HSE 工作内容，督促和推进 HSE 管理的现代化。

3.1.10 Organize disclosure, release and news reporting of emergencies; be responsible for establishment of press room under emergency circumstance, and do a good job of reception of external reporters. 组织应急事件信息的对外披露、发布及新闻报道工作；负责在应急事件状况下设立记者接待室，做好外来采访记者接待工作。

3.1.11 Be responsible for organization of inspection and implementation of cadre duty system. 负责组织检查落实干部值班制度。

3.1.12 Take measures to carry out fire, moisture and mould prevention for records and books rooms in a practical manner, and implement provisions regarding burglary prevention and confidentiality of records in a strict way. 采取措施，切实做好档案、图书库房的防火、防潮、防霉工作，严格执行档案的防盗保密规定。

3.2 HR Dept. 人力资源部

3.2.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.2.2 Be responsible for specified administration of employees' safety education & training and timely organization of induction safety education and assessment for all newcomers (including trainees and personnel trained on contract). Assist HSE Dept. in organizing safety technology education for employees and training and assessment of special operators. 负责职工安全教育和培训的归口管理工作，负责对新进单位人员（包括实习、代培人员）及时组织入厂安全教育和考核。协助 HSE 管理部组织对职工的安全技术教育及特种作业人员的培训、考核工作。

3.2.3 Prepare labor disciplines and management regulations, and organize inspection of labor disciplines for employees. 负责制定劳动纪律管理规定，组织检查职工劳动纪律。

3.2.4 Include company-level employee safety technology training assessment into annual training assessment of the Company and organize its implementation. 负责将公司级职工安全技术培训考核工作纳入公司年度培训考核计划，并组织落实。

3.2.5 Implement relevant laws and regulations of Brunei, and strictly control working overtime. Participate in investigation of major accident, implement punishment of personnel responsible for accident, and be responsible for compensation and identification after affirmation of work-related injury accident. 贯彻文莱相关法规，严格控制加班加点。参加重大事故调查，落实事故责任者的惩处事项，负责工伤认定后有关补偿和鉴定工作。

3.2.6 Include HSE performance into employees' assessment, promotion and reward. 将 HSE 工作业绩纳入职工考核、晋级、晋升和奖励等内容。

3.2.7 Organize induction physical examination of new employees. Be responsible for work accommodation of personnel with occupational contraindication or suspected occupational disease and implementation of their treatment. 负责组织新进职工的入职体检。负责职业禁忌、疑似职业病人的工作调整及有关待遇的落实。

3.3 Finance Dept. 财务管理部

3.3.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.3.2 Prepare plans for capital construction and engineering cost and simultaneously prepare expenditure plan for HSE measures to ensure that funds are in place. 在编制基本建设和工程费用计划的同时，编制 HSE 措施费用计划，确保资金到位。

3.3.3 Ensure that expenses for accident hazard control and HSE education and other safety funds are put in place. 保证事故隐患治理费用、HSE 教育费用等安全资金到位。

3.3.4 Be responsible for checking all kinds of accident handling expenses, and include them into the Company's economic activity analysis. 负责审核各类事故处理费用支出，并将其纳入企业经济活动分析内容。

3.3.5 Ensure expenditures for labor protection articles, healthcare food and heatstroke prevention drinks are put in place. 保证劳动防护用品、保健食品和防暑降温饮料的开支费用。

3.4 Commercial Dept. 商务部

3.4.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.4.2 Implement HSE management requirements of the Government of Brunei regarding sales of hazardous chemicals in a strict manner. 严格执行文莱政府相关危险化学品销售 HSE 管理要求。

3.4.3 Organize implementation of safety data sheet for hazardous chemicals sold and printing, distribution and registration of safety labels. 负责组织落实销售的危险化学品安全技术说明书和安全标签印刷、发放、登记工作。

3.4.4 Organize implementation of HSE management of outsourced business under its control. 负责组织落实分管外包业务 HSE 管理。

3.5 Materials & Supplies Dept. 物资装备部

3.5.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.5.2 Be responsible for procurement, bidding, tendering, storage and distribution of labor protection articles and general materials and supplies. 负责劳动保护用品等一般物资的采购、招投标、保管及发放工作。

3.5.3 Improve HSE rules, systems and operational procedures, conduct HSE inspection, and intensify efforts to hidden danger rectification. 健全完善 HSE 规章制度和操作规程，开展 HSE 检查，抓好隐患整改。

3.5.4 Implement all HSE rules and systems, and make great efforts to warehouse production safety. Be responsible for planning, purchase, transportation, storage, distribution and recycling of hazardous chemicals and highly toxic substances. 贯彻执行各项 HSE 规章制度，抓好仓库安全生产。负责危险化学品、剧毒品的计划、采购、运输、保管、发放及回收工作。

3.5.5 Provide equipment and materials necessary for HSE technical improvement project in a timely manner as planned. Be responsible for purchase, storage and allocation of emergency rescue materials and supplies. 按计划及时供应 HSE 技措项目所需的设备和材料。负责应急救援物资的采购、保管及调配；

3.5.6 Intensify efforts to quality management of materials purchased, and enable them to conform to relevant national standards and requirements and those of Brunei in terms of their safety and reliability. 加强采购物资的质量管理，使其安全可靠符合国家和文莱相关标准和要求。

3.5.7 Be responsible for quality check for purchased hazardous chemicals, packages and containers, request safety data sheets and safety labels from suppliers in a timely way, and provide them for recipient units; confirm qualifications of suppliers for business of hazardous

chemicals. 负责外购危化品及包装物、容器的质量把关，及时向供应商索取安全技术说明书和安全标签，并提供给领用单位；负责确认供应商的危险化学品经营资质。

3.6 Scheduling & Dispatch Dept. 计划调度部

3.6.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.6.2 Under the precondition of ensured safety, stop practices violating production safety systems, regulations and procedures, and strictly prohibit command and operation against rules. 在保证安全的前提下组织指挥生产，制止违反安全生产制度、规定、规程的做法，严禁违章指挥、违章作业。

3.6.3 Organize preparation and exercise of emergency plans for plant shutdown, water, power, steam and wind supply cut-off and meteorological disaster event and emergency response. Deal with insecurity, dangerous case and accident emerging in the course of production in a decisive and proper manner, and immediately report to leader in charge and relevant functional departments, so as to prevent the situation from getting worse. 组织装置停工、停水电汽风生产和气象灾害事件应急预案的制订、演练及应急处置工作。在生产过程中出现不安全因素、险情及事故时，应果断正确处理，立即报告主管领导并通知有关职能部门，防止事态扩大。

3.6.4 Participate in major production safety inspection, learn production safety dynamics at any time, and promptly report production safety of all units in dispatch meeting. 参加安全生产大检查，随时掌握安全生产动态，对各单位的安全生产情况，及时在调度会上通报。

3.6.5 Implement management systems for operational disciplines to prevent unplanned shutdown, running, emitting, bunching and other accidents, and realize safe, stable, long-term, full and optimized production. 负责贯彻操作纪律管理制度，防止发生非计划停工和跑、冒、串等事故，实现安、稳、长、满、优生产。

3.6.6 Be responsible for investigation, handling, collection and counterpart reporting of production accidents (unplanned shutdown, running, emitting and bunching). Participate in investigation and handling of other accidents reported. 负责生产事故（非计划停工和跑、冒、串事故等）的调查处理和统计、对口上报工作。参加其他上报事故的调查处理。

3.6.7 Implement the principle of three simultaneities regarding HSE, and participate in review of three simultaneities at design, construction and application stages of technical improvement project. 执行 HSE “三同时”的原则，参加技措项目的设计、施工和投用时的“三同时”审查。

3.6.8 Organize HSE inspection in terms of process and technology, and improve technical problems in a timely manner. 负责组织工艺技术方面的 HSE 检查，及时改进技术上存在的问题。

3.6.9 Participate in definition of key plants and major parts, and be responsible for process safety supervision and management of key plants and major parts. 参与关键装置和重点部位的界定，负责关键装置和重点部位的工艺安全监督管理。

3.6.10 Organize hazard identification and risk assessment of processes and production operations of production plants. 负责组织生产装置工艺过程及生产操作危害识别、风险评价。

3.7 Equipment Management Dept. 机械动力部

3.7.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.7.2 Implement HSE regulations and standards of China, the Government of Brunei and superior company regarding equipment design, manufacturing, overhaul, maintenance and construction, and conduct HSE work within its scope of business well. Formulate and revise the operation procedures and management regulations on all kinds of mechanical equipment. 贯彻国家、文莱政府、上级公司关于设备设计、制造、检修、维护保养及施工方面的 HSE 规定和标准，做好主管业务范围内的 HSE 工作。负责制定和修订各类机械设备的操作规程和管理制度。

3.7.3 Be responsible for HSE management of all machines, equipment, electrical units, power units, instruments, pipelines, heating & ventilation units and industrial buildings, and enable them to comply with safety-related technical specifications, standards and systems. 负责各种机械、设备、电气、动力、仪表、管道、采暖通风装置及工业建筑物的 HSE 管理，使其符合安全技术规范、标准和制度的要求。

3.7.4 Organize regular safety check and verification of industrial construction equipment, hoisting machine, construction machine and tools, boiler, pressure vessel, pressure pipe, safety accessory, gas cylinder, dust toxicant-resistant and static-free equipment, mechanical and electrical interlocks, and safety technology devices. Rectify problems found by such check in a timely manner, and immediately disable equipment with major hidden danger. 负责组织工业建筑设备、起重机械、施工机具、锅炉、压力容器、压力管道及安全附件、气瓶、防尘毒和防静电装置、机械和电气连锁装置、安技装备的定期安全检查、校验工作。及时整改检查中发现的问题，有重大隐患应立即停用。

3.7.5 At the time of preparation or review of relevant equipment design, manufacturing and transformation plan and preparation of equipment maintenance and repair plan, include corresponding HSE measures into such plans, and inspect and supervise implementation of HSE measures. 在制定或审定有关设备设计、制造、改造方案和编制设备检修计划时，应有相应的 HSE 措施内容，对 HSE 措施完成情况进行检查监督。

3.7.6 Organize major equipment safety inspection, prepare plans for problems found, promptly rectify such problems, and implement safety technology measures and plans and accident hazard rectification program on schedule. 组织设备安全大检查，对检查出的问题，应制定计划及时整改，按期实施安全技术措施计划和事故隐患整改项目。

3.7.7 Be responsible for registration and evidence gathering regarding special equipment such as pressure vessel and hoisting equipment. 负责压力容器、起重设备等特种设备的登记取证工作。

3.7.8 Be responsible for safety technical training and assessment of special types of work. 负责本专业特殊工种安全技术培训和考核工作。

3.7.9 As for external overhaul personnel and relevant personnel, organize good implementation of HSE management during the period of construction, and implement management provisions regarding construction disciplines. 对外来检修和有关人员等，应组织做好施工中的 HSE 管理工作，负责贯彻落实有关施工纪律的管理规定。

3.7.10 Organize preparation and exercise of emergency plan for special equipment as well as emergency response. Organize and allocate emergency rescue construction teams and tools,

implement allocation of emergency maintenance & leakage stoppage equipment, equipment maintenance and leakage stoppage; be responsible for power company-wide balance of power system, and organize and implement on-site power cut and supply. 组织特种设备事件应急预案制订、演练和应急处置工作。组织调配应急救援施工队伍和机具，落实抢修堵漏设备配备和设备抢修堵漏工作；负责公司范围内电力系统平衡，并组织落实现场停、送电工作。

3.7.11 Be responsible for investigation and handling of equipment accident, report handling details to superior leaders in a timely manner, and participate in investigation and handling of other accidents reported. 负责设备事故的调查处理，并将处理情况及时向上级领导汇报，参加其他上报事故的调查处理。

3.7.12 Participate in definition of key plants and major parts, and be responsible for HSE supervision and management of equipment, instrument and electrical engineering of key plants and major parts. 参与关键装置和重点部位的界定，负责关键装置和重点部位的设备、仪表和电气的 HSE 监督管理。

3.7.13 Organize hazard identification and risk assessment regarding maintenance and repair of electrical equipment, instruments and important equipment. 负责组织公司电气、仪表、重要设备检维修危害识别、风险评价。

3.7.14 Organize implementation of HSE management of outsourced business under its control. Include HSE liability clauses in construction contract signed. 负责组织落实分管外包业务的 HSE 管理。签订施工合同应有 HSE 责任条款。

3.8 HSE Dept. HSE 管理部

3.8.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.8.2 Implement HSE guidelines, laws, regulations, policies and systems of the Government of Brunei and superior company, and be responsible for HSE supervision and management under the leadership of the Company and HSE management committee. 贯彻执行文莱政府、上级公司 HSE 方针、法律、法规、政策和制度，在公司领导和 HSE 管理委员会的领导下负责 HSE 监督管理工作。

3.8.3 Be responsible for HSE education and training for employees and company-level HSE education for new employees. Assist relevant special operators with safety technology training; prepare crew-based HSE activity plan, and organize implementation of all HSE activities; assess engagement of leaders in grass-roots HSE activities and keep HSE meeting minutes well. Organize and conduct HSE education for external personnel well. 负责对职工进行 HSE 教育培训，以及新入厂职工的公司级 HSE 教育。协助做好相关特种作业人员的安全技术培训；制定班组 HSE 活动计划，组织开展各种 HSE 活动；对领导参加基层 HSE 活动情况进行考核，做好 HSE 会议记录。组织做好外来人员 HSE 教育。

3.8.4 Organize preparation and revision of HSE management system and HSE technical measures and plans of the Company and supervise and inspect their implementation. 组织制定、修订公司 HSE 管理制度和 HSE 技术措施计划，并监督检查执行情况。

3.8.5 Organize major HSE inspection. Implement accident hazard rectification regulations, assist and supervise relevant departments to prepare precautionary measures for hidden

dangers found, and examine and supervise completion of hidden danger rectification. Organize assessment and approval of major hidden danger control projects as well as inspect and supervise the implementation of such projects. 组织 HSE 大检查。执行事故隐患整改规定，协助和督促有关部门对查出的隐患制定防范措施，检查监督隐患整改工作的完成情况。组织重大隐患治理项目的评估、立项及项目实施的检查监督工作。

3.8.6 Participate in supervision of “three simultaneities” regarding new construction, expansion, transformation, overhaul and technical innovation projects, and organize HSE (pre) assessment of construction engineering project. 参加新建、扩建、改建及大修、技措工程的“三同时”监督，负责组织建设工程项目的 HSE（预）评价工作。

3.8.7 Go deep into on-site supervision and inspection of implementation of all HSE management system, supervise and assist in solving relevant HSE problems, and correct work against rules. In case of emergency endangering production safety, have the right to order to stop operation and immediately report to relevant leaders. 深入现场监督检查各项 HSE 管理制度的执行情况，督促并协助解决有关 HSE 问题，纠正违章作业。遇有危及安全生产的紧急情况，有权责令其停止作业，并立即报告有关领导。

3.8.8 Organize preparation and exercise of overall emergency plan and emergency plans for oil spill at sea, leakage of hazardous chemicals, environmental pollution and radiation incident and emergency. 组织总体应急预案、海上溢油、危险化学品泄漏、环境污染、放射性事件等应急事件的预案制订、演练及应急处置工作。

3.8.9 Be responsible for summary statistics and reporting of all accidents; be responsible for investigation and handling of fire, explosion, personal injury and death, environmental pollution and radiation incident; participate in investigation and handling of all offsite accidents; assist HR Dept. in conducting work-related injury identification well. 负责各类事故汇总、统计上报工作；主管火灾、爆炸、人身伤亡、环境污染、放射事故的调查处理；参加各类厂外级事故的调查、处理；协助人力资源部做好工伤认定工作。

3.8.10 Be responsible for HSE assessment, and propose suggestions on punishment or rewarding of personnel making prominent contribution to production safety or responsible for production safety accident. 负责 HSE 工作考核，对在安全生产中有突出贡献者或事故责任者，提出奖惩意见。

3.8.11 Establish and improve HSE management network, and hold HSE meeting at regular interval. 建立健全 HSE 管理网络，定期召开 HSE 会议。

3.8.12 Organize and conduct occupational health monitoring at working site well, report monitoring data on time, organize and conduct occupational health inspection in accordance with relevant regulations, and establish and improve employees' health monitoring records. 组织做好作业现场职业卫生监测并按时报监测数据，按照有关规定组织做好职业健康检查，建立健全职工健康监护档案。

3.8.14 Organize and conduct hazard identification and risk assessment well. 组织做好危险源辨识和风险评估工作。

3.8.15 Maintain management of security defense and traffic safety in the plant, organize preparation and exercise of emergency plans for traffic incidents in production area and terrorist attacks and public health incidents within the jurisdiction of the Company and emergency response, and be responsible for guarding, traffic control and onsite security work for accident site and surrounding areas and roads. 负责维护厂区内治安保卫、交通安全的管理，

组织生产区交通事件、公司辖区内的恐怖袭击事件、公共卫生事件的应急预案制订、演练和应急处置工作，负责对事故现场及周边地区和道路进行警戒、交通管制、现场保卫工作。

3.9 Information Management Dept. 信息管理部

3.9.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

3.9.2 Earnestly implement HSE guidelines and objectives of the Company and fulfill HSE commitments. Organize preparation and implementation of its annual HSE objectives and be responsible for its HSE performance. 认真贯彻执行公司 HSE 方针、目标，履行 HSE 承诺。负责组织制定、实施信息管理部年度 HSE 目标，对信息管理部 HSE 业绩负责。

3.9.3 Organize and conduct HSE awareness education and skill training for its own staffs. Organize HSE inspection, implement rectification and risk control regarding safety and fire hazards, and conduct annual review well. 组织开展部门职工的 HSE 意识教育和技能培训。组织 HSE 检查，落实安全、消防隐患的整改和风险控制，开展好年度评审工作。

3.9.4 Keep communication lines for wire telephone and interphone open under emergency circumstance and guarantee other emergency response work. 负责保证应急事件状态下的有线电话、对讲机线路畅通等应急工作。

4 Operation Dept. 运行部门

4.1 Be responsible for HSE work of her or his department and within her or his scope of business in accordance with the principle of “one in charge shall assume the responsibilities”. 按照“谁主管、谁负责”原则，对本部门和主管业务范围内的 HSE 工作负责。

4.2 Earnestly implement relevant HSE laws, regulations, standards, rules and systems of the Government of Brunei and the Company, implement responsibilities of all posts and all HSE measures, and guarantee production safety. 认真贯彻执行文莱政府和公司有关 HSE 法律、法规、标准和规章制度，落实各岗位职责和各项 HSE 措施，确保安全生产。

4.3 Be responsible for safe operation of production, equipment and service within its own jurisdiction, management and maintenance of its own equipment and facilities, and eliminate equipment defect and failure in a timely manner. 负责做好本部门管辖范围内生产、设备、服务安全运行，负责做好本单位设备、设施的管理和维护保养工作，及时消除设备缺陷和故障。

4.4 Establish and improve HSE management network, and give play to roles of full-time and part-time HSE managerial personnel. Hold special HSE management meeting at regular intervals and study and solve HSE-related problems in a timely manner. 建立健全 HSE 管理网络，发挥专、兼职 HSE 管理人员的作用。定期召开 HSE 管理专题会议，及时研究解决 HSE 有关问题。

4.5 Organize and conduct hazard (environmental factor) identification and risk evaluation, organize major HSE inspection at fixed period, implement hidden danger rectification and risk control, and promptly stop acts in violation of regulations. 组织开展危险源（环境因素）辨识和风险评估，定期组织 HSE 大检查，落实隐患整改和风险控制，及时制止违章行为。

4.6 Organize and conduct frequent HSE awareness education and skill training; organize and conduct regular technical training for posts and crew-related HSE activity, mobilize employees

to take an active part in HSE management, and commend and reward advanced crews and individuals. 组织开展经常性的 HSE 意识教育和技能培训；定期组织开展岗位技术练兵、班组 HSE 活动，发动职工积极参与 HSE 管理，表彰并奖励先进班组和个人。

4.7 Conduct application and approval of High Risk Work Permit well, and organize the implementation of all HSE protective measures. 做好高风险作业许可证的申请、审批工作，组织落实各项 HSE 防护措施。

4.8 Investigate its own accidents in accordance with accident classification, report such accidents to superior department in charge in a timely manner as required, and implement precautionary measures based on the principle of "Four No-allowings". 按照事故分级，对本部门相关的事故进行调查，按规定及时上报上级主管部门，并按事故“四不放过”原则落实防范措施。

4.9 Organize preparation and implementation of its own onsite emergency response plan, HSE management regulations and technical measures. 组织制定并实施本部门现场处置预案、HSE 管理规定和技术措施。

4.10 Organize and conduct secondary HSE education for external personnel under its jurisdiction, and implement the responsibility of "localized management". 组织做好本部门外来人员二、三级 HSE 教育，落实“属地化管理”职责。

4.11 Establish and improve the cadre duty system to ensure that production and safety are under control around the clock. 建立健全干部值班制度，做到 24 小时有人管生产、管安全。

4.12 Participate in "three simultaneities" of new construction projects and expansion projects, i.e., safety evaluation, "three examination and four determination", and intermediate handover. 参加新、改扩建项目安全评价、“三查四定”、中交等“三同时”工作。

4.13 Conduct use, examination, maintenance and care of employees' labor protection articles well. 做好职工劳动防护用品配备、使用、检查、维护和保养工作。

5 HSE responsibilities of all posts in Operation Dept. 运行部各岗位 HSE 职责

5.1 Director 部长

5.1.1 Act as the first person responsible for production safety of Operation Dept., assume full responsibility for department-level HSE work, supervise and inspection implementation of HSE responsibility systems of all posts, and realize production safety objectives. 对部门 HSE 工作全面负责，是部门安全生产第一责任人，监督检查各岗位 HSE 责任制的落实情况，实现安全生产目标。

5.1.2 Be responsible for implementation of "three simultaneities" of safety, environmental protection and occupational health of the department. 负责做好本部门的安全、环保、职业健康“三同时”落实工作。

5.1.3 Guarantee implementation of HSE laws, regulations, rules and systems of the Government of Brunei and the Company in the unit, hold HSE meetings at regular intervals to research and solve production safety problems, and take the lead to strictly implement relevant production safety systems and supervise their implementation. 保证文莱政府和公司 HSE 法律法规、规章制度在本单位的贯彻执行，定期召开 HSE 会议，研究解决安全生产问题，带头并督促职工严格执行安全生产有关制度。

5.1.4 Establish and improve HSE management organization of Operation Dept., direct and support HSE management conducted by Operation Dept., and give full play to HSE engineers and part-time crew safety officers. 建立和完善运行部 HSE 管理机构, 指导、支持运行部 HSE 管理工作并充分发挥 HSE 工程师和班组兼职安全员的作用。

5.1.5 Organize preparation and implementation of its HSE management systems, assessment regulations, operational procedures, and HSE schemes for construction and maintenance. 负责组织本部门 HSE 管理制度、考核规定、操作规程和施工检修 HSE 方案等的编制和落实。

5.1.6 Organize its Level 2 and Level 3 safety education and all HSE educational trainings, and conduct regular education on HSE-related thought, knowledge and technology. 负责组织本部门二、三级安全教育及各类 HSE 教育培训, 开展经常性的 HSE 思想、知识和技术教育。

5.1.7 Mobilize employees to take an active part in its HSE management, and regularly conduct crew-based HSE activities, job qualification exercise and assessment. 负责发动员工积极参与本部门的 HSE 管理, 定期开展班组 HSE 活动、岗位技能练兵和考核工作。

5.1.8 Organize and conduct hazard identification and risk assessment in the department, and supervise the development and implementation of HSE plans for major change operations and high-risk operations. Carry out HSE hazard identification and control in a timely manner, so as to guarantee safe and stable operation of operation plants. 负责组织开展本部门危险源辨识和风险评估工作, 监督重大变更作业、高风险作业 HSE 方案的制定和落实。及时组织开展 HSE 隐患排查和治理, 确保生产装置的安全平稳运行。

5.1.9 Establish its emergency response plans and prepare plans to conduct regular exercises and improve such emergency response plans. 负责建立本部门应急处置预案, 制定计划定期组织演练和完善预案。

5.1.10 Deal with insecurity and accident emerging in the course of production in a timely, decisive and proper manner, and immediately report to leader in charge and relevant functional departments, so as to prevent the situation from getting worse. 在生产过程中发现不安全因素、事故时, 及时正确果断处理, 立即报告上级主管领导及有关职能部门, 防止事态扩大。

5.1.11 Be responsible for organizing or participating in investigation and handling of its HSE accidents, stick to the principle of "Four No-allowings", earnestly learn from such accidents, and implement preventive measures which avoid repeated accidents. 负责组织或参与对本部门发生 HSE 事故的调查、处理, 坚持“四不放过”的原则, 认真吸取事故教训, 落实防止重复事故发生的预防措施。

5.2 Deputy Director in charge of Process 工艺副部长

5.2.1 Coordinate production safety work in a comprehensive way in accordance with the principle of "one in charge of production must also be responsible for safety"; be responsible for direct leadership and management of production safety of the department. 按照“管生产必须管安全”原则, 综合协调安全生产工作; 对本部门安全生产负直接领导和管理责任。

5.2.2 Implement HSE laws and regulations as well as other requirements, specifications and standards of the Government of Brunei and the Company and HSE management system of the Company, and ensure they are implemented. 贯彻执行文莱政府和公司 HSE 法律法规和其他要求、规范、标准和公司 HSE 管理制度, 并确保得到落实。

5.2.3 Assist the Director in preparing annual HSE work plan of the department based on annual HSE work focuses of the Company. 按照公司年度 HSE 工作要点，协助部长组织编制本部门年度 HSE 工作计划。

5.2.4 Be responsible for preparation and implementation of production safety education & training plans of the department and training of assessment of employees in terms of production technology; organize and conduct crew safety activities, and inspect and supervise safety education for new employees. 负责制定并实施本部门安全生产教育和培训计划，负责员工生产技术培训和考核；组织开展班组安全活动，检查督促新入厂员工安全教育工作。

5.2.5 Assist the Director in organizing revision of all emergency plans of the department and organize regular employee exercise. 协助部长组织制修订本部门各类应急预案，定期组织员工演练。

5.2.6 Organize hazard identification and risk assessment of operations with major risk such as significant process adjustment and start-up/shutdown, organize preparation and implementation HSE measures for equipment startup/shutdown, overhaul and temporary repair construction, and prepare HSE construction scheme. 负责组织对重大工艺调整、开停工等重大风险作业的危险源辨识和风险评估，组织编制并安排落实装置开停工、大检修及临时抢修施工时的 HSE 措施，制订 HSE 施工方案。

5.2.7 Participate in design inspection and completion acceptance of new projects and transformation & expansion projects of the department, and guarantee conformity to HSE requirements. 参加本部门新建、改扩建工程设计审查、竣工验收，确保符合 HSE 要求。

5.2.8 Be responsible for audit or approval of High Risk Work Permits in her or his scope of business, supervise the implementation of all HSE precautionary measures, and be responsible for HSE work of direct operation link. 负责业务范围内高风险作业许可证的审核或审批，督促落实各项 HSE 防范措施，对直接作业环节的 HSE 负责。

5.2.9 Identify hidden dangers of production safety accidents in a timely manner, and propose suggestions for improvement in production safety management of the department. 及时排查生产安全事故隐患，提出改进本部门安全生产管理的建议。

5.2.10 Report and deal with accidents and near-miss incidents of the department, and coordinate the investigation and analysis. 对本部门发生的事故及未遂事件按规定报告和处理，并配合调查和分析。

5.2.11 Assume corresponding HSE management responsibility for production safety accident within her or his scope of business. 对分管业务范围内发生的安全生产事故，承担相应的 HSE 管理责任。

5.3 Deputy Director in charge of Equipment 设备副部长

5.3.1 Assume direct leadership and management responsibility for HSE work of power-driven equipment and maintenance & repair engineering of the department in accordance with the principle of "one in charge shall assume the responsibilities". 按照“谁主管、谁负责”的原则，对本部门机动设备及检维修工程的 HSE 工作负直接领导和管理责任。

5.3.2 Implement HSE laws and regulations as well as other requirements, specifications and standards of the Government of Brunei and the Company and HSE management system of the

Company, and ensure they are implemented. 贯彻执行文莱政府和公司 HSE 法律法规和其他要求、规范、标准和公司 HSE 管理制度，并确保得到落实。

5.3.3 Organize preparation and revision of HSE operational procedures for maintenance of all equipment of the department. 负责组织制订和修订本部门各类设备维护 HSE 操作规程。

5.3.4 Be responsible for safety management and operation of equipment of the department, and enable such equipment to satisfy requirements of HSE technical specifications and standards. 负责本部门设备安全管理和运行，使其符合 HSE 技术规范、标准的要求。

5.3.5 Organize preparation of equipment transformation scheme and equipment overhaul plan of the department, provide corresponding HSE measures, organize and conduct hazard identification and risk assessment of operations with major risk like equipment maintenance (repair), and implement HSE measures. 负责组织编制本部门设备改造方案和设备检修计划，应有相应的 HSE 措施，负责组织开展对设备检修（抢修）等重大风险作业的危险源辨识和风险评估，并落实 HSE 措施。

5.3.6 Organize and conduct equipment inspection of the department, and rectify hidden dangers found in a timely manner. 组织开展本部门设备检查，对查出的隐患应及时整改。

5.3.7 Be responsible for training and assessment of employees of the department in terms of HSE knowledge including equipment maintenance, care and use. 负责对本部门员工进行设备维护、保养、使用等 HSE 知识的培训考核。

5.3.8 Implement maintenance of HSE facilities and equipment of the department and ensure they are in good conditions. 负责落实本部门 HSE 设施、设备的维护保养，确保完好。

5.3.9 Be responsible for audit or approval of High Risk Work Permits within her or his scope of business, and supervise the implementation of all HSE precautionary measures. 负责业务范围内高风险作业许可证的审核或审批，督促落实各项 HSE 防范措施。

5.3.10 Assume corresponding HSE management responsibility for production safety accident within her or his scope of business. 对分管业务范围内发生的安全生产事故，承担相应的 HSE 管理责任。

5.4 Process Director Engineer 工艺主任工程师

5.4.1 Assist Deputy Director of Operation Dept. and share responsibility for equipment and process under her or his jurisdiction in accordance with the principle of “one in charge of production must also be responsible for safety”. 按照“管生产必须管安全”的原则，协助运行部分管副部长对所辖装置工艺安全负责。

5.4.2 Be responsible for production, process and technology management of plants under her or his jurisdiction, and strictly implement all HSE management systems of the Company. 负责所辖装置生产、工艺、技术管理工作，严格执行公司各项 HSE 管理制度。

5.4.3 Organize and direct production under the precondition of ensured safety, deal with insecurity, dangerous case and accident emerging in the course of production in a decisive and proper manner, and immediately report to leadership of the department, so as to prevent the situation from getting worse. 在保证安全的前提下组织指挥生产，在生产过程中发现不安全因素、险情及事故时，要果断正确处理，并立即报告部门领导，防止事态扩大。

5.4.4 Organize preparation and revision of technical procedures, start-up/shutdown program and calibration program of production process of equipment under her or his jurisdiction;

prepare and implement HSE plans for production, repair and technical processes; be responsible for production technology training and assessment of operational posts of equipment under her or his jurisdiction. 负责组织编制、修订所辖装置生产工艺技术规程、开停车和标定方案；编制并落实生产、检修、技术过程 HSE 方案；负责所辖装置操作岗位生产技术的培训和考核。

5.4.5 Implement process-related operational disciplines and operational procedures, eliminate or reduce unplanned shutdown and running, emitting and bunching accidents, stop acts in violation of HSE systems and HSE technical specifications in a timely manner, and realize safe, stable, long-term, full and optimized production. 贯彻执行工艺操作纪律和操作规程，杜绝或减少非计划停工和跑、冒、串事故，及时制止违反 HSE 制度和 HSE 技术规程的行为，实现安、稳、长、满、优生产。

5.4.6 Be responsible for up-to-standard discharge of equipment under her or his jurisdiction and energy saving and emission reduction compliance requirements, and ensure up-to-standard discharge in terms of all environmental protection indicators. 负责所辖装置生产达标排放和节能减排达标要求，确保各项环保指标达标排放。

5.4.7 Organize inspection and assessment of the implementation of operational records, production statements, process indicators, on-site standardization, process disciplines and HSE management systems of operational crews. 组织检查和考核运行班组的操作记录、生产报表、工艺指标、现场规格化、工艺纪律、HSE 管理制度等执行情况。

5.5.8 Participate in daily, weekly and monthly inspections and other inspections at regular intervals, and report and deal with HSE hidden dangers in a timely manner. 定期参与日常检查、周检、月检等检查，发现 HSE 隐患及时汇报和处理。

5.4.9 Regularly organize and conduct accident emergency exercise for equipment under her or his jurisdiction and revise and improve emergency plans in a timely manner. 定期组织开展所辖装置事故应急演练并及时修订完善应急预案

5.4.10 Cooperate with or participate in investigations of production and HSE accidents, and implement accident rectification and prevention measures. 配合或参与生产、HSE 类事故调查，落实事故整改预防措施。

5.5 Process Engineer 工艺工程师

5.5.1 Assist leader in charge of process in Operation Dept. and share responsibility for equipment and process under her or his jurisdiction in accordance with the principle of "one in charge of production must also be responsible for safety". 按照“管生产必须管安全”的原则，协助运行部分管工艺领导对所辖装置工艺安全负责。

5.5.2 Be responsible for production, process and technology management of the plant, and strictly implement all HSE management systems of the Company. 负责本装置生产、工艺、技术管理工作，严格执行公司各项 HSE 管理制度。

5.5.3 Be responsible for safe and stable operation of the plant, deal with abnormality or emergency in a decisive and proper manner, and immediately report to leadership of the department, so as to prevent the situation from getting worse. 负责本装置安全平稳运行，发生异常或紧急状况时，要果断正确处理，并立即报告部门领导，防止事态扩大。

5.5.4 Be responsible for preparation and revision of technical procedures, start-up/shutdown program and calibration program of production process of the plant; prepare and implement HSE plans for production, repair and technical processes; be responsible for production technology training and assessment of operational posts of the plant. 负责编制、修订本装置生产工艺技术规程、开停车和标定方案；编制并落实生产、检修、技术过程 HSE 方案；负责本装置员工操作岗位生产技术的培训和考核。

5.5.5 Strictly implement process-related operational disciplines and operational procedures, eliminate or reduce unplanned shutdown and running, emitting and bunching accidents, stop acts in violation of HSE systems and HSE technical specifications in a timely manner, and realize safe, stable, long-term, full and optimized production. 严格执行工艺操作纪律和操作规程，杜绝或减少非计划停工和跑、冒、串事故，及时制止违反 HSE 制度和 HSE 技术规程的行为，实现安、稳、长、满、优生产。

5.5.6 Be responsible for up-to-standard discharge of the plant and energy saving and emission reduction compliance requirements, and ensure up-to-standard discharge in terms of all environmental protection indicators. 负责本装置生产达标排放和节能减排达标要求，确保各项环保指标达标排放。

5.5.7 Inspect and assess the implementation of operational records, production statements, process indicators, on-site standardization, process disciplines and HSE management systems of operational crews. 检查和考核运行班组的操作记录、生产报表、工艺指标、现场规范化、工艺纪律、HSE 管理制度等执行情况。

5.5.8 Participate in daily, weekly and monthly inspections and other inspections at regular intervals, and report and deal with HSE hidden dangers in a timely manner. 定期参与日常检查、周检、月检等检查，发现 HSE 隐患及时汇报和处理。

5.5.9 Regularly organize and conduct accident emergency exercise for the plant and revise and improve emergency plans in a timely manner. 定期组织开展本装置事故应急演练并及时修订完善应急预案。

5.4.10 Cooperate with or participate in investigations of production and HSE accidents, and implement accident rectification and prevention measures. 配合或参与生产、HSE 类事故调查，落实事故整改预防措施。

5.6 Chief Engineer of Equipment 设备主任工程师

5.6.1 Assist the leaders sharing responsibility for equipment of the operation department to be responsible for the equipment safety of the plant under his jurisdiction in accordance with the principle of “the one who is in charge of business must also be responsible for safety”. 按照“管业务必须管安全”的原则，协助运行部分管设备领导对所辖装置设备安全负责。

5.6.2 Organize to formulate and revise the safety operation and maintenance procedures and management documents of the equipment of plant under his jurisdiction. 组织制订和修订所辖装置设备安全操作、检修规程和管理文件。

5.6.3 Be responsible for daily maintenance of the equipment and facilities of plant under his jurisdiction, and timely deal with problems found to keep them in a good and safe condition. 负责所辖装置设备设施日常维护保养，发现问题及时处理，使其保持良好安全状态。

5.6.4 Be responsible for organizing regular inspections, verifications and submittals for inspection of special equipment, safety accessories, etc. of plant under his jurisdiction, and for handling the registration of special equipment. 负责组织对所辖装置特种设备、安全附件等的定期检查、校验和送检，办理特种设备的注册登记。

5.6.5 At the time of formulating relevant equipment design, manufacturing and transformation plans and preparing equipment maintenance and repair plans, include corresponding HSE measures into such plans, and inspect and supervise implementation of HSE measures. 在制订有关设备设计、制造、改造方案和编制设备检修计划时，应有相应的 HSE 措施内容，对 HSE 措施完成情况负责检查监督。

5.6.6 Participate in major inspections of equipment, and rectify the relevant hidden dangers that have been detected in planned and timely manner, and implement the HSE technical measures plans and rectification projects of accident hidden dangers on schedule. 参与设备大检查，对检查出的有关隐患，要有计划地及时整改，按期实现 HSE 技术措施计划和事故隐患整改项目。

5.6.7 Prepare and review the on-site maintenance and repair construction schemes for plant under his jurisdiction, and review HSE measures to ensure that risks are mitigated and controlled. 编制、审核所辖装置现场检维修施工方案，审核 HSE 措施，确保风险得到消减和控制。

5.6.8 Strengthen the HSE management of on-site maintenance and repair work of plant under his jurisdiction, and perform HSE inspection and assessment on contractors under his governance. 加强所辖装置现场检维修作业的 HSE 管理，对所管辖承包商进行 HSE 检查和考核。

5.6.9 Cooperate with or participate in investigations of equipment and HSE accidents, and implement accident rectification and prevention measures. 配合或参与设备、HSE 类事故调查，落实事故整改预防措施。

5.7 Equipment Engineer 设备工程师

5.7.1 Assist the leaders sharing responsibility for equipment of the operation department to be responsible for the equipment safety of the plant in accordance with the principle of “the one who is in charge of business must also be responsible for safety”. 按照“管业务必须管安全”的原则，协助运行部分管设备领导对本装置设备安全负责。

5.7.2 Participate in formulating and revising the safety operation and maintenance procedures and management documents of the equipment of the plant. 参与制订和修订本装置设备安全操作、检修规程和管理文件。

5.7.3 Be responsible for daily maintenance of the equipment and facilities of the plant, and timely deal with problems found to keep them in a good and safe condition. 负责本装置设备设施日常维护保养，发现问题及时处理，使其保持良好安全状态。

5.7.4 Be responsible for organizing regular inspections, verifications and submittals for inspection of special equipment, safety accessory facilities, etc. of the plant, and for handling the registration of special equipment. 负责组织对本装置特种设备、安全附件设施等的定期检查、校验和送检，办理特种设备的注册登记。

5.7.5 At the time of formulating relevant equipment design, manufacturing and transformation plans and preparing equipment maintenance and repair plans, include corresponding HSE measures into such plans, and inspect and supervise implementation of HSE measures. 在制订有关设备设计、制造、改造方案和编制设备检修计划时，应有相应的 HSE 措施内容，对 HSE 措施完成情况负责检查监督。

5.7.6 Participate in major inspections of equipment, and rectify the relevant hidden dangers that have been detected in planned and timely manner, and implement the HSE technical measures plans and rectification projects of accident hidden dangers on schedule. 参与设备大检查，对检查出的有关隐患，要有计划地及时整改，按期实现 HSE 技术措施计划和事故隐患整改项目。

5.7.7 Participate in preparing and reviewing all kinds of on-site maintenance and repair construction schemes, and review HSE measures to ensure that risks are mitigated and controlled. 参与编制、审核各类现场检维修施工方案，审核 HSE 措施，确保风险得到消减和控制。

5.7.8 Strengthen the HSE management of on-site maintenance and repair work of the plant, and perform relevant HSE inspection and assessment on contractors under his governance. 加强本装置现场检维修作业的 HSE 管理，对所管辖承包商进行相关 HSE 检查和考核。

5.7.9 Cooperate with or participate in investigations of equipment and HSE accidents, and implement accident rectification and prevention measures. 配合或参与设备、HSE 类事故调查，落实事故整改预防措施。

5.8 Chief Engineer of HSE HSE 主任工程师

5.8.1 Implement the HSE-related guidelines and policies, laws and regulations of the government of Brunei and the Company and various HSE rules and regulations of the Company, report the HSE work directly to the department head, propose HSE management suggestions and accept work instruction from superior HSE department according to his own work. 贯彻执行文莱政府和公司有关 HSE 方针政策、法律法规和公司各项 HSE 规章制度，根据本职工作，直接向部门主管领导汇报 HSE 工作，提出 HSE 管理建议、接受上级 HSE 部门工作指导。

5.8.2 Be responsible for the “Three Simultaneities” work of safety, environmental protection and occupational health of the department. 负责做好本部门的安全、环保、职业卫生 “三同时” 工作。

5.8.3 Be responsible for the HSE education of staff in the department, establish and save the education and examination archives, and ensure the 100% of education rate and qualification rate. 负责本部门员工 HSE 教育，建立并保存教育及考试档案，保证教育率和合格率达到 100%。

5.8.4 Be responsible for organizing and carrying out the crew-based HSE activities, timely delivering document requirements related to HSE laws and regulations, rules and regulations, accident cases, etc. and conducting inspections and assessments on the implementation of the activities. 负责组织开展班组 HSE 活动，及时传递有关 HSE 法律法规、规章制度、事故案例等文件要求，并对活动落实情况进行检查考核。

5.8.5 Be responsible for the hazard identification and risk assessment in the department, and supervise and inspect the development and implementation of HSE plans for major change operations and high risk work. 负责本部门危险源辨识和风险评价工作，监督检查重大变更作业、高风险作业 HSE 方案的制定和落实。

5.8.6 Be responsible for establishing the HSE management ledger of the department and updating it in time. 负责建立本部门的 HSE 管理台帐并及时更新。

5.8.7 Be responsible for the integrity management of HSE equipment, facilities and apparatus of the department, and supervise and urge the daily inspection and maintenance. 负责本部门 HSE 设备设施和器材完整性管理，督促做好日常检查、维护保养工作。

5.8.8 Conduct on-site supervision and inspection every day to master the safety production status and correct the “Three Violations” in a timely manner; apply for and review various types of High Risk Work Permits and schemes, supervise and inspect the effective implementation of various HSE measures, to ensure the safe and controlled state throughout whole process of various high risk work and prevent major accidents involving people, fire and explosion. 每天深入现场监督检查，掌握安全生产状况，及时纠正“三违”行为；申请、审查各类高风险作业许可证和方案，监督检查各项 HSE 措施的有效落实，保证各类高风险作业全过程始终处于安全受控状态，防止重大人身、火灾爆炸事故的发生。

5.8.9 Be responsible for management on labor protection products, heatstroke prevention, occupational health examinations, etc. of the department. 负责本部门劳动保护用品、防暑降温和职业健康体检等管理工作。

5.8.10 Participate in investigations of HSE accidents and implement accident prevention measures for accidents handling as per the principle of “Four No-Missings”. 参与 HSE 事故调查，落实事故防范措施，做到事故处理“四不放过”。

5.8.11 Complete other tasks assigned by the department head and superior departments in charge. 完成部门领导及上级主管部门交办的其他工作。

5.9 HSE Engineer HSE 工程师

5.9.1 Assist to implement the HSE-related guidelines and policies, laws and regulations of the government of Brunei and the Company and various rules and regulations of the Company, based on his own work, well perform various HSE work of the department and accept the work arrangements of the department head. 协助落实文莱政府和公司有关 HSE 方针政策、法律法规和公司各项规章制度，立足本职工作，做好部门 HSE 各项工作，接受部门领导工作安排。

5.9.2 Assist to well perform the “Three Simultaneities” work of safety, environmental protection and occupational health of the department. 协助做好本部门的安全、环保、职业卫生“三同时”工作。

5.9.3 Assist to well perform the HSE education of staff in the department, ensure the 100% of education rate and qualification rate, and establish the education and examination archives. 协助做好部门员工 HSE 教育，保证教育率和合格率达到 100%，建立教育及考试档案。

5.9.4 Assist to organize and carry out the crew-based HSE activities, timely deliver document requirements related to HSE laws and regulations, rules and regulations, accident cases, etc., and conduct inspections and assessments on the implementation of the activities. 协助组织开

展班组 HSE 活动，及时传递有关 HSE 法律法规、规章制度、事故案例等文件要求，并对活动落实情况进行检查考核。

5.9.5 Assist to carry out the hazard identification and risk assessment in the department, and supervise and inspect the development and implementation of HSE plans for major change operations and high risk work. 协助开展本部门危险源辨识和风险评估工作，监督检查重大变更作业、高风险作业 HSE 方案的制定和落实。

5.9.6 Assist to well perform the integrity management of HSE equipment, facilities and apparatus of the department, and supervise and urge the daily inspection and maintenance. 协助做好本部门 HSE 设备设施和器材完整性管理，督促做好日常检查、维护保养工作。

5.9.7 Assist to organize the preparation of the department's on-site disposal plans and the development of drill plans, organize accident drills on a regular basis, and perform the emergency work duties. 协助组织编制部门现场处置方案并制定演练计划，定期组织事故演练，履行应急工作职责。

5.9.8 Conduct on-site supervision and inspection every day to master the safety production status and correct the "Three Violations" in a timely manner; apply for and review various types of High Risk Work Permits and schemes, supervise and inspect the effective implementation of various HSE measures, to ensure the safe and controlled state throughout whole process of various high risk work and prevent major accidents involving people, fire and explosion. 每天深入现场监督检查，掌握安全生产状况，及时纠正“三违”行为；申请、审查各类高风险作业许可证和方案，监督检查各项 HSE 措施的有效落实，保证各类高风险作业全过程始终处于安全受控状态，防止重大人身、火灾爆炸事故的发生。

5.9.9 Assist to well perform management on labor protection products, heatstroke prevention, occupational health examinations, etc. of the department. 协助做好本部门劳动保护用品、防暑降温和职业健康体检等管理工作。

5.9.10 Participate in investigations of HSE accidents and implement accident prevention measures for accidents handling as per the principle of "Four No-Missings". 参与 HSE 事故调查，落实事故防范措施，做到事故处理“四不放过”。

5.9.11 Complete other tasks assigned by the department head and superior departments in charge. 完成部门领导及上级主管部门交办的其他工作。

5.10 Leader of the Crew 班（组）长

5.10.1 As the primary person in charge of the safety production of the crew, be fully responsible for the HSE work of the crew. Examine and evaluate the compliance with HSE responsibility system during the period of duty of each post. 是班组安全生产第一责任人，对本班组 HSE 工作全面负责。检查、考核各岗位在岗期间 HSE 责任制的遵守情况。

5.10.2 Conscientiously implement the safety production instructions and requirements issued by the Company and departments, educate employees to observe regulations and disciplines, and stop acts in violation of regulations. 认真执行公司和部门下达的安全生产指令和要求，教育职工遵章守纪，制止违章行为。

5.10.3 Perfect the crew construction, improve the HSE management level of the crew, and regularly organize and carry out the crew-based HSE activities. 搞好班组建设，提高班组 HSE 管理水平，定期组织开展班组 HSE 活动。

5.10.4 Participate in the preparation of daily maintenance, startup and shutdown and technical transformation plans, take part in the training on production operation skills and safety, fire-fighting knowledge, as well as on-the-job training and assessment. 参与日常检修、开停工和技术改造方案的编制，参加生产操作技能与安全、消防知识培训和岗位练兵及考核。

5.10.5 Be responsible for organizing the daily routing inspections and HSE inspections of the crew, strengthening the monitoring on critical key points, and timely organizing to handle and report the accident (if any), protect the accident scene and make detailed records. 负责组织班组日常巡检和 HSE 检查，加强对关键重点部位的监控，发生事故时应及时组织处理和报告并保护好现场，做好详细记录。

5.10.6 Be responsible for organizing the daily inspection and recording on production equipment, safety and environmental protection facilities, fire-fighting facilities, protective equipment and emergency equipment. 负责组织对生产设备、安全环保设施、消防设施、防护器材和急救器具的日常检查和记录。

5.10.7 Be responsible for supervising and urging the crew members to correctly use the labor protection articles and equipment and properly use the fire extinguishing equipment and gas protection equipment. 负责督促班组成员正确使用劳动防护用品、用具，正确使用灭火器材及防毒器材。

5.10.8 Be responsible for the implementation of various types of high risk work on site during the period of duty in strict accordance with the Company's relevant HSE system requirements. 负责落实在岗期间的现场各类高风险作业，严格按照公司相关 HSE 制度要求执行。

5.10.9 Have the right to refuse instructions for operations against rules, and to dissuade and stop others' unsafe acts and operations against rules. 有权拒绝违章作业的指令，对他人的不安全行为和违章作业加以劝阻和制止。

5.10.10 Participate in department-level emergency drills, and regularly organize and carry out the crew-level accident emergency drills to improve the crew members' accident emergency response abilities. 参加部门级应急演练并定期组织开展班组级事故应急演练，提高班组人员事故应急处置能力。

5.11 Deputy Leader of the Crew 副班长

5.11.1 Assist the Leader of the Crew to implement the HSE work, check the implementation of the HSE responsibility system during the period of duty of each post, and put forward assessment opinions on acts in violation of regulations. 协助班长落实 HSE 工作，检查各岗位在岗期间 HSE 责任制落实情况，对违章行为提出考核意见。

5.11.2 Assist the Leader of the Crew to perfect the crew construction, regularly carry out the crew-based HSE activities, publicize and implement the Company's HSE-related systems, and conduct regular education and training of HSE concepts, knowledge and skills for staff of the crew to continuously improve their HSE awareness. 协助班长搞好班组建设，定期开展班组 HSE 活动，宣贯公司 HSE 相关制度，对班组员工开展经常性的 HSE 理念、知识和技能的教育和培训，不断提高班组员工 HSE 意识。

5.11.3 Inspect and supervise the crew members to correctly use and manage the labor protection products, various protective equipment and fire-fighting appliances, and well perform

the daily maintenance. 检查督促班组人员正确使用和管理好劳动保护用品、各种防护器具和消防器材，并做好日常的维护保养工作。

5.11.4 Strictly check the operation of the personnel by entering the site, inspect the operation steps, and ensure the operation safety. 深入现场，对人员的操作行为进行把关，对操作步骤进行检查，确保操作安全。

5.11.5 Inspect and record the production equipment, safety and environmental protection facilities, fire-fighting facilities, protective equipment and emergency equipment in each crew. 每班对生产设备、安全环保设施、消防设施、防护器材和急救器具的进行检查和记录。

5.11.6 Correctly analyze, judge and deal with all kinds of accident symptoms to eliminate the accident in the bud. In the event of an accident, promptly report to the Leader of the Crew, correctly handle it as per the accident plan and protect the scene. 正确分析、判断和处理各种事故苗头，把事故消灭在萌芽状态。发生事故时应及时向班长报告，按事故预案正确处理，并保护好现场。

5.11.7 Assist the Leader of the Crew to implement various types of high risk work on site during the period of duty in strict accordance with the Company's HSE system requirements. 协助班长落实在岗期间的现场各类高风险作业，严格按照公司 HSE 制度要求执行。

5.11.8 Have the right to refuse instructions for operations against rules, and to dissuade and stop others' unsafe acts and operations against rules 有权拒绝违章作业的指令，对他人的不安全行为和违章作业加以劝阻和制止

5.11.9 Prepare the accident emergency drill plans for the crew, organize the implementation, and form the drill ledger and keep in the archives. 编制班组事故应急演练方案，并组织实施，形成演练台账并存档。

5.12 Indoor operator 内操

5.12.1 Conscientiously execute and implement the safety production instructions from the Company and departments, be familiar with the characteristics and distribution of toxic and harmful substances in the plant, and be responsible for the safety production of the plant's operation. 认真执行并落实公司和部门的安全生产指令，熟悉本装置有毒有害物质特性和分布情况，对装置操作的安全生产负责。

5.12.2 Strictly implement various rules and regulations and safety and technical operation procedures for the plant, to ensure the up-to-standard process and environmental protection control indicators. 严格执行各项规章制度和装置安全技术操作规程，确保工艺、环保控制指标达标。

5.12.3 Actively participate in various HSE activities such as crew-based HSE learning, technical trainings for posts and accident drills. 积极参加班组 HSE 学习、岗位技术练兵和事故演练等各项 HSE 活动。

5.12.4 Strictly implement the production monitoring, operation adjustment, etc. in accordance with operation procedures and process discipline requirements, during the working period, conscientiously conduct supervision of counting and operation adjustments; carefully analyze the operation data, and master the changing trends of various process parameters at any time to prevent overtemperature and overpressure of the equipment. And handle and report the abnormalities found in a timely manner. 生产监控、调整操作等按照操作规程及工艺纪律要求严

格执行，工作期间认真做好监盘、操作调整；认真分析操作数据，随时掌握各项工艺参数的变化趋势，防止设备超温、超压。发现异常及时处理和汇报。

5.12.5 Have the right to refuse instructions for operations against rules, and to dissuade and stop others' unsafe acts and operations against rules. 有权拒绝违章作业的指令，对他人的不安全行为和违章作业加以劝阻和制止。

5.13 Field operator 外操

5.13.1 Conscientiously study and strictly observe various rules and regulations, not violate the labor discipline, not operate against rules, be familiar with the characteristics and distribution of toxic and harmful substances in the post, and undertake the direct responsibility for the safety production of the post. 认真学习和严格遵守各项规章制度，不违反劳动纪律，不违章作业，熟悉本岗位有毒有害物质特性和分布情况，对本岗位安全生产负直接责任。

5.13.2 Strictly implement the safety and technical operation procedures for the plant, observe the process discipline and operation discipline, make various records, and hand over the safety and environmental protection situations for shifting of duty. 严格执行装置安全技术操作规程，遵守工艺纪律和操作纪律，做好各项记录，交接班必须交接安全、环保情况。

5.13.3 Expertly master the knowledge and skills on the post about the technological process, process principles, MSDS of hazardous chemicals, equipment startup and shutdown, accident emergency treatment, etc. 熟练掌握本岗位工艺流程、工艺原理、危化品 MSDS 和设备开停工、事故紧急处理等知识和技能。

5.13.4 During the period of duty, be responsible for the safety supervision of high risk work on site in strict accordance with the Company's HSE management system and requirements. 在岗期间负责现场高风险作业的安全监护，严格按照公司 HSE 管理制度和要求执行。

5.13.5 During the period of duty, carry out patrol inspections on time and according to the route, strengthen the monitoring on the operation of key equipment, etc. of the plant, make records, and handle and report the abnormalities found in a timely manner. 在岗期间按时、按路线进行巡回检查，加强对装置重点设备等运行情况的监控，并做好记录，发现异常应及时处理和报告。

5.13.6 Be responsible for regular inspections and records of facilities of safety, occupational health, fire fighting and gas protection, etc. in the area of the plant, and report and deal with problems found in a timely manner. 负责本装置区域内安全、职业卫生、消气防等设施的定期检查和记录，发现问题及时汇报和处理。

5.13.7 During the working period, wear labor protection clothing in accordance with regulations, and be able to correctly use the labor protection articles and facilities of safety, occupational health, fire fighting and gas protection, etc. 岗期间须按规定劳保着装，能正确使用劳动防护用品和安全、职业卫生、消气防等设施。

5.13.8 Actively participate in various HSE activities such as crew-based HSE learning, technical trainings for posts and accident drills. 积极参加班组 HSE 学习、岗位技术练兵和事故演练等各项 HSE 活动。

5.13.9 Have the right to refuse operations against rules and to dissuade and stop others' operations against rules. 有权拒绝违章作业，对他人违章作业加以劝阻和制止。