ESTADÍSTICAS HSSE

BGP Offshore ha establecido y divulgado políticas relacionadas con los aspectos de salud, seguridad, protección y medio ambiente de sus negocios y actividades. Todas las políticas de HSSE están firmadas por el presidente y están ubicadas en FLAG (sistema de gestión de datos de BGPO (acceso local de archivos a nivel mundial)) y publicadas en los lugares de trabajo y oficinas.

3 políticas para nivel corporativo

- Política de seguridad y salud ocupacional
- Política medioambiental y de sostenibilidad
- Política de riesgos

7 políticas secundarias que respaldan la política de salud y seguridad:

- Política de salud: no fumar
- Política de salud: drogas y alcohol
- Política de seguridad: transporte
- Política de seguridad: detener el trabajo
- Política de seguridad - Seguridad
- Política de seguridad: trabajo solitario
- Política de seguridad: joyería

BGPO statistic for 3 years

EXPOSURE-BGPO		Current Year	Year - 2019	Year - 2018
Total Man-hours worked		3,618,177	6,580,650	3,797,028
Exposure - Site Work (hours)		3,490,049	6,247,074	3,532,068
SAFETY-BGPO		**Current Year**	**Year - 2019**	**Year - 2018**
Fatalities	FAT	0	0	0
Lost Time Incidents	LTI	1	1	0
Lost Workday Cases	LWC	1	1	0
Restricted Workday Cases	RWC	0	0	0
Medical Treatment Cases	MTC	0	1	3
First Aid Cases	FAC	10	11	5
Total Recordable Cases (sum FAT, LWC, MTC, or RWC)	TRC	1	1	3
Near Miss Incidents		23	33	12
Fatal Accident Rate (per 10^8 hours)	FAR	0	0	0
Lost Time Injury Frequency (per 10^6 hours)	LTIF	0.29	0.32	0
Total Recordable Case Frequency (per 10^6 hours)	TRCF	0.29	0.32	0.85
ENVIRONMENT-BGPO		**Current Year**	**Year - 2019**	**Year - 2018**
Loss of Primary Containment (recordable)	LOPC	0	0	0

BGP Life Saving Rules

Category	ICON	Life Saving Rules
Personal Safety		Use fall protection equipment correctly when working at height
		Must wear personal flotation device as required when working in water
		Forbid walking under a suspended load
Site Safety		Forbid use of alcohol or drugs (with anaesthetizing effect) while working or driving
		Forbid smoking in smoking-prohibited area
Control of Work		Must obtain a valid Permit to Work for non-routine work and high risk operation
		Implement isolation before inspection and maintenance of electrical system and other possible energy releasing equipment
Explosives Safety		When assembling explosives and detonators , all wires must be shunted during the entire process
		Must maintain required Safety Distance when assembling explosives and detonators as well as during its blasting operation
Driving Safety		Wear your seat belt correctly while driving or riding a vehicle
		When driving on a journey, follow approved Journey Management Plan
		When driving, forbid use of phone and prohibit driving that exceeds speed limit

The following procedures will be used to address worker's Violation of BGP's Life Saving Rules

Life Saving Rules	First time Violation	Second time Violation	Third time Violation
	✧ Leave post for six months. ✧ Receive retraining ✧ Report to work after		
	Written Warning	✧ Leave post for six months. ✧ Receive retraining ✧ Report to work after	
	Verbal Warning	Written Warning	✧ Leave post for six months. ✧ Receive retraining ✧ Report to work after re-assessment.

Note: All international operating entities are required to establish procedures and policies on violation of BGP life saving rules in compliance with local and/or national laws and regulations.

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

HEALTH POLICY – NO SMOKING

BGP Offshore is committed to providing a workplace that is free from hazards and is a healthy place to work. We enforce a smoke-free environment in all of our places of work.

To achieve this, we have put in place the following rules:

- All company working areas are non-smoking, except for agreed designated smoking areas
- Employees will not get extra breaks for smoking
- All employees will be treated with mutual respect with regards to this policy
- Line managers shall lead by example in enforcing this policy



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

HEALTH POLICY – DRUG & ALCOHOL

The effects of drugs and alcohol can result in uncontrolled and risky behaviour. Employees who work under the influence of drugs and alcohol are a risk to themselves and their co-workers. BGP Offshore is committed to a workplace free from hazards, and we enforce "ZERO" tolerance of breaches of this policy.

To achieve this, we:

- Prohibit any person impaired by any performance limiting substance which can include alcohol, legal or illegal substances or prescribed medication from entering facilities, engaging in business or operating equipment on our behalf
- Will ensure subcontractors strictly adhere to this policy while performing their assigned duties
- Reserve the right to conduct unannounced work-site searches of personal effects, lockers, vehicles and quarters of anyone who is subject to this policy
- Will carry out random drug tests of employees, agents and subcontractors



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE
BUSINESS MANAGEMENT SYSTEM

HUMAN RESOURCES POLICY

BGP Offshore firmly believes that our greatest asset is our people, and we want everyone who works with us to be motivated and proactive in supporting us to achieve our strategic objectives.

To help achieve this aim, we promise to:

- Treat all of our employees fairly and justly
- Provide equal opportunities, without discriminating against people for their race, colour, nationality, ancestry, religion, sex, pregnancy, age or disability
- Ensure a fair and equitable recruiting and hiring process that results in the right match of skills, knowledge and experience with the job requirements
- Create an environment that encourages job satisfaction
- Have an open and honest communications process that involves employees and builds mutual trust and respect
- Provide employees with clear job descriptions, detailing what is expected of them, in terms of both performance and behaviour
- Carry out annual appraisals to help develop employees' skills and competencies
- Encourage employees' career development, in alignment with company strategic development, and provide appropriate support such as training or promotion
- Respect individuals' private needs, and be supportive and sympathetic in difficult or sensitive personal matters



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

OCCUPATIONAL HEALTH AND SAFETY POLICY

The Occupational Health and Safety (OHS) Policy supports BGP Offshore's Mission, Vision and Values Statement. It demonstrates our commitment to having zero incidents and to eliminating injuries, dangerous occurrences and ill health in all our operations.

To achieve this, we will:

- Make OHS the highest priority for all of our operations
- Make senior management accountable for company OHS performance, ensuring they demonstrate leadership in this area by leading by example in all their duties, at all times
- Implement safe systems of work to reduce risks
- Provide suitable facilities, plant and equipment, and maintain them in a safe and secure condition to protect the employees and people who will use them
- Provide suitable and sufficient training for all employees and selected contractors, as appropriate
- Maintain a transparent reporting system that allows the analysis of incidents, potential incidents, and unsafe acts and conditions
- Provide an open communications channel, encouraging employees to participate in OHS and actively look for improvements to eliminate risks
- Set objectives and targets for the continuous improvement of OHS
- Maintain OHS standards that meet legal and other requirements, always aiming for industry best practice



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

ENVIRONMENTAL AND SUSTAINABILITY POLICY

BGP Offshore understands that the integration and balance of the three dimensions (social, environment and economic) are vital for a business to strive. The company believes that an environmentally responsible company should manage its activities by identifying its impacts on the environment and communities, always looking to minimize the negative impacts and amplify the positive ones, preventing pollution at all times.

The company shall therefore, always act to maintain and improve of the environmental baseline conditions wherever it operates, always pursuing the following:

- Operating to a standard that meets International Management Standard ISO 14001:2015 and the International Convention for the Prevention of Pollution from Ships (MARPOL), and other applicable local, national and international regulatory requirements
- Setting key objectives for the Company that are appropriate for the organization and aligns with its strategic direction as described in SP-012 Performance Management
- Monitoring and analyzing environmental key performance indicators and striving for continuous improvement in our environmental performance
- Cooperating with clients, contractors and suppliers in the utilization of the latest environmental technology, challenging us to attain higher environmental standards than legislative requirements
- Identifying, engaging and understanding the needs and expectations of stakeholders through promoting a constructive dialogue and adopting relevant practices as compliance obligations
- Encouraging all personnel to exercise their right to Stop Work should they deem any situation or work activity an imminent risk to the environment.



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE
BUSINESS MANAGEMENT SYSTEM

RISK POLICY

BGP Offshore is committed to the effective management of risks, which include strategic, health and safety, environmental, quality, financial, human resources, legal and marketing risks. Having a robust risk management system improves the confidence of all our stakeholders in our ability to meet our strategy and objectives.

Our Senior Management Team is responsible for the effective management of risk within the company, with ownership of the risk management process. Line managers are responsible for identifying, assessing and treating risks. We foster a risk-awareness culture in all our decision-making.

To achieve our risk management objectives, we will:

- Establish the external and internal context of all risks
- Communicate and consult with relevant external and internal stakeholders
- Ensure accountability and authority are identified in employees' job descriptions
- Provide appropriate training to ensure competence for managing risk
- Provide and allocate appropriate resources
- Identify, analyse, evaluate and treat risks
- Continually monitor, review, record and improve our risk management process

Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE
BUSINESS MANAGEMENT SYSTEM

QUALITY POLICY

BGP Offshore's goal is to be the market leader in offshore seismic acquisition and seismic imaging solutions in the oil and gas industry, and to become a preferred partner wherever possible.

The Senior Management Team are responsible for supporting their employees in fulfilling the policy and our quality objectives.

To achieve this goal, we commit to:

- Provide resources to constantly improve our processes, enhance the services we provide and increase our competitiveness – as a minimum, we should always meet and where possible exceed our clients' expectations
- Ensure compliance with legal and other requirements, including international standards and industry regulations
- Establish measurable objectives that are consistent with this policy, and are monitored and reviewed by Senior Management during the annual Management Review
- Maximise efficiency through robust planning, utilising optimal equipment and having competent, qualified personnel
- Implement auditing, monitoring, reviews and client feedback to maintain and continually improve the effectiveness of our quality management within our business management system



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

SAFETY POLICY – TRANSPORTATION

BGP Offshore believes that all transport incidents are preventable. Our goal is to achieve **zero** incidents relating to transport. Line managers are responsible for supporting their employees in fulfilling this policy.

To achieve our goal, we will:

- Ensure that all employees get awareness training and acknowledge safety when driving and travelling on business
- Ensure that transport activities comply with all relevant local, national and contract requirements
- Enforce the use of seat belts
- Prohibit the use of mobile phones when driving
- Provide necessary professional training to drivers to ensure they are qualified and competent
- Ensure that all transport assets, facilities and equipment are in a safe operating condition
- Implement and monitor a project-specific journey management system at all locations



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

SAFETY POLICY – STOP WORK

BGP Offshore is committed to providing a safe and healthy workplace for all employees and people working on our behalf. Employees are empowered and have a duty to stop work if there is any cause for concern.

To achieve this, we will follow these principles:

- Promote the use of a **Time Out For Safety**
- Support everyone who requests a **Time Out For Safety**
- We will ensure a no-blame culture is enforced when employees stop work for any safety concerns
- No work will restart until the **Time Out For Safety** issues and concerns have been adequately addressed
- All **Time Out For Safety** interventions will be recorded in the BGP Offshore safety observation programme
- A **Time Out For Safety** is considered a positive action



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

SAFETY POLICY – SECURITY

BGP Offshore is committed to providing a safe and secure workplace for all employees and people working on our behalf. We commit to implementing and maintaining effective security measures, and reducing the impact from security risks to all company people and assets.

To achieve this goal, we will:

- Identify and evaluate threats, vulnerabilities and risks to our people and assets
- Establish a security and emergency plan to minimise the risk to people and potential damage to company assets
- Ensure that security issues are properly addressed by implementing country and project-specific security plans
- Ensure that all employees, subcontractors and security people get adequate training on best security practices



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

SAFETY POLICY – LONE WORK

BGP Offshore is committed to providing a safe workplace for all employees and people working on our behalf. We are committed to ensuring that people who may be required to work alone do so with an appropriate duty of care.

To achieve this goal, we will:

- Endeavour to minimise lone working situations as much as possible
- Ensure that an assessment of risks is conducted and recorded before commencing lone working tasks
- Ensure that suitable and sufficient control measures have been identified and are implemented
- Ensure that all lone workers have received appropriate awareness training and are competent to work alone safely



Liu Haibo

President of BGP Offshore

30 July 2020

BGP OFFSHORE

BUSINESS MANAGEMENT SYSTEM

SAFETY POLICY – JEWELLERY

BGP Offshore is committed to providing a safe workplace for all employees and people working on behalf of our company. To maintain safe working conditions, wearing jewellery is prohibited in all offshore locations and while performing operations on shift.

Jewellery includes, but is not limited to:

- Rings
- Earrings
- Bracelets
- Neck chains



Liu Haibo

President of BGP Offshore

30 July 2020

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No:
294185-2019-ASA-RGC-RvA

Initial certification date:
13 December, 2019

Valid:
13 December, 2019 - 13 December, 2022

This is to certify that the management system of

BGP OFFSHORE

B5th Floor Annex CNPC Building, Tianjin, No. 83, Second Avenue, TEDA, Tianjin, China, 300457

has been found to conform to the Occupational Health and Safety Management System standard:
ISO 45001:2018

This certificate is valid for the following scope:

Offshore Geophysical Service, including Offshore Geophysical Data Acquisition, Geophysical Data Processing and Sales

Place and date:
Shanghai, 16 December, 2019

MGMT. SYS.
RvA C 024

For the issuing office:
DNV GL – Business Assurance
Suite A, Building 9, No.1591 Hongqiao Road, Changning District, Shanghai 200336, P.R. China
TEL: +86 21 32799000

Zhu Hai Ming
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV GL Business Assurance B.V., ZWOLSEWEG 1, 2994 LB, BARENDRECHT, NETHERLANDS. TEL:+31102922689. assurance.dnvgl.com

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No:
294006-2019-AQ-RGC-RvA

Initial certification date:
13 December, 2019

Valid:
13 December, 2019 - 13 December, 2022

This is to certify that the management system of

BGP OFFSHORE

B5th Floor Annex CNPC Building, Tianjin, No. 83, Second Avenue, TEDA, Tianjin, China, 300457

has been found to conform to the Quality Management System standard:
GB/T 19001-2016/ISO 9001:2015

This certificate is valid for the following scope:

Offshore Geophysical Service, including Offshore Geophysical Data Acquisition, Geophysical Data Processing and sales

Place and date:
Shanghai, 16 December, 2019

MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT
IAF
MGMT. SYS.
RvA C 024
The RvA is a signatory to the IAF MLA

For the issuing office:
DNV GL – Business Assurance
Suite A, Building 9, No.1591 Hongqiao Road, Changning District, Shanghai 200336, P.R. China
TEL: +86 21 32799000

Zhu Hai Ming
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV GL Business Assurance B.V., ZWOLSEWEG 1, 2994 LB, BARENDRECHT, NETHERLANDS. TEL:+31102922689. assurance.dnvgl.com

DNV·GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No:
294184-2019-AE-RGC-RvA

Initial certification date:
13 December, 2019

Valid:
13 December, 2019 - 13 December, 2022

This is to certify that the management system of

BGP OFFSHORE

B5th Floor Annex CNPC Building, Tianjin, No. 83, Second Avenue, TEDA, Tianjin, China, 300457

has been found to conform to the Environmental Management System standard:
ISO 14001:2015

This certificate is valid for the following scope:

Offshore Geophysical Service, including Offshore Geophysical Data Acquisition, Geophysical Data Processing and Sales

Place and date:
Shanghai, 16 December, 2019

MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT
IAF
MGMT. SYS.
RvA C 024
The RvA is a signatory to the IAF MLA

For the issuing office:
DNV GL – Business Assurance
Suite A, Building 9, No.1591 Hongqiao Road, Changning District, Shanghai 200336, P.R. China
TEL: +86 21 32799000

Zhu Hai Ming
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV GL Business Assurance B.V., ZWOLSEWEG 1, 2994 LB, BARENDRECHT, NETHERLANDS. TEL:+31102922689. assurance.dnvgl.com

22-NOV-2018



HUMAN RESOURCES MANAGEMENT

HUMAN RESOURCES MANAGEMENT SYSTEM

HUMAN RESOURCE DEPARTMENT

BGP OFFSHORE

14th Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 300457, CHINA

Contents

1.0 PURPOSE 3
2.0 SCOPE 3
3.0 REFERENCES 4
4.0 DEFINITIONS 4
5.0 RESPONSIBILITY& ACCOUNTABILITY 5
6.0 PROCESS 8
6.1 Strategic Workforce Planning 8
6.1.1 Corporate Resource Planning 9
6.1.2 Operational Workforce Planning 9
6.2 Corporate Structure 10
6.2.1 Department Structures 10
6.2.2 Job Descriptions 11
6.3 Recruitment 12
6.3.1 Request 12
6.3.2 Advertisement of Vacancy 14
6.3.3 Advertisement of Position 14
6.3.4 Candidates for Further Assessment 14
6.3.5 Candidate Management – Job Offer 15
6.3.6 Pre-Employment Checks 15
6.3.7 Pre-Boarding New Employees 15
6.3.8 Boarding 16
6.3.9 Internal process 16
6.4 Performance Management 17
6.4.1 Initial Performance Appraisal 17
6.4.2 Annual Performance Appraisal 18
6.4.3 Performance Monitoring 19
6.5 Training & Development 19
6.5.1 Location Hazard Assessments 20
6.5.2 Training Matrix 20
6.5.2.1 Level 1 - Industry Standard Requirements for Offshore personnel 20
6.5.2.2 Level 2 – BGPO In-house QHSSE Safety Awareness 21
6.5.2.3 Level 3 – Position Related Training 21
6.5.3 Position & Competency Requirements 22
6.5.4 Recruitment 22
6.5.5 Training Needs Assessment 22
6.5.5.1 New Hire 22
6.5.5.2 Additional Training 22
6.5.6 Training Evaluation 23

6.5.6.1 Training Provider Evaluation 23
6.5.6.2 Training Course Evaluation 23
6.5.6.3 Training Candidates Supervisor Evaluation 23
6.5.7 Training & Competency Budget Management 23
6.6 Employee Absentee Management 24
6.6.1 Personal Health Monitoring 24
6.6.2 Personal Health Issues 24
6.6.3 Work Related Health Issues 24
6.6.4 Personal Leave(Unpaid Leave) 24
6.6.5 Maternity leave 25
6.6.6 Bereavement Leave 25
6.6.7 Marriage Leave 25
6.7 Disciplinary Management 25
6.7.1 Disciplinary Action Process 25
6.7.2 Pre-disciplinary Action Procedure/Informal Counselling 26
6.7.3 Formal Disciplinary Action 26
6.7.4 Misconduct/Gross Misconduct 26
7.0 RECORDS 27
8.0 PROCESS PERFORMANCE 27
8.1 Monitoring and Review 27
8.2 Management Review 27

1.0 PURPOSE

This manual summarizes all major human resources policies and procedures that are currently in force in BGP Offshore and its subsidiaries. Any terms and conditions of employment not covered, in part or in whole, in this manual shall be subject to the provisions of labour legislation in force in P.R. China.

The manual is intended to serve as a reference guide for interested parties on the human resources policies and procedures of BGP Offshore as well as providing rationale and principles of how these should be implemented and enforced. The provisions stipulated in this manual shall be subject to change from time to time at the discretion of BGP Offshore.

This Human Resources Management Manual is used to explain how BGP Offshore fulfils the aspirations of the BGP Offshore Human Resources Policy which was implemented to support the Mission, Visions & Values statement. The policy identifies key principles that BGP Offshore shall work to which are:

- To recruit personnel with the relevant skills and competencies to meet specific job requirements to meet current and future needs of BGP Offshore
- To create a working environment that encourages job satisfaction by having open and honest communications
- To provide clear guidance on individual's responsibilities and the company's expectations
- To ensure that employees demonstrate competence in their assigned tasks
- To treat personnel in a fair and just manner
- To ensure equality for all individuals
- To promote positive behaviour through a continuous appraisal feedback process
- To exercise proactive prevention of hazards to safeguard the health and safety of personnel
- To provide appropriate training to ensure continuous personal development and understanding the individual's aspirations and the changing company needs.

By aligning effective human resource management with strategic planning, the organization can:

- Respond to organizational, regulatory and operational needs
- Anticipate and manage human resource risks
- Ensure associated costs are managed and the value of such investments is measured
- Develop an organizational culture which reflects its organizational values
- Foster increased management, effective communication and collaboration across all stakeholders
- Optimize overall performance

2.0 SCOPE

The Human Resources Management Manual is applicable across the company to include International Operations and will provide guidance on tools, processes and practices to be put in place in order to establish, maintain and continually improve effective human resources management within BGP Offshore.

3.0 REFERENCES

ISO 30400:2016 Human Resource Management Vocabulary
ISO 30405:2016 Human Resource Management – Guidelines on Recruitment
ISO 30409:2016 Work Force Planning
BGPO-P-01Human Resources Policy
BGPO-SP-002 Code of Conduct
MLC 2006 Regulations
IOGP Report 292
IOGP Report 510

4.0 DEFINITIONS

BGPO: BGP Offshore.

H.R.M.: Human Resources Management.

Workforce: People who provide a service or labour to contribute to the organizational outcomes.

Workforce Planning: Systematic identification, analysis &planning of organizational needs in terms of personnel.

Succession Plan: Process for identifying and developing current employees with the potential to fill key positions in the organization.

Social Responsibility: Responsibility of an organization for the consequences of its decisions and activities on society and the environment through transparent and ethical behaviour that:

- Contributes to sustainable development, including health and the welfare of society
- Takes into account the expectations of stakeholders
- Is in compliance with applicable law and consistent with international norms of behavior

Key Performance Indicators: Indicators that are qualitative and quantitative measures that demonstrate critical success factors of the people in the organization.

Performance Management: Includes activities which ensure that goals are consistently being met in an effective and efficient manner.

Recruitment: Process of sourcing, attracting, assessing and employing talent for an existing or new position within the organization.

Requisition: Request to recruit people.

Talent Pool: Identified group of people who possess the knowledge, skills, abilities and other characteristics for a specific job.

Candidate: Applicant who is interested in and qualified for a job, and who is of interest to the organization.

Assessment: Systematic method and procedure for ascertaining work-related knowledge, skills, abilities or other characteristics of people or a group, or the performance of people or a group of people.

Job Description: List of specific or general tasks or functions and goals or responsibilities of a position, as well as organizational conditions under which those tasks and functions are to be performed.

Employee: Engage the services of a person or put a person to work.

5.0 RESPONSIBILITY& ACCOUNTABILITY

The following positions hold responsibilities as a collective in the implementation of this manual and the supporting procedures.

President shall:

- Ensure that sufficient resources are made available so that a Human Resource Management system is in place for BGP Offshore
- Ensure that BGP Offshore is legally compliant in the management of human resources
- Appoint a competent person to oversee the management of the Human Resources Management System

VP H.R. shall:

- Ensure that BGPO has a Human Resource Management System in place that is suitable and sufficient for the business needs of BGP Offshore
- Ensure that all applicable laws and other requirements have been identified and that mitigations are in place
- Ensure that all risks related to a Human Resource Management System have been identified in the risk register at a corporate level
- Be responsible for providing guidance on the application and use of the BGPO Human Resource Management System
- Be responsible for ensuring the competency of personnel in the management of the Human Resource Management System
- Be responsible for having a framework for reviewing and monitoring the effectiveness of the Human Resource Management System

Director H.R. shall:

- Ensure that the Human Resource Management System for BGPO covers all locations operated or managed by BGPO
- Ensure that all applicable laws and other requirements that have been identified have appropriate mitigations and processes in place
- Be responsible for providing guidance on the application and use of the BGPO Human Resource Management System
- Be responsible for reviewing and monitoring the effectiveness of the Human Resource Management

System

- Ensure the allocation of resources for training of personnel and appropriate training has been identified in the company training matrix

Deputy Directorshall:

- Assist the Director overseeing human resource management practice or activities compliance with policies and procedure
- Review and make recommendation to the Director with respect to management of change
- Assist to generate annual human resource plans such as workforce, manpower budget, and department budget etc.
- Advise the Director concerning issues and questions relating to the policies or procedures
- Be responsible for certain aspects(Payroll &benefits, Workforce and document control etc.) of management on behalf of Director after authorization
- Assist the Director in conducting performance appraisals and handling other personnel matters, including performance and conduct issues that rise to the Director level

Manager – Recruitmen tshall:

- Manage and lead the recruitment process
- Be fully responsible for the development of the recruitment process and implementation of recruitment innovations
- Ensure recruiting processes align with current and future workforce needs
- Develop the most effective, economical and appropriate recruiting channels and methods
- Maintain good relationships with all advertisement and recruitment agencies
- Ensure that project/department milestones/goals are met and adhere to approved budgets
- Act as a single point of contact for managers regarding recruitment topics

Manager - Training shall:

- Develop the companywide Training & Competency program and have it documented
- Ensure legal and other requirements have been identified and training and competency programs are in place
- Coordinate training, including that provided by any in-house trainers or external bodies
- Lead the development and implementation of all training across the organization
- Provide a program for training and qualification for all personnel responsible for instructing or training others. (“Training the Trainer”)

- Provide quality assurance of training from internal and external sources
- Lead the overall training evaluation and feedback process with support from line departments
- Provide a periodic report to the business with feedback on the results of the evaluation of training program and training process improvements
- Ensure adequate training records are maintained by regular audit
- Ensure adequate training records are in place for employees and contract staff employed by the organization.
- Ensure the Training & Competency procedure is audited for compliance
- Develop a Training Matrix which meets the company's legal and other requirements
- Manage any Non-Conformances related to the Training & Competency procedure

Manager –Performance Appraisal shall:

- Formulate (update) schematic diagram of BGP Offshore and establish the job responsibilities of each functional department as required by the organization,
- Collect, organize and formulate job descriptions for all employees in the management department formulating rational and correct job descriptions according to actual works
- Assist in the annual performance appraisal process for BGP Offshore management
- Do well in the annual business assessment to the team managers, management staff, and professional technicians according to relative policy and regulations of the Company
- Complete outstanding staff quarterly evaluation work
- Evaluate competence of foreign employees and qualification appraisal

Manager-Payroll shall:

- Co-ordinate, direct and control payroll preparation, processing and distribution
- Manage payroll workload to meet operational requirements
- Ensure payroll is processed in an accurate, compliant and timely manner
- Direct the preparation of payroll related documents
- Oversee compliance with statutory reporting and filing requirements
- Compile data from payroll sources
- Monitor the accurate processing of staff appointments, transfers, promotions and terminations
- Review and improve payroll policies and procedures
- Oversee the maintenance of current employee data systems

- Ensure all payroll information and records are maintained in accordance with statutory requirements
- Interpret new legislation impacting payroll

Manager- Insurance & Benefits shall:

- Develop, implement, administer, and maintain benefits programs, policies, and procedures
- Ensure programs meet employee needs, comply with legal requirements and are cost effective
- Develop benefits communications and counsel employees on benefits related issues
- Evaluate existing benefits programs against peer organizations to determine competitiveness, trends and developments.
- Ensure that project/department milestones/goals are met and adhere to approved budgets

Manager-HRMIS shall:

- Manage and oversee the organization's Human Resources Information Systems (HRIS).
- Maintain internal database files and tables, and develop custom reports to meet the requirements of company management and staff
- Manage Human resource statistic data analysis and input HRMIS with high accuracy and in a timely manner

6.0 PROCESS

BGP Offshore Human Resource Management (HRM) is an ongoing process that is required to be flexible to meet the business needs of BGP Offshore. With a vision of expanding globally, BGP Offshore implements a strategy of forward planning for the resources required to meet the vision.

HRM continually faces new challenges from the increased globalization of the company, enhanced technologies requirement and changing workforce demographics. To meet these new challenges requires navigation through the dynamic and often complex economic, legislative, social and industrial environment in which the company operates.

BGP Offshore has an established legal department which is responsible for acquiring legislation and rules associated with business operation to guide and support the operation.

6.1 Strategic Workforce Planning

Workforce planning is an active and continuous process within BGP Offshore's organizational planning cycle. The planning is undertaken at two levels and both are interlinked. During the planning cycles, HRM risks are identified to ensure that current and future business needs are not affected by the risk(s).

The first phase of HRM planning is to have a clear understanding of the potential business scenarios that should be taken into consideration during planning sessions to include;

- Change to business needs
- Growth – quantified
- Decline – quantified

- Other – e.g. work/department needs/location

The second phase is to understand supply and demand on resources to include the status of the company's human resources. Indicators include:

- Turnover of personnel (exit minus entries)
- Levels of competency for the oil & gas sector in which BGP operate as well as international requirements
- Availability for deployment of the current workforce

The third phase looks at the risks associated with the workforce which require strategies, action plans, and reports;

- Risks are to be identified by departments and as a whole company for planning and transition management to include:
  - Resources required
  - Funding
  - Systems which need to be managed

The fourth phase is implementation and monitoring the effectiveness of the workforce planning which would be done by process, department and whole business.

6.1.1 Corporate Resource Planning

At the corporate level, all stakeholders within BGP Offshore will have a representative present during the annual Management Review meeting. The Management Review will focus on the previous year's performance and provide an understanding of successes and opportunities for improvements across the business.

The HRM inputs to the Management Review for workforce planning may be initiated by an internal or external issue, audits, feedback, workforce supply issues, industry competition, growth capacity or changes in technologies.

The review will look at potential organizational risks from absence or inadequacy of a workforce plan for the future needs of the organization strategy.The outputs from the meeting should provide the HRM team with a clear strategy that will be aligned to the overall business needs of BGP Offshore.

For further information on the Management Review process within BGP Offshore, please reference BGPO-SP-012 Performance Management which is available in FLAG.

6.1.2 Operational Workforce Planning

All departments within BGP Offshore shall identify future workforce planning requirements they foresee and should consider:

- Changes in size
- Growth
- Decrease
- Other changes (restructuring, new technologies, competency/skill sets)

The requirements that have been identified should also be given to a timeline for implementation. The departments that require changes shall implement a management of change for significant changes within their department.

The department is responsible for providing a detailed recruitment request to the Human Resources Department along with a detailed Job Description.

The recruitment request form can be obtained from the Human Resources Department or from FLAG BGPO-F-001 Recruitment Request Form.

6.2 Corporate Structure

BGP Offshore has an organizational structure in place so that clear business needs are identified and adequate resources are allocated to meet these needs. The organizational structure also demonstrates the hierarchy of responsibility and accountability. The Senior Management Team in BGP Offshore contains the following levels:

- President
- Senior Vice Presidents
- Vice Presidents

The V.P. Human Resources is responsible for ensuring that clear organizational structures are in place and that they are current. Each department within BGP Offshore is responsible for maintaining an up to date department organization chart. The Senior Management Organizational chart is maintained by the V.P. Human Resources.

The organization charts give a visualization of how the company is setup and the structures in place to manage the business needs and risks. The organizational charts in BGP Offshore shall show the following details;

- Organization by individual department
- Department structures
- Hierarchy of responsibility and accountability
- Function/job role

By following this process, all departments will have a clear reporting line for all individuals to understand.

6.2.1 Department Structures

Within BGP Offshore, the Marketing & Sales Department and Operations Departments have the main interface with clients. For this purpose, the rest of the organization is structured to support their needs.

Current departments within BGP Offshore are:

- Human Resources
- Legal
- Financial
- Business Development
- Marketing & Sales (Towed & OBN)
- Operations
- Technical
- Equipment
- QHSSE

Each department will have a matrix of responsibility as a quick reference that shall help all personnel clearly understand additional requirements of their position as well as their general duties. The matrix will address areas like procedure responsibilities, risk management inputs, appraisal requirements, department development inputs and management of change responsibilities.

Critical positions within each department should be identified so that a clear Management of Change (MOC) is in place to address any business risks that could arise from a change of that

position.

6.2.2 Job Descriptions

A job description is a critical document for every position in BGP Offshore. A well-defined job description performs a number of important functions:

- It sets clear expectations for the employee and employer
- It describes the skills and competencies that are needed to perform the role
- It defines where the job fits within the overall company hierarchy
- It is used as the basis for the employment contract
- It is a valuable performance management tool

To ensure that BGP Offshore has the correct talent available for its business needs, each department shall ensure that each role within their department has a clearly defined job description in place. A well-defined job description will help reduce risks to the company and the department by ensuring that competencies and experience required for respective roles are understood during the recruitment process. The job description will also provide clear guidance for employees to understand the company's expectations for the position they hold.

The job description shall identify the following requirements for the position:

Job Title: Accurately reflects the nature of the job and the duties being performed, it will reflect its ranking within the organization, and it is self-explanatory.

Duties: Should contain a list of all duties and responsibilities associated with the role.

Skills & Competency: Should be listed separately from one another as they are two separate areas:

- *Skills* - are activities the candidate can perform based on what they learned in the past, or from a qualification they have obtained
- *Competencies*– are traits or attributes you expect the candidate to display in the role. Examples are; strong leadership, teamwork, communications, flexibility and initiative.

Relationships: It is important to include reporting lines, so the position knows who reports to them and who they report to. This should also be reflected in the department organization chart. It may also be necessary to identify relationships with other departments they support.

Work Location : List the physical location the candidate will be expected to work or support.

Schedule: Define the working schedule expected i.e. onshore - hours per day/days per week/ vacation allocated or offshore shift hours per day & rotation duration - weeks on and off the vessel.

Job descriptions should be used during the appraisal process in case of any misunderstanding of responsibilities etc.

Each department is responsible for the review/updating of job descriptions for their department on an annual basis. This ensures that current requirements are being met. When a job description has been updated, personnel affected by the changes will need to review the new requirements.

A Job Description template is available from the H.R. department that gives a structure to be completed. BGPO-F-002 Job Description.

The Human Resources Department are responsible for keeping all Job Descriptions on record and for making sure each role within the company has an up to date Job Description.

6.3 Recruitment

The main principle of BGP Offshore is to recruit qualified people and to maintain a pool of human resources aligned to the company's workforce planning requirement. It is also the principle of BGP Offshore to transfer or promote well performing and capable employees to fill vacancies so that employees are provided with opportunities to widen their exposure and further their career development within BGP Offshore.

All applicants have equal opportunities of employment irrespective of their age, sex, marital status, pregnancy, family status, disability, race, nationality or religion.

Job applicants are treated fairly and equally. Employment is offered only to the best qualified applicants with reference to their merits and abilities to meet the requirements of the jobs, irrespective of whether they are referrals or direct applicants.

The Human Resources Department provides recruitment advice and services to all Departments and is responsible for the entire process leading to employment. BGP Offshore will not be bound by offers of employment other than by the Human Resources Department.

The purpose of recruitment within BGP Offshore is to acquire, in a cost-effective manner, the optimum number of high quality employees for the operations and development of BGP Offshore. In order to appoint the most appropriate persons for the positions, it is crucial that potential candidates are drawn from a wide pool and equal opportunities are ensured for all candidates. The following processes are used to ensure transparency and fairness throughout the recruitment process and maximize the diversity of applicants.

The recruitment process identified in figure 1 is the standard approach when recruiting personnel in BGP Offshore. A robust approach to recruitment can aid in cost saving to the company by:

- Increasing productivity
- Reducing errors
- Recruiting candidates that meet the long-term strategies of the company

All personnel collectively make BGP Offshore a successful company, therefore attention to detail is required across the company when selecting the right candidate for the role.

6.3.1 Request

The need for a new hire shall be determined by the corresponding department manager as described in section 6.1.2. Once the approval of a new recruit has been obtained, a Job Description for the position shall be identified by the line manager and sent to the Human Resources Department (HRD) as part of the Recruitment Request Form. The form will provide the following details;

- Department the recruit is required for
- Position
- Start Date
- Salary Range
- Type of employment-permanent employment or short term

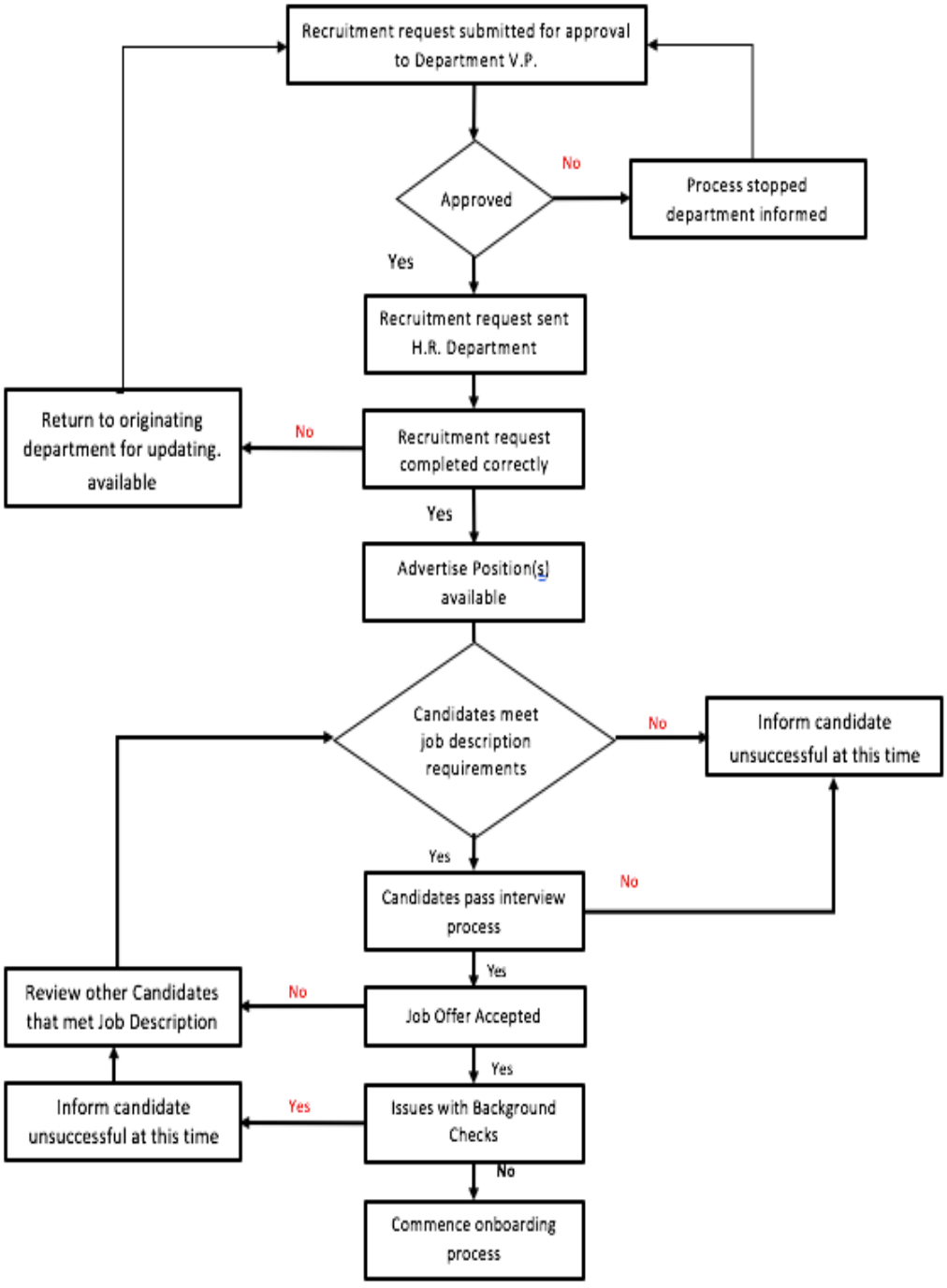


Figure 1 Recruitment process

6.3.2 Advertisement of Vacancy

The position will be identified as being open for recruitment by advertising either Internally/Externally, on Social Media and through third-party recruiters. Recruitment shall be focused on finding candidates who match the requirements identified on the Job Description which will be decided by HRD Director.

6.3.3 Advertisement of Position

The Recruitment Manager reviews applications to determine whether the candidate has the required skills, competencies and abilities for the position. The applications for the vacancy are divided into 3 groups:

1) Not Qualified: These candidates don't meet the requirements identified
2) Qualified & Not Pursuing: Candidates that meet minimum qualifications, but the company will not pursue at this time, candidates will be saved in the talent pool
3) Qualified &Pursuing: Candidates that shall be moved to the next phase of the recruitment process.

Those candidates determined to have met these requirements shall be contacted by the Recruitment Manager and be provided with additional information regarding the organization and specific employment situation.

6.3.4 Candidates for Further Assessment

This part of the process is for candidates that BGP Off shore is interested in and who hold the relevant qualifications for the position. During this phase, BGP are assessing the candidate's knowledge, skills, abilities and other characteristics to further refine the pool of candidates for the job. The Recruitment Manager will organize the candidate's interview using the following work instructionBGPO-F-003Interview Assessment Form, which covers:

Preparation:

- Schedule assessment meeting time & place
- Review of further information obtained about candidate
- Decide who will attend and lead the interview

During meeting:

- Greet candidate and describe the recruitment process
- Answer any questions the candidate has about the process
- Conduct assessment
- Record information acquired during the assessment activities accurately, using BGPO-F-003 Interview Assessment Form, one should be completed by each person conducting the interview for a comparison at the end
- Close the assessment
- Describe the next steps in the recruitment process

On completion of the assessment process with the candidate, use the assessment form and gather results to determine if the candidate moves to the next process or becomes the final candidate.

The results should be shared with the stakeholders involved in the process and feedback should be gathered during the process which assists in coming to a common conclusion on which candidate is deemed most suitable for the position.

6.3.5 Candidate Management – Job Offer

Candidate management focuses on the completion of the final decision regarding interested and qualified candidates. In this part of the process, the desired candidate will be offered the advertised position within BGP Offshore.

The Recruitment Manager shall send theBGPO-F-004 Job Offer which states the following:

- Start date
- Type of employment
- Position title
- Duration of contract
- Salary & benefits
- Working hours
- Induction & training details
- Bonuses
- Other requirement (e.g. joining requirements)
- Acceptance terms

The next step is to:

Process the job offer acceptance (provide next steps to candidate) or Process the job offer rejection (go back to talent pool for other suitable candidates)

6.3.6 Pre-Employment Checks

Once the candidate signs and accepts the offer letter the Recruitment manager will initiate the following pre-employment checks to confirm candidate eligibility and competency:

- Validation of Licenses and Certifications
- Previous Employment References
- Criminal Background

On completion of the above checks, a pre-employment medical will be required. If the candidate works offshore, a Drug & Alcohol test will be required.

If the results from the pre-employment checks and medical requirements are satisfactory, then the job vacancy notice shall be closed, and the On-Boarding Process for the new employee shall commence.

6.3.7 Pre-Boarding New Employees

This phase focuses on completing the activities necessary to move the candidate from the acceptance an offer to the first day of employment. The objective is to retain the candidate's interest in joining BGP Offshore by ensuring that required documentation is completed and by initiating the candidate's social and cultural integration into BGP Offshore.

The Recruitment Manager shall prepare the new employee package, which can include:

- Welcome letter
- Agenda for the first week-provided by related department
- Copy of the Mission, Vision & Values statement
- Copy of BGP Offshore Policies
- Department Organization chart-provided by related department
- The Code of Conduct and if applicable an employee handbook
- Department phone / email directory-provided by related department
- Emergency procedures / health & safety information

- Draft contract

In conjunction with the employee package being sent, HRD will also notify the department when the new employee will be boarding and provide a BGPO-F-005 On-boarding Checklist to ensure department makes adequate preparation. The checklist will identify the following activities:

- Notify Administration department of IT requirements for new employee, and provide list of required software/hardware
- Request email set up
- Notification of telephone communications, office line or mobile requirements
- Prepare employee work area (i.e. furniture, supplies, keys or key pass)

Make a lunch plan for the employees first day

- Identify employee with similar functions to act as employee's mentor
- Prepare employees paperwork (payroll and benefits information)
- Setup time sheets if required
- Inform department manager and team to set aside time for introduction and meeting of the mentor

These activities begin at the time a candidate accepts a job offer and end when the candidate reports for work.

This phase is very important within BGP Offshore as it shows new employees that they are a valued part of the team and that the company are demonstrating the valueplaced on all team members.

6.3.8 Onboarding

The recruitment process ends on the first day of employment and the transition to the department starts. With the steps identified in 6.7 Pre-Boarding, new employees complete a smooth introduction and integration into the BGP Offshore culture and work community. The following steps are considered valued parts of this final process:

- Send a welcome message to staff announcing the new employee's arrival and location
- Introduce the new employee to human resources/payroll/benefits representatives to complete any final paperwork requirements such as contract.

Making time for new employees at this phase sets high standards of expectations and allows personnel to feel valued as a member of the department and organization.

6.3.9 Internal process

Within BGP Offshore, the transfer or promotion of well performing and capable employees to fill vacancies allows employees the opportunity to further their career development within BGP Offshore.

Employees can apply through this same process, but the selection of a candidate is performed using the appraisal process to identify the suitability and any potential gaps in training that would be needed.

For further information, see BGPO-SP-006 Personal Performance Appraisal.

6.4 Performance Management

Performance management within BGP Offshore is aimed at planning, managing and improving employee performance. The aim of performance management is to optimize every employee's output in terms of quality and quantity, thereby improving the department's overall performance. By achieving this BGP Offshore in turn benefits.

To achieve individual excellence, the objectives for performance management are to:

- Establish a performance and learning culture in the Public Service
- Improve service delivery
- Ensure that all jobholders know and understand what is expected of them
- Promote interaction on performance between jobholders and their supervisors
- Identify, manage and promote jobholders' development needs
- Evaluate performance fairly and objectively
- Recognize categories of performance that are fully effective
- Manage categories of performance that are not fully effective

The key principles for effective performance management are as follows:

- Departments shall manage performance in a consultative, supportive and non-discriminatory manner to enhance organizational efficiency, effectiveness, and accountability for the use of resources and the achievement of results
- Performance management processes shall link to a consistent staff development plan and align with the department's strategic goals
- Performance management processes shall be developmental, and shall allow for recognizing fully effective performance and for an effective response to performance that is consistently effective
- Performance management procedures should minimize the administrative burden on Line Management while maintaining transparency

BGPO-SP-006 Personnel Performance Appraisal can be reviewed for further details on the whole process. The steps below are milestones used in the process.

6.4.1 Initial Performance Appraisal

Performance management for a new employee in BGP Offshore is taken over the first six (6) months of employment. This allows new employee's time to settle into their position and understand the workings of the department and the company as a whole.

The employee shall have the process explained to them when joining the company so that they understand that the process is an ongoing and two-way communication process. The process should allow the employee to highlight any issues or areas of uncertainty they have. By doing this, issues can be resolved and the transition into the department/company becomes smoother.

Near the end of the first six months of employment, employees should be provided with a performance assessment. The basis of the assessment should be the job description that is used for the role. The assessment should allow for any gaps to be understood and objectives should be set that will improve the employee's performance.

The assessments shall be a face to face meeting between the employee and their Appraisal Manager who is identified in the Job Description. When conducting the appraisal, management should have held a discussion with the new employee mentor to gain an understanding how they feel about the employee's progress. Ideally this meeting would take place a week before the assessment to allow the Appraisal Manager time to fully understand the feedback from the mentor.

Mentor should complete BGPO-F-006Personal Performance Appraisal.

During the meeting, the Appraisal Manager should cover the following areas;

1) The positive aspects the employee brings to the position and the department.This may include:
   a. Job knowledge
   b. Technical skills
   c. Acceptance of responsibility
   d. Quality of work
   e. Reliability
   f. Initiative
   g. Communication skills
   h. Interpersonal relationships
   i. Flexibility
   j. Team work
   k. Planning & execution of tasks
   l. Leadership qualities
2) Understanding the employee's own thoughts on their performance
3) Identifying potential gaps that may be evident and why the gaps maybe there
4) Setting objectives for improvement

At the end of the appraisal, there must be an agreed plan in place as this is the foundation for an effective performance management process. The plan must outline what BGP Offshore expects of the employee and what BGP Offshore will do for the employee to aid development. Types of objectives could be:

- Specific tasks/duties that the employee shall achieve
- Levels of performance expected

There is no limit to the number of objectives that can be set but they must be set using the SMART process which is defined in BGPO-SP-006 Personal Performance Appraisal.

All objectives that have been set should have an expected timeframe for completion.

6.4.2 Annual Performance Appraisal

The annual performance appraisal takes the same approach as the initial appraisal in that it is a two-way communication meeting that will have an agreed outcome. Preparation for this meeting is key in making the allocated time effective. The Appraisal Manager should:

- Review the previous appraisal and monitor updates on the objectives set
- Review support needed and draft training and development needs
- Seek appropriate feedback from relevant stakeholders to support the process
- Review and update all relevant documentation
- Identify internal/external factors affecting the employee's performance

The employee should be prepared for the meeting by;

- Reviewing previous objectives and identifying possible new objectives
- Collecting supporting facts on performance delivered
- Identifying factors that affected their performance both positive and negative
- Identifying support that will be needed as well as possible training and development

needs
- Reflecting on the feedback to be given during monitoring sessions

The Annual Performance Appraisal should provide:

- An opportunity for the employee to assess their own performance and contribution to BGP Offshores objectives and to identify areas of improvement
- An opportunity for the Appraisal Manager to provide formal feedback on performance over the year and to identify ways of improving what was achieved
- An opportunity for the employee to contribute to, and respond to comments regarding their performance and identify issues beyond their control that may have limited the achievement of results
- An open discussion between the employee and the Appraisal Manager in which achievements can be fully recognized and ideas for problem solving agreed
- Agreement on an overall assessment score reflecting judgement on the level of achievement attained in terms of the performance agreement
- An opportunity for the supervisor and the employee to agree on areas of personal development

6.4.3 Performance Monitoring

During the Initial Appraisal and Annual Appraisal, the Line Management of the employee should be gauging the progress made on the objectives that have been set during the meetings. The purpose of the monitoring is for successful outcomes of the objectives set. Waiting for the annual performance appraisal to find out if objectives have or have not been met is counter-productive to the employee and the company.

Monitoring sessions should be planned events that allow for an update on how the employee feels the objectives are going and if they see any issues in the completion of the objectives. During these sessions, further guidance or support can be offered to reach the desired outcome.

Line Management may feel that a focus is needed in certain areas and this can be highlighted during the monitoring session.

Line Management performing these monitoring sessions should make notes that will be used towards the annual performance appraisal.

As stated previously, section 6.4 is providing an outline on this process and the full process i.e. scoring/rating of individual's performance can be reviewed inBGPO-SP-006 Personal Performance Appraisal

6.5 Training & Development

To ensure the safety of personnel performing duties for or on the behalf BGP Offshore by implementing a process of identifying training and competencies allows BGP Offshore to;

- Provide a clear demonstration of compliance with any legislative requirements
- Facilitate a gap analysis to identify if further training is required and provide input to establishing a training budget in a systematic approach
- Undertake tactical resourcing decisions and consider strategic HR planning such as succession planning, demographic profiling and identification of recruitment requirements
- Demonstrate an ability to identify a better match between training needs and their provision
- Identify cost and time savings through economies of scale and more effective use of staff resources
- Draw upon resources flexibility and transferability of skilled staff across different business

departments
- Provide a demonstrable and auditable approach for matching agreed competency levels with assessed actuals and resulting training outcomes.

BGP Offshores primary purpose for training is to help personnel acquire and maintain the skills and knowledge to perform a job to a defined standard. The training should be instrumental in developing and sustaining competency.

To ensure that BGP Offshore is legally compliant to perform the activities, a location assessment will be undertaken to determine the risks and mitigations required. When the activities have been identified, a "Training Matrix" will be developed to support the locations needs. Delivering training will not in itself guarantee safety, but it will help reduce the risks to a level that is as low as reasonably practicable (ALARP).

6.5.1 Location Hazard Assessments

The identification of training requirements is part of the location risk assessment. During this process, activities that are undertaken within the location are listed. Hazardous activities that have a legal requirement will have the training identified that is suitable and sufficient to provide personnel with the skills and competency to manage the risk associated with the task.

Other training needs that do not have a legal requirement will be provided to supplement the location risk related training.

Each locations assessment is recorded in FLAG and can be viewed. The location assessments form part of the company risk register.

For further details on location assessments please see*BGPO-MP-014 Location Hazard Assessments* which is stored in FLAG

6.5.2 Training Matrix

On completion of the location assessment, a training matrix will be provided to the management identifying the minimum training required and the positions at that location that shall be required to undertake the training. The BGP Offshore training matrix will have 3 levels of requirements.

6.5.2.1 Level 1 - Industry Standard Requirements for Offshore personnel

The training in this level is a standard requirement for personnel working offshore.This training will be required as a minimum for all offshore personnel and onshore personnel that are required to visit offshore locations.

1) STCW 95 or BOSIET - offshore survival course that provides a basic understanding of survival at sea. It is renewed is by type of course;
   - BOSIET = 4 years
   - STCW 95= 5 years
2) HUET, which needs to be renewed every 4 years
3) OGUK Medical or equivalent, every 24 months for all crew, every 6 Months for catering staff
4) Drug &Alcohol (D&A) Testing - All new hires will undergo a D&A test upon joining the Company and thereafter random testing will take place.

A certificate of evidence showing the individual has completed the training/examination will be provided, a copy of these shall be held by the Human Resources department.

6.5.2.2 Level 2 – BGPO In-house QHSSE Safety Awareness

The courses provided in level 2 are designed to ensure personnel have a general awareness of risks they may face in the workplace and an introduction to the Short Service Employee Program. The course in level 2 are;

1) Location inductions
   a. Location induction explaining the general location layout and the safety related requirements i.e. muster stations, safety equipment etc. that individuals should be aware of when working / visiting the location. This will normally be completed within the first 24 hours on board.
   b. Department Inductions are more detailed to cover the type of work that the individual will perform and any potential hazard they may encounter.
2) Short Service Employee
3) BGP Offshores Business Management System
4) Risk Management & Risk Analysis
5) Safe Use of Work Equipment
6) BGP Offshore PTW Requirements
7) Safe Working at Height
8) Personal Protective Equipment (PPE) Requirements & Usage
9) Manual Handling
10) Extreme Weather conditions
11) Occupational Health Awareness
12) Travel Guidelines
13) Environmental – Aspects & Impacts
14) Environmental – Air Pollution
15) Environmental – Waste Management / MARPOL
16) Environmental management during projects
17) Environmental – Offshore Mammals
18) General Welfare

The courses above are awareness courses and where it has been identified that a certain position may have to perform activities that require a more in-depth knowledge these will be addressed in the level 3 course.

BGP Offshore Procedure BGPO-MP-029 Short Service Employee Program should be referenced to understand the mentoring program in place that aids the development of individuals during their first six (6) months of employment**.**

6.5.2.3 Level 3 – Position Related Training

Level 3 courses are provided by an external provider deemed competent to deliver the training to an industry recognized standard. A certificate is required to show attendance and successful completion of the course. The following courses are currently available in BGP Offshore:

1) Lifting Awareness – General understanding of rigging and slinging of loads, the inspection of loads prior to a lift, and the duties of a banksman during a lift.
2) Crane Operator – Training provided to ensure that personnel have sufficient knowledge in the operation of Pedestal or Knuckle Booms cranes used in BGP Offshore
3) Workboat Coxswain – Personnel can volunteer to be part of the workboat crew and under -go this training.

4) BGP Offshore Confined Space Entry & Rescue
5) TM Master – User training for the maintenance program used in BGP Offshore
6) IOSH Managing Safety – Provided to Line Management which details the Moral, Legal & Financial reason for having HSE.
7) NEBOSH General/International – Understanding the Legal requirements associated with Health & Safety in the workplace
8) Internal Audit – Understanding the importance of process management and applying improvements
9) Lead Auditor– Understanding whole management systems and verification of compliance

6.5.3 Position & Competency Requirements

With the completion of the location assessment and training & positions matrix, the Human Resource department will receive detailed job descriptions from the department(s) requiring personnel along with a BGPO-F-001 Recruitment Request Form. See below for details on requirements of a Job Description(6.2.2)

6.5.4 Recruitment

The main principle of BGP Offshore is to recruit well qualified people and to maintain a pool of human resources aligned to its workforce planning requirement. It is also the principle of BGP Offshore to transfer or promote well performing and capable employees to fill vacancies so that employees are provided with opportunities to widen their exposure and further their career development within BGP Offshore.

The Human Resources Department provides recruitment advice and services to all Departments and is responsible for the entire process leading to employment. BGP Offshore will not be bound by offers of employment other than by the Human Resources Department.

For further information on Recruitment see BGPO-SP-004 Recruitment Management.

6.5.5 Training Needs Assessment

Training is an ongoing process which starts when personnel first join the company and is monitored during appraisal processes. New hires and existing employees will be assessed for training requirements. In all cases, employee development needs to be aligned to the needs of the business whether this is driven by compliance with legislation or by a desire to improve business efficiency and productivity.

6.5.5.1 New Hire

When a new employee joins the company, a review of the training that they hold will be undertaken to enable the department to implement further training as required to meet the identified training needs.

6.5.5.2 Additional Training

BGP Offshore looks at ways to link further skills development to strategic objectives as well as to demonstrate compliance with industry regulations. It is important to identify the skill gaps of employees in terms of the organization's specific business strategies. The following could be reasons for additional training;

- The introduction of new workplace regulations
- A change in role by personnel, particularly where this change relates to safety, health or environmental responsibilities

- A change to an existing process or piece of equipment
- A change to, or the development of, a training course
- A weakness identified by monitoring, review or audit
- The need for re-training following people or organizational changes
- The continuous training of existing staff that are required to maintain or upgrade their skills and knowledge

The principle processes for identifying additional training requirements will be in the annual appraisal process (BGPO-SP-006Personal Performance Appraisal) and additional project related training that is required by a client outside of BGP Offshore normal training provided.

6.5.6 Training Evaluation

When training needs and gaps are identified, the relevant training will be undertaken. Assessment of the training provider and training course will be taken at random using satisfaction surveys. The effectiveness of the training will be identified during the appraisal process.

6.5.6.1 Training Provider Evaluation

To ensure training providers are suitably qualified, they will need to be evaluated. When training has been completed, Satisfaction Surveys will be taken at random which focus on the knowledge, ability, attitude of the training provider and the effectiveness of the training and teaching.

6.5.6.2 Training Course Evaluation

To ensure training courses meets the requirements of and are useful to the trainee, the training course will need to be evaluated. When the training is complete, Satisfaction Surveys will be taken at random to focus on the course design and training arrangement.

6.5.6.3 Training Candidates Supervisor Evaluation

The candidate needs to be evaluated to see if they have improved because of the training. This will be assessed by their line manager and identified in theappraisal process.

6.5.7 Training & Competency Budget Management

The Human Resources Department is to conduct an annual Training Needs Survey to identify and formulate the annual training plan of BGP Offshore.

According to the Training Matrix, workforce plan and Business strategy, The Human Resources Department will assess the training gaps and training requirement, then make the annual plan of HRD.

The Human Resources Department will send a Training Needs Survey to all Departments and subsidiaries of BGP Offshore to collect the training needs.

The Human Resources Department will combine the departments plan and HR Plan, establish BGP Offshore Annual Training Plan and budget, and send to the VP of HR for approval.

6.6 Employee Absentee Management

BGP Offshore works towards having a healthy working environment that is free of hazards. The management of this is undertaken by the QHSSE Department and guidance on how this is achievedcan be read in the BGPO-M-02 Occupational Health & Safety Manual.

Where personnel have reported ill health through work conditions or personal issues, BGP Offshore has a process to provide guidance to Line Management in handling these types of issues. BGPO-SP-011 Absentee.

6.6.1 Personal Health Monitoring

BGP Offshore has a health screening process in place that helps support the well-being of employees. Pre-employment medicals are conducted to ensure that personnel are fit to carry out their assigned duties and this is supported by a drug and alcohol testing program.

Personnel that work offshore are required by the industry to have medicals every two years as a minimum.

6.6.2 Personal Health Issues

Personnel that require time off work for personal health reasons shall inform the H.R.D. and fill out the Absence & Leave Form with approval by their line manager, VP or President. Also, a medical certificate maybe required to support his/her absence request.

6.6.3 Work Related Health Issues

Personnel that are off work for work related issues must be reported to QHSSE Department and Human Resource Department. The QHSSE Department is responsible for reporting to the local Bureau of Labor for certification any employee injured with work. The Human Resource Department shall follow the process of degree of disability and provide sick leave allowance, living allowance and medical care etc., and coordinate with Insurance Companies.

6.6.4 Personal Leave(Unpaid Leave)

If employees need to apply for leave to deal with personal affairs, time off at crew change is a choice. Otherwise, the employees may apply for personal leave, and the reasons could be as the following cases:

- Taking care of babies younger than one year of age
- Taking care of seriously ill or injured family numbers
- Using up sick leave for non-work-related injuries
- Dealing with family problems
- Attending funeral of a relative or close friend but not qualified for Bereavement Leave
- Going to further study
- Taking optional operations not covered by social insurance system
- Other personal reasons

Employees should submit an application for personal leave. If the request is less than one day, it should be approved by line manager. Between 1 to 5 days, it should be approved by the VP of department. More than 5 days, it must be approved by the President of BGP Offshore. An Absence & Leave Form must be completed if the request for leave is more than one day. By approval of the director, the request will be placed with Attendance Report of the employee in HR department. Weekends and public holidays are included in days of Personal Leave.

6.6.5 Maternity leave

BGP Offshore provides 128 days of paid maternity leave for female employees normally. An additional maternity leave will be granted in occurrence of the following cases:

- An additional 15-days of maternity leave will be granted in the case of multiple births. For every other baby more than one, another 15-days will be granted;
- An additional 15-day maternity leave will be granted in the case of caesarean birth.

6.6.6 Bereavement Leave

Bereavement Leave is provided to employees to deal with matters after death of lineal relative members and their conciliation.

Employees may have a Bereavement Leave maximum of 3-days if approved by their line directors. According to the transportation conditions, extension of the leave may be granted. Lineal relatives refer to spouses, parents and children.

6.6.7 Marriage Leave

Marriage Leave is providing the employee reasonable leave for wedding. Within a year of wedding registration, employees can enjoy their Marriage Leave if approved by their line directors. According to the related national regulations, employees can have a Marriage Leave of 18 days.

6.7 Disciplinary Management

BGP OffshoreBGPO-SP-002 Code of Conduct outlines the acceptable behavior of personnel representing BGP Offshore. The Business Management System (BMS) of BGP Offshore provides instruction and guidance in the form of procedures and work instructions on all aspects of work that is required to be undertaken, and details responsibilities of those involved with the various processes. The procedures and work instructions of the BMS shall form the “rules” that employees shall be expected to follow.

The disciplinary procedure provides a framework for dealing with instances where employees are alleged not to have met the required standards of conduct. The aim is to ensure prompt, consistent and fair treatment for all employees and to assist in enabling both the individual and BGP Offshore to be clear about the expectations of both parties. This procedure shall provide guidance on the course of actions to be taken if disciplinary actions are required to be taken.

6.7.1 Disciplinary Action Process

This Disciplinary Action procedure is to comply with the appropriate employment legislation and codes of practice in order to protect the integrity of BGP Offshore and its employees.

The maintenance of discipline is the responsibility of managerial staff at all levels. If minor disciplinary action offences are overlooked, an opportunity to redirect an employee’s attitude or behaviour may be lost. Additionally, overlooking an opportunity at this early stage may result in the situation escalating, leading to the need for more serious disciplinary action later.

Managers in any disciplinary situation must apply the principles of being fair and consistent. This means that the following steps must be taken in any disciplinary process:

- The employee must be presented with the case details in full
- Support from another work colleague will be actively encouraged
- The employee must be given a reasonable time to prepare a response and state the case from their perspective

- The manager must listen to all aspects of the case presented by the employee
- A sanction decided upon must be appropriate to the gravity of the circumstances. While BGP Offshore acknowledges that the need for disciplinary action seldom arises, this procedure is designed to ensure that when it is necessary, it is exercised in a fair and reasonable manner, with due regard to the rights and responsibilities of all concerned

6.7.2 Pre-disciplinary Action Procedure/Informal Counselling

Counseling or informal warnings may be a more satisfactory method of resolving problems than formal disciplinary action. The objective of any such action is to help the employee improve. Therefore, counseling or informal warnings should normally be given except where the offence is repeated or serious enough to warrant recourse to the formal procedure.

6.7.3 Formal Disciplinary Action

There are a number of sanctions in the formal disciplinary procedures which may be imposed by BGP Offshore depending on the seriousness of the offence. These are as follows:

- A verbal warning
- A written warning
- A final written warning
- Dismissal
- Suspension without pay
- Removal from the sickness benefit program
- Demotion

All cases of disciplinary action will be recorded and placed in the employee's personal record. It is of high importance that these notes are kept securely and confidentially. If there is no further offence, or if the required improvement is achieved and maintained, warnings are normally disregarded for disciplinary purposes as follows:

- A verbal warning – after 6 months
- A written warning – after 12 months
- A final written warning – after 12 months

However, there may be exceptional cases where different time limits may be applied.

Separate procedures operate under the disciplinary action procedure heading. The first will deal with performance/capability issues and the second will deal with issues of misconduct/gross misconduct.

6.7.4 Misconduct/Gross Misconduct

A full investigation of all the circumstances will be carried out without delay where appropriate. Any act of gross misconduct shall entitle BGP Offshore to summarily dismiss an employee. However, notwithstanding the above, BGP Offshore will carry out an investigation into any matter which is considered to be gross misconduct, prior to dismissal. If appropriate, BGP Offshore may by written notice, suspend an employee for a specific period during which time the investigation can be undertaken. If an employee is so suspended, the contract of employment will be deemed to continue together with all rights under the contract, including payment of salary or wages.

However, during such periods of suspension BGP Offshore reserves the right to refuse an employee access to BGP Offshore premises or any of its records except at the prior request for or with the prior consent from the Director Human Resources and subject to conditions that may be imposed. The investigation will be carried out by a person nominated by BGP Offshore

with strictly programmed procedure.

7.0 RECORDS

H.R.M. Records are confidential and not available for general viewing.

8.0 PROCESS PERFORMANCE

8.1 Monitoring and Review

Process owners are responsible for

- Establishing KPIs for the process
- Establishing process improvement objectives
- Reporting data to the Data Analysis Manager
- Scheduling process audits with the audit manager

8.2 Management Review

Process performance data will be used to determine the compliance to the management system arrangements and feed into the management review process.

02-AUG-2019

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT MANUAL

QHSSE DEPARTMENT

BGP OFFSHORE

14th Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 300457, CHINA

Contents

1.0 PURPOSE 3
2.0 REFERENCES 3
3.0 DEFINITIONS 3
4.0 CONTEXT OF THE ORGANISATION 3
4.1 Context of the Organization 3
4.1.1 BGP Offshore and its Context 3
4.1.1.1 BGPO's Internal Context and Issues 3
4.1.1.2 BGPO's External Context and Issues: 4
4.2 Interested Parties 4
4.3 Scope of the occupational health & safety management system 5
5.0 LEADERSHIP 5
5.1 Leadership and Commitment 5
5.2 Occupational Health and Safety Policy 5
5.3 Organisational roles, responsibilities and authorities 6
5.4 Consultation and participation of workers 8
6.0 PLANNING 8
6.1 Action to Address Risks and Opportunities 8
6.1.1 General 8
6.1.2 Hazard identification and assessment of risks and opportunities 8
6.1.2.1 Hazard identification 8
6.1.2.1.1 Corporate Risk 8
6.1.2.1.2 Project Risk Management 8
6.1.2.1.3 Location Risk Management 9
6.1.2.1.4 Task Risk Assessments 9
6.1.2.2 Assessment of OH&S risks and other risks to the OH&S management system 9
6.1.2.2.1 Occupational Hygiene Auditing 9
6.1.2.2.2 Occupational Health Risk Assessments 10
6.1.2.2.3 Medical Examination Requirements 10
6.1.2.2.4 Personal Medication Reporting 10
6.1.2.2.5 Return to Work Requirements 11
6.1.2.2.6 Drug and Alcohol Testing 11
6.1.2.2.7 Travel Advisory 12
6.1.2.2.8 Counselling 12
6.1.2.3 Assessment of OH&S opportunities and other opportunities for the OH&S management system 12
6.1.2.3.1 Workplace Safety Management 12
6.1.2.3.2 Permit To Work 13
6.1.2.3.3 Safety and Health Campaign 14
6.1.2.3.3.1 Safety Campaign 14
6.1.2.3.3.2 Health Campaign 14

6.1.2.3.4 Emergency Preparedness and Response 14
6.1.3 Determination of legal requirements and other requirements 15
6.1.4 Planning action 15
6.2 OH&S Objectives and Planning to Achieve Them 15
7.0 SUPPORT 15
7.1 Resources 15
7.2 Competence 16
7.3 Awareness 16
7.4 Communication 16
7.4.1 General 16
7.4.2 Internal Communication 16
7.4.3 External Communication 17
7.5 Documentation Information 17
7.5.1 General 17
7.5.2 Creating and Updating 19
7.5.3 Control of Documented information 19
7.5.4 Creating and Updating 19
7.5.5 Control of Documented information 19
8.0 OPERATION 20
8.1 Operational Planning and Control 20
8.1.1 General 20
8.1.2 Eliminating hazards and reducing OH&S risks 20
8.1.3 Management of change 21
8.1.4 Procurement 22
8.2 Emergency Preparedness and Response 22
9.0 PERFORMANCE EVALUATION 22
9.1 Monitoring, Measurement, Analysis and Evaluation 22
9.1.1 General 22
9.1.2 Evaluation of Compliance 23
9.2 Internal Audit 23
9.2.1 General 23
9.2.2 Internal audit program 23
9.3 Management Review 23
10.0 Improvement 24
10.1 General 24
10.2 Incident, Non-Conformity and Corrective Action 24
10.3 Continual Improvement 25

1.0 PURPOSE

In support of the Mission, Vision & Values Statement, Management Commitment Statement, Occupational Health and Safety (OH&S) Policy, this manual has been produced to provide a documented description of how occupational health and safety risks and issues are managed within BGP Offshore. Senior Management fully supports the process of occupational health and safety management.

The OH&S Management Manual has been developed to fulfil the requirements of the OH&S management systems (OH&SMS) specification detailed in ISO 45001, and to demonstrate that a specific framework is in place to manage H&S risks. The document is also designed to provide a clear understanding how H&S risks are managed in BGPO. The manual is supported by system procedures and management procedures, which are available in FLAG. Core benefits to BGPO of the H&SMS are to ensure a safe and healthy working environment and practices, effective and efficient business processes, and sustainability of the business.

2.0 REFERENCES

- ISO 45001:2018 – Occupational Health & Safety Management System – Requirements with guidance for use

3.0 DEFINITIONS

BGPO: BGP Offshore

ISO: International Organization for Standardization

OH&SMS: Occupational Health & Safety Management System

BMS: Business Management system

FLAG (File Locally Access Globally): BGPO's electronic data management system

4.0 CONTEXT OF THE ORGANISATION

4.1 Context of the Organization

4.1.1 BGP Offshore and its Context

BGP Offshore's parent company BGP is an integrated geophysical company. Its business line includes geophysical data acquisition, processing and interpretation; gravity, magnetic, and chemical survey; and equipment manufacturing.

BGP Offshore is a division of BGP. BGPO carries out comprehensive offshore geophysical seismic acquisition and provided corresponding technical services for energy companies around the world. Its core business includes marine seismic acquisition, offshore OBN seismic acquisition, and providing multi-client data collection and services.

4.1.1.1 BGPO's Internal Context and Issues

Issues affecting the organization:

- Organizational activities
- Types of product and service
- Strategic direction
- Capabilities (people, knowledge, processes, systems)
- Quality, safety and environmental conditions capable of affecting or being affected by BGPO

Sources of information relating to internal issues might include:

- Organizational structure, including the identification of roles and responsibilities and governance arrangements
- External reports showing how well BGPO is performing
- Statements relating to BGPO's mission, vision and core values
- Emphasis placed upon business ethics and organizational codes of conduct
- Feedback from employees through opinion surveys
- Information management systems and processes for capturing and deploying knowledge and lessons learned
- Organizational capability studies, and identification of load/capacity and resource requirements to achieve demand
- Register of identified internal risks

4.1.1.2 BGPO's External Context and Issues:

External context can include:

- The cultural, social, political, legal, regulatory, financial, technological, economic, natural and competitive environment, whether international, national, regional or local
- Key drivers and trends that impact on BGPO's objectives
- Relationships with, and perceptions and values of, external stakeholders

External issues might typically be influenced by the following factors:

- Cultural, social, political and regulatory
- Financial, economic, natural and competitive issues, whether international, national, regional or local
- Quality, safety and environmental conditions capable of affecting or being affected by BGPO

4.2 Interested Parties

The Vice President (VP) of Quality, Health, Safety, Security and Environment (QHSSE) is responsible for identifying interested parties at a corporate level. These could be those who are involved with or impacted by BGPO or its service, or those who may have a significant interest in the company. Interested parties include but are not limited to:

- CNPC (China National Petroleum Corporate, owner of BGP)
- BGP (parent company)
- Customers
- Employees and their families
- Communities local to operations
- Suppliers and subcontractors
- Port authorities
- Competitors

At a project level, the Project Team are responsible for identifying stakeholders as part of the

marketing and sales process MP-037 Marketing & Sales. These are recorded in FLAG. The needs and expectations of these stakeholders will be determined at the initial project phase to ensure that all compliance obligations and all risks are identified and effectively controlled.

4.3 Scope of the occupational health & safety management system

Offshore Geophysical Service, including Offshore Geophysical Data Acquisition, Geophysical Data Processing and sales; Offshore Geophysical Related Vessels Operation

5.0 LEADERSHIP

5.1 Leadership and Commitment

The President and Senior Management Team have described their vision for the company in the BGPO-MVV-01 Mission, Vision and Values Statement, which is reviewed regularly to ensure it remains the driving force of BGPO.

This is the top-level document in the organization, and it aligns with the Mission, Vision and Values of the parent companies.

In the BGPO-MC-01 Management Commitment Statement, the company sets out the senior management's commitment to:

- Taking accountability for the effectiveness of the OH&SMS
- Demonstrating leadership, accountability and responsibility in the management of the business
- Establishing, implementing and maintaining a BMS to identify and realize strategic objectives
- Ensuring the integration of OH&SMS requirements into BGPO's business processes
- Communicating the importance of effective environmental management and of conforming to OH&SMS requirements
- Providing resources to ensure that all risks have been identified and suitable and sufficient mitigations have been implemented
- Monitoring the effectiveness of the BMS and promoting continual improvement
- Engaging, directing and supporting employees to contribute to the effectiveness of the BMS

By implementing the BMS, the President and the Senior Management team have demonstrated their commitment to BGPO's current and future stakeholders.

5.2 Occupational Health and Safety Policy

BGPO has established an BGPO-P-02 Occupational Health and Safety Policy

The policy has been designed so that it:

- Is appropriate to the nature and scale of the company's OH&S risks
- Includes commitments to continual improvement
- Includes a commitment to at least comply with current applicable OH&S legislation and to any other requirement to which to company subscribes
- Is documented, implemented and maintained

The Occupational Health and Safety Policy will be reviewed on an annual basis by the VP QHSSE and

will be approved by the President during the Annual Management Review meeting.

Also, there are 7 Safety Policies which will support the OH&S Policy;

These policies will be applied to the fields related accordingly. Below is the list of the 7 policies:

Health Policy:

- BGPO-Health Policy-01 NO SMOKING
- BGPO-Health Policy-02 DRUG & ALCOHOL

Safety Policy:

- BGPO-Safety Policy-01 TRANSPORTATION
- BGPO-Safety Policy-02 STOP WORK
- BGPO-Safety Policy-03 SECURITY
- BGPO-Safety Policy-04 LONE WORK
- BGPO-Safety Policy-05 JEWELRY

These supporting policies will be reviewed on annual basis by director QHSSE and approved by VP HSSE.

The policies are communicated to all employees of BGPO by being posted in locations operated by BGPO and available for all employees within FLAG.

Further details relating to the communication of our Occupational Safety Policy are contained in Procedure BGPO-SP-016 Communication, Participation & Consultation.

5.3 Organisational roles, responsibilities and authorities

President shall:

- Be responsible for ensuring the Occupational Health & Safety of all BGPO employees and those that are working on behalf of BGPO
- Ensure that all Legal and other requirements relating to OH&S have been identified and treated to reduce the risk of occurrence
- Be responsible for providing adequate resources to manage OH&S within BGPO

VP QHSSE shall:

- Ensure that BGPO has an OH&S Management System in place that covers all locations operated or managed by BGPO
- Ensure that all applicable laws and other requirements have been identified and that mitigations are in place
- Be responsible for providing guidance on the application and use of the BGPO OH&S Management System
- Be responsible for ensuring the competency of personnel in the management of the OH&S Management System
- Be responsible for having a framework for reviewing and monitoring the effectiveness of the OH&S Management System

Director HSSE shall:

- Ensure that the OH&S management system for BGPO covers all locations operated or managed by BGPO
- Be responsible for the identification of activities conducted within all locations and to ensure that legal and other requirements have been identified for the activity and are recorded within the BGPO Risk Register
- Ensure that all applicable laws and other requirements that have been identified have appropriate mitigations in place
- Be responsible for providing guidance on the application and use of the BGPO OH&S Management System
- Be responsible for reviewing and monitoring the effectiveness of the OH&S Management System
- Ensure the allocation of resources for training of personnel and appropriate training has been identified in the company training matrix

Manager OH&S shall:

- Be responsible for monitoring the use of the OH&S management system within all locations operated or managed by BGPO
- Be responsible for the ongoing assessments of OH&S hazards identified within the corporate and location risk registers
- Be responsible for monitoring the applicable laws and other requirements that have been identified and that mitigations in place meet the requirements
- Be responsible for providing the OH&S Management Procedures that support BGPO OH&S Manual
- Be responsible for the performance review and monitoring the effectiveness of the OH&S Management Procedures
- Be responsible for providing guidance on the application and use of the BGPO OH&S Management Procedures to the position reporting lines
- Be responsible for identifying the training required to reduce risks and improve competency of the employees of BGPO

QHSE Advisors shall:

- Be responsible for the ongoing review and monitoring of OH&S hazards identified within the location hazard register
- Provide training and guidance on the implementation of OH&S Management Procedures for use in Work Instructions and Task Risk Assessments
- Conduct audits of the OH&S Management Procedures as directed by the OH&S Manager
- Perform Active Monitoring of tasks related to activities identified in the location risk register

Line management shall:

- Follow the requirements that have been identified in the OH&S Management System and supporting Management Procedures

- Ensure that reporting lines have received the appropriate training as identified in the company training matrix in relation to OH&S

5.4 Consultation and participation of workers

Employees are consulted on workplace health and safety issues through line management. BGPO-SP-016 Communication, Participation & Consultation details the methods of communication for safety issues to and from employees and interested parties. Weekly safety meetings are held on-board BGPO operated vessels. The employees QHSE Advisor is listed on the Health and Safety notice board on all worksites.

6.0 PLANNING

6.1 Action to Address Risks and Opportunities

6.1.1 General

This manual aims to identify and prevent occupational health and safety issues caused by the work undertaken by BGPO. The OH&S Manual supports the BGPO M-04 Risk Manual in the identification and management of risks. For further details on the management of risk in BGPO please reference BGPO-M-04 Risk Management Manual.

Arrangements for the effective planning, organization, control, monitoring and review of the necessary preventive and protective measures for workers, taking into account the activities performed in BGPO and the tasks employees will be undertaking.

6.1.2 Hazard identification and assessment of risks and opportunities

6.1.2.1 Hazard identification

6.1.2.1.1 Corporate Risk

BGPO uses FLAG to capture all risks identified at the corporate level. Once identified the current mitigations in place within BGPO are added to ensure that we have minimized the risk to As Low As Reasonably Practicable (ALARP). OH&S risks identified at a corporate level have identified the need for BGPO to have a QHSSE Department and maintain an OH&S management system. For further details on this process please review BGPO-MP-004 Corporate Risk Assessment

6.1.2.1.2 Project Risk Management

BGPO applies a project risk management process to all projects undertaken. The process is detailed in BGPO-MP-028 Project Risk Assessment. During this process, the team look at risks that are associated with the project to include;

- Health Risks
- Environmental Risks
- Security Risks
- Project Specific Risks (Field issues/SIMOPs/Journey Management etc.)

The risk discussed during this process is out with the day to day risks managed by the locations within BGPO. The recording of the risk assessment is captured in FLAG within the Project Tab.

6.1.2.1.3 Location Risk Management

Location risk registers identify the hazards related to the location and the activities that are undertaken at the location. This process then outlines the risk(s) involved with each of the hazards. The register provides guidance on the legal compliance to manage these activities and also operational mitigations/processes required. Training recommended from a legal & other requirement to help make personnel aware of the risks will be detailed within the register.

6.1.2.1.4 Task Risk Assessments

Activities that have been identified in the location risk register will have tasks associated with them i.e. “Activity – Working At Height” can have tasks like “Working with scaffold or Repairs above 3m”. Where a task has been identified in association with an Activity it shall require a “Task Risk Assessment (TRA)” to be completed. The process for performing a TRA can be reviewed in BGPO-MP-033 Task Risk Assessment, BGPO-MP-033 Task Risk Assessment shall be used to record the findings of the assessment.

Work Instructions (WI) may also be used where applicable to describe the steps to be taken to complete the task and the TRA identifies the hazards while performing the task. When producing WI & TRA Line Management must ensure that the requirements identified in the BGPO supporting Management Procedures have been addressed.

6.1.2.2 Assessment of OH&S risks and other risks to the OH&S management system

One outcome from the risk registers is the need to manage occupational health within BGPO. This is achieved by using the following processes

6.1.2.2.1 Occupational Hygiene Auditing

BGPO when required shall perform Occupational Hygiene Audits on the locations operated or owned by BGPO. The occupational hygiene audit will perform tests/reviews on the following areas;

- Noise
- Air quality
- Vibration Levels
- Lighting levels
- Water quality
- Work place ergonomic and manual handling
- Chemical exposure/management
- Ultra-violet (UV) Radiation

The results of the audits are recorded in FLAG and are used to build Health Risk Assessments that are department/role related.

BGPO where it is deemed required have a MP that provides guidance on the management of occupational health issues. The following lists of procedures are available in FLAG;

- BGPO-MP-010 Hand & Arm Vibrations (HAVS) Management
- BGPO-MP-011 Hazardous Substances Management

- BGPO-MP-012 Housekeeping
- BGPO-MP-017 Manual Handling
- BGPO-MP-023 Noise Management

Location Line Management shall ensure that the requirements identified in these Management Procedures are followed and that personnel new to that location are made aware of the requirements outlined within the procedure through the In-house level II training modules.

Other occupational factors are also taken into consideration during the Occupational Hygiene Audit include;

- Over the Counter Medicines
- Immunization for Travel Purposes
- Psychosocial Factors and Fatigue Management

6.1.2.2.2 Occupational Health Risk Assessments

The outcome of the occupational hygiene audits will be used to build Health Risk Assessments (HRAs) for each department and roles within the department. The HRAs will reflect the issues faced performing the tasks within each department and will outline the mitigations in place.

The location Line Management and QHSE team member are responsible for ensuring the mitigations that are identified in the HRAs are in place. The onsite Medical provider maybe requested to participate in the review of the HRA.

The HRAs are recorded on BGPO-F-047 Health Risk Assessment.

6.1.2.2.3 Medical Examination Requirements

BGPO carries out pre-employment medicals for all new employees. These medicals are carried out to the P.R.C. requirements or OGUK standard for international offshore workers. Employees that are required to have offshore medicals in accordance with IOGP requirements shall have a repeat medical every two (2) years.

Sub-Contractors that work for BGPO shall be required to follow this requirement, unless they are part of catering crews then it shall be required for six (6) monthly medicals.

6.1.2.2.4 Personal Medication Reporting

In order to ensure that, in the event of an emergency, the right actions can be taken to prevent escalation or unnecessary complications, it is important that personnel declare any pre-existing medical conditions and prescribed medication they may be taking.

Particular attention should be paid to the possible effects of ‘over the counter’ painkillers that contain small amounts (typically between 8mg and 15mg per tablet) of codeine in addition to paracetamol. Additionally, personnel may not be fully aware that many cold remedies also contain paracetamol. The following medications should be taken into account:

- Painkillers including paracetamol, ibuprofen, aspirin and combinations including codeine
- Common cold remedies
- Cough medicines and cough sweets
- Anti-emetics (drugs dealing with nausea and sickness)
- Medicated skin creams (e.g. insect bite cream)

Personnel should be aware that 'over the counter' preparations and medicines that are freely available over the counter in one country may not be available, or may even be illegal, in others. The same principle may apply to levels of dose or the quantity of the active ingredient in any given medicine.

When personnel move between countries as a regular part of their journey to work, care should be taken with these medicines to ensure compliance with local laws. Consideration should also be given to possible side-effects arising from the combination of some of the above medicines with anti-malarial drugs.

All medications shall be declared to the vessel Medical provider upon arrival. There are no exceptions and a failure to declare may result in disciplinary action being taken. Only medications prescribed to the individual or supplied by the on-board Medical provider are permitted for use at all work sites.

This is identified in the BGPO-MP-029 Short Service Employee.

6.1.2.2.5 Return to Work Requirements

BGPO is committed personnel that have been off work for work related issues shall take a return to work medical to ensure that they have been examined and deemed medically fit to return to work.

BGPO wishes to see their staff re-introduced into the workplace following a period of absence and carefully manage the process to ensure prevention of further absence due to a recurrence of the existing problem or the development of another one.

BGPO has a full understanding of the nature of an employee's condition in order that they can develop an agreed return to work program that is appropriate and long lasting. Advice can be taken from the employee's medical practitioner, via 'fit' notes or other documentation which will provide details about the ailment and any possible limitations on the individual, including possible side effects of any continued treatment.

BGPO will engage in continuous dialogue with the employee. Occasional visits by a BGPO representative and informal meetings to discuss progress and concerns are invaluable in maintaining good relationships and encouraging the employee towards a return to work.

6.1.2.2.6 Drug and Alcohol Testing

BGPO-Health Policy-02 Drug & Alcohol is generated for monitoring the Drug & Alcohol testing for all locations operated by BGPO. The D&A Policy is supported by a Management Procedure BGPO-MP-020 Drug & Alcohol

Testing that sets outs all requirements for testing within the organization

Drug and alcohol screening can be of value in prevention of occupational ill-health, but should be undertaken with the utmost care and attention to the procedure. There are a number of issues that should be taken into consideration.

Screening shall be undertaken before employment; as a routine matter (either at random or periodically) during employment; following incidents, and also might be undertaken in the event of there being reasonable cause for a test.

6.1.2.2.7 Travel Advisory

BGPO operates worldwide and when working in some countries we may encounter various levels of hygiene standards and exposure to a variety of local diseases (e.g. malaria). These issues will be dealt with through project health risk assessment when BGPO is bidding or undertaking a project.

For personnel that travel in advance of the crew consideration should be made in the journey management plan for the following types of vaccinations for immunization against the following;

- Diphtheria
- Typhoid
- Hepatitis A, B and C (Based on job specific risks)
- Polio (poliomyelitis)
- Tetanus
- Yellow Fever

Further detail refers to BGPO-MP-021 Journey Management.

BGPO has a malaria prophylaxis program when operations shall be performed in countries with a high risk to catching the virus. For further details see BGPO-MP-035 Malaria Prevention Management.

6.1.2.2.8 Counselling

Following a traumatic incident at the workplace, it may be appropriate to offer one-to-one counselling for those workers who feel they would benefit from discussing the events. Other situations where counselling may be used could include the following:

- Employee is suffering from work-related stress
- Employee has been subjected to violence or sexual
- harassment
- in the work situation
- Piracy and kidnapping

6.1.2.3 Assessment of OH&S opportunities and other opportunities for the OH&S management system

6.1.2.3.1 Workplace Safety Management

As already identified in section 6.3 Planning BGPO uses a Location Risk Register to identify the “Activities” that will be performed within the various

locations operated. Where there is a legal requirement associated with that activity BGPO shall have a written management procedure to give clear instruction on the requirements to be fulfilled in order to perform the activity. The requirements will identify:

- Roles & Responsibilities
- Reference to Legal & other requirements
- Process to be followed to be compliant
- Approved equipment
- Recommended resources
- Training requirements
- Auditing frequency

The following activities have been identified as common activities with legal requirements;

- BGPO-MP-034 Working at Height
- BGPO-MP-003 Confined Space
- BGPO-MP-019 Mechanical Lifting
- BGPO-MP-015 Lone Working
- BGPO-MP-017 Manual Handling
- BGPO-MP-032 Stored Energy Management
- BGPO-MP-011 Hazardous Substances Management
- BGPO-MP-007 Display Screen Management
- BGPO-MP-010 Hand & Arm Vibrations (HAVs) Management

The following Management Procedures are used to help reduce risk by giving further guidance and controls to be followed;

BGPO-MP-025 Permit to Work
BGPO-MP-016 Management of Hot Work Activities
BGPO-MP-012 Housekeeping
BGPO-MP-002 Close Pass and Dead Head
BGPO-MP-030 Workboat Management
BGPO-MP-027 Preventative Maintenance Management
BGPO-MP-029 Short Service Employee
BGPO-MP-026 Personnel Protective Equipment Requirements

These lists will be updated as new requirements are identified.

6.1.2.3.2 Permit To Work

BGPO recognises that certain tasks have a greater level of risk associated with them due to the nature/location of the task i.e. Confined Space work. For this reason, further controls are implemented to help reduce the likelihood of an unplanned event happening. BGPO-MP-025 Permit to Work (PTW) is designed to provide guidance on the controls for these type tasks. The controls may require isolation of energy sources, rescue plans, atmospheric testing, duration limitations etc. Within the PTW Procedure a guide has been provide for tasks that shall be controlled within this process.

Training shall be provided on the PTW system and the system shall be audited on a regular basis with a minimum of;

10% of all Cold Work Permits

20% of all Hot Work Permits

100% of all Confined Space Certificate

These audits shall be recorded on the back of the PTW form and in FLAG. Issues identified will be generated non-conformances or observations for improvements. These will be linked to the audit conducted on the task.

6.1.2.3.3 Safety and Health Campaign

6.1.2.3.3.1 Safety Campaign

Safety campaigns are an effective way to identify hazards and reinforce compliance with procedures/policies. A campaign might be initiated either, when SOP Report/Incident Report/I&O Report/Internal audit etc. shows that certain area needs to be improved or where an incident occurs in industry. BGPO encourages individual field unit and onshore department to get involved in the planning/design of a campaign process. At least two safety campaigns are to be launched every year.

6.1.2.3.3.2 Health Campaign

BGPO promotes the benefits to the individuals for a 'healthy' lifestyle. Campaigns to encourage individuals to stop smoking, eat healthily (eating of fruit and vegetables, less fat, less salt, etc.) and drink only moderately are only some of the better-known ones. Campaigns on a six (6) monthly basis for smoking cessation and multiple fitness tasks are used throughout the year.

6.1.2.3.4 Emergency Preparedness and Response

BGPO maintains procedures to identify the potential for, and response to, incidents and emergency situations, and for preventing and mitigating their associated impacts on staff health and safety.

BGPO-SP-008 Incident Management provides guidance on the management of an incident and how it will be recorded. FLAG is used to record all evidence and to ensure that a clear understanding of the causes of the incident have been documented and actions have been taken to ensure the incident is not repeated. Incidents will be managed by an appropriately qualified person.

For a full understanding of the incident management process in BGPO please read BGPO-SP-008 Incident Management.

BGPO-SP-018 Crisis Management provides guidance on the escalation of an incident and how additional support will be provided. This procedure is used in the development of project Emergency Response Planning (EPRs).

For a full understanding of the crisis management process in BGPO please read BGPO-SP-018 Crisis Management.

In instances where BGPO acts as a tenant in a building, then the building ERP will be followed.

These procedures are reviewed for continuing suitability and effectiveness as a part of the Management Review meeting and after the occurrence of an incident or emergency situation.

6.1.3 Determination of legal requirements and other requirements

BGPO has identified three separate areas where legal and other requirements require to be managed. These areas are:

- Marine
- Project
- Location

All compliance obligations are managed through BGPO-MP-021 Compliance Management.

6.1.4 Planning action

a) Through the use of BGPO-MP-004 Corporate Risk, BGPO-MP-014 Location Risk and BGPO-MP-028 Project Risk Assessment, BGPO evaluates hazards and risks and take appropriate action to mitigate the risk. Actions are planned to ensure regular reviews and are managed through FLAG.

Actions arising from Legal and other compliance obligations identified through the hazard and risk assessment processes are managed through the FLAG process.

Actions to prepare for and respond to emergency situations are planned through the project planning phase and are reviewed regularly. Any actions arising are managed through FLAG.

b) BGPO has taken all aspects of the business and integrated them into the integrated Business Management System (BMS). The effectiveness of the BMS and the actions taken will be reviewed as part of the Management Review Process.

6.2 OH&S Objectives and Planning to Achieve Them

OH&S Objectives are established at Corporate level, Project level and Location level and logged in FLAG. Where practicable these objectives are measurable and are consistent with the OH&S Policy. These objectives include legal, industry and client requirements as well as the results of risks and opportunities assessments and consultation with location staff. When planning objectives BGPO will use the SMART methodology (Specific, Measurable, Achievable, Relevant, Time bound).

7.0 SUPPORT

7.1 Resources

A QHSSE Department has been established in order to provide the management structure necessary to implement the OH&S Management System. The necessary resources required for the implementation and control of the OH&S are in place and can be expanded as necessary. The VP QHSSE has overall responsibility to ensure that the company's OH&S is established and implemented in line with the OHSAS 18001, and for reporting on the system's performance to the President for review purposes. The OH&S Management Structure is described in the BGPO Organization Chart.

7.2 Competence

BGPO-SP-003 Training & Competency provides the framework for personnel to achieve awareness and competency in the use of BGPO's health and safety systems. Health and Safety awareness is provided through the induction process. In addition, staffs will receive appropriate, job specific training as identified by the Training Matrix within BGPO-SP-003 Training & Competency. Formal training needs identification is undertaken for all staff according to BGPO-SP-003 Training & Competency, and training records are maintained within BGPO's online system. Training needs and training effectiveness are formally reviewed at the Management Review meeting (Section 6.0)

7.3 Awareness

BGPO-SP-003 Training & Competency provides the framework for personnel to achieve awareness and competency in the use of BGPO's health and safety systems. Through the training progress, the workers should aware:

- BGPO's OH&S policy and OH&S objectives;
- their contribution to the effectiveness of the OH&S management system, including the benefits of improved OH&S performance;
- the implications and potential consequences of not conforming to the OH&S management system requirements;
- incidents and the outcomes of investigations that are relevant to them;
- hazards, OH&S risks and actions determined that are relevant to them;
- the ability to remove themselves from work situations that they consider present an imminent and
- serious danger to their life or health, as well as the arrangements for protecting them from undue
- consequences for doing so.

7.4 Communication

7.4.1 General

Employees are consulted on workplace health and safety issues through line management. BGPO-SP-016 Communication, Participation & Consultation details the methods of communication for safety issues to and from employees and interested parties. Weekly safety meetings are held on-board BGPO operated vessels. The employees QHSE Advisor is listed on the Health and Safety notice board on all worksites.

7.4.2 Internal Communication

Senior Management ensures that there is appropriate communication within BGPO relating to the EMS. This is achieved by methods such as:

- FLAG
- Work group meetings (kick-off and toolbox meetings, etc.)
- Project meetings
- Site visits
- Email correspondence

- Access to EMS documentation in hard copy and/or digital format

7.4.3 External Communication

Senior Management ensures there is appropriate communication with regulatory bodies and clients. This is achieved by methods such as:

- Project meetings
- Email correspondence
- Documentation transfers
- Gaining client approval for release of their documentation to a third party
- Senior Management has reviewed the benefits and obstacles to communicating BGPO environmental aspects to external parties, with the following outcomes:
- **Regulatory:** Reports such as greenhouse gas emissions, marine fauna observations and reportable incidents
- **Clients:** Reports such as QHSSE statistics and incidents, and procedural documentation as per contractual requirements
- **Contractors:** Procedural documentation as per environmental requirements
- **Public:** General news, services and certifications on the BGPO website

7.5 Documentation Information

7.5.1 General

All documents in the Business Management System are available through FLAG, which is accessible by all personnel. Appropriate controls and permissions are in place. Only documents that are currently held in FLAG are valid and controlled documents.

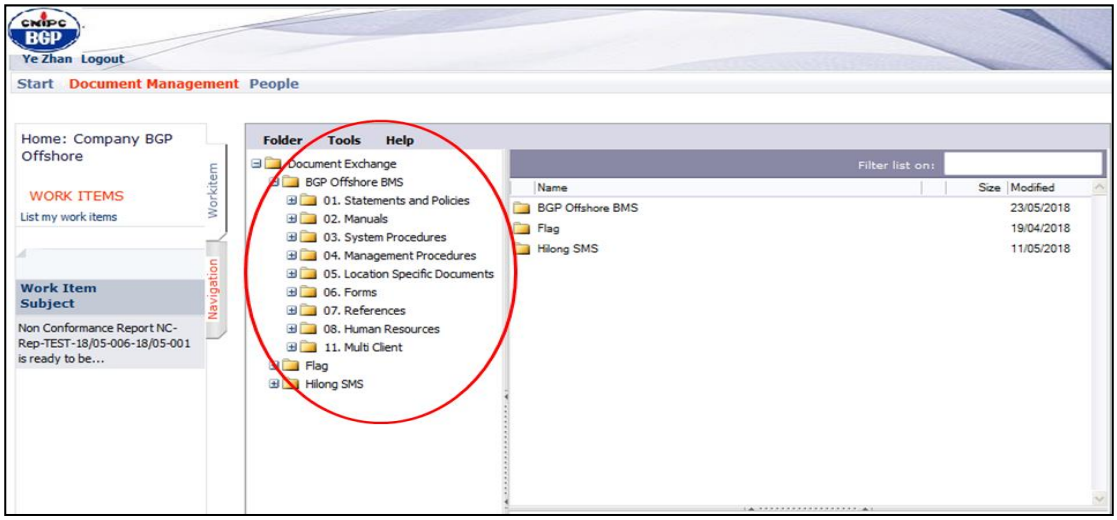


Figure 3 – Document Management Directory

Policies, manuals and SPs apply company-wide and are controlled by the Senior Management Team. MPs are more location- and task-specific, and are owned by departments. WIs support procedures and will be managed at location and department level.

Policies and documents that are relevant to OHS include but are not limited to the following:

- BGPO-MP-002 Close Pass and Dead Head
- BGPO-MP-003 Confined Space

- BGPO-MP-007 Display Screen Management
- BGPO-MP-010 Hand & Arm Vibrating Syndrome
- BGPO-MP-011 Hazardous Substances Management
- BGPO-MP-012 Housekeeping
- BGPO-MP-015 Lone Working
- BGPO-MP-016 Management of Hot Work Activities
- BGPO-MP-017 Manual Handling
- BGPO-MP-019 Mechanic Lifting
- BGPO-MP-020 Drug & Alcohol Testing
- BGPO-MP-021 Journey Management
- BGPO-MP-023 Noise Management
- BGPO-MP-025 Permit to Work
- BGPO-MP-026 Personnel Protective Equipment Equipments
- BGPO-MP-032 Stored Energy Management
- BGPO-MP-034 Working at Height
- BGPO-MP-035 Malaria Prevention Management
- BGPO-MP-036 Behavior Based Safety
- BGPO-MP-038 Safety Observation Program
- BGPO-MP-042 Medical Fitness Requirements
- BGPO-MP-043 Fatigue Management
- BGPO-MP-051 Driving Standards
- BGPO-MP-052 Medical Equipment and Consumables Requirements
- BGPO-MP-053 Portable Appliance Testing

Project documents are listed in the FLAG, and include the following, though they vary from project to project:

- Project Execution Plan
- Project QHSSE Plan
- Project Security Plan
- Project Environment Management Plan
- Project Emergency Response Plan
- HSSE Bridging Document



Figure 4 – Project Document example

7.5.2 Creating and Updating

When creating and updating documented information, people should refer to section 6.4 and 6.5 of **BGPO-SP-001 Control of Documented Information**.

7.5.3 Control of Documented information

BGPO's procedure for controlling relevant documentation is described in **BGPO-SP-001 Control of Documented Information**, which details the definitions and processes for dealing with documented information within BGPO's Business Management System (BMS). BGPO ensures that its documented information is available and suitable for use, where and when it is needed, and that it is adequately protected. Having this control process in place means that documented information always contains the correct information. Please see section 6.0 of **BGPO-SP-001** for more detail on the control process.

7.5.4 Creating and Updating

When creating and updating documented information, people should refer to section 6.4 and 6.5 of **BGPO-SP-001 Control of Documented Information**.

7.5.5 Control of Documented information

BGPO's procedure for controlling relevant documentation is described in **BGPO-SP-001 Control of Documented Information**, which details the definitions and processes for dealing with documented information within BGPO's Business Management System (BMS). BGPO

ensures that its documented information is available and suitable for use, where and when it is needed, and that it is adequately protected. Having this control process in place means that documented information always contains the correct information. Please see section 6.0 of **BGPO-SP-001** for more detail on the control process.

8.0 OPERATION

8.1 Operational Planning and Control

8.1.1 General

BGPO applies a hierarchy of controls and instructions for the management of the company, the operations and tasks performed by its personnel. This process is followed in the management of the BGPO OH&S Management system. This manual supports the OH&S Policy and is further supported by System Procedures (SP) and Management Procedures (MP). BGPO-M-04 Risk Management Manual will detail the methodology used for the management of risk and the control hierarchy used. This manual will be a general guidance on how to understand the full management of OH&S in BGPO.

8.1.2 Eliminating hazards and reducing OH&S risks

Risk treatment involves selecting one or more options for modifying risks, and implementing those options. Once implemented, treatments provide or modify the controls.

The aim of risk treatment is to bring the risk to a level that is tolerable or is as low as reasonably practicable (ALARP). This involves:

- Identifying, evaluating and selecting potential treatment options following the Hierarchy of Controls (see below)
- Undertaking cost/benefit assessments
- Preparing and implementing treatment plans
- Reassessing the 'residual risk' to see if it is ALARP (run through the risk management process again), continuing to monitor it.

Once the risks have been assessed, any form of mitigation or prevention which reduces risk shall be considered. The following Risk Reduction **(ERICPD)** steps shall also be considered in order.

Elimination：If a hazard can be eliminated then the risk created by that hazard disappears. Avoid exposing employees to the risk first, before any other control measures are considered.

- Use of mechanical device instead of manual handling.

Reduce：If the degree to which a worker is exposed to a hazard can be reduced, then that worker is far less likely to have an accident with that hazard. The duration of each exposure (e.g. for 10 minutes or for 8 hours) and the frequency (e.g. once a week or 10 times a day) of exposure will both play a part -the less time and the less frequently the better.

- Use of water-based paints instead of solvent based;
- Substances in pellet/liquid form instead of powder;
- Reduction in size/weight of item.

Isolations: The aim here is to isolate the hazard physically so that nobody is exposed to it. This

might be done by total enclosure or containment of the hazard. In some cases, this isolation is achieved not by enclosure of the hazard, but simply by placing it in an inaccessible location.

- Access Controls
- Distance
- Time
- Engineer Controls
- Enclosure

Controls: These involve designing safety into plant and equipment through the construction of machines, vehicles, containers, etc. with particular features, as well as adding particular safety equipment to processes in order to remove or reduce risks.

- Local exhaust ventilation
- Guarding
- Lighting

Personnel Protective Equipment (PPE): Is there suitable and sufficient PPE, appropriate for the job? Personal protective equipment (PPE) should only be considered as the last line of defense and should only be introduced when all other control measures have been found inadequate in eliminating or controlling the risk.

- Safety harness/inertia reel
- Respiratory protective equipment
- Chemical suit/gauntlets
- Goggles
- Face mask

Discipline: Formal procedures are designed to eliminate or control hazards. This will include the physical layout of the job, the sequence of operations, the provision of tools and equipment and communication of relevant notices, warnings and special instructions. Risk assessment systems can prompt changes in the BMS. Procedure or other related BMS documents shall be updated or new ones created as a requirement of risk assessment results.

- Process (permits, etc.);
- Procedures;

The controls determined as necessary to minimize the risk associated with each task shall be recorded within the Risk Assessment.

Risk treatment can also introduce secondary risks that need to be assessed, treated, monitored and reviewed. With the controls and mitigations recorded, the residual risk level can be determined. This is achieved by redefining the likelihood and in rare cases the severity from the Risk Matrix.

8.1.3 Management of change

BGP Offshore to have a robust system in place that is used across the company at every level to manage changes that can have an adverse effect if not managed correctly. BGP Offshore expects all personnel to be aware of when an MOC is required and how the MOC will be managed within BGP Offshore

Changes will normally come from business strategic objectives or new opportunities. The change should start with a diagnosis of the current situation in order to both understand the need for the change, the capability to change and the effect of the change. Once these are understood, a systematic approach is required to plan the change. A successful change will normally have

identified the following:

- Stakeholders expectations of the change
- Business case for the change
- Risks associated with the change, both positive and negative
- Cost of the change
- Timeframe to implement the change
- Training needs
- Procedure review / updates
- Methods of communicating the change to interested parties
- Human factors associated with changes (people don't always like a change)

Any change being implemented within BGP Offshore should improve what is currently in place. The process for the change will be managed through FLAG which is available at all locations in BGP Offshore.

8.1.4 Procurement

Hazards arising from the use of contractors are managed through SP-007 Subcontractor Management and MP-024 Marine Contractor Management.

BGPO does not outsource any functions.

8.2 Emergency Preparedness and Response

BGPO maintains procedures to identify the potential for, and response to, incidents and emergency situations, and for preventing and mitigating their associated impacts on staff health and safety.

BGPO-SP-008 Incident Management provides guidance on the management of an incident and how it will be recorded. FLAG is used to record all evidence and to ensure that a clear understanding of the causes of the incident have been documented and actions have been taken to ensure the incident is not repeated. Incidents will be managed by an appropriately qualified person.

For a full understanding of the incident management process in BGPO please read BGPO-SP-008 Incident Management.

BGPO-SP-018 Crisis Management provides guidance on the escalation of an incident and how additional support will be provided. This procedure is used in the development of project Emergency Response Planning (EPRs).

For a full understanding of the crisis management process in BGPO please read BGPO-SP-018 Crisis Management

In instances where BGPO acts as a tenant in a building, then the building ERP will be followed.

These procedures are reviewed for continuing suitability and effectiveness as a part of the Management Review meeting and after the occurrence of an incident or emergency situation.

9.0 PERFORMANCE EVALUATION

9.1 Monitoring, Measurement, Analysis and Evaluation

9.1.1 General

BGPO-SP-012 Performance Management defines the methods for monitoring and measuring the OHS processes for each level, including, corporate, project and location levels.

9.1.2 Evaluation of Compliance

Evaluations will be carried out from time to time to ensure compliance with legal and/or prescribed requirements. Evaluation of compliance is detailed in MP-021 Compliance Management.

9.2 Internal Audit

9.2.1 General

Internal audits are carried out as per the BMS internal audit schedule, which is set by the process owners and based on process risk. The internal audits will verify compliance to the IOGP, ISO45001, regulatory and the effectiveness of the system.

All BGPO auditors have had appropriate training and have been deemed competent. Where possible auditors are selected to ensure they are independent of the process they are auditing.

The audit process is owned by the Audit Manager and described in **BGPO-SP-013 Auditing. Records** of audits are kept in FLAG.

9.2.2 Internal audit program

BGPO follows the audit requirement from ISO 45000 and IOGP regulations, an internal audit program is developed and kept on FLAG—BGP Offshore Audit Schedule.

9.3 Management Review

Management Reviews always involve the VP QHSSE at a minimum. The process will involve a review and evaluation of the OH&SMS on at least an annual basis to ensure its continuing suitability, adequacy and effectiveness, and will be undertaken according to **BGPO-SP-012 Performance Management**. This procedure ensures the necessary information has been collected to allow management to undertake this review process. Process performance data will be used to check compliance with the management system arrangements and feed into the management review process and management shall communicate the relevant outputs of management reviews to workers, and, where they exist, workers' representatives

The management review process will involve the following steps.

<u>Review assessment of performance:</u>

a) Compliance with OH&SMS

b) Vision Statement and policies

c) Objectives and targets

<u>Review input:</u>

a) Status of actions from previous management reviews

b) Changes in external and internal issues that are relevant to the OH&SMS

   1. needs and expectations of interested parties
   2. legal and other requirements
   3. risks and opportunities

c) Extent to which the OH&S policy and objectives have been met

d) Information on the OH&S performance, including trends in:

1. incidents, nonconformities, corrective actions and continual improvement;
2. monitoring and measurement results;
3. results of evaluation of compliance with legal requirements and other requirements;
4. audit results;
5. consultation and participation of workers;
6. risks and opportunities;

e) Adequacy of resources

f) Relevant communications with interested parties

g) Opportunities for continual improvement

Review output

a) Continuing suitability of the OH&SMS

b) Continual improvement opportunities

c) Changes needed to OH&SMS

d) Resources needed

e) Actions needed

f) Opportunities to improve integration of OH&SMS with other business processes

g) Any implications for the strategic direction of the organisation

10.0 Improvement

10.1 General

As part of the performance management process, BGPO establishes improvement objectives based on the process monitoring data. This process is designed to identify opportunities to improve the performance of the EMS to support the BGPO-P-03 Environmental and Sustainability Policy and enhance client satisfaction. This process is detailed in **BGPO-SP-012 Performance Management**.

As part of the improvement process, BGPO has established a process for recording ideas and opportunities: **BGPO-SP-015 Ideas and Opportunities**. This process allows all members of staff to make suggestions on how performance can be improved.

10.2 Incident, Non-Conformity and Corrective Action

A non-conformance, in respect to OH&S management, is defined as a failure to comply with:

- Any required element of the OH&S Management System such as our legal and other requirements that have been detailed.
- Any equipment, operational or other failure which leads to a deviation from the BGPO-P-02-OH&S Policy or OH&S Management requirements.

BGPO-SP-014 Management of Non-conformance outlines the approach and responsibilities for handling, investigating and responding to a Non-Conformance and for initiating and assessing correction and the corrective action.

Non-conformances raised against the OH&S management system shall be managed by the OH&S

Manager & the Director HSSE.

The effectiveness of any Corrective Actions taken following a Non-Conformance, as well as any resulting changes required in documentation, shall be reviewed during the Management Review and on an on-going basis by the OH&S Manager.

BGPO uses FLAG for the reporting and management of the Non-Conformance process. The management of the process is monitored by the Quality team within BGPO.

10.3 Continual Improvement

The company has established OH&S objectives within the documented Business Management System (BMS). These are established and reviewed whilst taking in to consideration;

- Company's legal and other requirements
- its technological options
- the views of interested stakeholders
- its financial, operational and business requirements

The process for establishing and monitoring occupational health and safety objectives is detailed in BGPO-SP-012 Performance Management. Continuous monitoring of the Objectives is carried out on a quarterly basis by the QHSE Department.

All Objectives are also formally reviewed at the Management Review meeting

Company Objectives are communicated using BGPO-SP-016 Communication, Participation & Consultation process.

02-AUG-2019



ENVIRONMENTAL MANAGEMENT MANUAL

ENVIRONMENT MANAGEMENT SYSTEM

QHSSE DEPARTMENT

BGP OFFSHORE

14th Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 300457, CHINA

Contents

1.0 PURPOSE 3
2.0 REFERENCES 3
3.0 DEFINITIONS 3
4.0 CONTEXT OF THE ORGANISATION 3
4.1 Context of the Organisation 3
4.1.1 BGP Offshore and its Context 3
4.1.1.1 BGPO's Internal Context and Issues 4
4.1.1.2 BGPO's External Context and Issues: 4
4.2 Interested Parties 5
4.3 Scope of the environmental management system 5
5.0 LEADERSHIP 5
5.1 Leadership and Commitment 5
5.2 Environmental Policy 6
5.3 Organisational roles, responsibilities and authorities 6
6.0 PLANNING 7
6.1 Action to Address Risks and Opportunities 7
6.1.1 General 7
6.1.2 Environmental Aspects 7
6.1.3 Compliance Obligations 8
6.1.4 Planning Action 9
6.2 Environmental Objectives and Planning to Achieve Them 9
6.2.1 Environmental Objectives 9
6.2.2 Planning Actions to Achieve Environmental Objectives 9
7.0 SUPPORT 9
7.1 Resources, Roles, Responsibility and Authority 9
7.2 Competence 10
7.3 Awareness 11
7.4 Communication 11
7.4.1 General 11
7.4.2 Internal Communication 11
7.4.3 External Communication 12
7.5 Documentation Information 12
7.5.1 General 12
7.5.2 Creating and Updating 13
7.5.3 Control of Documented information 13
8.0 OPERATION 14

8.1 Operational Planning and Control 14
8.2 Emergency Preparedness and Response 16
9.0 PERFORMANCE EVALUATION 16
9.1 Monitoring, Measurement, Analysis and Evaluation 16
9.1.1 General 16
9.1.2 Evaluation of Compliance 16
9.2 Internal Audit 16
9.3 Management Review 17
10.0 Improvement 18
10.1 General 18
10.2 Non-Conformity and Corrective Action 18
10.3 Continual Improvement 18
Appendix I: BGPO's Risk Matrix 19
Appendix II: BGPO's QHSSE Department Organisational Chart 20

1.0 PURPOSE

In support of the Mission, Vision & Values Statement, Management Commitment Statement, Environment, and Sustainability Policy, this manual has been produced to provide a documented description of how environmental risks and issues are managed within BGP Offshore. Senior Management fully supports the process of environment management.

The Environment Management Manual has been developed to fulfil the requirements of the environmental management systems (EMS) specification detailed in ISO 14001, and to demonstrate that a specific framework is in place to manage environmental risks. The document is also designed to provide a clear understanding how environmental risks are managed in BGPO. The manual is supported by system procedures and management procedures, which are available in FLAG. Core benefits to BGPO of the EMS are to provide protection of the environment, effective and efficient business processes, and sustainability of the business.

2.0 REFERENCES

- ISO 14001:2015 – Environmental Management System – Requirements

3.0 DEFINITIONS

BGPO: BGP Offshore

ISO: International Organization for Standardization

EMS: Environmental Management System

BMS: Business Management system

ITT: Invitation to tender

FLAG (File Locally Access Globally): BGPO's electronic data management system

Environment: The surrounding area in which the organisation operates, including air, water, soil, natural resources, flora, fauna, human beings and any related issues.

Environmental Aspects: Any parts of BGPO's activities, products or services that can interact with the environment or with the well-being of surrounding communities.

Environmental Impact: Any positive or negative changes to the environment that results entirely or in part from the organisation's environmental aspects.

Gaseous Emission: Waste gases, vapours and small particles that are released into the air.

Project Life cycle: this includes capability and bid support, handover of contractor, pre-mobilisation, mobilisation, project execution, de-mobilisation, evaluation and the close of the project.

4.0 CONTEXT OF THE ORGANISATION

4.1 Context of the Organisation

4.1.1 BGP Offshore and its Context

BGP Offshore's parent company BGP is an integrated geophysical company. Its business line includes geophysical data acquisition, processing and interpretation; gravity, magnetic, and chemical survey; and equipment manufacturing.

BGP Offshore is a division of BGP. BGPO carries out comprehensive offshore geophysical seismic acquisition and provided corresponding technical services for energy companies around the

world. Its core business includes marine seismic acquisition, offshore OBN seismic acquisition, and providing multi-client data collection and services.

4.1.1.1 BGPO's Internal Context and Issues

To help understand BGPO's internal issues, at the micro-level, it is necessary to understand its strengths and weaknesses and be able to identify relevant opportunities and threats.

The company regularly carries out SWOT (Strengths, Weakness, Opportunities, and Threats) analyses to review and evaluate BGPO's current business strategies, its position and direction, and its business propositions.

The SWOT analysis has been developed to ensure that the weaknesses and threats become inputs to determine risk and opportunity. Internal issues might typically be influenced by the following factors:

- Organisational activities
- Types of product and service
- Strategic direction
- Capabilities (people, capital, knowledge, processes, systems, etc.)
- Relationships with, and perceptions and values of internal stakeholders
- Quality, safety and environmental conditions capable of affecting or being affected by BGPO

Sources of information relating to internal issues might include:

- Organisational structure, including the identification of roles and responsibilities and governance arrangements
- External reports showing how well BGPO is performing
- Statements relating to BGPO's mission, vision and core values
- Emphasis placed upon business ethics and organisational codes of conduct
- Feedback from employees through opinion surveys
- Information management systems and processes for capturing and deploying knowledge and lessons learned
- Organisational capability studies, and identification of load/capacity and resource requirements to achieve demand
- Register of identified internal risks

4.1.1.2 BGPO's External Context and Issues:

External context can include:

- The cultural, social, political, legal, regulatory, financial, technological, economic, natural and competitive environment, whether international, national, regional or local
- Key drivers and trends that impact on BGPO's objectives

- Relationships with, and perceptions and values of, external stakeholders

External issues might typically be influenced by the following factors:

- Cultural, social, political and regulatory
- Financial, economic, natural and competitive issues, whether international, national, regional or local

4.2 Interested Parties

The Vice President (VP) of Quality, Health, Safety, Security and Environment (QHSSE) is responsible for identifying interested parties at a corporate level. These could be those who are involved with or impacted by BGPO or its service, or those who may have a significant interest in the company. Interested parties include but are not limited to:

- CNPC (China National Petroleum Corporate, owner of BGP)
- BGP (parent company)
- Customers
- Employees and their families
- Communities local to operations
- Suppliers and subcontractors
- Port authorities
- Competitors

At a project level, the Project Team are responsible for identifying stakeholders as part of the marketing and sales process MP-037 Marketing & Sales. These are recorded in FLAG. The needs and expectations of these stakeholders will be determined at the initial project phase to ensure that all compliance obligations and all risks are identified and effectively controlled.

4.3 Scope of the environmental management system

Offshore Geophysical Service, including Offshore Geophysical Data Acquisition, Geophysical Data Processing and sales; Offshore Geophysical Related Vessels Operation

5.0 LEADERSHIP

5.1 Leadership and Commitment

The President and Senior Management Team have described their vision for the company in the BGPO-MVV-01 Mission, Vision and Values Statement, which is reviewed regularly to ensure it remains the driving force of BGPO.

This is the top-level document in the organisation and it aligns with the Mission, Vision and Values of the parent companies.

In the BGPO-MC-01 Management Commitment Statement, the company sets out the senior management's commitment to:

- Taking accountability for the effectiveness of the EMS
- Demonstrating leadership, accountability and responsibility in the management of the business

- Establishing, implementing and maintaining a BMS to identify and realise strategic objectives
- Ensuring the integration of EMS requirements into BGPO's business processes
- Communicating the importance of effective environmental management and of conforming to EMS requirements
- Providing resources to ensure that all risks have been identified and suitable and sufficient mitigations have been implemented
- Monitoring the effectiveness of the BMS and promoting continual improvement
- Engaging, directing and supporting employees to contribute to the effectiveness of the BMS

By implementing the BMS, the President and the Senior Management team have demonstrated their commitment to BGPO's current and future stakeholders.

5.2 Environmental Policy

The BGPO-P-03 Environment and Sustainability Policy provides more detail on the Mission, Vision and Values statement, to ensure that BGPO fosters and maintains a culture that meets its strategic vision and meets all ISO 14001 requirements. It is available in FLAG.

The Environmental Policy:

a) Applies to BGPO's scope of operations and purpose

b) Documents BGPO commitment to protecting the environment, and continually improving the EMS

d) Is displayed in Head Office and on board BGPO-managed vessels, is covered during each employee's induction into the company, is communicated to all BGPO employees through FLAG and is posted in all BGPO's locations

e) Is reviewed at least annually to ensure it continues to be suitable

5.3 Organisational roles, responsibilities and authorities

It is everyone in BGPO's responsibility to be involved with preventing environmental pollution that could impact or influence outcomes in its projects or organisation. Each employee's job description sets out how they will be accountable for implementing the manual. Each employee will receive all necessary training to effectively manage environment sustainability.

The following people have specific roles in managing environmental risks in BGPO:

President will:

- Have overall responsibility for environmental management within the company
- Be responsible for providing adequate resources to manage environmental risks

VP QHSSE will:

- Ensure that BGPO has an EMS in place that covers all locations operated or managed by BGPO
- Ensure that all applicable laws and other requirements have been identified and that mitigations are in place
- Provide guidance on the application and use of the EMS
- Ensure the competency of those managing the EMS

Director QHSSE will:

- Ensure that BGPO's EMS is implemented at all locations operated or managed by BGPO
- Support the Environment and Sustainability Manager in implementing the EMS

Environment and Sustainability Manager will:

- Implement and ensure compliance with all environmental legal and other requirements
- Monitor the applicable laws and other requirements that have been identified, and ensure that mitigation in place meet the requirements
- Provide guidance on the application and use of the Environment Management Procedures
- Manage aspects and impacts in FLAG
- Identify the EMS training required to reduce risks and improve competency of BGPO employees
- Assist in waste management sites assessment for BGPO
- Collect data and report on EMS performance to senior management

6.0 PLANNING

6.1 Action to Address Risks and Opportunities

6.1.1 General

The EMS supports company policies and signposts the management processes within BGPO. BGPO is committed to identifying all environmental aspects and opportunities, and assessing their impacts on the environment. All controls will be established in line with relevant legal or other requirements.

System procedures (SPs), management procedures (MPs), and work instructions (WIs) have been developed to support the EMS. SPs apply company-wide. MPs are more location- and activities-specific. WIs will be managed at a location and department level. These supporting documents are to ensure all impacts from BGPO's activities have been fully identified and properly managed. All of these documents are available in FLAG and are reviewed to ensure they are suitable and sufficient for BGPO's business needs.

BGPO has established a process for recording ideas & opportunities, **BGPO-SP-015 Ideas and Opportunities**. This process allows all members of staff to make suggestions on how environmental performance can be improved.

BGPO has also established procedure **BGPO-SP-017 Aspects and Impacts** for the identification of aspects associated with the scope of this EMS, including external and internal context. Having these processes in place allows employees and other interested parties to understand the methods used to identify the aspects and impacts and how they are managed.

Both impacts and opportunities are to be addressed through their respective modules in the FLAG.

6.1.2 Environmental Aspects

a) BGPO-SP-017 Aspects and Impacts is used to identify the environmental aspects of BGPO operations, and to assess the impact to environment. The principal steps are:

- Identify issues, aspects and impacts

- Assess impacts
- Address compliance obligations
- Control mitigating impacts
- Re-assess residual impacts

b) Risk aspects with significant impact(s) on the environment are identified.

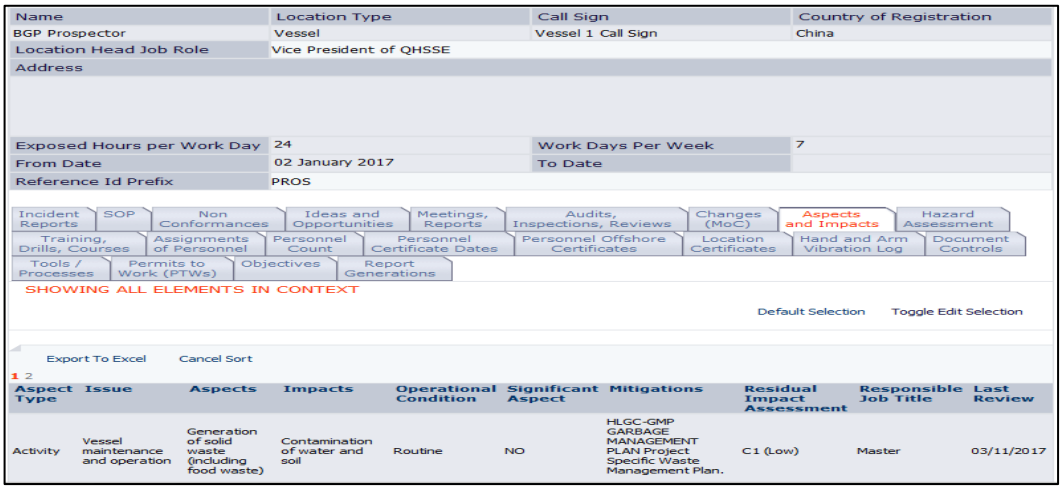
c) Risk assessments are documented and updated as required.

d) Risk identified will be considered when establishing, implementing and maintaining the EMS.

e) Environmental impacts are also to be considered for:

- BGPO-MP-025 Permits to Work
- BGPO-MP-011 Hazardous Substances Management

BGPO's aspects and impacts are identified and assessed by location and can be found in FLAG. Here is an example of how it looks:



Name	Location Type	Call Sign	Country of Registration
BGP Prospector	Vessel	Vessel 1 Call Sign	China
Location Head Job Role	Vice President of QHSSE		
Address			
Exposed Hours per Work Day	24	Work Days Per Week	7
From Date	02 January 2017	To Date	
Reference Id Prefix	PROS		

Incident Reports | SOP | Non Conformances | Ideas and Opportunities | Meetings, Reports | Audits, Inspections, Reviews | Changes (MoC) | Aspects and Impacts | Hazard Assessment | Training, Drills, Courses | Assignments of Personnel | Personnel Count | Personnel Certificate Dates | Personnel Offshore Certificates | Location Certificates | Hand and Arm Vibration Log | Document Controls | Tools / Processes | Permits to Work (PTWs) | Objectives | Report Generations

SHOWING ALL ELEMENTS IN CONTEXT

Default Selection Toggle Edit Selection

Export To Excel Cancel Sort

1 2

Aspect Type	Issue	Aspects	Impacts	Operational Condition	Significant Aspect	Mitigations	Residual Impact Assessment	Responsible Job Title	Last Review
Activity	Vessel maintenance and operation	Generation of solid waste (including food waste)	Contamination of water and soil	Routine	NO	HLGC-GMP GARBAGE MANAGEMENT PLAN Project Specific Waste Management Plan.	C1 (Low)	Master	03/11/2017

Figure 1 – Location Aspects and Impacts

6.1.3 Compliance Obligations

BGPO-SP-010 Management of Contract & Legal Affairs and **BGPO-SP-021 Compliance Management** defines how BGPO identifies and evaluates legal requirements and how compliance is evaluated.

As per **BGPO-SP-017 Aspects and Impacts,** during the identification of aspects, impact assessments and the establishment of processes with environmental aspects, relevant legislation and regulation are used to set processes to meet requirements that are identified in the aspects and impacts register for each location.

The local specific law and requirement will be identified and reflect in the project HSSE plan.

6.1.4 Planning Action

Any mitigations or improvement actions to environmental aspect are to be planned as per **BGPO-SP-017 Aspects and Impacts** and **BGPO-SP-015 Ideas and Opportunities** and Project HSSE Plan.

6.2 Environmental Objectives and Planning to Achieve Them

6.2.1 Environmental Objectives

The company has established Environmental Objectives from top to bottom, including corporate objectives, project objectives and location objectives. The Environmental Objectives are measurable and consistent with the Environmental Policy. These take into consideration the views of interested parties, as well as the company's:

- impacts
- legal and other requirements
- technological options
- financial, operational and business requirements

The process for establishing and monitoring environmental objectives is detailed in **BGPO-SP-012 Performance Management**. The objectives are monitored monthly by the QHSSE Department. All objectives are reviewed at Management Review meetings (section 8.3).

Company objectives are communicated using the **BGPO-SP-016 Communication, Participation & Consultation** process, and can be viewed in FLAG for each location.

6.2.2 Planning Actions to Achieve Environmental Objectives

Corporate environmental objectives depend on meeting project objectives and location objectives by implementing project QHSSE plans and location aspects and impacts. Project QHSSE plans define how the project achieves its environmental objectives. And the location's aspects and impacts register will help crews, vessels and locations achieve their environmental objectives.

7.0 SUPPORT

So the EMS is implemented as planned, it is essential to allocate resources appropriately, establish an effective organisational structure and provide clear details of responsibility. It is also important to establish appropriate controls for environment risks. This will ensure that all environmental requirements are addressed in the design and development process for the operation, and considered at all times. The relevant environmental requirements will be communicated to all locations and contractors. BGPO will maintain appropriate documented information.

7.1 Resources, Roles, Responsibility and Authority

Senior Management will ensure there are appropriate resources to establish, implement, maintain and improve the EMS. Resources include human, specialised skills, organisational infrastructure, technology and financial resources. The HR Manager ensures that position descriptions are created for key personnel. These will detail the role, duties, responsibility and authority required to address environmental requirements.

A QHSSE Department has been established to provide the management structure necessary to

implement the EMS. The VP QHSSE has overall responsibility to ensure that the company's EMS is established and implemented. The QHSSE Department structure is described in the BGPO Organisation Chart (**Appendix II**).

7.2 Competence

The identification of training requirements is part of the location aspect and impact assessments. During this process, all activities that take place within the location are listed. Suitable training will be carried out for hazardous activities that have a legal requirement, to ensure people have the skills and competency to safely carry out the tasks and manage any impacts.

Training needs that are not a legal requirement will be provided to supplement the location impact-related training.

Each locations assessment is recorded in FLAG and can be viewed at any time. The location assessments form part of the company risk register.

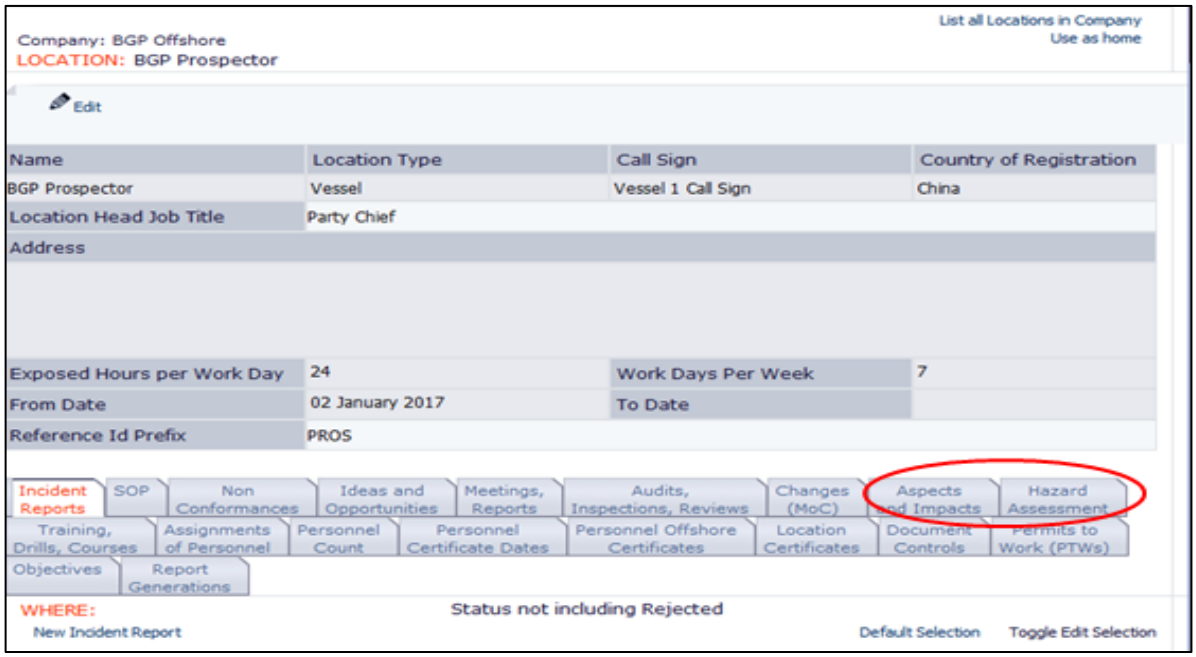


Figure 2 – Location Aspects and Impacts and Hazard Assessment

For further details on location assessments please see **BGPO-MP-014 Location Hazard Assessment**, which is stored in FLAG.

On completion of the location assessment a training matrix will be provided to the management, identifying the minimum training required and the positions at that location that will be required to undertake the training. The BGPO training matrix will have three levels of requirements.

Level 1 – Industry Standard Requirements for Offshore Personnel

Level 2 – BGPO In-house QHSSE Safety Awareness

Level 3 – Position-Related Training

The relevant training of environmental management is focused on Level 2 In-house QHSSE safety awareness. The training courses listed below have been identified but are not limited to:

- Environmental – Aspects and Impacts
- Environmental – Waste Management/MARPOL
- Environmental Management During Projects
- Environmental – Marine Mammals

Specific environmental awareness includes, but is not limited to, the following:

- BGPO will promote best practice environmental management in the workplace by using posters, campaigns, presentations and other communication initiatives as appropriate.
- Location induction is applied for promoting awareness of environmental protection:
  a) Conformity to the Environmental Policy
  b) Significant environmental aspects and impacts
  c) Individual roles and responsibilities
  d) Potential consequences of departure from set processes
- Whilst in port and during vessel operations, vessel inspections and training sessions may be carried out to highlight environmental aspects. Environmental procedures will be reinforced, and any procedural changes introduced and explained

7.3 Awareness

- BGPO and client environmental alerts and awareness materials will be displayed on noticeboards on board BGPO-managed vessels and in BGPO offices as appropriate
- Environmental awareness issues will be raised at kick-off, toolbox and handover meetings

7.4 Communication

7.4.1 General

FLAG, BGPO's official data management system, is the central library of current documentation and communication for the company.

All corporate-level documents such as policies, manuals and system procedures are controlled by the Senior Management Team on FLAG. Crews on location on vessels can easily access them at any time. MPs and WIs are managed at location and department levels on FLAG, and they are available for office workers and clients to refer at any time (see Figure 3 Document Management Directory). Project documents are compiled according to contract and industry requirements. They are uploaded on FLAG (see Figure 4 Project Document) and are available for everyone to access.

Detailed methods of communication are described in the **BGPO-SP-016 Communication Participation and Consultation**.

7.4.2 Internal Communication

Senior Management ensures that there is appropriate communication within BGPO relating to the EMS. This is achieved by methods such as:

- FLAG
- Work group meetings (kick-off and toolbox meetings, etc.)
- Project meetings
- Site visits
- Email correspondence
- Access to EMS documentation in hard copy and/or digital format

7.4.3 External Communication

Senior Management ensures there is appropriate communication with regulatory bodies and clients. This is achieved by methods such as:

- Project meetings
- Email correspondence
- Documentation transfers
- Gaining client approval for release of their documentation to a third party

Senior Management has reviewed the benefits and obstacles to communicating BGPO environmental aspects to external parties, with the following outcomes:

- **Regulatory**: Reports such as greenhouse gas emissions, marine fauna observations and reportable incidents
- **Clients**: Reports such as QHSSE statistics and incidents, and procedural documentation as per contractual requirements
- **Contractors:** Procedural documentation as per environmental requirements
- **Public:** General news, services and certifications on the BGPO website

7.5 Documentation Information

7.5.1 General

All documents in the Business Management System are available through FLAG, which is accessible by all personnel. Appropriate controls and permissions are in place. Only documents that are currently held in FLAG are valid and controlled documents.

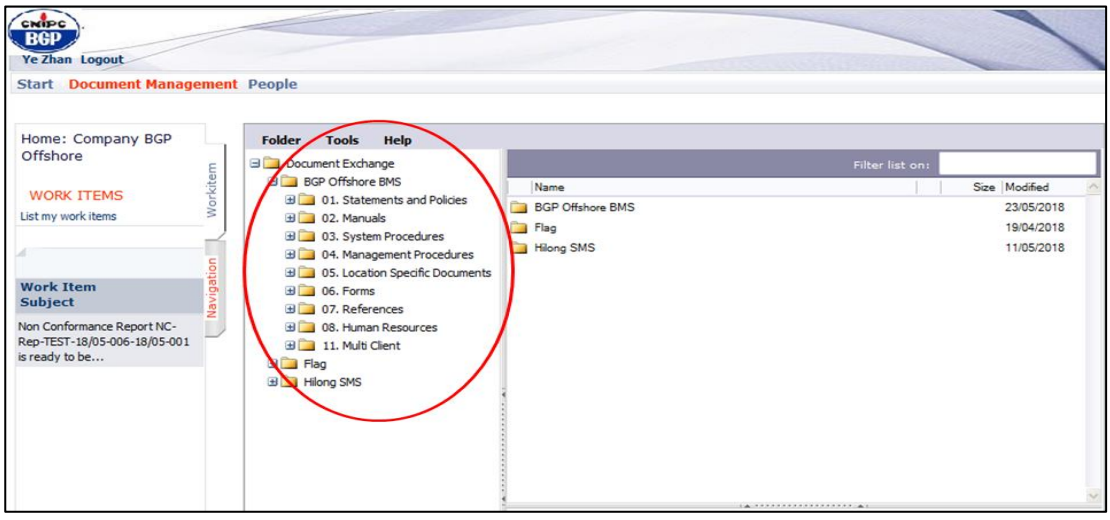


Figure 3 – Document Management Directory

Policies, manuals and SPs apply company-wide and are controlled by the Senior Management Team. MPs are more location- and task-specific, and are owned by departments. WIs support procedures and will be managed at location and department level.

Policies and documents that are relevant to EMS include but are not limited to the following:

- BGPO-P-03 Environment and Sustainability Policy
- BGPO-M-03 Environmental Management Manual

- BGPO-SP-017 Aspect and Impact
- BGPO-MP-046 Waste Management
- BGPO-MP-049 Protected Species Mitigation and Monitoring
- BGPO-F-014 Atmospheric Emission and Waste Monitoring
- BGPO-F-015 Marine Mammal Recording

Project documents are listed in the FLAG, and include the following, though they vary from project to project:

- Project Execution Plan
- Project QHSSE Plan
- Project Security Plan
- Project Environment Management Plan
- Project Emergency Response Plan
- HSSE Bridging Document



Figure 4 – Project Document example

7.5.2 Creating and Updating

When creating and updating documented information, people should refer to section 6.4 and 6.5 of **BGPO-SP-001 Control of Documented Information**.

7.5.3 Control of Documented information

BGPO's procedure for controlling relevant documentation is described in **BGPO-SP-001 Control of Documented Information**, which details the definitions and processes for dealing with documented information within BGPO's Business Management System (BMS). BGPO ensures that its documented information is available and suitable for use, where and when it is needed,

and that it is adequately protected. Having this control process in place means that documented information always contains the correct information. Please see section 6.0 of **BGPO-SP-001** for more detail on the control process.

8.0 OPERATION

8.1 Operational Planning and Control

Environmental protections must be addressed during every phase of a project lifecycle. These are finalised at the pre-mobilisation stage, as detailed in **BGPO-MP-018 Marine Seismic Operations**, and listed in figure 5.

There are three main areas (waste management, atmospheric emission and protected species) of environmental management that need special attention and control during seismic survey operations. To mitigate the environmental impacts from these operations, the following processes are followed:

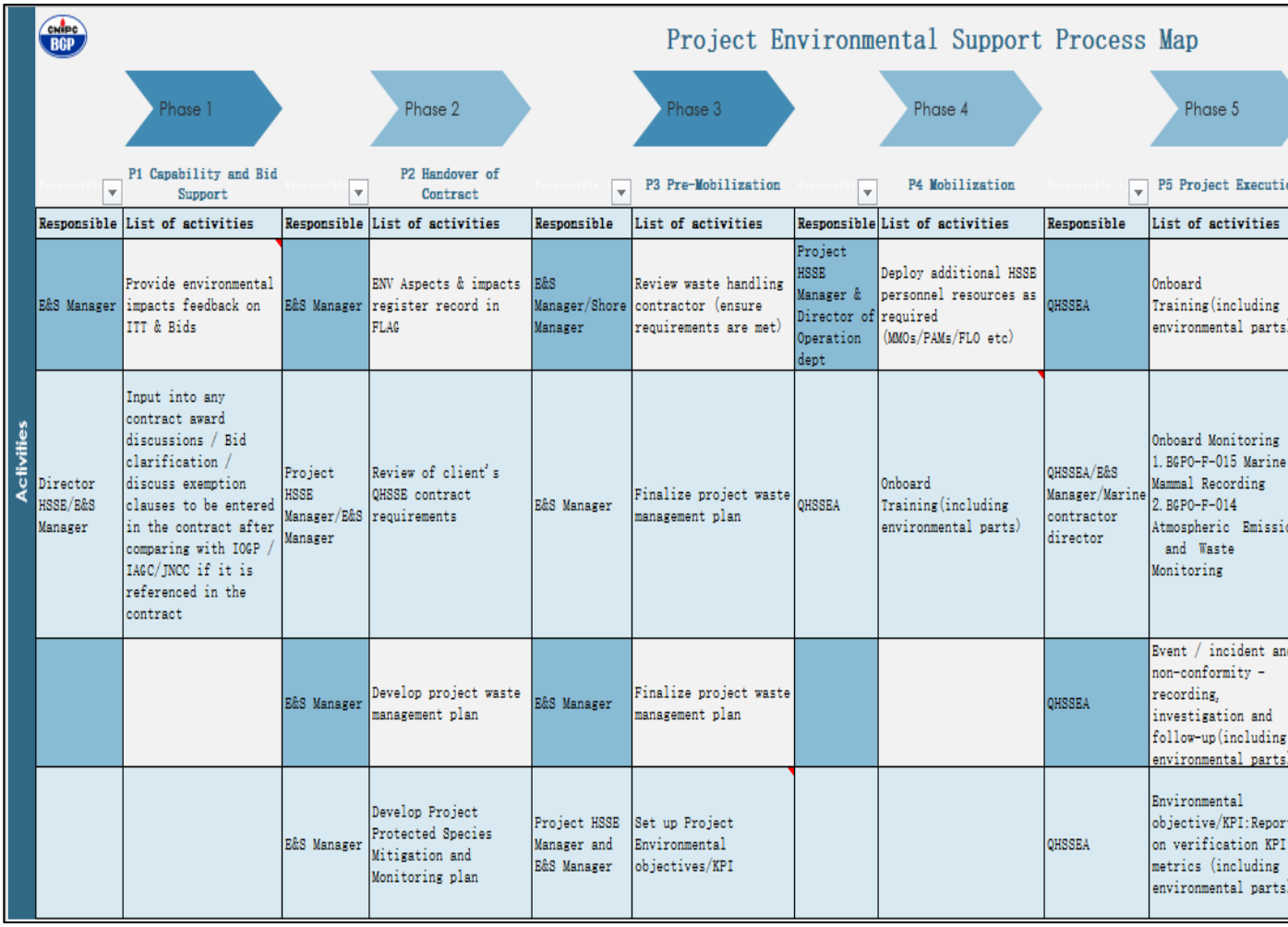
- BGPO-SP-017 Aspect and Impact
- BGPO-MP-046 Waste Management
- BGPO-MP-049 Protected Species Mitigation and Monitoring
- BGPO-MP-047 Atmospheric Emission Monitoring and Management

At bidding stage, the EMS Manager provides environmental impact feedback on Invitation to tender (ITT) and bids.

Before a project commences, all aspects and impacts registers of the location are developed in FLAG, and the project waste management plan and protected species management plan are normally required to be developed and followed. This is to ensure that the operation will comply with local regulations and industry requirements.

Through the safety observation programme and impact assessment etc., the crew should identify all aspects associated with the activities they perform according to the procedure **BGPO-SP-017 Aspects and Impacts**. Where applicable, the operations associated with these aspects are subject to controls. The environment impacts are controlled by strengthening preventive maintenance, improving and obeying WIs and strictly conducting drills and training as scheduled, especially the SOPEP drill, which has a decisive effect on oil spill pollution.

Any changes to the EMS are planned and carried out using **BGPO-SP-009 Management of Change**. This considers the purpose of the change and the potential consequences, the integrity of the Environment Management System, the availability of resources and the allocation or re-allocation of responsibilities or authorities.



Project Environmental Support Process Map

Activities

Phase 1		Phase 2		Phase 3		Phase 4		Phase 5	
P1 Capability and Bid Support		P2 Handover of Contract		P3 Pre-Mobilization		P4 Mobilization		P5 Project Executi	
Responsible	List of activities	Responsible	List of activities	Responsible	List of activities	Responsible	List of activities	Responsible	List of activities
E&S Manager	Provide environmental impacts feedback on ITT & Bids	E&S Manager	ENV Aspects & impacts register record in FLAG	B&S Manager/Shore Manager	Review waste handling contractor (ensure requirements are met)	Project HSSE Manager & Director of Operation dept	Deploy additional HSSE personnel resources as required (MMOs/PAMs/FLO etc)	QHSSEA	Onboard Training(including environmental parts
Director HSSE/E&S Manager	Input into any contract award discussions / Bid clarification / discuss exemption clauses to be entered in the contract after comparing with IOGP / IAGC/JNCC if it is referenced in the contract	Project HSSE Manager/E&S Manager	Review of client's QHSSE contract requirements	E&S Manager	Finalize project waste management plan	QHSSEA	Onboard Training(including environmental parts)	QHSSEA/E&S Manager/Marine contractor director	Onboard Monitoring 1. BGPO-F-015 Marine Mammal Recording 2. BGPO-F-014 Atmospheric Emissi and Waste Monitoring
		E&S Manager	Develop project waste management plan	E&S Manager	Finalize project waste management plan			QHSSEA	Event / incident an non-conformity - recording, investigation and follow-up(including environmental parts
		E&S Manager	Develop Project Protected Species Mitigation and Monitoring plan	Project HSSE Manager and E&S Manager	Set up Project Environmental objectives/KPI			QHSSEA	Environmental objective/KPI:Repor on verification KPI metrics (including environmental parts

Figure 5 – Operational Process Overview

8.2 Emergency Preparedness and Response

BGPO maintains procedures to:

- Identify emergency situations
- Respond to actual emergencies
- Take action to prevent or mitigate the consequences of emergency situations
- Periodically test as per the Emergency Drill Schedule
- Periodically review and revise processes after emergency situations
- Provide information and training to interested parties and people who are working on its behalf

Incident and emergency situations are identified in each project- and location-specific Emergency Response Plan. Responses to major or catastrophic events are handled according to the **SP-018 Crisis Management Procedure**.

These procedures are reviewed for continuing suitability and effectiveness at Management Review meetings (section 10.3), and after an incident or emergency situation.

9.0 PERFORMANCE EVALUATION

9.1 Monitoring, Measurement, Analysis and Evaluation

9.1.1 General

BGPO-SP-012 Performance Management has been developed to define suitable methods for monitoring and measuring the EMS processes for each level, including, corporate, project and location levels. To ensure individual performance is in line with the company, project and location's environmental targets, and that they meet the requirement of MARPOL 73/78 and relevant industry regulation, BGPO will monitor the following items:

- Aspects and impacts
- Garbage management
- Protected species observation and mitigation
- Gaseous emission

9.1.2 Evaluation of Compliance

Evaluations will be carried out according to **BGPO-SP-021 Compliance Management** to ensure compliance with legal and/or prescribed requirements.

Methods used will also include:

- Aspects and impacts review

The compliance of relevant laws and regulations for each of the environmental aspect are subject to specific evaluation and any non-conformance or I/O will incur a work item.

9.2 Internal Audit

Internal audits are carried out as per the BMS internal audit schedule, which is set by the process owners and based on process risk. The internal audits will verify compliance to the EMS, ISO14001, regulatory and the effectiveness of the system.

All BGPO auditors have had appropriate training and have been deemed competent. Where possible auditors are selected to ensure they are independent of the process they are auditing.

The audit process is owned by the Audit Manager and described in **BGPO-SP-013 Auditing**. Records of audits are kept in FLAG.

9.3 Management Review

Management Reviews always involve the VP QHSSE at a minimum. The process will involve a review and evaluation of the EMS on at least an annual basis to ensure its continuing suitability, adequacy and effectiveness, and will be undertaken according to **BGPO-SP-012 Performance Management**. This procedure ensures the necessary information has been collected to allow management to undertake this review process. Process performance data will be used to check compliance with the management system arrangements and feed into the management review process.

The management review process will involve the following steps.

Review assessment of performance:

a) Compliance with EMS

b) Vision Statement and policies

c) Objectives and targets

Review input:

a) Status of actions from previous management reviews

b) Changes in external and internal issues that are relevant to the EMS

c) Changes in the needs and expectations of interested parties, including compliance obligations

d) Changes in the company's identified significant environmental aspects

e) Changes in risks and opportunities identified

f) Internal and external audits results – compliance with regulatory and prescribed requirements

g) Status of non-conformities and corrective actions

h) Key performance indicators – objectives and targets review and evaluation

i) Adequacy of resources

j) Opportunities for continual improvement

Review output

a) Decisions and actions on improvement recommendations for the EMS

b) Decisions and actions on resources required for the effectiveness of the EMS, and meeting client and regulatory requirements

c) Decisions and actions on objectives for BGPO to meet regulatory, client and BGPO requirements

d) Changes identified – these are actioned as per **BGPO-SP-009 Management of Change**

e) Any implications for the strategic direction of the organisation

10.0 Improvement

10.1 General

As part of the performance management process, BGPO establishes improvement objectives based on the process monitoring data. This process is designed to identify opportunities to improve the performance of the EMS to support the BGPO-P-03 Environmental and Sustainability Policy and enhance client satisfaction. This process is detailed in **BGPO-SP-012 Performance Management**.

As part of the improvement process, BGPO has established a process for recording ideas and opportunities: **BGPO-SP-015 Ideas and Opportunities**. This process allows all members of staff to make suggestions on how performance can be improved.

10.2 Non-Conformity and Corrective Action

Non-conformities can arise from many sources, including:

- Customer complaints
- Internal and external audits
- Complaints from stakeholders
- Incident investigations
- Management reviews
- Management visits

BGPO has established procedure **BGPO-SP-014 Management of Non-conformance** to ensure that there is an effective documented process for:

- Recording non-conformities
- Carrying out appropriate correction measures
- Investigating root causes
- Establishing corrective actions
- Checking the effectiveness of corrective actions

The Auditing Manager is the process owner and the VP QHSSE is the process approver.

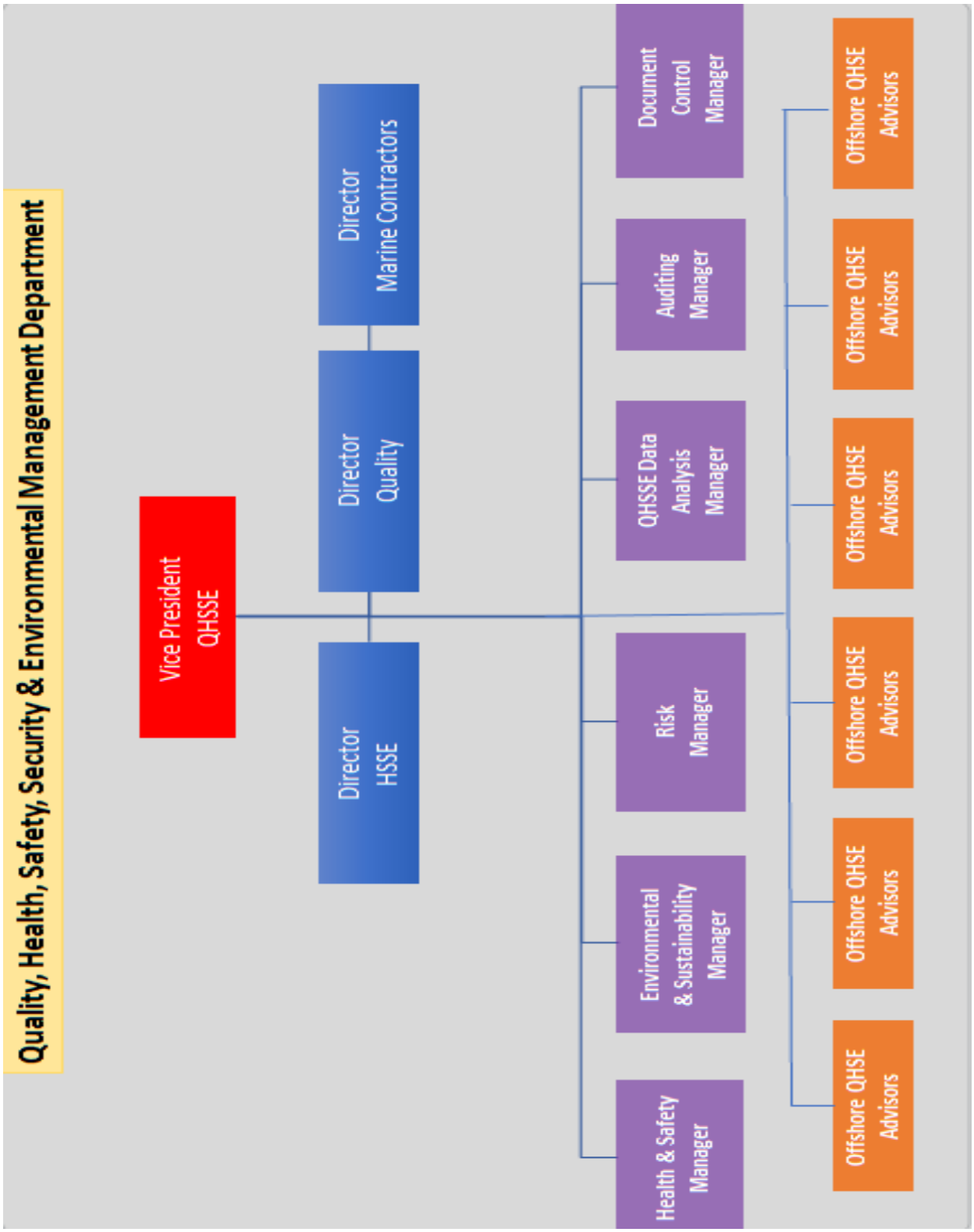
10.3 Continual Improvement

Through continuously monitoring the management system and client feedback, BGPO has established a documented process **BGPO-SP-12 Performance Management** for setting objectives to improve performance. This supports the aims of the Mission, Vision and Values statement and the Environmental and Sustainability Policy.

Appendix I: BGPO's Risk Matrix

SEVERITY RATING	PEOPLE	ENVIRONMENT	ASSETS	REPUTATION	FINANCIAL	Likelihood: A Never heard of in the E & P industry	B Heard of in the E & P industry	C Incident has occurred in the company	D Incident has occurred several times in the company	E Incident has occurred several times in a year in the company
1	Slight Health Effect/ Injury Not detrimental to work performance (First Aid, Medical Treatment). Return to duties next day.	Slight Effect Local risk. Contained onboard. Contamination < 10 L	Slight Damage No disruption to operations. Cost of repair 10 K$	Slight Impact Public alert, but no concern	$ 0 - 50 K	Low	Low	Low	Low	Low
2	Minor Health effect/ Injury Detrimental to performance of work. Lost Time Injury < 1 week (LTI and Restricted Work Case)	Minor Effect Spill to sea, but not lasting effect. Contamination > 10- < 100 L	Minor Damage Brief disruption to operations. Cost of repair 10 K$ - 100 K$	Limited Impact Slight local media and/ or local political attention with possible negative aspects for BGP Offshore	$ 50k - 100k	Low	Low	Low	Medium	Medium
3	Major Health Effects/ Injury Permanent partial disablement. Detrimental to work performance > 1 week	Localized Effect Localized environmental damage. Contamination >100- <1000L	Localized Damage Partial shutdown. Cost of repair 100 K$ - 1M$	Considerable Impact Regional public concern. Extensive negative attention in local media. Slight national political attention	$ 100K to 500K	Low	Low	Medium	Medium	High
4	Fatality / Permanent total disability	Major Effect Severe environmental damage. Extensive measures to restore. Contamination 1 000 – 10 000 L	Major Damage Partial loss. Shut down max two weeks. Cost of repair 1 M$ - 10 M$	National Impact National public concern. Extensive negative media attention. Possible restrictive measures. Mobilization of action groups.	$ 500K to 1,000,000	Low	Medium	Medium	High	High
5	Multiple fatalities	Massive Effect Persistence severe environmental damage over a large area. Contamination > 10000L	Extensive Damage Total loss. Cost of repair > 10 M$	International Impact International public attention. Negative attention in international media. Possible severe impact on access to new areas	> $ 1,000,000	Medium	Medium	High	High	High

Appendix II: BGPO's QHSSE Department Organisational Chart



20-JUL-2020



QUALITY MANUAL

QUALITY MANAGEMENT SYSTEM

QHSSE DEPARTMENT

BGP OFFSHORE

14th Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 300457, CHINA

Contents

1.0 PURPOSE 2
2.0 REFERENCES 2
3.0 DEFINITIONS 2
4.0 CONTEXT OF THE ORGANISATION 3
4.1 BGP Offshore in Context 3
4.2 Interested Parties 3
4.3 Scope of the Quality Management System 3
4.4 Quality Management System and Its Processes 3
5.0 LEADERSHIP 4
5.1 Leadership 4
5.1.1 General 4
5.1.2 Customer Focus 4
5.2 Quality Policy 5
5.3 Organisational Roles, Responsibilities and Authorities 5
6.0 QUALITY MANAGEMENT PLANNING 6
6.1. Action to Address Risks and Opportunities 7
6.2. Quality Objectives 8
6.3. Planning of Changes 9
7.0 SUPPORT 10
7.1. Resources 10
7.2. Competence 10
7.3. Awareness 11
7.4. Communication 11
7.5. Documented Information 11
8.0 OPERATIONS 13
8.1. Operational Planning and Control 13
8.2. Requirements for Products and Services 13
8.3. Design and Development of Products and Services 14
8.4. Control of Externally Provided Processes, Product and Services 14
8.5. Production and Service Provision 14
8.6. Release of Products and Services 14
8.7. Control of Non-Conforming Outputs 14
9.0 PERFORMANCE EVALUATION 16
9.1. Monitoring, Measurement, Analysis and Evaluation 16
9.1.1 General 16
9.1.2 Customer Satisfaction 16
9.1.3 Analysis and Evaluation 16
9.2. Internal Audit 16
9.3. Management Review 16
10.0 IMPROVEMENT 16
10.1. General 16
10.2. Non-Conformity and Corrective Action 16
10.3. Continual Improvement 17

1.0 PURPOSE

In support of BGPO-MVV-01 Mission, Vision & Values Statement, BGPO-MC-01 Management Commitment Statement and BGPO-P-05 Quality Policy, this Quality Manual has been produced to provide interested parties with a documented description of how Quality Assurance is managed within BGP Offshore, and how BGP Offshore fulfils the requirements of ISO 9001:2015.

BGP Offshore operates a Business Management System of which the Quality Assurance is only one strand. The others are:

- Human Resource Management
- Occupational Health and Safety
- Environmental and Sustainability
- Risk Management

The manual is designed to act as a signposting document to allow interested parties to have a clear understanding how quality is managed in BGP Offshore. The manual is supported by System Procedures (SP) and Management Procedures (MP) which are available in FLAG.

This Quality Management Manual is applied to all areas of BGP Offshores operations and support services.

For ease of use this manual has been aligned to the structure of ISO9001:2015.

2.0 REFERENCES

- ISO9000:2015 Fundamentals and Vocabulary
- ISO9001:2015 Quality Management Systems Requirements
- IOGP Report 510 Operating Management System Framework

3.0 DEFINITIONS

BGPO: BGP Offshore

FLAG: BGP Offshore's electronic database (File Locally Access Globally)

MP: Management procedure. A procedure that is applied to a specific department or part of the business

PDCA: Plan, Do, Check, Act

QMS: Quality Management System

SMART: In relation to objectives Specific, Measurable, Achievable, Realistic, Time bound.

SP: System Procedure, a procedure which is applied across the business.

TM-Master: BGP Offshore's electronic equipment and material management system (Access Globally)

4.0 CONTEXT OF THE ORGANISATION

4.1 BGP Offshore in Context

BGP Offshore's parent company BGP is an integrated geophysical company; its business line involves geophysical data acquisition, processing and interpretation; gravity, magnetic, and chemical survey; equipment manufacturing etc.

BGP Offshore is a division of BGP and has conducted comprehensive offshore geophysical seismic acquisition and provided corresponding technical services for worldwide energy companies. Its core business includes marine seismic acquisition, offshore OBN seismic acquisition, and provides multi-client data collection and services

4.2 Interested Parties

The VP QHSSE is responsible for identifying interested parties at a corporate level. These are recorded in FLAG and reviewed at the regular Management Review meetings. These include:

- CNPC (China National Petroleum Corporate, Owner of BGP)
- BGP (Parent company)
- Customers
- Employees
- Communities local to operations
- Suppliers & Subcontractors

At a project level the Marketing and Sales Team are responsible for identifying stakeholders as part of the marketing and sales process MP-037 Marketing & Sales. These are recorded in FLAG.

The needs of these stakeholders are considered at both levels when planning activities to ensure that all risks and opportunities are identified.

4.3 Scope of the Quality Management System

In determining the scope of the Business Management system BGP Offshore has considered external and internal issues, the requirements of interested parties and stakeholders and the services provided.

Quality management is applicable to all the processes and in BGP Offshore's Business Management System (BMS) and the scope has been determined as:

"The acquisition of seismic data using towed stream and ocean bottom services."

4.4 Quality Management System and Its Processes

BGP Offshore has determined the processes needed to implement, maintain and continually improve the Business Management System (BMS). These processes have been documented and are maintained in FLAG as described by SP-001 Control of Documented Information.

These documented processes have been organised as follows;

- System Procedures (SP), documented processes that are applicable to the whole organisation
- Management Procedures (MP), documented procedures that are applicable to departments or locations

These procedures are supported by a range of Work Instructions (WI).

When the determining the processes the process owners also consider the criteria and methods needed to ensure the effective operation and control of these processes as well as the risk and opportunities.

The processes are subject to ongoing evaluation and changes made to ensure the processes achieve their intended result and that opportunities for improvement are identified and implemented.

5.0 LEADERSHIP

5.1 Leadership

5.1.1 General

The President and Senior Management Team have described their vision for the Company in BGPO-MVV-01 Mission, Vision and Values Statement which is reviewed regularly to ensure it remains the driving force for the management for the organisation.

This document is the top-level document in the organisation and aligns with the Mission, Vision and Values of the parent companies.

Through BGPO-MC-01 Management Commitment Statement, the President has described how the senior management team is committed to:

- Demonstrating leadership, accountability and responsibility in the management of business
- Establishing, implement and maintain a business management system to identify and realize strategic objectives
- Providing resources to ensure that all risks have been identified and that suitable and sufficient mitigations have been implemented
- Monitoring the effectiveness of the business management system and promote continual improvement
- Engaging, direct and support the employees to contribute to the effectiveness of the business management system

Through the implementation of the BMS the President and the Senior Management team have demonstrated their commitment to the present and future stakeholders of BGP Offshore.

5.1.2 Customer Focus

The Senior Management Team has ensured that customer and applicable statutory and regulatory requirements are identified and understood and that risks and opportunities regarding the conformity of the products are determined.

This manual further describes how the Senior Management Team has committed to the quality management system under the separate clause headings.

5.2 Quality Policy

Top Management has established BGPO-P-05 Quality Policy which is kept in FLAG and hard copies are posted at all BGPO locations. The Quality Policy is the one of the five company policies that supports the BMS.

The quality policy is available to relevant interested parties through access to FLAG (BGPO-P-05).

5.3 Organisational Roles, Responsibilities and Authorities

The Senior Management Team has determined and assigned the roles, responsibilities and authorities for the organisation.

The major responsibilities of the quality team are detailed below. Other departmental responsibilities are defined in section 4 of the relevant procedures. Organisational roles and authorities for HQ and vessels are defined the company organisation charts found in FLAG (Document control section 8). The job descriptions for each department are held in FLAG (Document control section 9).

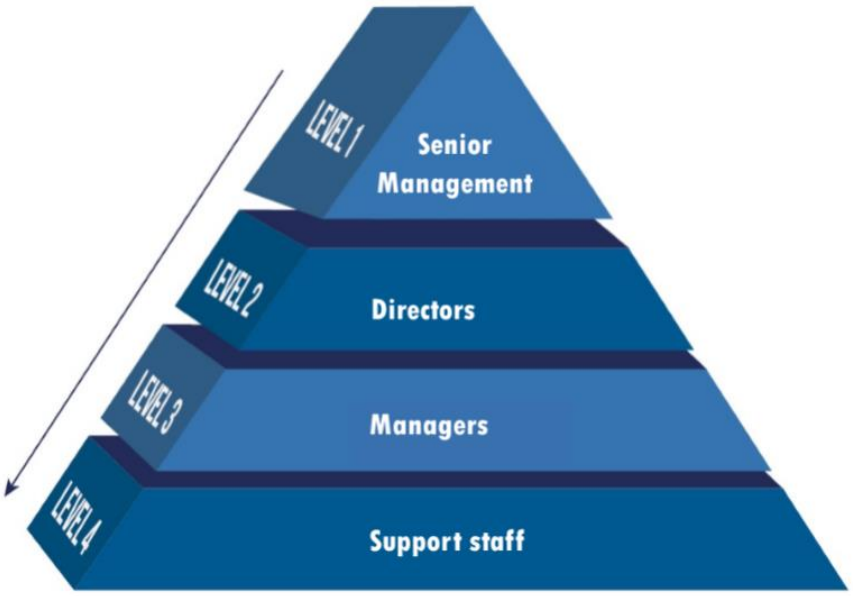


Figure 1 HQ Management Hierarchy

President:

The President is ultimately responsible for the quality of BGP Offshore's products and services, ensuring the Quality Policy is established and implemented and that employees are fully aware of the policy and the part they play in meeting the policy commitments.

VP QHSSE:

The President has delegated the responsibility for implementation and management of the QMS to the VP QHSSE. The VP QHSSE is responsible for the implementation and maintenance of the Company's Quality Management System and ensuring it remains effective and continues to meet the Quality Policy, Objectives and relevant requirements.

Director Quality is responsible for:

- Ensuring that the Quality Manual is in place, accurate and complete
- The implementation of quality procedures; reviews and provide improvement plans to Vice President
- Ensuring the Control of Documented Information process is followed
- Ensuring the Opportunities and Improvements procedure is followed
- Reviewing training material for department procedures
- Part of procedure review team and shall be part of departmental procedure review team

QHSSE Data Analysis Manager is responsible for:

- Ensuring that the Performance Management procedure is known and used.
- Preparing training material for the Performance Management procedure.
- Being the point of contact for personnel on issues with the Performance Management procedure
- Being part of procedure review team and shall be part of departmental procedure review team

Document Control Manager is responsible for:

- Ensuring that the Management of Documented Information procedure is known and used
- Preparing training material for the Management of Documented Information procedure
- Being the point of contact for personnel on issues with the Management of Documented Information procedure
- Being part of procedure review team and shall be part of departmental procedure review team

Auditing Manager is responsible for:

- Liaising with process owners to prepare the audit schedule
- Ensuring that the Auditing and Management of Non-conformance procedures are known and used
- Preparing training material for the Auditing and Management of Non-conformance procedure
- Being the point of contact for personnel on issues with the Auditing and Management of Non-conformance procedure
- Being part of procedure review team and shall be part of departmental procedure review team

6.0 QUALITY MANAGEMENT PLANNING

The quality element of the BMS is based on the quality management principles,

- Customer focus
- Leadership
- Engagement of people
- Process approach
- Improvement

- Evidence-based decision making
- Relationship management

The requirements of ISO9001:2015 and the PDCA cycle as demonstrated in figure 2 below:

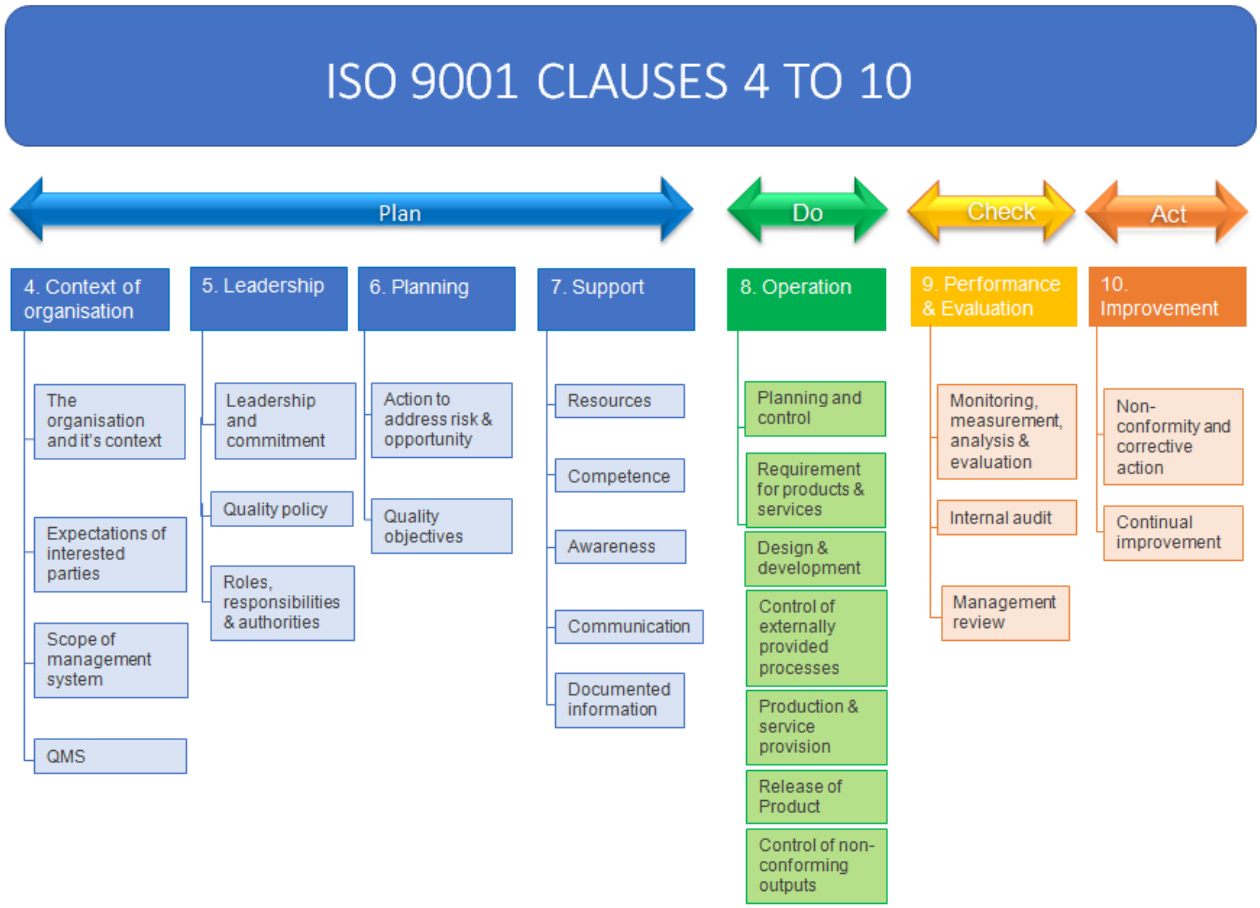


Figure 2 PDCA Cycle in ISO9001:2015

6.1. Action to Address Risks and Opportunities

As part of the management review of the QMS the Senior Management Team identifies statutory, regulatory and standard requirements, customer requirements, expectations and stakeholder demands. This process includes identifying opportunities for improvement as well as risks.

The risk management process is detailed in BGPO-M-04 Risk Management Manual and the management review process is detailed in section 10 of this manual.

6.2. Quality Objectives

Senior Management establishes company policies which outline BGP Offshore's long term strategic goals for its business.

Corporate level objectives are established by the President to set the strategic direction of the company. These are supported by SMART Objectives that are established at least annually as part of the management review process. The Corporate objectives are cascaded to Projects objectives, Location objectives and Personal objectives and reviewed quarterly at the QHSSE meetings.

The Quality Objectives are included in these four levels objectives within BGP Offshore, and cascaded from corporate level to Project, Location and Personal level. The objectives are managed and kept in FLAG.

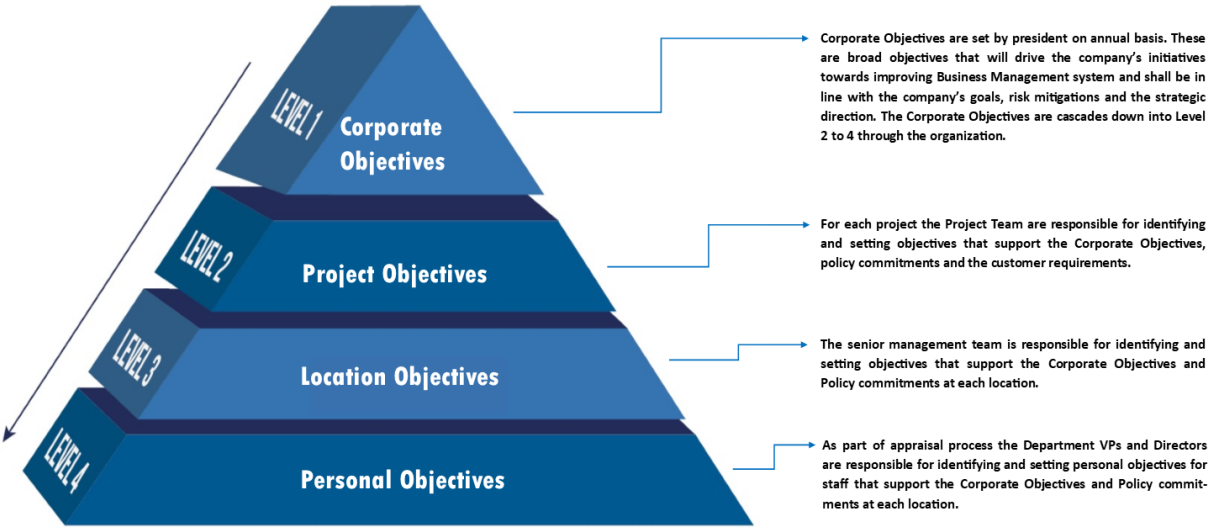


Figure 3 Company Objective Pyramid

Monitoring processes have been established to ensure that the progress towards meeting the objectives can be easily established. BGPO-SP-014 Performance Management details the process for managing objectives.

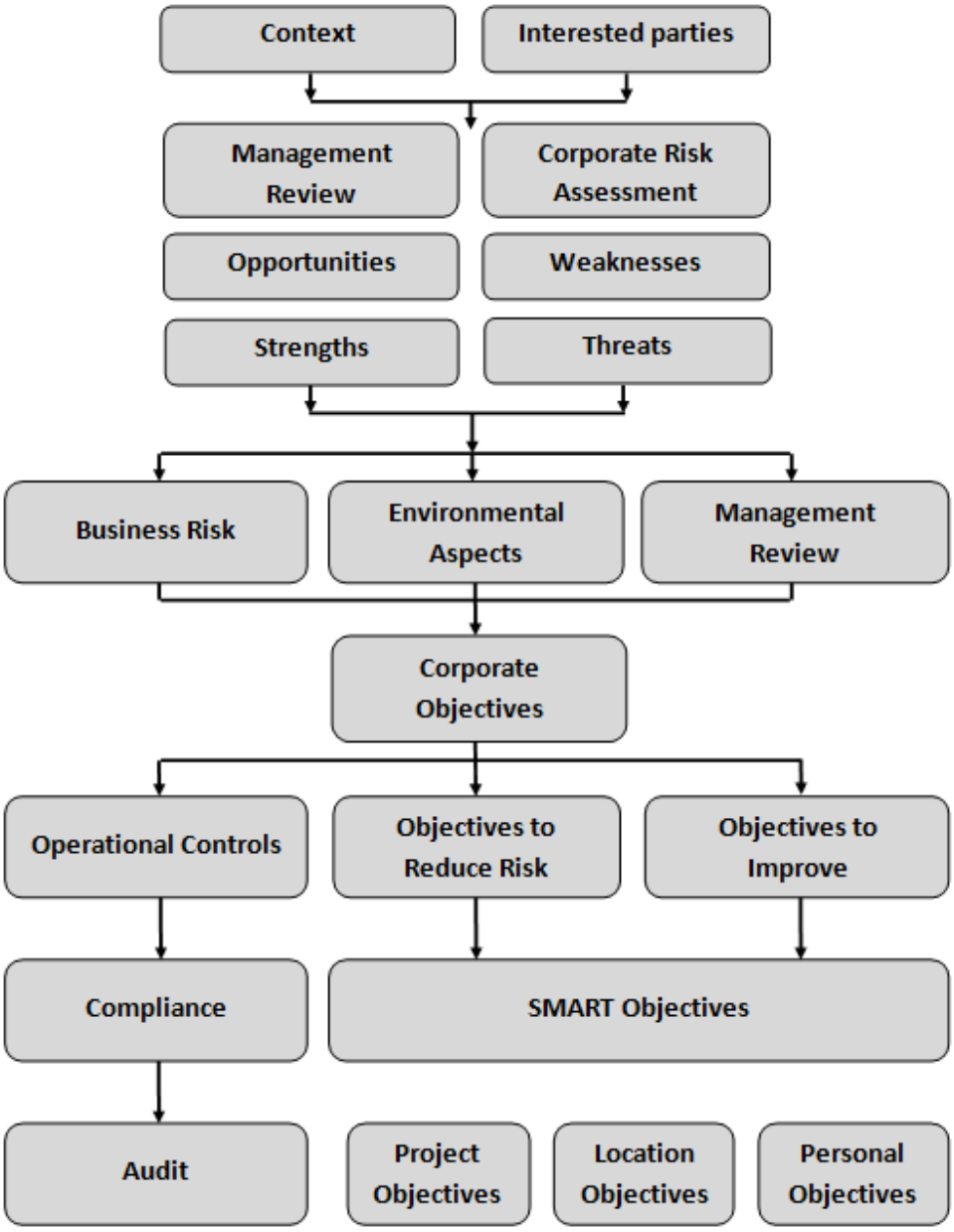


Figure 4 Objectives and Improvement Process

6.3. Planning of Changes

Any changes to the QMS are carried out in a planned manner using BGPO-SP-009 Management of Change. This considers the purpose of the change and the potential consequences, the integrity of the quality management system, the availability of resources and the allocation or re-allocation or responsibilities or authorities.

7.0 SUPPORT

7.1. Resources

People

BGP Offshore has determined the competencies and training required for the successful and effective implementation of the QMS through BGPO-SP-003 Training & Competency.

Infrastructure

BGPO is headquartered in the CNPC Tianjin Tower, No. 83, Second Avenue, TEDA, Tianjin.

The appropriate infrastructure has been considered by the senior management team and implemented by the VP Equipment to ensure service conformity. These include appropriate vessels, office space, IT infrastructure, utilities and facilities. HSE issues are considered and appropriate practices implemented to ensure safe working environment.

BGPO-MP-024 Marine Contractor Management, BGPO-MP-008 Equipment & Materials Management and BGPO-MP-027 Preventive Maintenance Management are established to support the relevant processes. TM-Master software is used to manage the relevant infrastructure.

Environment for the operation of processes

BGPO has ensured that through the provision of suitable workplaces, both in the office and the vessels and the implementation of the BMS that the environment is optimised for the effective operation of services.

Monitoring and measuring resources

BGPO has determined and supplied the resources needed to verify accuracy of results of the data acquisition process. These are covered by the seismic acquisition quality control procedures which include:

- BGPO-MP-006 Data Quality Control
- BGPO-MP-013 Instrument Management
- BGPO-MP-022 Navigation Management
- BGPO-MP-031 Source Mechanical

Measurement traceability

The arrangements for measurement traceability are maintained in TM-Master by the Equipment Department.

Organisational knowledge

BGPO use FLAG to record the details of each project. This includes a “lessons learned” section where any lessons from the execution of the project are recorded at the Evaluation phase. These lessons learnt are maintained for reference in FLAG for future projects to use at the planning stage.

7.2. Competence

Competencies and training requirements are established by the H.R. Department in collaboration with the appropriate departments. This process is detailed in BGPO-M-01 Human Resources Management.

The Human Resources Manual and its supporting processes BGPO-SP-003 Training & Competence,

ensure that the staff of BGP Offshore are competent on the basis of education, training or experience and are managed to ensure that staff remain up to date with the competencies required through the appraisal process, BGPO-SP-006 Personal Performance Appraisal.

7.3. Awareness

BGP Offshore ensures that employees are fully aware of the quality policy, quality objectives and how their contribution is important to the long-term sustainability of the company.

All employees undergo BMS Induction training, including quality management system awareness, the quality policy, relevant quality objectives, the importance of their contribution to the effectiveness of the management system, the benefits of continual improvement and the implication of not conforming to the management system. This is followed by regular refresher training and updates as required.

7.4. Communication

The quality team is responsible for ensuring that any internal or external communications related to the quality management system are identified and the appropriate means of communication are documented either in the relevant procedures or as part of the management of change process BGPO-SP-009 Management of Change.

7.5. Documented Information

BGP Offshore ensures that all documented information is available and suitable for use, where and when it is needed and ensures that the documented information is adequately protected. BGP Offshore has established BGPO-SP-001 Control of Documented Information to document the definitions and process for dealing with the management of documented information within BGPO's Business Management System.

Documented information within BGPO are the documents and records generated within the BGP Offshore Business Management System.

All documents in the Business Management System are created and updated by relevant Process Owner and approved by relevant Process Approver. This is defined in BGPO-SP-001 Control of Documented Information.

All documents in the Business Management System are available through FLAG, which is accessible by all personnel with appropriate controls and permissions.

The Document Control Manager and QHSE Advisors have the responsibility for the document quality check and upload into FLAG. All the controlled documents are identified with unique reference numbers, the revision number, the process owner and approver as described in BGPO-SP-001 Control of Documented Information.

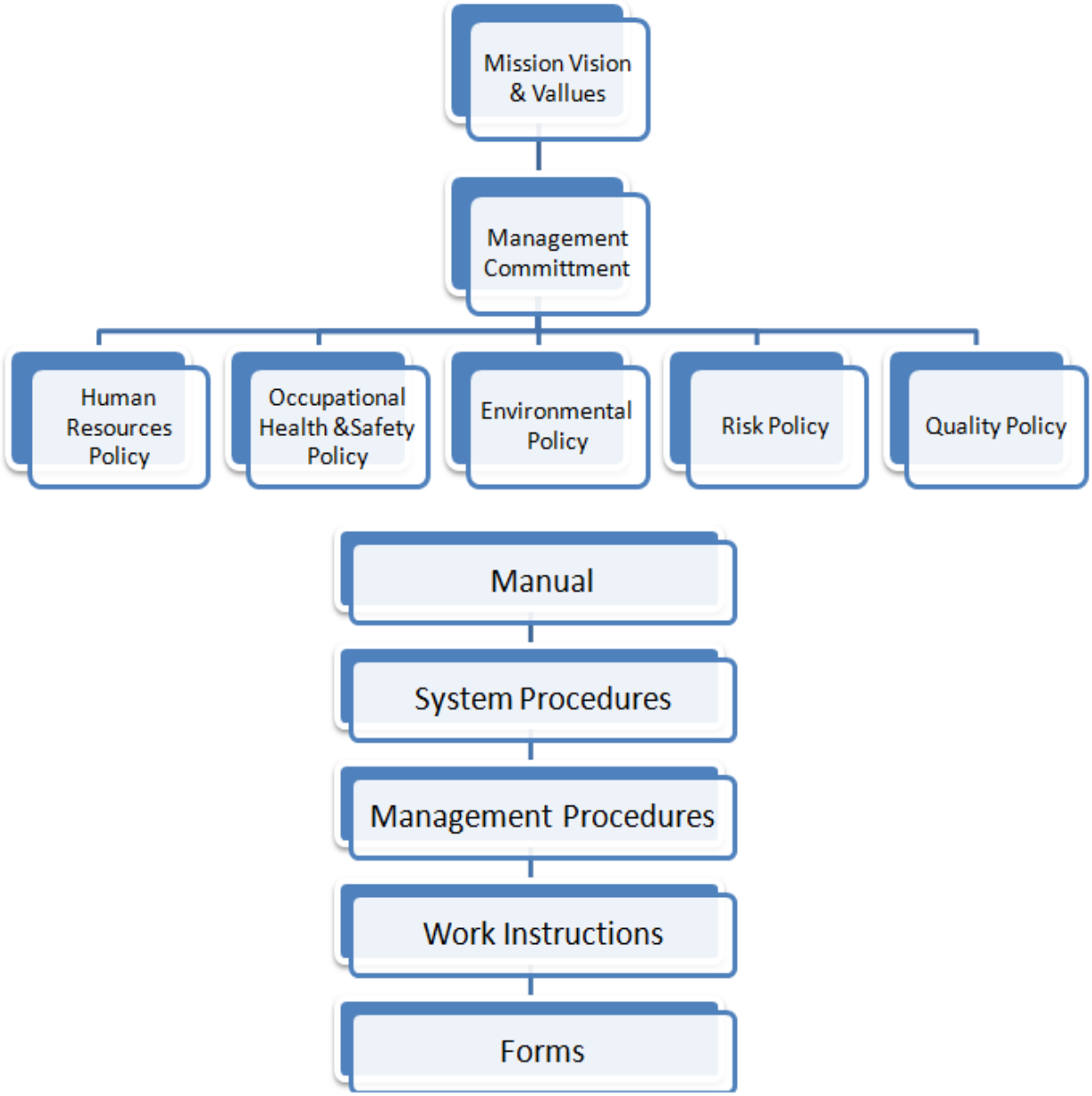


Figure 5 Business Management System Document Structure

8.0 OPERATIONS

8.1. Operational Planning and Control

Operations are planned through the Capability and Bid Support process as detailed in BGPO-MP-037 Marketing and Sales, these plans are finalised at the pre-mobilisation stage as detailed in BGPO-MP-018 Marine Seismic Operations. (See Figure-6 below)

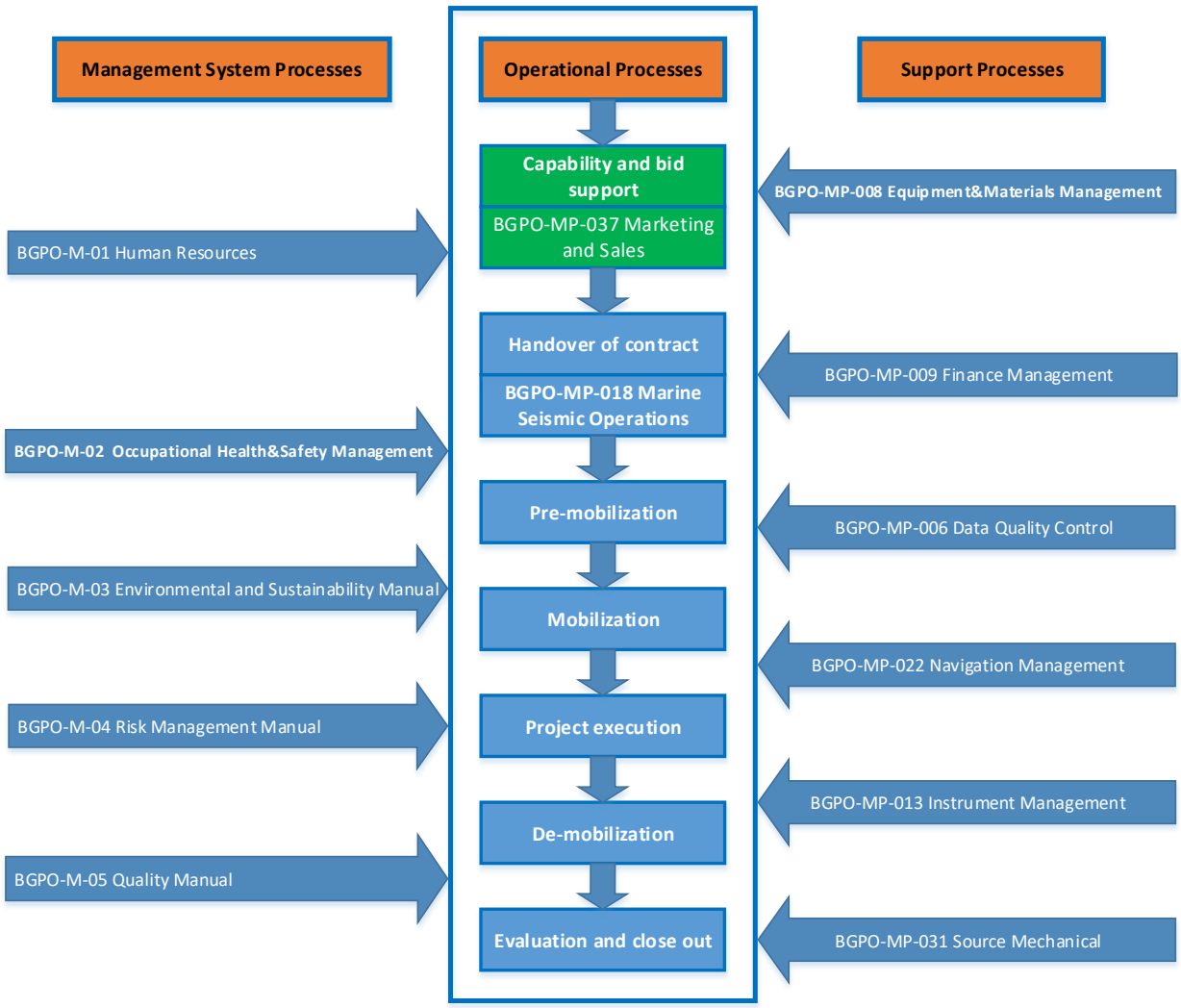


Figure 6 Operational Process Overview

8.2. Requirements for Products and Services

The Capability and Bid Support process includes the establishing effective lines of communication with customers and defining the requirements for the project and the review requirements, including applicable regulatory requirements. BGPO-MP-037 Marketing and Sales provides the support for this process.

8.3. Design and Development of Products and Services

The organisation has determined that this clause is not applicable (ISO9001:2015 4.3).

8.4. Control of Externally Provided Processes, Product and Services

BGP Offshore identifies and evaluates the impacts and risks of the externally provided processes and services to BGP Offshore's ability to consistently meet client requirements. Two procedures have been established to manage suppliers, sub-contractors and externally provided processes. These procedures are BGPO-MP-024 Marine Contractor Management and BGPO-SP-007 Subcontractor Management.

These procedures evaluate the risk associated with the provider and identify appropriate mitigation and control measures. Records of these evaluations are maintained in FLAG.

8.5. Production and Service Provision

BGP Offshore has determined the controls necessary for the effective acquisition of seismic data. These controls are described in detail in the quality management system as illustrated in the Operational Process Overview (figure 6). This shows the sequence and interaction of the Operational Processes and refers to the relevant Operational procedures that control the acquisition of data. Figure 6 also illustrates the processes that support the operational process and the different elements of the management system. Figure 7 further provides an overview of the activities addressed in the relevant procedures carried out within the seven main operational processes.

All documented procedures and records are maintained in FLAG to ensure consistent application of the Business Management System across all locations. FLAG also provides a secure and globally accessible platform for maintaining records.

Control of changes

Any change required by the client to the contract or the scope of work is communicated to the Operations Department through the channels agreed at the planning phase and managed the through the Management of Change process in FLAG.

8.6. Release of Products and Services

The DQC Geophysicist on board is responsible for the quality control and release of the data. The DQC Geophysicist will liaise with the Client Representative on board and ensure no data is released to the client until the client representative has verified that the outputs conform to the contract.

8.7. Control of Non-Conforming Outputs

Nonconforming data is managed by the on-board DQC Department using BGPO-MP-043 Seismic Product Management ensure that the data is controlled to prevent its unintended use.

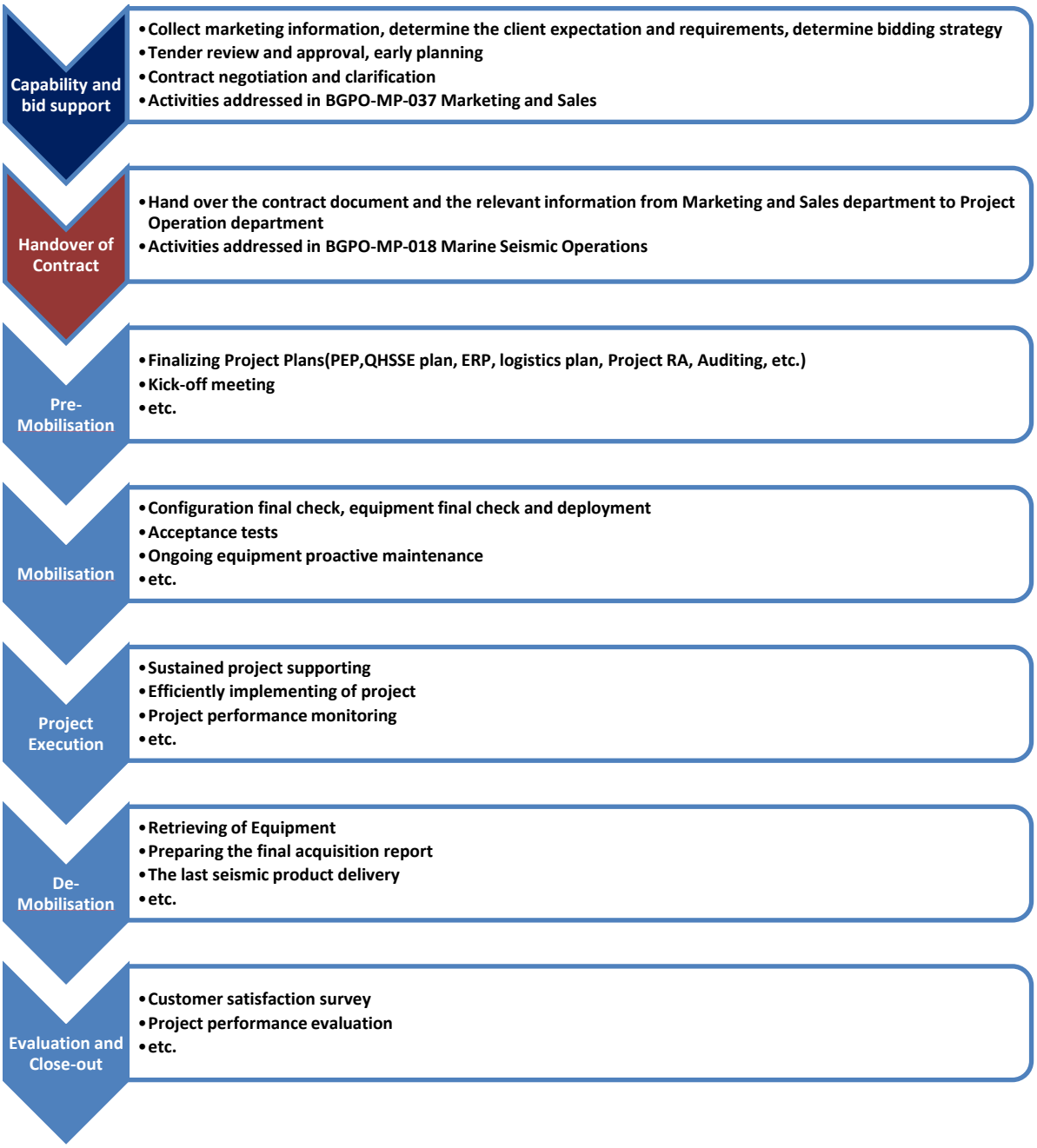


Figure 7 Activities Overview of Operational Process

9.0 PERFORMANCE EVALUATION

9.1. Monitoring, Measurement, Analysis and Evaluation

9.1.1 General

Process owners have been obliged to identify the appropriate monitoring methodologies for the processes they are responsible for. These arrangements are governed by BGPO-SP-012 Performance Management.

9.1.2 Customer Satisfaction

BGP Offshore has established BGPO-MP-005 Customer Satisfaction which describes how customer satisfaction information is gathered and evaluated.

9.1.3 Analysis and Evaluation

The information gathered from 9.1.1 and 9.1.2 shall be evaluated at the management review to ensure the conformity of products and services and the level of customer satisfaction.

The performance of contractors and sub-contractors shall be monitored and evaluated.

9.2. **Internal Audit**

BGPO has scheduled audits to be conducted at intervals determined by the process owners based on process risk. The internal audits will verify compliance to the QMS, ISO9001 and the effectiveness of the system.

BGPO auditors have had appropriate training and have been deemed competent. Where possible auditors are selected to ensure they are independent of the process they are auditing.

The audit process is owned by the Audit manager and described in BGPO-SP-013 Auditing. Records of audits are kept in FLAG.

9.3. Management Review

The management review process is ongoing at BGP Offshore with the Senior Management Team, including field operation managers meeting quarterly to monitor and evaluate the performance of the QMS.

The process is detailed in BGPO-SP-012 Performance Management.

10.0 IMPROVEMENT

10.1. General

As part of the performance management process BGPO establishes improvement objectives based on the process monitoring data. This process is designed to identify opportunities to improve the performance of the QMS to support the Quality Policy and enhance client satisfaction. This process is detailed in BGPO-SP-012 Performance Management.

As part of the improvement process BGPO has established a process for recording ideas and opportunities, BGPO-SP-015 Ideas and Opportunities. This process allows all member of staff to make suggestions on how performance can be improved.

10.2. Non-Conformity and Corrective Action

Non-conformities can arise from many sources including;

- Customer complaints
- Internal and external audits

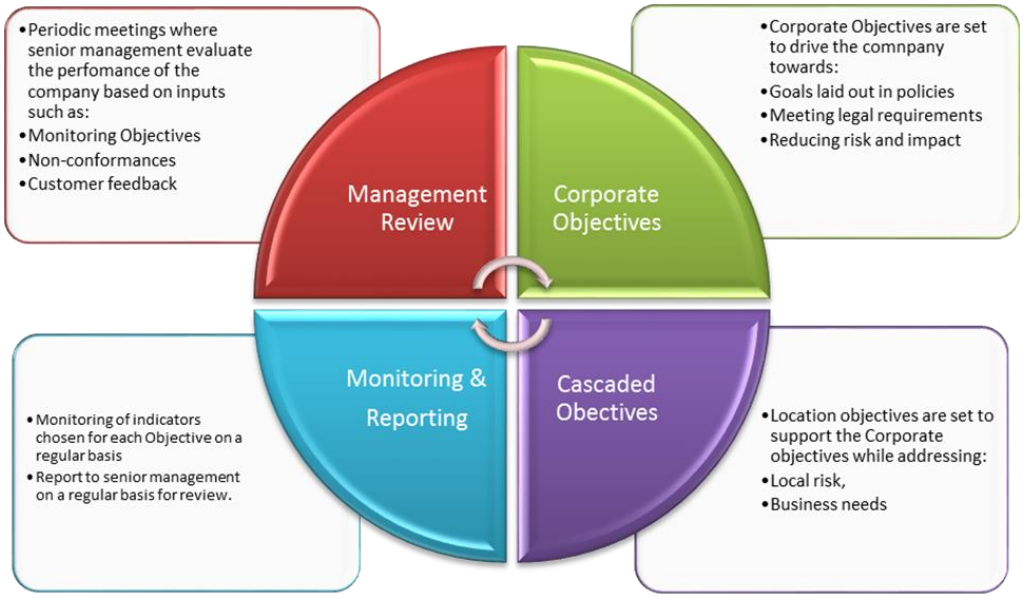
BGP Offshore has established procedure BGPO-SP-014 Management of Non-conformance to ensure that there is an effective documented process for;

- Recording non-conformities
- Carrying out appropriate correction measures
- Investigating root causes
- Establishing corrective actions
- Checking the effectiveness of corrective actions

The Auditing Manager is the process owner and the VP QHSSE is the process approver.

10.3. Continual Improvement

Through continuously monitoring the management system and client feedback, BGP Offshore has established a documented process BGPO-SP-12 Performance Management for setting objectives to improve performance. This supports the aims of the Mission, Vision and Values statement and the Quality Policy.



[Client name and country]

[Type of Acquisition] Seismic Acquisition

PD-09 MARINE FAUNA MITIGATION PLAN

QHSSE DEPARTMENT
BGP Offshore
14 Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 3000457, CHINA

MARINE FAUNA MITIGATION PLAN

REVISION HISTORY				
Revision History	Date of Issue	Reason for Update	Issued by	Approved by (client)

DISTRIBUTION LIST			
Name	Company	Position	Email address
Phillip Bigg	BGPO	VP QHSSE	philbigg@cnpc.com.cn

Table of Content

1. INTRODUCTION 5
   1.1. PURPOSE 5
   1.2. OBJECTIVES 5
2. DEFINITIONS 5
3. APPLICABLE LEGAL AND OTHER REQUIREMENTS 6
4. ROLES, RESPONSIBILTIES & AUTHORITY 6
   4.1. BGPO PROJECT MANAGER 6
   4.2. BGPO ENVIRONMENTAL AND SUSTAINABILITY MANAGER IS RESPONSIBLE FOR: 6
   4.3. BGPO PROJECT QHSSE MANAGER 6
   4.4. PARTY CHIEF 6
   4.5. QHSSE ADVISOR 7
   4.6. LEAD MARINE FAUNA OBSERVER IS RESPONSIBLE FOR: 7
   4.7. MARINE FAUNA OBSERVER IS RESPONSIBLE FOR: 7
   4.8. LEAD PAM OPERATOR IS RESPONSIBLE FOR: 7
   4.9. PAM OPERATOR IS RESPONSIBLE FOR: 7
   4.10. ALL PERSONNEL 7
5. STAKEHOLDERS 7
6. FAUNA IDENTIFICATION 8
   6.1. CORAL REEFS 8
   6.2. FISH 8
   6.3. MARINE MAMMALS 9
   6.4. SEA TURTLES 9
7. RISK ASSESSMENT & CONTROLS 10
8. RESOURCES AND COMPETENCY 11
   8.1. STAFFING LEVELS 11
   8.2. MFO/PAM OPERATOR REQUIREMENTS 11
9. MITIGATION MEASURES 12
   9.1. VISUAL MONITORING 12
   9.2. RAMP UP (SOFT START) PROCEDURE 12
10. LINE CHANGES 13

10.1. LINE CHANGES GREATER THAN 45 MINUTES 13
10.2. LINE CHANGES LESS THAN 45 MINUTES 14
11. SILENCE 14
12. INVASIVE SPECIES 14
13. FAUNA POTENTIAL NON-COMPLIANCE 15
14. REPORTING REQUIREMENTS 15
15. INCIDENT INVESTIGATION 16
16. LESSONS LEARNT 16
17. REFERENCES 16

MARINE FAUNA MITIGATION PLAN

1. INTRODUCTION

This Marine Flora and Fauna Plan (MFFP) has been developed to support the Project HSSE Plan for the (project name and type). It has been complied based on BGPO-MP-013 Protected Species Mitigation Monitoring, JNCC Guidelines for Minimizing the Risk of Injury to Marine Mammals from Geophysical Surveys 2017 as well as client/location specific requirements applying to all vessels within the Seismic Survey Fleet (SSF).

1.1. PURPOSE

The purpose of this document is to enable all stakeholders within the project to be able to:

- Identify the roles, responsibilities and authority of key personnel
- Identify the resources available to support the plan
- Understand client and local requirements
- Understand the procedure to be followed in case marine mammals and turtles are sighted.

1.2. OBJECTIVES

The main objectives of this plan are:

- Ensure protection of local fauna throughout the project
- Monitor and generate data for future reference.

2. DEFINITIONS

BGPO - BGP Offshore

EZ – Exclusion zone

HSSE- Health, Safety, Security and Environment

MFO – Marine Fauna Observer

PAM – Passive Acoustic Monitoring

QHSSE- Quality, Health, Safety, Security and Environment

SPI – Shot Point Interval

[ADD/CHANGE DEFINITIONS]

3. APPLICABLE LEGAL AND OTHER REQUIREMENTS

Table 1 Applicable legal requirements

Guidance: Data can be obtained from the client's EIA/ESIA/HSEIA.

Subject (Guidance: topic e.g. water resources, waste management etc.)	**Requirements** (Guidance: Legislation number and title)

4. ROLES, RESPONSIBILTIES & AUTHORITY

It is the duty of all personnel detailed below to understand their role, responsibilities and authority and to ensure that all personnel in their direct line of management are aware of their role, responsibilities and authority throughout the lifecycle of this project:

4.1. BGPO PROJECT MANAGER

The BGPO Project Manager shall demonstrate leadership in environmental stewardship by leading by example and shall:

- Be responsible for allocating the resources to enable the implementation of this plan
- Ensure regulatory compliance is maintained
- Act as the focal point between BGPO and the Client for all issues related to this plan

4.2. BGPO ENVIRONMENTAL AND SUSTAINABILITY MANAGER IS RESPONSIBLE FOR:

- Preparing this plan in accordance with BGP Offshore's requirements, Client requirements and local requirements
- Providing training, if applicable

4.3. BGPO PROJECT QHSSE MANAGER

The Project QHSSE Manager shall demonstrate leadership in environmental stewardship by leading by example and shall:

- Advise and support the vessels' crew on the implementation of this plan
- Provide training, if applicable

4.4. PARTY CHIEF

- The Party Chief shall ensure that the requirements identified in this plan are implemented as applicable for the duration of this project.

4.5. QHSSE Advisor

- The QHSSE Advisor shall liaise with the MFO to ensure this plan has been communicated at crew level and:
- Ensure FLAG records are completed daily.

4.6. Lead Marine Fauna Observer is responsible for:

- Liaising with Seismic crew and Environmental and Sustainability Manager
- Visually detecting and identifying protected species according to this plan
- Monitor seismic operations for compliance with this plan
- Communicating with seismic crew to delay start of ramp up, when applicable
- Complete daily visual log

4.7. Marine Fauna Observer is responsible for:

- Visually detecting and identifying protected species according to this plan
- Monitor seismic operations for compliance with this plan
- Communicating with seismic crew to delay start of ramp up, when applicable
- Complete the daily visual log

4.8. Lead PAM Operator is responsible for:

-

4.9. PAM Operator is responsible for:

-

4.10. All Personnel

- All personnel have a responsibility to report sightings to MFOs or designated observers.

Guidance: Other roles may be added

5. STAKEHOLDERS

The following stakeholders have been identified for this project:

Table 2 Stakeholder identification

Guidance: Shall be revised from Project

Stakeholder	Needs and Expectations

Local Government	Compliance with applicable law Business opportunities
Local Community	Job opportunities No environmental impacts Business opportunities
Customer	Quality of data Delivery on time High level of HSSE
Suppliers	Business opportunities Communication and project management
Staff	High levels of QHSSE Company's reputation Growth potential Continuous competence development

6. FAUNA IDENTIFICATION

6.1. CORAL REEFS

Coral reefs support a range of species providing sheltering, feeding, spawning and nursery areas, resulting in the large and diverse community for which they are renowned. The coral reef ecosystem has been shown to be very sensitive to changes to their surroundings and adverse impacts can cause the ecosystem to collapse, resulting in widespread mortality of coral and various associated organisms.

[Guidance: Add info on project location. Source can be client/project EIA]

6.2. FISH

[Guidance: Add info on project location. Source can be client/project EIA]

[Guidance: Add fauna maps and photos if available]

6.3. MARINE MAMMALS

[Guidance: Add info on project location. Source can be client/project EIA]

[table to be revised]

[search can be made using IUCN and NOAA websites as well as local ones]

Common Name (English)	Scientific Name	Status	Description	Photo
Spinner Dolphins	*Stenella longirostris*	Least concern	Spinner dolphins are best known for their above-water displays of leaping and spinning several times. A single spinning leap can include as many as four body revolutions. Spinner dolphins are found throughout the world's tropical and subtropical oceans.	

Table 3 List of marine mammals potentially found in the area (Source: XXX)

6.4. SEA TURTLES

[Guidance: Add info on project location. Source can be client/project EIA]

Common name (English)	Scientific Name	Status	Description	Photo

Table 4 Turtle species likely to be found in the project area. (Source:

7. RISK ASSESSMENT & CONTROLS

The following table identifies the top risks to Marine Fauna during this project. The evaluation of risk was performed using the BGPO Risk Matrix.

Table 5 Risk assessment and mitigations.

	Impact	Impact Description	Risk	Mitigation	Residual Risk
MARINE MAMMALS	Mortality	Mortality caused by seismic sources. This impact has not been recorded; therefore the likelihood is very low.	L	• Noise emission does not exceed exposure criteria threshold; • Minimise vessel presence and movements; • Presence of MFO, • Implement soft start procedures ; • Establishment of exclusion zone (500 m from noise source). • Delay soft start in the presence of marine mammals	L
	Physical Injury	Injuries observed in marine mammals linked to direct exposure to seismic source noise mainly relates to damaged auditory organs including perforated ear drums and broken bones.	M		L
	Disturbance and displacement	Changes in dive patterns, aggressive-like behaviour, Changes in blow rate, shifts in migration routes, disruption of mating or foraging, proximity avoidance or displacement from normal habitats Compromised ecological fitness by masking mammal vocalization used for finding prey, navigation and social cohesion Behavioural changes like confusion, proximity avoidance, compromised ecological fitness	H		L
SEA TURTLES	Mortality		M	• Avoidance of sensitive areas/ periods; • Noise emission does not exceed exposure • criteria threshold (as per marine mammal • group); • Minimize vessel presence and	L

	Physical Injury		M	movements; • Implement soft start procedures;	L
	Disturbance and displacement	Behavioural changes like confusion, proximity avoidance, temporary dislocation, compromised ecological fitness	M		L
FISH	Mortality and Physical Injury	Behavioural changes like confusion, proximity avoidance, temporary dislocation, compromised ecological fitness, auditory injury, death		1.	L
	Disturbance and Displacement		H		L
INVASIVE SPECIES	Introduction of exotic species that can become invasive	Exotic species can be introduced via ballast water or attached to ship's hull.	H	• Implementation of Ballast Waste Management Plan • Keeping hull painted at regular intervals as determine by the International Maritime Organization (IMO), ensuring a TBT free paint (Antifouling Certificate)	L

8. RESOURCES AND COMPETENCY

8.1. STAFFING LEVELS

MFO? [number of MFO to be agreed with client]

PAM Operators? [number of PAM to be agreed with client]

8.2. MFO/PAM OPERATOR REQUIREMENTS

All MFOs and PAM operators must have completed a recognized protected species observer training program.

MFO's and PAM Operators will have completed HUET / Sea Survival/BOSIET. MFO's and PAM Operators will provide required PPE, including hard hat, steel tip boots and fire-retardant coveralls, following BGPO's standards.

MFO equipment such as binoculars with reticle rangefinder shall be provided by contractor.

9. MITIGATION MEASURES

9.1. VISUAL MONITORING

[Guidance: Monitoring/Mitigation procedures might change from client to client]
[Guidance: Check client's specific procedures, if any]

The visual observer will stand watch in a suitable location that will not interfere with the navigation or operation of the vessel and affords an optimal view of the sea surface. Observers will maintain 360° coverage surrounding the seismic vessel and will adjust their positions appropriately to ensure adequate coverage of the entire area.

The observer will monitor for Marine Fauna using the naked eye and hand-held binoculars.

Visual monitoring will begin no less than 30 minutes prior to the beginning of ramp up.

If marine fauna is observed, the observer should first implement the necessary mitigation actions, or if no mitigation actions are required, they will note and monitor the position (including latitude/longitude of the vessel and relative bearing and estimated range to the animal) until the animal dives or moves out of visual range of the observer.

9.2. RAMP UP (SOFT START) PROCEDURE

The intent of ramp-up is to warn marine mammals of pending seismic operations and to allow sufficient time for those animals to leave the immediate vicinity. Under normal conditions, animals sensitive to these activities are expected to move out of the area.

For all acoustic source activity, including acoustic source testing, ramp-up procedures must be conducted to allow marine mammals to depart the exclusion zone (EZ) before surveying begins.

Ramp-up procedures are as follows:

- Visually monitor the exclusion zone and adjacent waters for the absence of marine mammals for at least 30 minutes before initiating ramp-up procedures. If none are visually detected inside the 500 meter EZ, ramp-up procedures may begin.
- Seismic personnel confirm with MFO on watch that the EZ is all clear
- Initiate ramp-up procedures by firing a single acoustic element. The preferred acoustic element to begin with should be the smallest acoustic element, in terms of energy output

(dB) and volume (cubic inches).

- Continue ramp-up by gradually activating additional acoustic elements over a period of at least 20 minutes but no longer than 40 minutes, until the desired operating level of the acoustic source array is obtained.
- Immediately shutdown all acoustic elements, ceasing seismic operations any time a shut-down species is visually detected entering the exclusion zone.

  Seismic operations may recommence beginning with a ramp-up of acoustic elements only when the EZ has been cleared visually for at least 20 minutes to ensure the absence of marine mammals.

  The observer will monitor and record in detail, ramp-up procedures in accordance with the requirements of this plan. A record of operations form (BGPO-F-015 Marine Mammal Recording) will be completed for all changes in acoustic source power output.

  [Revise flowchart when applicable]

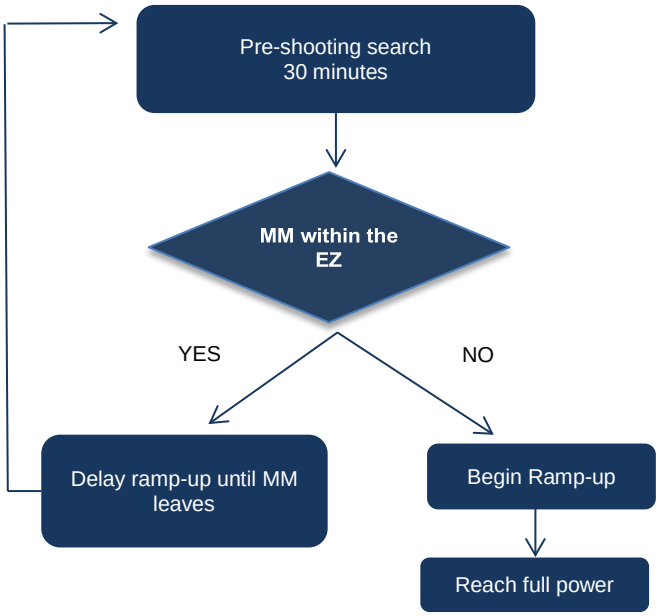


Figure 1 Marine mammal mitigation flowchart.

10. LINE CHANGES

10.1. LINE CHANGES GREATER THAN 45 MINUTES

If line changes are expected to take longer than 40 minutes, regardless of seismic source volume:

- Shooting shall be terminated at the end of the survey line (or geophone repositioning);

- A pre-shooting search shall be undertaken during the scheduled line change (or geophone repositioning);
- The soft-start shall be delayed s when marine mammals (or other protected fauna) are seen within the mitigation zone during the pre-shooting search and
- A full 20-minute soft-start shall be undertaken before the start of the next line.

10.2. LINE CHANGES LESS THAN 45 MINUTES

If line changes are expected to be completed within (or equal to) 40 minutes, regardless of seismic source volume:

- Shooting can continue during the line change only if power is reduced to 180 cubic inches (or as close as is practically feasible) at standard pressure. Seismic source volumes of less than 180 cubic inches can continue to fire at their operational volume and pressure; AND
- The Shot Point Interval (SPI) is increased to provide a longer duration between shots, with the SPI not to exceed 5 minutes: AND
- The SPI is decreased in uniform stages during the final 10 minutes of the line change (or geophone repositioning), prior to data collection re-commencing (i.e. mini soft start).

11. SILENCE

Unplanned breaks refer to instances where the seismic sources cease firing unexpectedly during data acquisition, i.e. a technical problem or breakdown. It is imperative that the MFO begins to monitor the mitigation zone as quickly as possible after an unplanned break has occurred.

Unplanned breaks of less than 10 minutes: If the seismic sources can be restarted and data acquisition can resume in less than 10 minutes, there is no requirement for a soft-start and firing can recommence at the required power, provided no marine mammal(s) have been detected in the mitigation zone during the breakdown period.

If a marine mammal is detected during the breakdown period, the MFO will advise to delay recommencement of the seismic source firing until their passage, or the transit of the vessel, results in the marine mammal being outside of the mitigation zone. There should be a minimum of a 20-minute delay from the time of the last sighting within the mitigation zone and the commencement of the soft-start.

Unplanned breaks of longer than 10 minutes: If it will take longer than 10 minutes to restart the seismic sources, a full pre-shooting search and soft-start should be carried out before the survey re-commences. If an MFO operative has been observing prior to the breakdown period, this time can contribute to the pre-shooting search time, however, the full 30 or 60-minute search period is still required.

12. INVASIVE SPECIES

Prior to entering the coastal waters of **[add country name],** all vessels shall, in accordance with their Ballast Water Management Plan, apply the D-1 standard and are to exchange their ballast water in open seas, away from coastal areas at least 200 (Two Hundred) nautical miles from land and in water at least 200 (Two Hundred) meters deep. All exchanges of ballast by the flow-through method, shall be pumped through three times the volume of each ballast water tank, to meet the standard and shall be entered into the vessels Ballast Water Record Book.

13. FAUNA POTENTIAL NON-COMPLIANCE

The MFO will verbally inform the Party Chief and/or onboard client representative of any compliance related issues, whether actual or potential, immediately upon them occurring. The MFO will also inform their direct supervisor within the contracting company via email of all potential non-compliance events.

Any potential non-compliance will first be attempted to be resolved on the vessel between the Lead MFO and the Party Chief and/or onboard client representative. The Lead MFO will document in writing the compliance issue and the agreed upon resolution for minimizing future non-compliance incidents. The Party Chief and/or onboard client representative will review and approve the statement and agreed upon resolution. This will then be entered in FLAG at the location level as a non-conformity for the vessel.

The BGPO, the client and MFO Contractor will distribute any pertinent information resulting from the incident to other personnel as deemed necessary.

If the issue cannot be resolved onboard the vessel, BGPO, the client, and the MFO contractor will discuss the issue and determine the correct approach for future mitigation actions.

14. REPORTING REQUIREMENTS

Reports shall be forwarded to the distribution list in this plan as described below:

Reporting requirement may change from project to project.

Daily Reports	Send Marine Mammal Recording Form- Operations and Effort Embedded in the email, inform if there were any sightings, any non-compliance or any other issues. If any relevant pictures attach to the email when internet allows. Ensure all sightings are recorded in FLAG so they can be checked from shore at any time.
Monthly reports	A monthly report shall be submitted with a summary of sightings, maps, issues and lessons learned.
Final Report	A compilation of project sightings, maps, issues and

	lessons learned.
Add fields if needed	

15. INCIDENT INVESTIGATION

All incidents shall be investigated in accordance with BGPO's procedure SP-008-Incident Management.

16. LESSONS LEARNT

All identified lessons learnt shall be logged and maintained within FLAG under the project page.

17. REFERENCES

[Guidance: add client specific procedure reference]
[Guidance: add reference to client EIA for the area]

Add more references if needed

JNCC Guidelines for Minimizing the Risk of Injury to Marine Mammals from Geophysical Surveys 2017.

OGP 576 Seismic Surveys & Marine Mammals.

OGP Recommended Monitoring and Mitigation Measures for Cetaceans during Marine Seismic Survey Geophysical Operations.

IAGC Sound & Marine Seismic Surveys

November 15, 2019





Emergency Response Plan

insert project (name)

QHSSE DEPARTMENT

insert client (name)

14th Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 300457, CHINA

Table of Contents

1.0 COMMITMENT AND ACCOUNTABILY....8
1.1 Project Manager....8
1.2 Deputy Project Manager....8
1.3 Company Security Officer (Optional)....8
1.4 Designated Person Ashore....8
1.5 Fleet Manager (Optional)....9
1.6 Master....9
1.7 Chief Officer....9
1.8 Chief Engineer....9
1.9 Officer on Watch....10
1.10 Fleet Party Chief (Optional)....10
1.11 Party Chief....10
1.12 Health Care Professional....10
1.13 Medical Team....11
1.14 Fast Rescue Boat Coxswain....11
1.15 Onshore Emergency Response Team....11
2.0 OBJECTIVES....12
2.1 Onshore....12
2.2 Offshore....12
3.0 ORGANISATION, RESOURCES AND CAPABILITY....13
3.1 BGPO....13
3.2 BGPO Project Management Team....13
3.3 BGPO Emergency Response Resources....13
3.4 Vessel Management Companies Resources....13
3.5 Client Project Management Team....14
3.6 Client Project Management Team Resources....14
3.7 Joint Venture Management Team Resources (Optional)....14
3.1 National Resources (Optional)....14
3.2 Communications....15
3.3 Onshore ERP Organizational Chart....15
3.4 Offshore ERP Organizational Chart....16
4.0 STAKEHOLDERS AND CUSTOMER....16
4.1 Stakeholder Identification....17

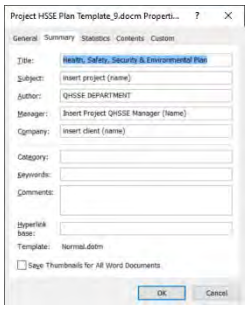
5.0 RISK ASSESSMENT AND CONTROL 19
6.0 ASSET DESIGN AND INTEGRITY 20
6.1 Human Resources 20
6.1.1 Certification, Qualification and Experience. 20
6.1.2 Project Specific Human Resource Requirements (Optional) 20
6.2 Vessel Management Companies 20
6.3 Vessel Audits and Inspections 21
6.3.1 Planned Maintenance 21
6.3.2 Critical Spares 21
6.3.3 Oil Pollution Prevention 21
6.3.4 Life Saving Appliances 21
6.3.5 Ships Security 21
6.3.6 Fire Fighting 22
6.3.7 Towing 22
6.3.8 Helidecks (Optional) 22
6.3.9 Winch Points (Optional) 22
6.3.10 Davits 22
6.3.11 Embarkation Zones 22
6.3.12 Small Boats 23
6.3.13 Offshore Medical Facilities and Equipment 23
6.3.14 Project Specific Planned Maintenance Requirements (Optional) 23
6.4 Onshore Medical Facilities (Optional) 23
6.5 Ambulances (Optional) 23
6.6 Emergency Response Drills 23
7.0 PLANS AND PROCEDURES 25
7.1 Vessel Specific Emergency Response Procedures 25
7.2 Client Specific Emergency Response Procedures 27
8.0 EXECUTION OF ACTIVITIES 28
8.1 INITIATING AN ONSHORE EMERGENCY RESPONSE 28
8.2 REPORTING 28
8.2.1 Initial Report 28
8.2.2 Follow Up Report 28
8.3 INTIATING AN OFFSHORE EMERGENCY RESPONSE 29
8.4 REPORTING 32

8.4.1 Initial Report 32
8.4.2 Follow Up Report 32
9.0 MONITORING, REPORTING AND LEARNING 33
9.1 Monitoring Performance 33
9.2 Incident Reporting & Investigation 33
9.3 Lessons learned 33
10.0 ASSURANCE, REVIEW AND IMPROVEMENT 34
10.1 Auditing 34
10.1.1 Project Audits 34
10.1.2 Sub-Contractor and Supplier Audits 34
10.1.3 Management Visits 34
10.2 Project Self-Verification 34
10.3 Client ERP Assurance Process (Optional) 34
10.4 Review 35
10.4.1 Management Review 35
10.4.2 Project Reviews 35
10.4.3 Location Reviews 35
10.5 Improvement 36
10.5.1 Non-Conformity 36
10.5.2 Ideas and Opportunities 36
11.0 APPENDIX 37
11.1 Attachments 37
11.2 Glossary 37

Instructions: Delete before publishing.

This plan has been developed to allow the user to fill in required sections in BLUE. Other areas in the document are protected to maintain the integrity of the plan.

The document must be opened to allow macros as this enables the feature to add additional rows if required in the tables provided.



Meta data is used in this document and must be filled in first to load specific fields in the document. To access this:

Click File tab.

On Info part, move to Properties in the right side of the pane.

Click the down arrow and choose Advanced Properties in the menu.

You will get a pop-up window, where you can make change in the dialog box.

You may enter and edit information in the "**blue**" text form fields. If additional rows are required when adding information to the tables and form fields, select the "**+**" plus symbol on the bottom right of the table as shown below:

Revision Number	Amendment	Date
1	Updated Section X.XX to include: abcdef	6/2/2019

Some fields are "Optional" and may be deleted if not required for the project.

If you encounter any problems or find information in this plan that is inaccurate or needs to be updated. Please contact the QHSSE Department.

DOCUMENT REVISION & CONTROL

This plan has been developed by the BGPO QHSSE Department and has been reviewed & approved through FLAG workflows with the project management team prior to being distributed as per the distribution list on the following page. This plan is held as an active document in **FLAG** at the project level and shall be reviewed by the project management teams (both BGPO/Client and JV Partner as appropriate) prior to the initiation of each phase of the project.

AMENDMENTS

Revision Number	Amendment	Date
1	Updated Section X.XX to include: abcdef	6/2/2019

CUSTODIAN

Company	Name	Role
BGP Offshore	Insert Project QHSSE Manager (Name)	Project QHSSE Manager

APPROVAL

Company	Name	Role
BGP Offshore	Phil Bigg	QHSSE VP

DISTRIBUTION LIST

The following table identifies the distribution list for this document. Individuals on this list shall be sent a workflow action from FLAG [Add Follow Up Action] from the Custodian to the to the individual to acknowledge receipt and or to approve this plan.

It is the responsibility of the individual to cascade the information contained within this document and its supporting attachments to their direct reports and/or departments or organizations:

Internal Role	Name	Action by Workflow
QHSSE VP	Phil Bigg	Approve Plan
Insert Role	Insert Name	Acknowledge Receipt

External Role	Name	Action by Workflow
Insert Role	Insert Name	Acknowledge Receipt

INTRODUCTION

Emergencies can easily escalate into disasters unless they are managed efficiently and that depends on effective decisions being made quickly and calmly. This can only be achieved by following prescribed procedures that have been carefully planned and thoroughly tested.

This plan applies to all locations on the project and has been developed to support geophysical survey operations for the **insert project (name)** for **insert client (name)**.

PURPOSE

This Emergency Response Plan covers the following area and is further supported by the Medical Emergency Response Plan:

- Man Overboard
- Collision
- Grounding
- Oil Spill
- Critical System Failure
- Severe Weather
- Abandon Ship
- Helicopter Crash
- Loss of Stability
- Fire
- Medical
- Security

The purpose of this document is to enable all stakeholders within the project to be able to react appropriately to an incident, by:

- Identifying the Roles, Responsibilities and Authority of key personnel within the Emergency Response Plan (ERP)
- Identify the resources available to the Master in the discharge of their duties
- Identify the Command and Control structures within the Seismic Survey Fleet (SSF), the project organisation and any particular host nation support available
- Identify the project specific support assets available
- The method of contacting Topside support
- The method of Initiating an Emergency Response effectively

This plan shall be read in conjunction with the following documents:

- Project Execution Plan
- Medical Emergency Response Plan
- Communications Plan
- Security Plan **(Optional)**
- Community Engagement Plan **(Optional)**

1.0 COMMITMENT AND ACCOUNTABILY

It is the duty of line management and their direct reports to understand their roles, responsibilities and authority throughout the lifecycle of this project in accordance with their respective job descriptions in **FLAG** and implement duties assigned. The following sections highlight these main ERP responsibilities:

1.1 Project Manager

The Project Manager shall support the Master and/or Party Chief of any vessel within the seismic survey fleet involved in an incident and any BGPO managed personnel involved in an onshore incident; in addition, they shall;

- Ensure that adequate resources are provided to support the management of the incident
- Liaise with the client's onshore project management team
- Liaise with the Vessel Management Company's onshore vessel management team
- Liaise with the Joint Venture partners onshore project management team **(Optional)**
- Liaise with onshore National Emergency Service Assets
- The management of onshore incidents

1.2 Deputy Project Manager

The Deputy Project Manager is responsible for supporting the Project Manager, and shall;

- Assume the duties of the Project Manager during period of absence of the Project Manager

1.3 Company Security Officer (Optional)

The Company Security Officer (CSO) shall provide security advice and assistance to their respective vessel Master and Chief Officer, in addition they shall;

- Provide security updates to the senior management of their respective organisation
- Provide direct liaison with the United Kingdom Marine Trade Operations (UKMTO)
- Provide direct support to the Master and Ships Security Officer (SSO)
- Provide direct liaison to the Port Facility Security Officer (PSSO)

1.4 Designated Person Ashore

The Designated Person Ashore shall act as a direct link between the vessel Master and crew to senior management, in addition they shall;

- Ensure that adequate resources are provided to support the management of the incident

- Provide advice and assistance to their respective vessel Master, Chief Officer and crew
- Provide updates to the senior management of their respective organisation
- Provide direct liaison with their organisations Protection and Indemnity (P&I) Club
- Provide direct liaison with the vessels Flag State authority

1.5 Fleet Manager (Optional)

The Fleet Manager is responsibility for the coordination of all vessels and assets employed to support the ERP and shall:

- Take Tactical Command of the movement of asset within the survey area.
- Provide a direct liaison between the contacted emergency providers both onshore and offshore.

1.6 Master

Master of each vessel has the **ultimate responsibility and authority** for the safe operation of their respective vessel, they shall;

- Take Tactical Command of all incidents occurring on-board their vessel.
- Anticipate and react to support requested by another vessel in support of an incident on-board another vessel
- Alert all vessels with the project fleet should an actual or potential incident occur on-board their vessel
- Request any support they deem necessary from the immediate project fleet or from their respective Emergency Response Team ashore
- Request any support they deem necessary from third party agencies identified within their emergency response plans and procedures

1.7 Chief Officer

The Chief Officer shall be able to take command of the vessel should the Master be incapacitated, they shall also:

- Act as the Local Commander for all none medical incidents on-board their vessel
- Act as the vessels Ships Security Officer (SSO)
- Provide advice on security to the Master and crew

1.8 Chief Engineer

The Chief Engineer shall provide technical support to the Master, they shall also;

- Carry out the duties as defined in the vessel specific emergency response plans

1.9 Officer on Watch

The Officer on watch (OOW) shall maintain a listening and visual watch and inform the Master and Party Chief Immediately should an incident or potential incident occur, in addition they shall,

- Ensure the Voice Data Recorder is set to record
- Maintain an accurate log

1.10 Fleet Party Chief (Optional)

The Fleet Party Chief has responsibility for:

- Provide technical support to the Master on towed seismic equipment
- Act as a liaison between the Master and the on-board client representative
- Act as a liaison between the vessel and BGPO onshore management
- Maintain an accurate log

1.11 Party Chief

The Party Chief shall provide incident management assistance to the Master

- Provide technical support to the Master on towed seismic equipment
- Act as a liaison between the Master and the on-board client representative
- Act as a liaison between the vessel and BGPO onshore management
- Maintain an accurate log

1.12 Health Care Professional

The Health Care Professional (HCP) shall provide immediate trauma and/or cardiac life support to any injured person(s) and act as the Local Commander for all medical incidents, they shall also

- Package any patient(s) ready for medical evacuation
- Provide medical advice to the Master on the condition of a patient(s)
- Provide remote medical support via telecommunications to another vessel
- Where practical provide close medical support to another vessel by means of small boat transport to that vessel
- Perform Triage during an incident with multiple injured/ill patients
- Performs makes the initial assessments, reaches a diagnosis and commences stabilisation and initial treatment.

- Determine in consultation with TOPSIDE support the most suitable evacuation type. and prepare the patient for evacuation.

1.13 Medical Team

The Medical Team shall prepare medical equipment to support any incident, in addition they shall;

- Provide medical support to the Master and/or Health Care Professional

1.14 Fast Rescue Boat Coxswain

The Coxswain shall take command of the Fast Rescue Boat (FRB) and crew, in addition they shall;

- Prepare the FRB for immediate launch should the type of incident onboard their vessel or another vessel potential require support

1.15 Onshore Emergency Response Team

All personnel within an onshore Emergency Response Team (ERT) are to be available at all times.

The ERT shall stay in close contact with the Vessel Emergency Response Team and their respective higher-level management.

The ERT has the following key tasks during an Emergency:

- Assess the emergency situation continually until it is resolved.
- Report frequently to the higher-level management.
- Assist in getting the emergency situation under control, without micromanaging
- Liaise between ERT's from other organisations involved in the incident
- Allocate sufficient resources required to bring the incident to a successful conclusion

2.0 OBJECTIVES

This document has been designed to ensure the following objectives can be achieved

2.1 Onshore

Tier	Description	Response Time
0	**First response, by anyone at the incident location** **(First Aid Firefighting, Medical First Aid, etc)**	**Immediate**
1a	Duty Manager Informed	4 minutes
1b	Notification to Appropriate Emergency Support Asset (Police, Fire Services, Agent, Security Company etc)	4 minutes
2	Arrival of Appropriate Emergency Support Asset	15 minutes
3a	Medical Evacuation to hospital	4 hours
3b	Arrival at Safe Haven (Police Station, Embassy, Hotel, Airport etc)	4 hours

2.2 Offshore

Tier	Description	Response Time
0	**First response, by anyone at the incident location** **(First aid firefighting, Collision Avoidance, Medical First Aid, etc)**	**Immediate**
1	Vessel Emergency Teams Onsite (Fire Team, SOPEP Team, FRB Crew, etc)	4 minutes
2	Fleet Emergency Response Onsite (Towing Vessel)	15 minutes
3a	Medical Evacuation to shore based hospital	4 hours
3b	Third Party Support (Towing, Salvage, Oil Spill Recovery etc)	Specific to geographic location

3.0 ORGANISATION, RESOURCES AND CAPABILITY

The following resources have been dedicated and/or identified to support the project. In order to uphold the principle of 'Duty of Care', BGPO shall ensure that all resources are appropriately audited and/or inspected to ensure that the standards expected by each company are met or exceeded:

3.1 BGPO

The BGPO Management Team provides the following:

- Direct Support to Project Management Team
- Corporate Emergency Response Team

3.2 BGPO Project Management Team

The BPGO onshore Project Management Team provides the following:

- Direct Project Management
- Local Emergency Response Team
- Client Liaison and Interface

3.3 BGPO Emergency Response Resources

The following BPGO offshore ERP Resources have been allocated to support the project:

Location Name/Asset	ERP Resource	Supplied By
Vessel name	**Towing Vessel**	**TBC Ships Management Company**
Vessel 1 name	Lead Health Care Professional Medical Doctor	RMI International
Vessel 2 name	Health Care Professional Paramedic	RMI International
Vessel 3 name	Health Care Professional Nurse	RMI International
Vessel 1 name	Lead Security Liaison Officer	TBC Security Company
Vessel 2 name	Security Liaison Officer	TBC Security Company
Onshore	Agent	TBC Company
Vessel 1 Name	Security Vessel	TBC Company
Vessel 2 Name	Security Vessel	TBC Company
Vessel 3 Name	Security Vessel	TBC Company

3.4 Vessel Management Companies Resources

All vessel management companies supply the following ERP resources for the vessels they operate:

- Designated Person Ashore (DPA)
- P&I Club
- Company Security Officer
- Emergency Response Team

3.5 Client Project Management Team

The client onshore Project Management Team provides the following:

- Direct Project Management
- Contractor Liaison and Interface
- Local Emergency Response Team

3.6 Client Project Management Team Resources

The client onshore Project Management Team provides the following ERP resources:

Location Name/Asset	ERP Resource	Supplied BY
Insert location / vessel name	**Lead Client Representative**	**Client**
Insert location / vessel name	Towing Vessel	TBC Ships Management Company
Insert location / vessel name	Medical Evacuation Helicopter	TBC Helicopter Management Company
Insert location / vessel name	Spill Response Vessel	TBC Ships Management Company
Insert location / vessel name	Fire Fighting Vessel	TBC Ships Management Company

3.7 Joint Venture Management Team Resources (Optional)

The Joint Venture (JV) onshore Project Management Team provides the following ERP resources:

Location Name/Asset	ERP Resource	Supplied BY
Insert location / vessel name	**Emergency Response Team**	**JV Partner**
Insert location / vessel name	Community Liaison	JV Partner

3.1 National Resources (Optional)

The following national resources available to support the project:

ERP Resource	Capability	Contact Details
Police	**Police**	**Tele: xxxxxx**
Fire Service	Fire and Rescue Services	Tele: xxxxxx
Ambulance	24hour Operations	Tele: xxxxxx
Coast Guard	Helicopter Search and Rescue Search and Rescue Coordination	Tele: xxxxxx
Navy	Armed Vessels	Tele: xxxxxx
Hospital 1	Primary Hospital 24hour Accident and Emergency General Surgery Burns Unit Intensive Care Unit	Tele: xxxxxx
Hospital 2	Secondary Hospital 24hour Accident and Emergency General Surgery Burns Unit Intensive Care Unit	Tele: xxxxxx
Hospital 3	Tertiary Hospital 24hour Accident and Emergency General Surgery Burns Unit Intensive Care Unit	Tele: xxxxxx

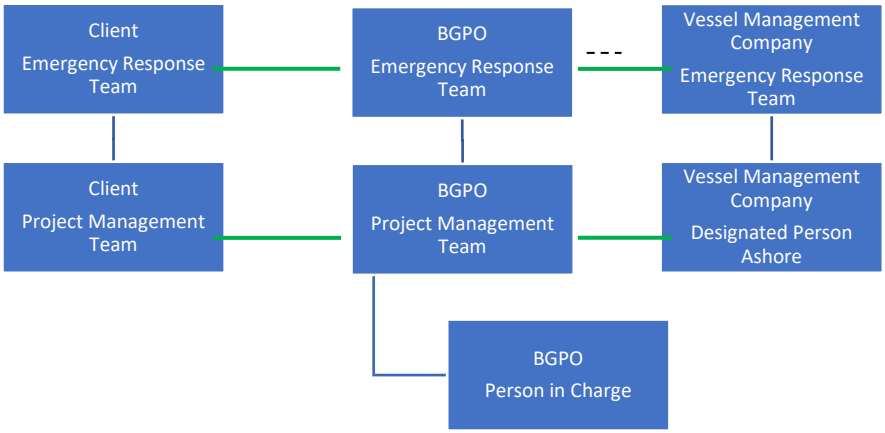
3.2 Communications

The project COMMUNICATION PLAN provides a framework for effective communication management for the complete lifecycle of the project. It is vital that strict communication protocols are to be adhered to in order to reduce the likelihood of passing incorrect information and breaching legal or contractual obligations.

The plan details communication mapping, protocols and the communication vehicles used to share and disseminate information.

3.3 Onshore ERP Organizational Chart

The diagram below shows the Onshore ERP reporting structure between all involved parties on the project:



Key — Update chart as required

Operational Reporting & Authority

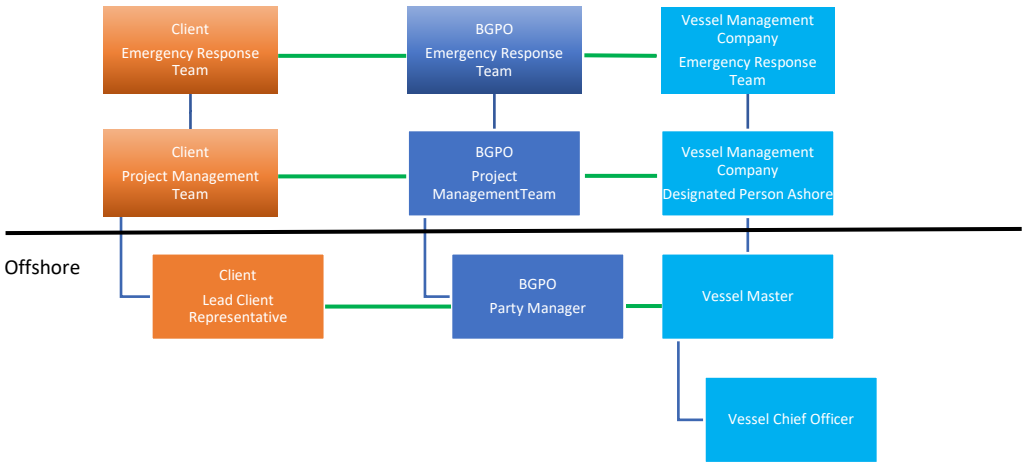
Functional Reporting & Authority

Consultancy – No Authority

Figure 1 - ERP Onshore Organisational Chart

3.4 Offshore ERP Organizational Chart

The diagram below shows the Offshore ERP reporting structure between all involved parties on the project:



Key — Update chart as required

Operational Reporting & Authority

Functional Reporting & Authority

Consultancy – No Authority

Figure 2 - ERP Offshore Organisational Chart

4.0 STAKEHOLDERS AND CUSTOMER

4.1 Stakeholder Identification

Stakeholders that have been identified in the project are listed in **FLAG** under the stakeholder tab at the project level. Information in this tab includes: The *Company / Organization* name, *Relationship to the project*, *Means of communicating*, the *Contact Point* in the stakeholders organisation and other specific details regarding the stakeholders responsibilities, needs, expectation and requirements in the *Comment* section. The Project Team with full support from the QHSSE Department is reposibile for identifing applicable laws, regulatory requirements as defined in BGPO-MP-018 Marine Seismic Operations. The Project QHSSE Manager details these requirements for the project in **FLAG** under the Project Level tab, Stakeholders.

The stakeholders that have been identified for the project, with specific responsibilites and expectations are listed in the table below.

Stakeholder	Responsibilities	Project Specific Expectations
Client	Ensure all activities are conducted in a way that preserve the health, safety, security and integrity of the environment in accordance with regulatory permits and company expectations.	Insert additional client expectations here. i.e Evacuation within 2 hours
BGPO	Conduct and manage operations in accordance with the contract, BGPO Mission & Values statements, Policy and the BMS	Manage the project in accordance with Project Specific Plans and interface / bridging arrangements from client
Vessel management company (1) Add company name	Comply with contractual & interface arrangements. Insert vessel names	Click or tap here to enter text.
Vessel management company (2) Add company name	Comply with contractual & interface arrangements. Insert vessel names	Click or tap here to enter text.
Add other if applicable **Health & Safety Regulatory Body, Maritime, Environmental**	Reporting of Incidents	Click or tap here to enter text.

Regulatory Body, Top Side Support, Oil & Gas Authority, Aviation		

5.0 RISK ASSESSMENT AND CONTROL

The following project level risks have been identified they have the potential to cause an incident that may require emergency response, details of their control measures can be found in the FLAG Ref ID:

#	FLAG Ref ID	Risk Category	Hazard
1	**Insert Flag Ref ID - i.e. RA-Shell-19/04-002**	**Security**	**Onshore**
2	Insert Flag Ref ID - i.e. RA-Shell-19/04-002	Security	Offshore
1	Insert Flag Ref ID - i.e. RA-Shell-19/04-002	Safety	Resupply at Sea
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Bunkering at Sea
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Logistics - Road Conditions
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Helicopter Operations Landing On
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Adverse Weather Conditions
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Close Pass
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Simultaneous Operations
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Shallow Water Operations
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Oil Field Infrastructure
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Security	Maritime National Boundaries
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Commercial Shipping
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Commercial Fishing
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Artisan Fishing
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Vessel/Boat in Distress

6.0 ASSET DESIGN AND INTEGRITY

In order to provide a robust system to ensure that an incident is efficiently managed and brought to a rapid conclusion, and to prevent the incident from escalating it is vital that's all parts of the emergency response processes are appropriately managed and fit for purpose. The following shall be confirmed through Audits, Inspections Reviews, Training and Drills:

6.1 Human Resources

A review of the Certification, Qualification and Experience of all safety critical personnel shall be made to ensure that they have the competency levels expected to manage an emergency situation:

6.1.1 Certification, Qualification and Experience.

All Maritime Crew shall hold the appropriate certificate in accordance with their position on-board the vessel as determined in the vessels SMS and in compliance with the STCW Code.

The Master and Chief Officer shall hold the STCW 95, A-VI/4-2 - Proficiency in Medical Care

The Health Care Professionals (HCP) shall in addition to their professional qualification also hold an in-date certificate in Advanced Trauma Life Support (ATLS) and Acute Cardiac Life Support (ACLS).

Non-Maritime Crew all non-maritime crew shall be trained and drilled in the vessels and projects medical emergency response processes and procedures.

The designated Coxswain(s) shall be certified as appropriate to the type of small boat in operation

The Helicopter Landing Officer (HLO) shall hold a valid OPITO approved standard Offshore Helicopter Landing Officer certification

The Heli-deck Assistants (HDA) shall hold a valid OPITO approved standard Offshore Helicopter Deck Assistant certification

6.1.2 Project Specific Human Resource Requirements (Optional)

Insert details of project specific human resource requirements here.

Delete if not required

6.2 Vessel Management Companies

All vessel management companies shall undergo an audit as defined within the BGPO-MP-024 Marine Contractor Management to ensure they meet industry requirements.

In addition, an Interface document between BGPO and the Vessel Management Company has been produced in order to determine the hierarchy of control should an incident occur:

6.3 Vessel Audits and Inspections

All vessels shall undergo the following audits and inspections to ensure compliance to International, National and Contractual Conventions, Regulations obligations for the management of an emergency and shall undergo the following:

- BGPO - HSE and Marine Inspection
- Client - HSE and Marine Inspection
- OCIMF - Offshore Vessel Inspection Document (OVID) Inspection
  - *Insert Vessel Name*
  - *Insert Vessel Name*
- OCIMF - Ship Inspection Report Programme (SIRE) Inspection
  - *Insert Vessel Name*
- IMCA - Common Marine Inspection Document (CMID) Inspection
  - *Insert Vessel Name*
- Flag State - Audits and Inspections
- BGPO - Security Audit **(Optional)**
- CAA - Helideck Inspections **(Optional)**

During these audits and inspections, the following shall be confirmed:

6.3.1 Planned Maintenance

All vessels have a Planned Maintenance System (PMS) that has been audited by BGPO and holds sufficient critical spares as approved by the vessels Flag State.

6.3.2 Critical Spares

All vessels carry sufficient spares in accordance with the vessels' Planned Maintenance System (PMS) and the Safety Management System (SMS).

6.3.3 Oil Pollution Prevention

All vessels hold A Shipboard Oil Pollution Emergency Plan (SOPEP), as defined in the provisions of regulation 37 of Annex I of MARPOL conv.

6.3.4 Life Saving Appliances

All vessels shall hold the appropriate Life Savings Appliances (LSA) as detailed in the SMS and approved by the vessel's classification society and Flag State and in accordance SOLAS and the LSA code requirements and maintained within the vessel's PMS.

6.3.5 Ships Security

All vessels hold a Ships Security Plan (SSP) that is approved by the vessel's classification society and Flag State. Regular security training and drills are carried out as defined in the vessels' SMS and in accordance with the ISPS code.

6.3.6 Fire Fighting

All vessels have a Fire Control Plan as described in SOLAS Chapter II, Regulation 15, and all firefighting equipment is maintained within a Planned Maintenance System (PMS). All vessels also conform to SOLAS Chapter III, Regulation 18 in regard to emergency training and IMO Resolution A.437 (XI) for the Training of Crews in Firefighting

6.3.7 Towing

All vessels have a documented emergency towing procedure and associated risk assessments. Towing arrangements are certified and inspected in accordance with the vessels SMS and PMS.

6.3.8 Helidecks (Optional)

All operational helidecks are certified and comply to the CAP 437 Standards for Offshore Helicopter Landing Areas.

A documented procedure and risk assessment for the helicopter operations shall also be produced that is specific to that vessel

6.3.9 Winch Points (Optional)

All vessels without helidecks have winch points that are marked as described in CAP 437 Standards for Offshore Helicopter Landing Areas and the International Chamber of Shipping (ICS) 'Guide to Helicopter/Ship Operations'

A documented procedure and risk assessment for the use of the winch point shall also be produced that is specific to that vessel.

6.3.10 Davits

All small boats davits and ancillary items are controlled under a PMS and undergo regular servicing and inspections by a competent person, as defined by that vessels specific SMS.

6.3.11 Embarkation Zones

All Embarkation (Rescue) Zones comply with SOLAS Ch V/Reg. 23.1.1 and the provisions defined in. IMO Resolution A.1045 (27) Pilot Transfer Arrangements.

The ancillary items to the arrangements shall be controlled under a PMS and undergo regular servicing and inspections by a competent person, as defined by that vessels specific SMS. In addition, the Coxswain shall assess the ships side to ensure that any obstructions that may pose a risk to a small boat coming alongside are identified.

6.3.12 Small Boats

All small boats are to be controlled under a PMS and undergo regular servicing and inspections by a competent person, as defined by that vessels specific SMS and class requirements appropriate to the type of small boat.

6.3.13 Offshore Medical Facilities and Equipment

All ships medical stores shall be regularly inspected and comply to the vessels Flag State requirement the following provisions stated in the Medical Emergency Response Plan. The ships medical stores shall undergo annual inspection from a third-party competent organisation, as defined in that vessels Safety Management System.

6.3.14 Project Specific Planned Maintenance Requirements (Optional)

Insert details of project specific planned maintenance requirements here.

6.4 Onshore Medical Facilities (Optional)

All onshore medical facilities identified within the Medical Emergency Response Plan shall have been assessed for the suitability and capabilities to support 24hour medical emergency care. An agreement shall be in place with BGPO and the medical facility to ensure payment for medical treatment.

6.5 Ambulances (Optional)

All onshore ambulance assets identified within the Medical Emergency Response Plan shall have been assessed for the suitability and capabilities to support 24hour medical emergency response and care. An agreement shall be in place with BGPO and the ambulance facility to ensure payment.

6.6 Emergency Response Drills

The Master of each vessel shall ensure that all company drills, and training are undertaken in accordance with the Safety Management System (SMS) of that organisation, and to carry out any project specific drills and training as defined in the contractual obligation and in the Health, Safety, Security and Environment Management Plan

The Master share incorporate and participate where practical in the support of other vessels drills and training throughout the project (i.e. The FRB crew is stood by during the Man Over-board drill of another vessel).

The following project drills shall occur in addition to each vessels' standard training and drill matrixes:

Training/Drill	Responsibilities	Frequency
MERP Table Top	Master of Each Vessel	Weekly/Monthly etc
ERP Table Top	Master of Each Vessel	Weekly/Monthly etc

Emergency Towing Drill	Master of Each Seismic Vessel	Weekly/Monthly etc

7.0 PLANS AND PROCEDURES

7.1 Vessel Specific Emergency Response Procedures

The following table indicates vessel specific emergency response procedures that have been reviewed and Supplier Interface documents:

Hilong Geophysical	Vestland Offshore	REM Offshore	Insert or de
IMS-HSEQM- 08 Contingency Manual	IMS-HSEQM- 08 Contingency Manual	RIMS-OM-CH08 0095 Contingency Procedures - General	
Project/Vessel Specific: IMS-HSEQV-OEU 1404 Emergency	Project/Vessel Specific: IMS-HSEQV-OEU 1404 Emergency	Vessel Specific RAQU-VSL-VSP 0497 Emergency Towing Procedure	
IMS-HSEQM-08 0085 NA Contingency Manual Ship - Abandon Ship	IMS-HSEQM-08 0085 NA Contingency Manual Ship - Abandon Ship	RIMS-OM-CH08 0093 Down-Manning of non-essential personnel	
IMS-HSEQM-08 0086 NA Contingency Manual Ship - Collision	IMS-HSEQM-08 0086 NA Contingency Manual Ship - Collision	RIMS-OM-CH08 0092 Identified Potential Accidents and Emergency Situations	
IMS-HSEQM-08 0092 Contingency Manual Ship	IMS-HSEQM-08 0092 Contingency Manual Ship	RIMS-OM-CH08 0096 Medical Evacuation -	

Hilong Geophysical	Vestland Offshore	REM Offshore	Insert or de
- Man Overboard	- Man Overboard	MEDEVAC	
IMS-HSEQM-08 0089 Contingency Manual Ship - Grounding	IMS-HSEQM-08 0089 Contingency Manual Ship - Grounding	RIMS-OM-CH08 0410 Mobilisation of Contingency Group	
IMS-HSEQM-08 0090 Contingency Manual Ship - Loss of Propulsion	IMS-HSEQM-08 0090 Contingency Manual Ship - Loss of Propulsion		
IMS-HSEQM-08 0091 Contingency Manual Ship - Loss of steering	IMS-HSEQM-08 0091 Contingency Manual Ship - Loss of steering		
IMS-HSEQM-08 0094 Contingency Manual Ship Pollution	IMS-HSEQM-08 0094 Contingency Manual Ship Pollution		
IMS-HSEQM-08 0088 Contingency Manual Ship - Fire	IMS-HSEQM-08 0088 Contingency Manual Ship - Fire		

7.2 Client Specific Emergency Response Procedures

The following project Client Specific Emergency Response Procedures that have been reviewed by BGPO and incorporated with the BGPO and Client Interface document:

Procedure	Activation
Insert Client Document Title ***Helicopter Medical Evacuation***	Insert who and how it is activated Lead Client Representative
Insert Client Document Title ***Spill Response Evacuation***	Insert who and how it is activated Lead Client Representative

8.0 EXECUTION OF ACTIVITIES

8.1 INITIATING AN ONSHORE EMERGENCY RESPONSE

To initiate onshore emergency response all personnel shall be provided with the following credit card Emergency Response Card:

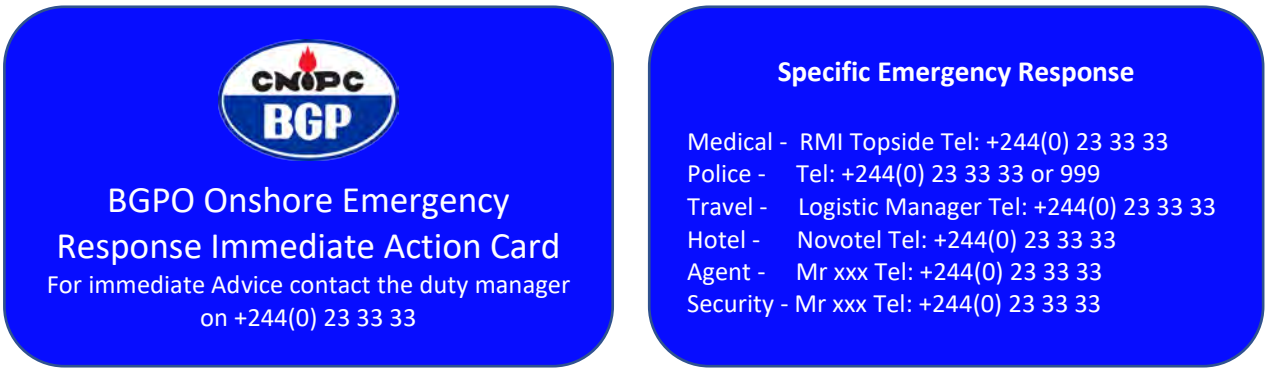


Figure 3 - Example Onshore Emergency Response Card

8.2 REPORTING

The Person in Charge (PIC) of a group or the individual is responsible for providing the initial and follow up reports to the ***Insert Agency*** and the BGPO Project Manager.

The BGPO Project Manager shall inform the Client. The reports shall at least contain the following details

8.2.1 Initial Report

- Time, Date
- Location
- Type of incident (Medical, Fire, Theft, etc)
- Number person(s) involved
- Preliminary assessment

8.2.2 Follow Up Report

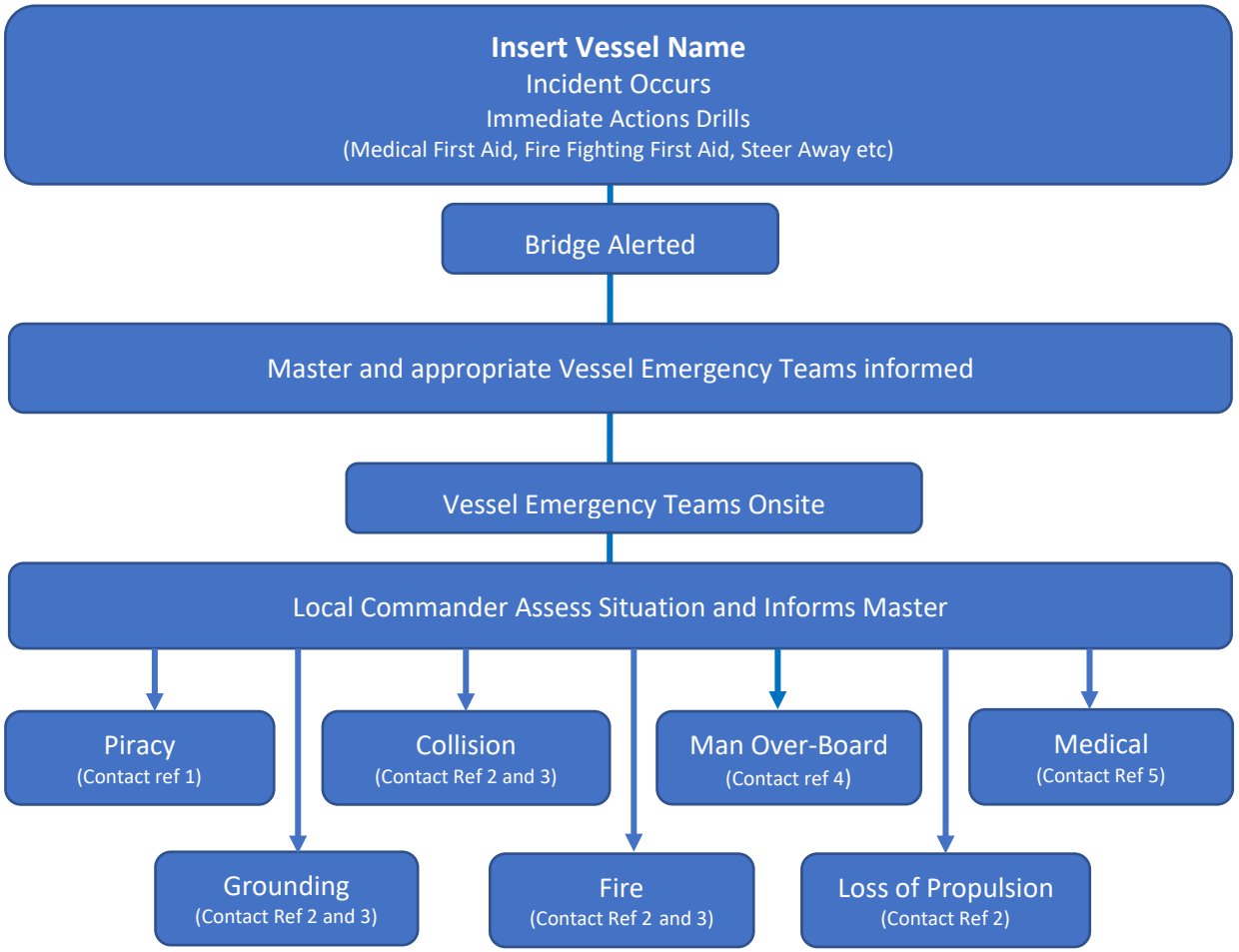
- Time, Date
- Location
- Actions to be carried out or underway (Police on scene etc)

8.3 INTIATING AN OFFSHORE EMERGENCY RESPONSE

To initiate an offshore emergency response, use the following 'Emergency Response Immediate Actions' flowcharts,

- Figure 3 - *Insert Vessel Management Company*,
- Figure 4 - *Insert Vessel Management Company*,

These shall be printed and displayed on the bridge of each respective vessel, A3 copies of these Emergency Response - Immediate Action Plans are contained in Attachment 1 and shall be posted on the bridge of all vessels, appropriate to the vessel's operator.



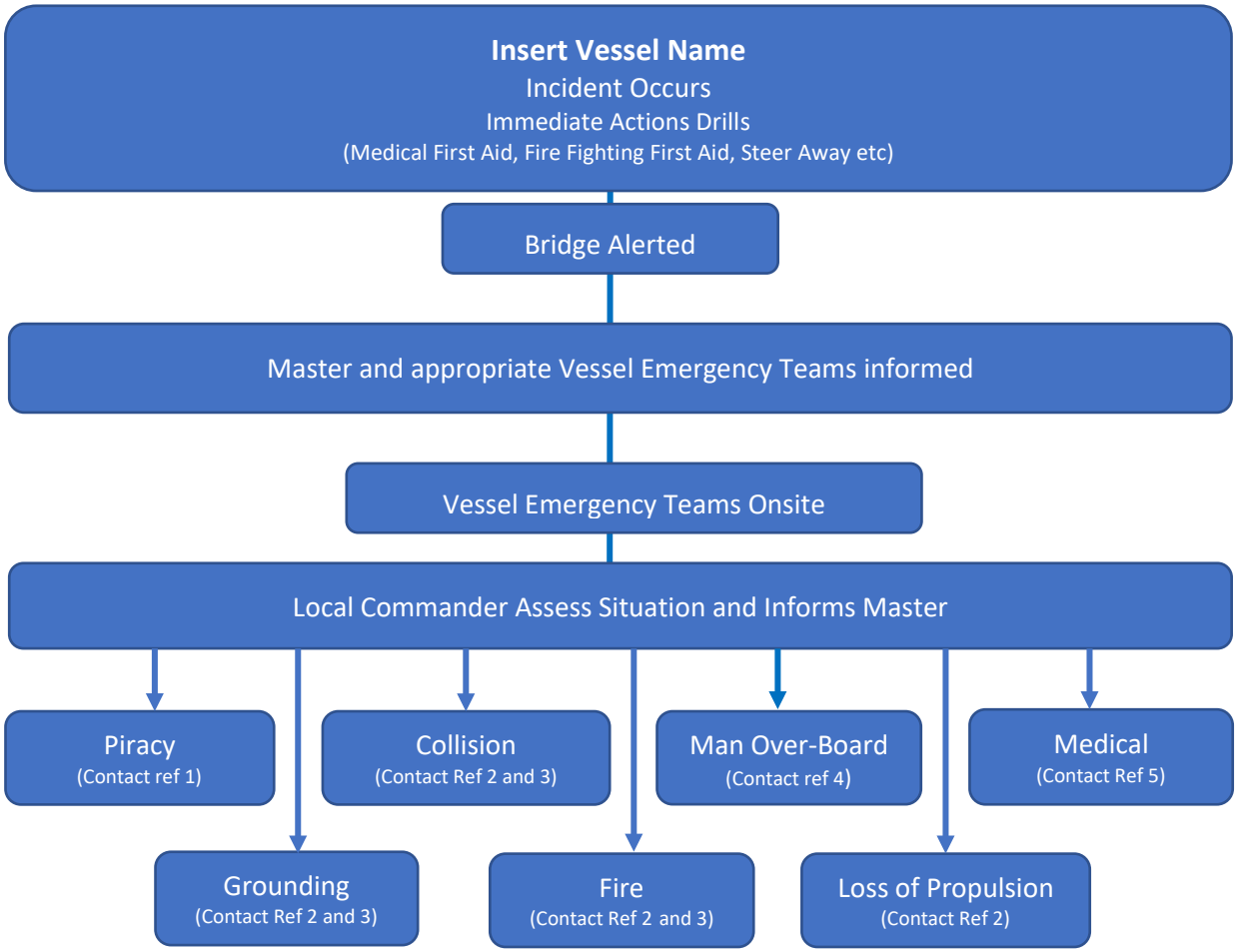
ALL INCIDENTS

Vessel Management Company - DPA
+44(0)90 52 41 001
BGPO - Duty Project Manager
+44(0) 90 52 41 001
Client - Duty Manager
+44(0) 90 52 41 001

INCIDENT SPECIFIC

1. **UKMTO: +44(0) 2392 222 060**
2. **P&I Hull and Machinery: +47(0) 90 92 52 00**
3. **P&I - Damage Stability: +47(0) 90 52 41 00**
4. **JRCC: +222(0) 644 6141:**
5. **Refer to MERP:**

Figure 4 - ERP Flow Chart



ALL INCIDENTS

Vessel Management Company - DPA
+44(0)90 52 41 001
BGPO - Duty Project Manager
+44(0) 90 52 41 001
Client - Duty Manager
+44(0) 90 52 41 001

INCIDENT SPECIFIC

6. **UKMTO: +44(0) 2392 222 060**
7. **P&I Hull and Machinery: +47(0) 90 92 52 00**
8. **P&I - Damage Stability: +47(0) 90 52 41 00**
9. **JRCC: +222(0) 644 6141:**
10. **Refer to MERP:**

Figure 5 - ERP Flow Chart

8.4 REPORTING

The Master or Chief Officer are responsible for providing the initial and follow up reports to the; ***Insert Agency***, their respective Emergency Response Team, and the Party Chief.

The client Representative is responsible for the immediate contact with the Clients helicopter operations room (Optional and based on client's notification requirements)

The Party Chief or QHSSE Advisor is responsible for providing the initial and follow up reports to the BGPO Project Manager and the on-board Client Representative.

The reports shall at least contain the following details

8.4.1 Initial Report

- Time, Date
- Type of incident (Medical, Collison, Grounding etc)
- Number of injured person(s) involved
- Preliminary assessment

The on-board Client Representative is responsible for relaying the Initial report to the Client Project Manager

8.4.2 Follow Up Report

- Time, Date
- Condition of vessel and/or towed equipment
- See, Appendix 7, Medical Emergency Response Plan
- Actions to be carried out or underway
  - Towing
  - Lighting
  - etc

9.0 MONITORING, REPORTING AND LEARNING

9.1 Monitoring Performance

The effectiveness of this plan and its supporting vessel specific emergency response procedures shall be monitored through the use of project and vessel drills, each drill shall be followed up by an immediate de-brief by the Master and a detailed Drill Report.

9.2 Incident Reporting & Investigation

All incidents shall be reported verbally to the Master, Party Chief, QHSSE Advisor and then on to the Field Client Representative through the Party Chief immediately.

All incidents shall be investigated in accordance with the respective organisations Investigation Procedures. Where appropriate BGPO and the client shall be involved within the investigation as an observer as defined in BGPO-SP-008-Incident Management and further described in the HSSE Plan.

9.3 Lessons learned

All Lessons learnt are identified through incident investigations, meetings, audits, non-conformance, project reviews and other forums such as distributed circulars, industry sharing, and alerts are logged and maintained within **FLAG.** Through **FLAG,** lessens can be distributed via broadcasts and where appropriate SMART (Specific, Measurable, Achievable, Realistic and Time-bound) actions may be assigned as further defined in BGPO-SP-012 Performance Management. Lessons learned may be entered in **FLAG** at three separate levels:

1. Company Level
2. Project Level
3. Location Level

10.0 ASSURANCE, REVIEW AND IMPROVEMENT

10.1 Auditing

The audit process in BGPO is defined in BGPO-SP-013 Auditing. The following audits are conducted in accordance with the procedure:

10.1.1 Project Audits

Project audits helps the Project Team to get an adequate review of the project in order to identify what elements of the project were managed successfully and what were mismanaged. They also identify what can be improved in the future. The project audit is risk-based and will include client requirements.

10.1.2 Sub-Contractor and Supplier Audits

External providers have a great influence on the success of BGPO. There are two procedures to support these types of audits, BGPO-SP-007 Subcontractor Management and BGPO-MP-024 Marine Contractor Management.

10.1.3 Management Visits

Management visits are conducted by senior management in BGPO in accordance with BGPO-SP-019 Management Visit. This process involves a senior manager visiting the location and performing an audit at that location. They are used to evaluate the status and continued suitability of the BGPO BMS and the safety culture at each worksite.

10.2 Project Self-Verification

BGPO utilizes a Project Audit process for self-verification in accordance with IOGP 423 - Working Together in a Contract Environment. This process includes specific actions that will be taken through the various project phases to ensure HSSE assurance measures have been implemented as planned. The BGPO Quality Department is responsible for this process through each phase of the project. Audit findings, either Non-Conformance or Ideas & Opportunities are entered into the Project level Audit tab with assigned workflows for corrective action.

Additional project specific self-verification processes required by contract are detailed below:

Project specific self-verification process	Reference
Insert details of additional project specific self-verification process if any required by contract. If none write "N/A"	

10.3 Client ERP Assurance Process (Optional)

The following details the client's HSSE Assurance Process that will be used on the project:

Client ERP Assurance Process	Reference
Insert details of client ERP Assurance Process if any. i.e. RMV- Risk Management verification, audit / inspection process etc. If none delete	

10.4 Review

Corporate, Location and Project objectives entered in **FLAG** are set with appropriate monitoring and measuring arrangements to ensure that progress towards these objectives are being met as part of a Plan, Do, Check, Act approach. Performance monitoring will be reported/recorded in **FLAG**, reviewed by the process owners, and later reviewed by senior management in accordance with BGPO-SP-012 Performance Management.

10.4.1 Management Review

In BGPO there is an ongoing management review process where senior management evaluates the efficacy of the BMS and outlines direction for continuous improvement. During the review, senior management will review the organisation's past performance and determine the areas they want to prioritise for performance improvement.

10.4.2 Project Reviews

Project reviews are carried out by the BGPO and Client Project Management Team and where possible the Party Chief and Master(s). These reviews should cover the project objectives as set in **FLAG** and will allow the Project Teams to:

- Assess and learn from the information gathered on the project.
- Consider what is and what is not working on the project.
- Reflect on how the project is progressing towards its intended outcomes; and
- To implement any changes which might be needed to ensure that the outcomes for the end of project will be achieved.

Project Specific Review Process (Optional)	Reference
Insert details of any project specific review process required by the client, contract etc. **Delete if not required**	Insert contract reference etc

10.4.3 Location Reviews

Performance reviews are conducted at the location level to track progress through the locations key performance indicators on objectives set. The Party Chief for the crew is responsible for conducting these reviews and updating progress toward objectives in **FLAG** for each location.

10.5 Improvement

10.5.1 Non-Conformity

The BGPO-SP-014 Management of Non-Conformance procedure details the process by which BGPO manages non-compliance within the BMS and related activities. The QHSSE department is responsible for receiving and retaining the findings raised from locations and determines which process owner should be assigned corrective action. Any employee, subcontractor or client of BGPO can raise a non-conformance. It is company policy to encourage staff to report all issues considered as non-compliance they see in the course of their activities.

10.5.2 Ideas and Opportunities

A key element in the improvement process in BGPO is called Ideas and Opportunities. This programme as detailed in BGPO-SP-015 Ideas and Opportunities allows for all personnel to input suggestions and or their ideas to improve any aspect of with BGPO operations and the BMS.

Personnel may input their I&O directly into **FLAG** which is then allocated to the appropriate manager to consider and address. The process is also tied the incentive programme to encourage personnel to bring their ideas forward.

11.0 APPENDIX

11.1 Attachments

The following attachments have been added under this plan for the project in **FLAG**:

FLAG ID Reference	Name of Attachment

11.2 Glossary

Name	Definition
A	
ALARP	As Low as Reasonably Practical
B	
BGPO	BGP Offshore
BMS	Business Management System
C	
CSO	Company Security Officer
D	
DPA	Designated Person Ashore
E	
ERT	Emergency Response Team
ERP	Emergency Response Plan
F	
FLAG	BGPOs electronic database. (File Locally Access Globally)
FIFI	Fire Fighting Appliances
G	
H	

HCP	Health Care Professional
HSEMP	Health, Safety and Environmental Management Plan
HSSE	Health, Safety, Security, Environment
I	
IAGC	International Association of Geophysical Contractors
IMO	International Maritime Organisation
IMCA	International Marine Contractors Association
IOGP	International Association of Oil & Gas Producers
J	
K	
KPI	Key performance indicators
L	
LSA	Life Saving Appliance
M	
MARPOL	Maritime Pollution
MOB	Man Overboard
N	
NGO	Non-Governmental Organisation
O	
OSC	On Scene Commander
OVID	Offshore Vessel Inspection Database
P	
PMS	Planned Maintenance System
PEP	Project Execution Plan
Q	
QA	Quality Assurance
R	
S	
SAR	Search and Rescue

SCE	Safety Critical Equipment
SSF	Seismic Survey Fleet
SSO	Ships Security Officer
SOLAS	Safety of Life at Sea (an international maritime treaty)
SOPEP	Shipboard Oil Pollution Emergency Plan
SMART	Specific, Measurable, Achievable, Realistic and Time-bound
SMS	Safety management system
STCW	Standards of Training, Certification and Watchkeeping
T	
TRA	Task risk assessment
U	
UHF	Ultra-High Frequency
V	
VHF	Very High Frequency
W	
WI	Work instruction – Task base procedure
WHO	World Health Organization
X	
Y	
Z	

November 15, 2019





Project HSSE Plan

insert project (name)

QHSSE DEPARTMENT

insert client (name)

14th Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 300457, CHINA

Table of Contents

1.0 COMMITMENT AND ACCOUNTABILY....10
1.1 Project Manager....10
1.2 Deputy Project Manager (Optional)....10
1.3 Project QHSSE Manager....10
1.4 Master....11
1.5 Chief Officer....11
1.6 Chief Engineer....12
1.7 Chief Cook....13
1.8 Fleet Party Chief (Optional)....14
1.9 Party Chief....14
1.10 Chief Navigator....15
1.11 Chief Observer....15
1.12 Chief Mechanic....16
1.13 Quality Control (QC) Geophysicist....16
1.14 Health Care Professional....16
1.15 QHSSE Advisor....17
1.16 All Personnel....18
2.0 POLICIES, STANDARDS AND OBJECTIVES....18
2.1 Business Management System....18
2.1.1 Document Hierarchy in FLAG....19
2.1.2 Policy....19
2.1.3 BMS Manuals....19
2.1.4 Procedures....20
2.1.5 Work Instructions....20
2.1.6 Forms & Checklists....20
2.1.7 Records....20
2.2 FLAG....20
2.2.1 Access to FLAG....21
2.2.2 BGP Offshore - Corporate - Level I....21
2.2.3 Project Level - 2....21
2.2.4 Location Level - 3....22
2.2.5 Document Management & Control....22
2.3 Standards and Legislation....22

2.4 Corporate Objectives 23
2.5 Project Objectives 23
2.6 Location Objectives 23
3.0 ORGANISATION, RESOURCES AND CAPABILITY 23
3.1 BGPO Project Management Team 23
3.2 BGPO Offshore HSSE Resources 24
3.3 Vessel Management Companies 24
3.4 Other Subcontractor Management Companies 24
3.5 Client Project Management Team 24
3.6 Joint Venture Management Team (Optional) 24
3.7 Communications 25
3.7.1 HSSE Communications 25
3.8 HSSE Organizational Chart 25
3.9 Key Personnel 26
3.10 Training & Competency 26
3.10.1 Project Specific Training 27
3.11 Supplier management 27
4.0 STAKEHOLDERS AND CUSTOMER 27
4.1 Stakeholder Identification 27
5.0 RISK ASSESSMENT AND CONTROL 29
5.1 Risk Matrix 29
5.2 Permit to Work and Lockout/Tagout Operations 30
5.3 Manual of Permitted Operations (MOPO) 31
5.3.1 Project Specific MOPO Requirements (Optional) 31
5.4 Management of Change 31
5.4.1 Project Level 32
5.4.2 Location Level 32
5.5 Management System Interface 32
5.6 Management of Project TOP HSSE Risks 33
5.7 Environmental and Social Risks 33
5.7.1 Atmospheric Emissions and Waste 34
5.7.2 Marine Fauna 34
5.7.3 Marine Debris and Ghost Net Initiative 34
5.7.4 Environmental & Social Impact Assessments 35

5.7.5 Management of Specific Environmental and Social Risks 35
5.7.6 Engagement and Communication (Optional) 35
5.8 Security Risk (Optional) 36
5.9 Occupational Health and Safety Risk 36
5.9.1 Vector Borne Disease (Optional) 37
5.9.2 Communicable Diseases 37
5.9.3 Non-Communicable Diseases 37
5.9.4 Fatigue Management 38
5.9.5 Noise 38
5.9.6 Hand & Arm Vibration (HAVS) 38
5.9.7 Personal Protective Equipment 38
5.9.8 Portable Appliances 39
5.9.9 Display Screen Management 39
5.9.10 Lifting Operations 39
5.9.11 Manual Handling 39
5.9.12 Lone Work 40
5.9.13 Journey Management 40
5.9.14 Driving 40
5.9.15 Work Boat Operations 40
5.9.16 Welfare 41
5.9.17 Drugs and Alcohol 41
5.9.18 Fitness for Work 41
5.9.19 Hazardous Substances 41
5.9.20 Last-Minute Risk Assessments 42
5.9.21 Behavioural Based Safety 42
5.9.22 Time Out for Safety 43
5.9.23 Stop Work Policy 43
5.9.24 Life Saving Rules 43
5.9.25 Why Me Why Not 43
5.9.26 Safety Observation Program 43
5.9.27 Incentive Program 43
5.9.28 Personal Performance Appraisal 44
5.9.29 Disciplinary Action 44
6.0 ASSET DESIGN AND INTEGRITY 44

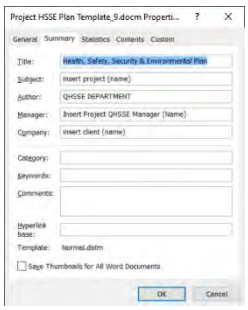
6.1 Vessel Management Companies....44
6.2 Vessel Audits and Inspections....44
6.3 Planned Maintenance....44
6.3.1 Safety Critical Equipment....45
6.3.2 Seismic Equipment Planned Maintenance....45
6.3.3 Planned Maintenance Schedule....46
6.3.4 Project Specific Planned Maintenance Requirements (Optional)....46
6.4 Human Resources....46
6.4.1 Certification, Qualification and Experience....46
6.4.2 Project Specific Human Resource Requirements (Optional)....47
7.0 PLANS AND PROCEDURES....47
7.1 Project Specific Work Instructions (Optional)....47
7.2 Project Specific & Supporting Plans....47
7.2.1 Waste Management Plan....47
7.2.2 Marine Fauna Mitigation Plan....47
7.2.3 Fatigue Management Plan (Optional)....48
7.2.4 Security Plan (Optional)....48
7.2.5 Emergency Response Plan....49
7.2.6 Medical Emergency Response Plan....49
8.0 EXECUTION OF ACTIVITIES - PROJECT PHASES AND ACTIVITIES....50
8.1 Phase 1 – Pre-mobilisation....51
8.1.1 Meetings....51
8.1.2 Audits / Inspections....51
8.1.3 Review....52
8.1.4 Project Specific Training....53
8.1.5 Personnel Certification....53
8.2 Phase 2 - Mobilisation....54
8.2.1 Meetings....54
8.2.2 Audits / Inspections....54
8.2.3 Review....55
8.2.4 Training....57
8.2.5 Drills & Tests....57
8.3 Phase 3 - Execution....57
8.3.1 Meetings....58

8.3.2 Audits / Inspections 58
8.3.3 Monitoring 59
8.3.4 Review 59
8.3.5 Training 60
8.3.6 Drills 60
8.4 Phase 4 - Demobilisation 60
9.0 MONITORING, REPORTING AND LEARNING 61
9.1 Monitoring Performance 61
9.2 Active Monitoring 61
9.3 Incident Reporting & Investigation 61
9.4 Project Lessons Learned 62
10.0 ASSURANCE, REVIEW AND IMPROVEMENT 62
10.1 Auditing 62
10.2 Project Self-Verification 63
10.3 Client HSSE Assurance Process (Optional) 63
10.4 Review 63
10.4.1 Management Review 63
10.4.2 Project Reviews 64
10.4.3 Location Reviews 64
10.5 Improvement 64
10.5.1 Non-Conformity 64
10.5.2 Ideas and Opportunities 64
11.0 APPENDIX 65
11.1 Attachments 65
11.2 Glossary 65

Instructions: Delete before publishing.

This plan has been developed to allow the user to fill in required sections in BLUE. Other areas in the document are protected to maintain the integrity of the plan.

The document must be opened to allow macros as this enables the feature to add additional rows if required in the tables provided.



Meta data is used in this document and must be filled in first to load specific fields in the document. To access this:

Click File tab.

On Info part, move to Properties in the right side of the pane.

Click the down arrow and choose Advanced Properties in the menu.

You will get a pop-up window, where you can make change in the dialog box.

You may enter and edit information in the "**blue**" text form fields. If additional rows are required when adding information to the tables and form fields, select the "**+**" plus symbol on the bottom right of the table as shown below:

Revision Number	Amendment	Date
1	Updated Section X.XX to include: abcdef	6/2/2019

Some fields are "Optional" and may be deleted if not required for the project.

If you encounter any problems or find information in this plan that is inaccurate or needs to be updated. Please contact the QHSSE Department.

DOCUMENT REVISION & CONTROL

This plan has been developed by the BGPO QHSSE Department and has been reviewed & approved through FLAG workflows with the project management team & crew department heads prior to being distributed as per the distribution list on the following page. This plan is held as an active document in **FLAG** at the project level and shall be reviewed by the project management teams (both BGPO/Client and JV Partner as appropriate) prior to the initiation of each phase of the project.

AMENDMENTS

Revision Number	Amendment	Date
1	Updated Section X.XX to include: abcdef	6/2/2019

CUSTODIAN

Company	Name	Role
BGP Offshore	Insert Project QHSSE Manager (Name)	Project QHSSE Manager

APPROVAL

Company	Name	Role
BGP Offshore	Phil Bigg	QHSSE VP

DISTRIBUTION LIST

The following table identifies the distribution list for this document. Individuals on this list shall be sent a workflow action from FLAG [Add Follow Up Action] from the Custodian to the to the individual to acknowledge receipt and or to approve this plan.

It is the responsibility of the individual to cascade the information contained within this document and its supporting attachments to their direct reports and/or departments or organizations:

Internal Role	Name	Action by Workflow
QHSSE VP	Phil Bigg	Approve Plan
Insert Role	Insert Name	Acknowledge Receipt

External Role	Name	Action by Workflow
Insert Role	Insert Name	Acknowledge Receipt

INTRODUCTION

BGP OFFSHORE

BGP Offshore (BGPO) is part of the Bureau of Geophysical Prospecting (BGP) group, which is a subsidiary of The China National Petroleum Corporation (CNPC). BGP is an international geophysical company, delivering a wide range of geophysical products and services with its headquarters located in Zhuozhou City, Hebei province, sixty kilometres south of Beijing.

BGP Offshore's head office is located in the Tianjin Economic-Technological Development Area (TEDA), Tianjin China at the CNPC Tower. BGPO has provided quality services for all super major international energy companies and is a member of the International Association of Geophysical Contractors (IAGC.

MANAGEMENT COMMITMENT

In support of the BGPO Mission, Vision & Values Statement the Senior Management team of BGPO shall:

- Demonstrate leadership, accountability and responsibility in the management of the business by:
  - Protecting our personnel which are our greatest assets.
  - Providing a safe working environment.
  - Protecting the environment and work towards minimizing our footprint.
  - Being socially responsible in all that we do.
  - Delivering quality services to our clients.
- Establish, implement and maintain a Business Management System to identify and realize strategic objectives.
- Provide resources to ensure that all risks have been identified and that suitable and sufficient controls have been implemented.
- Monitor the effectiveness of the Business Management System and promote continual improvement.
- Engage, direct and support employees to contribute to the effectiveness of the business management system.

PURPOSE

This plan applies to all locations on the project and has been developed to support geophysical survey operations for the **insert project (name)** for **insert client (name)**. This plan has been compiled based on the project's main risks identified in the Project Risk Assessment following the structure of IOGP 510 and in compliance with IOGP 432 and the requirements specified in the BGPO Business Management System (BMS).

The purpose of this document is to:

- Inform BGPO, the client, sub-contractors and other stakeholders, how the BMS operates at the project level.
- Detail how the crew plan to address the main HSSE issues for the project.
- Interface survey specific information, between BGPO and client.

- Identify the roles, responsibilities and authority of key personnel within the project.
- Identify the communication structures within the project.
- Identify the HSSE resources available to support the project.
- Maintain legal and contractual obligations for geophysical operations.
- State the crew's predetermined HSSE objectives during this project.

1.0 COMMITMENT AND ACCOUNTABILY

It is the duty of line management and their direct reports to understand their roles, responsibilities and authority throughout the lifecycle of this project in accordance with their respective job descriptions in **FLAG** and implement duties assigned. The following sections highlight these main HSSE responsibilities:

1.1 Project Manager

The Project Manager is responsible for the conduct of the crew during the survey from project development to completion and shall:

- Ensure this plan is read, understood and implemented by the Project Team. Ensuring that appropriate resources are allocated to implement this plan.
- Act as the focal point with the client for all project related QHSSE management issues. Ensuring an open and transparent HSSE reporting system is maintained with the Client.

1.2 Deputy Project Manager (Optional)

The Deputy Project Manager is responsible for supporting the Project Manager in their duties and shall:

- Ensure this plan is read, understood and implemented by the Project Team. Ensuring that appropriate resources are allocated to implement this plan.
- Act as the deputy focal point with the client for all project related QHSSE management issues on instruction by the Project Manager. Ensuring an open and transparent HSSE reporting system is maintained with the Client.

1.3 Project QHSSE Manager

The Project QHSSE Manager is responsible for identifying contractual and regulatory obligations in regard HSSE protection as well as corporate social responsibilities throughout the project lifecycle and shall:

- Provide advice and guidance to the Project Manager and other members of the project management team and act as the focal point for the development and implementation of security management, both onshore and offshore.
- Provide close support to project locations, the offshore project management team and act as a liaison between the QHSSE department and all other departments within the project.
- Monitor the effectiveness of the BGP BMS throughout the life cycle of the project.

- Identify project stakeholder's needs and expectations, and record these in **FLAG**.

1.4 Master

The Master is in overall command of all personnel and operations aboard the ship for safe and efficient day-to-day operation of the vessel. Their authority at sea is supreme and overriding. They have the authority and responsibility to make decisions with respect to safety and pollution prevention and to request emergency assistance from any appropriate source if required and shall:

- Demonstrate leadership in HSSE by leading by example and be responsible for the conduct of the maritime personnel under their command and lay down a set of standing orders for each crew member under their command.
- Complying with the laws of navigation and the entire body of statutes that regulate ships and seagoing matters and ensure regulatory compliance is maintained.
- Maintaining the seaworthiness of the vessel and protecting the interests of the company.
- Implementing the Safety and Environmental Protection policies of the Safety Management System and motivating the crew in the observation of those policies.
- Monitoring and reviewing the Safety Management System and reporting any deficiencies to the Ship Operations Group.
- Preparing the annual Master's review of the Safety Management System.
- Maintain peace, order and discipline onboard.
- Be responsible for the implementation of the Permit to Work process on board their vessel and perform the duty of "issuing authority" for all permits issued and ensure they are recorded in **FLAG**.
- Be responsible for training drills for the vessel.
- Lead regular safety meetings.
- Ensure that health awareness & prevention programs are enforced.
- Ensure compliance to MLC 2006 Work Rest Hours is maintained.
- Initiate "walk arounds" on the vessel with client representatives and seismic team members to identify hazards and recognize safe work practices.
- Transmit emergency distress signals if required and maintain operation command of the vessel in an emergency.
- Act as Alternate Vessel Security Officer when needed.

1.5 Chief Officer

The Chief Officer is responsible for performing vessel navigation watch duties, demonstrate leadership in HSSE by leading by example ensuring the safe and efficient operation of the Deck / Bridge Department and shall:

- Support the Master in upholding the safety of the vessel and ensuring regulatory compliance is maintained by carrying out all their duties while complying with the rules and regulations laid down by the flag state administration, IMO, and port state authorities.
- Be responsible under the authority of the Master for the conduct of the maritime personnel under their command and lay down a set of standing orders for each crew member under their command.
- Be responsible for the planning and organisation of the deck crew and of all anchor handling and mooring equipment.
- Be responsible for the planning and logging of working hours for the deck crew.
- Be responsible, while on duty, for the safety and integrity of the vessel and that relevant procedures for the loading and unloading of attending vessels and helicopters (if applicable) are followed by the appointed personnel.
- Be responsible for all work on deck is carried out in a safe and efficient manner. This includes responsibility for performing the duty of “area authority” for “deck” related permit to work activities.
- Perform the duties of the Ship’s Safety Officer (SSO) if assigned.
- Coordinate training drills on the vessel.
- Be familiar with the principles and practices of risk management.
- Ensure that all personnel joining the vessel are familiar with relevant health and safety arrangements and be responsible for vessel safety inductions.
- Manage the planned maintenance system (PMS) and checks for the deck department, including stocktaking, stability and ballast operations, maintenance of all lifesaving appliances, lifting appliances and the handling and stowage of hazardous materials.
- Stop any work that they reasonably believe may cause an incident and immediately inform the Master.
- Provide an independent view of safety on behalf of the company.
- Encourage the vessel staff to work safely and explain the consequences of unsafe practices and be a role model for carrying out safe work.
- Participate in and carry out investigation of incidents when required.
- Logging necessary inputs into the **FLAG** system where required.

1.6 Chief Engineer

The Chief Engineer is responsible for the entire technical operations of the vessel including engineering, electrical, and mechanical divisions. They are the head of the entire engine department aboard the ship and shall demonstrate HSSE leadership by leading by example and shall:

- Support the Master in upholding the safety of the vessel and ensuring regulatory compliance is maintained by carrying out all their duties while complying with the rules and regulations laid down by the flag state administration, IMO, and port state authorities.
- Ensure that all the ship's machinery and equipment are working in an efficient manner in order to support safe navigation of the ship.
- Collaborate on security, survival and health care on board, observe the national and international standards of application.
- Manage the planned maintenance system (PMS) of the engine room machinery spaces by conducting frequent inspections of equipment dealing with ship and personal safety at regular intervals of time.
- Lay down a set of standing orders for each crew member under their command in accordance with the routine maintenance schedule as laid down by the Planned Maintenance System (PMS), which is prescribed by the manufactures.
- Ensure all items used for pollution prevention should be frequently checked and tried out for proper operating condition.
- Ensure that proper operation and maintenance of fuel and lubricating oil and purifying equipment is carried out to minimize leakage. check that from the effluent mixture, only clean water is pumped out of the ship only through an oily water separator.
- Act as Alternate Vessel Security Officer when needed.
- Logging necessary inputs into the **FLAG** system where required.

1.7 Chief Cook

The Chief Cook is responsible the safe and effective operation of the vessels catering and accommodation services, and shall demonstrate HSSE leadership by leading by example, they also shall:

- Ensure that the storage, preparation, display and disposal of provisions is in accordance with the Hazard Assessment Critical Control Point (HACCP) process.
- Ensure all catering staff wear Kevlar (cut-resistant) gloves when using knives.
- Ensuring that hygiene programmes within the location's eating areas are enforced.
- Ensuring that MARPOL and local regulatory requirements are adhered to in the management of waste from the location's catering facilities.
- Ensure task risk assessments are in place for food preparation & catering facility tasks.
- Ensure specialist catering facility equipment such as electrical appliance, hot surfaces and knives receive proper consideration, storage and care when handling or in use.

1.8 Fleet Party Chief (Optional)

The Fleet Party Chief has responsibility for:

- Demonstrating leadership in HSSE by leading by example.
- Coordinating the seismic survey fleet operations to deliver the seismic in a safe manner to ensure contractual, regulatory and BMS requirements are met and implemented.
- Communicating with the client lead representative, vessel Master(s) and Party Chiefs on other vessels on operational and HSSE matters.
- Being responsible for planning safe and efficient daily operation of the seismic fleet and any other subcontracted services associated with the operations which are present in the field.
- Monitor fleet performance according to agreed KPI's, contractual expectations of the client and ensure the location's performance is documented and reported in **FLAG**.
- Be responsible for operational risk management for the fleet; identify and mitigate project and work site risks in close cooperation with the Master(s) and Party Chiefs in the Seismic Survey Fleet (SSF).
- Organize and chair operational daily meetings with the client and report QHSSE matters as described in the BMS.

1.9 Party Chief

The Party Chief has responsibility for:

- Demonstrating leadership in HSSE by leading by example on the location.
- Managing the operations required to deliver operations in a safe manner to ensure contractual, regulatory and BMS requirements are met and implemented for the location.
- Communicating with the following on operational and HSSE matters:
  - Client
  - Master
  - Fleet Party Chief (Optional)
- Being responsible for the safe and efficient daily operation of the seismic equipment and any other subcontracted services associated with the location.
- Monitor vessel performance according to agreed KPI's, contractual expectations of the client and ensure the location's performance is documented and reported in **FLAG**.
- Be responsible for operational risk management at the work site; identify and control project and work site risks in close cooperation with the Master.

- Ensure that applicable HSSE procedures, work instruction and task risk assessments are in place, known, understood and implemented in all departments.
- Ensure planned maintenance for seismic equipment is implemented and recorded in all departments in accordance with BGPO-MP-027 Preventative Maintenance Management.
- Ensure that all personnel working on the location are competent in their positions.
- Ensure that all HSSE records are maintained in **FLAG** according to procedures.
- Organize HSSE safety meetings on the location in participation with the Master and report QHSSE matters as described in the BMS.

1.10 Chief Navigator

The Chief Navigator is responsible for the safe and efficient operation of their department and shall:

- Ensure that the requirements identified in BGPO-MP-022 Navigation Management Procedure are implemented as applicable for all operations.
- Be responsible for operational risk management in their department; identify and manage task risks in close cooperation with their direct reports.
- Ensure planned maintenance for their department's seismic equipment is implemented and recorded.
- Ensure that applicable HSSE procedures, work instruction and task risk assessments are in place, known, understood and implemented in their department.
- Ensure that all personnel working in their department are competent in their positions.
- Ensure mentors are allocated for short service employees under their department.
- Ensure that all HSSE records for the department are maintained in **FLAG** according to procedures and work instructions.

1.11 Chief Observer

The Chief Observer is responsible for the safe and efficient operation of their department and shall:

- Ensure that the requirements identified in BGPO-MP-013 Instrument Management Procedure are implemented as applicable for all operations.
- Be responsible for operational risk management in their department; identify and manage task risks in close cooperation with their direct reports.
- Ensure planned maintenance for their department's seismic equipment is implemented and recorded.
- Ensure that applicable HSSE procedures, work instruction and task risk assessments are in place, known, understood and implemented in their department.

- Ensure that all personnel working in their department are competent in their positions.
- Ensure mentors are allocated for short service employees under their department.
- Ensure that all HSSE records for the department are maintained in **FLAG** according to procedures and work instructions.

1.12 Chief Mechanic

- The Chief Mechanic is responsible for the safe and efficient operation of their department and shall:
- Ensure that the requirement s identified in BGPO-OP-031 Source Mechanical Procedure are implemented as applicable for all operations
- Be responsible for operational risk management in their department; identify and manage task risks in close cooperation with their direct reports.
- Ensure planned maintenance for their department's seismic equipment is implemented and recorded.
- Ensure that applicable HSSE procedures, work instruction and task risk assessments are in place, known, understood and implemented in their department.
- Ensure that all personnel working in their department are competent in their positions.
- Ensure mentors are allocated for short service employees under their department.
- Ensure that all HSSE records for the department are maintained in **FLAG** according to procedures and work instructions.

1.13 Quality Control (QC) Geophysicist

The QC Geophysicist is responsible for the safe and efficient operation of their department and shall:

- Ensure that the requirements identified in BGPO-MP-006 Data Quality Control Procedure are implemented as applicable for all operations

1.14 Health Care Professional

The Health Care Professional (HCP) is responsible for the provision of Primary Health Care to the crew and to:

- Advise Master(s) on the crew on medical matters.
- Perform regular health and hygiene inspection & verify crew meet medical fitness requirements as specified in the contract and detailed in BGPO-MP-042 Medical Fitness Requirement.
- Actively promote healthy living by making presentations on such issues as diet, smoking and exercise.

- Provide fitness testing and evaluation, and to assist crewmembers by advising on individualized fitness programs in accordance with the crew's health campaign.
- Ensure vessel medical equipment & pharmaceutical stocks are maintained in accordance with BGPO-MP-052 Medical Equipment and Consumables Requirements.
- Provide medical training to the vessel medical team and first aid training, including the use of AEDs, to all other crew members.
- Assist the Chief Engineer in the testing of the vessel potable water system.
- Maintain medical in confidence protocols when handling patient information unless overridden by the Master's statutory responsibilities.
- Become familiar with the ship's protocols and advise the Master and Party Chief if a patient is unfit for work, or medical condition or situation such as potential contamination from infectious disease presents a risk to the safety, or health of the crew.
- Monitor compliance with BGPO's Fatigue Management process and assist in fatigue evaluations for the crew.
- Liaise with Top Side Medical support in the event of medical illness or emergencies.
- Assist the crew with the administration of QHSSE.

1.15 QHSSE Advisor

The QHSSE Advisor shall champion health, safety and environment issues on the crew by leading by example and shall;

- Verify compliance with the BGPO Business Management System by conducting inspections of the worksite and reporting all Non-Conformities identified.
- Execute QHSSE responsibilities as defined in the Business Management System manuals & procedures.
- Continually analyse the work environment to ensure a safe workplace and consult with crewmembers on HSSE issues and risk in the operation.
- Be responsible for assisting the department chiefs in the ongoing review and monitoring of risks identified in Location Risk Assessments, Aspects & Impacts & Project Risk registers in **FLAG**; ensuring they have suitable and appropriate controls & mitigations in place.
- Provide guidance to the crew on the PTW process and conduct permit audits in accordance with the procedure.
- Scheduling Active Monitoring based on the locations top ten risks and checking that this is conducted in accordance with the Audit Schedule in FLAG in accordance with BGPO-MP-001 Active Monitoring.

- Promote improvement of the "safety culture" of the entire workforce by participating and promoting the company's Behaviour Based Safety Program, SOPs, TOFS and LMRA programs.
- Verify environmental compliance of project environmental plans through inspections of waste management, marine mammal mitigation and atmospheric emissions monitoring programs in accordance with.
- Monitor the location's and project KPIs and provide line management with updates to ensure that all will be achieved.
- Support and coordinate process auditing program for the crew in accordance with the Audit Schedule for the location.
- Monitor the crew's remedial actions to ensure that items raised meet the "SMART" criteria and they are managed through to closure.
- Support Daily Meetings by providing HSSE discussion points to the team.
- Support the crew in weekly hygiene inspections, take note of findings and generate **FLAG** reports as required.
- Verify all have access & provide guidance on the use of **FLAG** (Take the roll of **FLAG** Champion on the crew).
- Be part of incident investigations and support the crew in compiling evidence into **FLAG**.

1.16 All Personnel

All personnel whether employed directly or indirectly or providing services to support the operation are empowered and have a duty to stop work if there is cause for concern, and shall:

- Demonstrate HSSE commitment by being a safety coach to all team members they work with.
- Assess risks prior to all work activities and comply with the BGPO BMS policy, lifesaving rules, procedures and work instructions at all times.
- Support and promote the safety culture on the crew.

2.0 POLICIES, STANDARDS AND OBJECTIVES

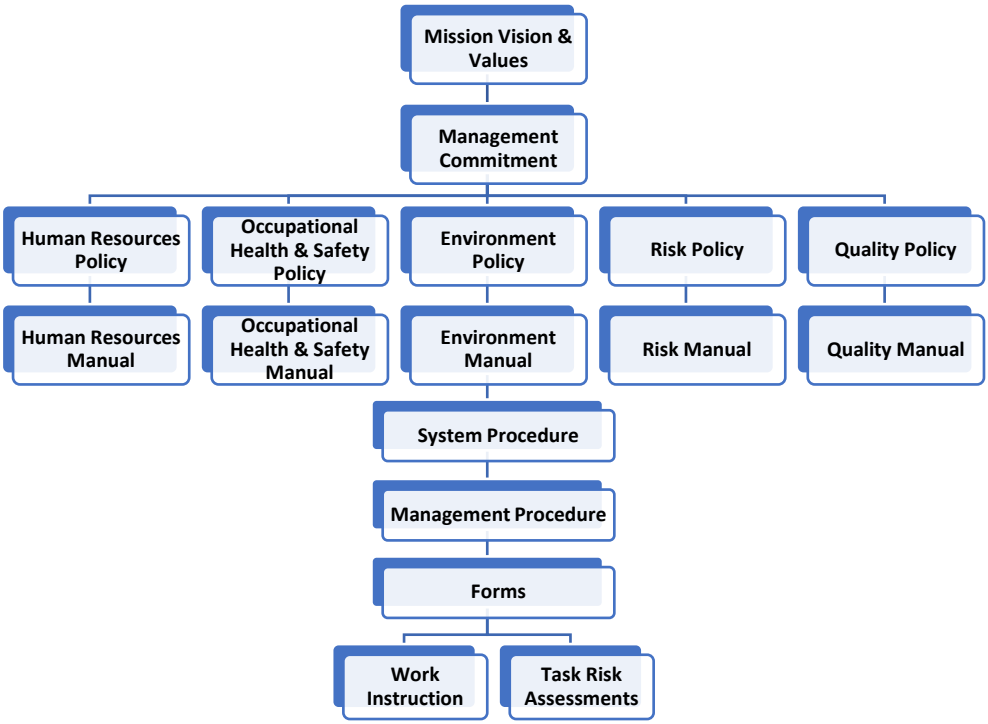
2.1 Business Management System

The BMS is designed to organize the policies, procedures, work instructions, forms and processes within BGPO to meet client requirements; safely, efficiently and with no harm to the environment.

This section lays out the structure of the Business Management System (BMS) and how the company and crew will implement this system on the project.

2.1.1 Document Hierarchy in FLAG

The figure below outlines the documentation structure in the BMS:



2.1.2 Policy

BGPO policy is at the top of the document structure in the BGPO Document Management System in folder 01. Statements and Policies in **FLAG**. Policy defines how BGPO will be managed and commit the company to meet the ISO International standards. These high-level documents include: The Mission & Vision Statement, Management Commitment Statements as well as Human Resources, Occupational Health & Safety, Environmental and Sustainability, Risk & Quality policies. Supplementary policies have been developed under the Health & Safety Policies which include: Smoking, Drugs and Alcohol, Transport, Stop Work, Security, Lone Work and Jewellery.

Project Specific Policy Requirements (Optional)

Insert details of project specific policy requirements here i.e. client golden rules

Delete if not required

2.1.3 BMS Manuals

The BMS contains five manuals; one for each corporate policy, which detail how the content of the policy will be realised. These manuals are the “guidebooks” to the BMS and are located under folder 02. Manuals in **FLAG**. Reference: BGPO-M-01 Human Resources Management, BGPO-M-02 Occupational Health

& Safety Management, BGPO-M-03 Environmental Management Manual, BGPO-M-04 Risk Management Manual and the BGPO-M-05 Quality Manual.

2.1.4 Procedures

Procedures in the BMS are split into two separate folders. The first is (03. System Procedures) which apply to all departments in BGPO. Procedures in this category include the BGPO Code of Conduct, Management of Change, Subcontractor Management, Auditing and other high-level processes. The second folder (04. Management Procedures), apply only to specific departments and activities which include but not limited to: Permit to Work, Active Monitoring, Hazardous Substances Management and other activities conducted by specific departments in BGPO.

Procedures related to the vessel's Safety Management System (SMS) are contained within each of the individual ship's management companies' systems. Interface arrangements with BGPO as described in section 5.5 Management System Interface to determine primacy.

2.1.5 Work Instructions

Work instructions for each offshore location detail specific controls and responsibilities for conducting certain tasks. These are located in Document Management in folder (06. Location Documents Offshore). Each work instruction is accompanied by an equivalent task risk assessment applicable to that task. These documents are owned and maintained by the departments conducting these activities.

As with vessel maritime procedures; vessel work instructions related to the vessel's SMS are contained within the individual ships' SMS(s).

2.1.6 Forms & Checklists

Forms and checklists in the BMS are located under folder 07. Forms. These are completed for the activities related to the System & Management Procedures.

2.1.7 Records

Forms and checklists are either directly loaded in FLAG for certain activities, such as permit to work and meetings. Other forms are recoded and maintained in the Location Records Offshore folders specific to each location.

2.2 FLAG

FLAG (File Locally Access Globally) is the company's on-line database, document management and reporting system that is used in:

- Managing risks
- Managing and follow-up on non-conformities & corrective actions
- Managing workflows for assigned action
- Managing change (MOC)
- Permit to work
- Training & Drills
- Incident Reporting
- Ideas and opportunities
- Environmental compliance
- Audits, inspections and reviews
- Meetings
- Managing personnel assignment and count
- Managing and performing quality assurance
- Document management & control
- Co-operating and providing transparency with stakeholders

The **FLAG** Database System is designed to be used at three levels: Corporate, Project, and Location. Each level contains tabbed information pertinent to and controlled by users at that level.

2.2.1 Access to FLAG

All personnel with internet access will have access to **FLAG** with appropriate controls and permissions based on their position and need for access.

The QHSSE Advisor will assist new personnel joining seismic vessels in obtaining a FLAG account through the QHSSE Department. This is done by submitting the BGPO-F-124 FLAG Account Application Request form to the BGPO Performance and Software Manager.

If required, the project management team will provide required information to and receive information from locations without access to **FLAG**, as detailed in the **Communications Plan**.

2.2.2 BGP Offshore - Corporate - Level I

Tabbed information at the corporate level contains records for the highest level in BGPO. The figure below details the information contained at this level. Note that access to certain tabs on this page is restricted to company personnel only.



2.2.3 Project Level - 2

Tabbed information at the project level contains project specific information. Project level documents, such as project specific plans (this plan) and others that are maintained by the Project Team. Project information can be found by navigating from the top level in **FLAG** (BGPO) through the “Project” tab shown in the previous section, to the project level in **FLAG**. Personnel assigned to the project including; the Project Team, subcontractors, client and other

stakeholders will have access to this page in **FLAG** as well as the Location tabs associated with the project when assigned to the project in **FLAG**. See figure below details the information contained at this level.



2.2.4 Location Level - 3

Tab information at the location level contains detailed records for the specific location or vessel as shown in the figure below. These can be found by navigating from the Project level in **FLAG** through the "Crews in Project" tab shown in the previous section, to the specific location on the crew. Note that "Location" in BGPO terminology refers to either a vessel, worksite or office location. Personnel assigned to the project will have access to view the locations involved and will have access to the tabs shown in the figure below.



2.2.5 Document Management & Control

The Document Management feature in **FLAG** can be accessed from the main page of **FLAG**. This system is used to control and manage all documents and is the "central library" of current documentation in BGPO, the project and applicable locations.

The BGPO-SP-001 Control of Documented Information procedure details how BGPO manages documents in compliance with the ISO 9001:2015 standard. This procedure defines, document ownership, approval and the review cycle for each level of documentation in the system.

2.3 Standards and Legislation

BGPO-SP-010 Management of Contract & Legal Affairs and BGPO-SP-021 Compliance Management defines how BGPO identifies and evaluates legal requirements as well as how compliance is verified.

The table below details specific HSSE standards from stakeholders and legislation applicable to the project.

Subject	Requirements to be Implemented
Insert topic e.g. tour duty limits, waste management etc)	Insert obligation it creates for the project

Reference the Waste Management Plan & Marine Fauna Mitigation Plan for specific requirements related to these two areas.

2.4 Corporate Objectives

Corporate objectives are set out by Top Management on at least an annual basis. These are broad objectives that will drive the company's initiatives towards improving the Business Management System and will be in line with the company's goals, risks controls and strategic direction as defined in the Mission, Vision and Values statement, Policies and Management Commitment Statements. Corporate objectives are detailed at the highest level in in **FLAG**. Refer to sections 9.1 Monitoring Performance and 10.4 Review for more details on monitoring and reviewing performance.

2.5 Project Objectives

For each project the BGPO Project Management Team is responsible for identifying and setting objectives that support client and other stakeholder requirements as well as corporate objectives and policy commitments.

During the planning phase, project objectives are agreed with the client and BGPO Project Team to target stakeholder expectations and outcomes for the project. Refer to sections 9.1 Monitoring Performance and 10.4 Review for more details on monitoring and reviewing performance.

The following project objectives with key performance indicators have been agreed and are detailed in **FLAG** at the Project Level for this project:

Objective	Key Performance Indicator
Insert objectives entered in FLAG	Insert KPI associated with objective

2.6 Location Objectives

Location objectives are set by the location head and loaded under the Location's Objectives tab in **FLAG** with guidance from the QHSSE department in setting key performance indicators (KPIs) for each. These objectives are designed to support the corporate objectives and ensure continual improvement. Refer to sections 9.1 Monitoring Performance and 10.4 Review for more details on monitoring and reviewing performance.

3.0 ORGANISATION, RESOURCES AND CAPABILITY

The following resources have been dedicated and/or identified to support the project. In order to uphold the principle of 'Duty of Care', BGPO shall ensure that all resources are appropriately audited and/or inspected to ensure that the standards expected by each company are met or exceeded:

3.1 BGPO Project Management Team

The BPGO onshore Project Management Team provides the following:

- Direct Project Management
- Client Liaison and Interface
- HSSE Support
- Local Emergency Response Team

3.2 BGPO Offshore HSSE Resources

The following BPGO offshore HSSE Resources have been allocated to support the project:

Location Name	HSSE Resource	Managed By
Insert location / vessel name	Insert QHSSE Advisor / Medic / Security etc	BGPO

3.3 Vessel Management Companies

All vessel management companies supply the following resources for the vessels they operate:

- Designated Person Ashore (DPA)
- Marine oversight & compliance
- HSSE Support / CSO
- Emergency Response Team

3.4 Other Subcontractor Management Companies

Subcontractor / supplier management companies supply the following HSSE resources for the services they provide:

Subcontractor / Supplier Name	HSSE Resource	Managed By
Insert service company	Insert resource provided, inspection service / oversight etc	BGPO

3.5 Client Project Management Team

The client onshore Project Management Team provides the following HSSE resources:

- BGPO liaison and HSSE interface
- Client approvals/review of the management of change.
- Emergency Response Team
- Client standards and HSSE critical information
- Management of their contractors operating on-board all vessels within the crew
- Joint audit resources

3.6 Joint Venture Management Team (Optional)

The Joint Venture (JV) onshore Project Management Team provides the following HSSE resources:

- BGPO liaison and HSSE interface
- JV approvals/review of the
- JV standards and HSSE critical information
- Management of their contractors

management of change.

- Emergency Response Team

operating on-board all vessels within the crew

- Joint audit resources

3.7 Communications

The project COMMUNICATION PLAN provides a framework for effective communication management for the complete lifecycle of the project. It is vital that strict communication protocols are to be adhered to in order to reduce the likelihood of passing incorrect information and breaching legal or contractual obligations.

The plan details communication mapping, protocols and the communication vehicles used to share and disseminate information on the crew.

Meetings will be one of the primary communication vehicles used during the project to communicate HSSE related information. The types and frequency of meetings that are conducted in BGPO are detailed in BGPO-SP-020 Meeting Procedure. All meetings conducted during the project shall be recorded in **FLAG**.

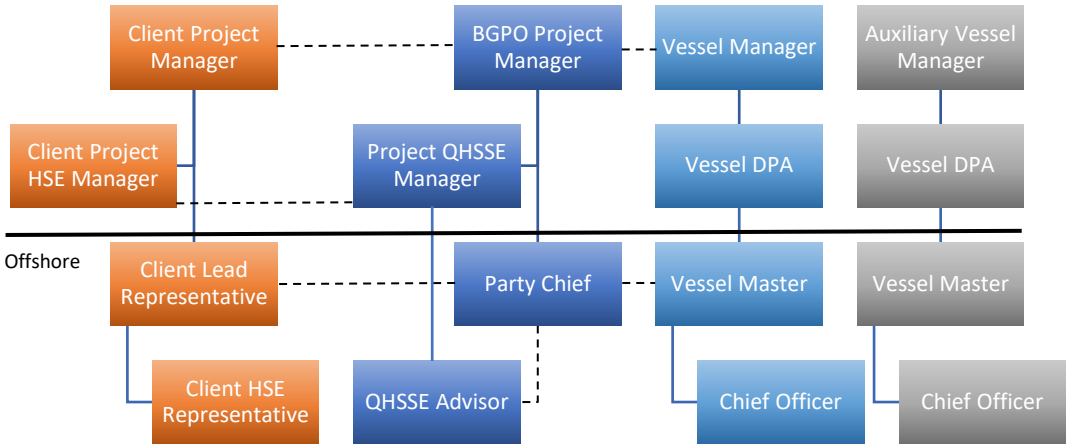
3.7.1 HSSE Communications

HSSE related information communicated will be in accordance with BGPO-SP-016 Communication Participation Consultation. This procedure details the QHSSE Advisor's responsibility to communicate:

- Project specific plans such as this plan and emergency plans.
- New risks or risk with new methods or equipment that may affect health and safety at work at any location.
- Knowledge and experience requirements regarding competency for conducting tasks.
- Applicable health, safety & environmental laws.
- Corrective or preventive actions to mitigate or eliminate risks associated with work activities.
- Requirements for health and safety training.
- Incident investigation reports and lessons learned.
- Occupational health issues.
- Standards, client contractual requirements, codes of practice and agreements with local community groups on the project.

3.8 HSSE Organizational Chart

The diagram below shows the HSSE reporting structure between all involved parties on the project:



Key — Update chart as required

Operational Reporting & Authority

Functional Reporting & Authority

Consultancy – No Authority

Figure 1 - HSSE Organisational Chart

3.9 Key Personnel

Key personnel for the project are defined as follows:

Seismic	Maritime	Other
Project Manager, Project QHSSE Manager, Party Chief, Assistant Party Chief, Department heads & QHSSE Advisors	All Maritime Officers	Health Care Provider MMO / PSO / FLO
insert others if detailed in contract. Delete add rows		

3.10 Training & Competency

Training in BGPO shall be in accordance with BGPO-SP-003 Training Competency and has been identified through a risk-based process, detailed in each location's Risk Assessment tab in **FLAG**. Training is tracked in **FLAG** based on the BGPO Training Matrix which details minimum training requirements for BGPO personnel.

Competency for BGPO personnel is assured through the BGPO-MP-029 Short Service Employee programme which incorporates the use of the BGPO-F-038 Short Service Employee Checklist. The SSE will be assigned a mentor by the Vessel Manager / Party Chief. The mentor will provide support by showing the new employee the basic day to day working requirements of BGPO operations and ensure that all company policies and procedures are understood, and that the new employee knows where to find them within the document management system.

BGPO defines a Short Service Employee as: "A newly hired permanent employee, temporary employee or contractor with less than six months' experience in their assigned job"

Project specific requirements for SSEs if any, are detailed below:

Project Specific SSE Requirement	Reference
Insert project specific requirements for SSEs if any	Insert reference to contract etc.

3.10.1 Project Specific Training

The table below summarises project specific training and or competence assurance requirements not described in BGPO-SP-003 Training Competency. Details of when this training will be delivered can be found in section 8.0 EXECUTION OF ACTIVITIES - PROJECT PHASES AND ACTIVITIES

Project Specific Training	Target Group & Trainer
Insert project specific training required, i.e. fatigue, malaria	Insert who receives and will conduct the training

3.11 Supplier management

The management of maritime suppliers is controlled through the BGPO-MP-024 Marine Contractor Management procedure and through interface documents between the BGPO BMS and the supplier's Safety Management System (SMS). Non-marine suppliers are managed in accordance with BGPO-SP-007 Subcontractor Management.

The table below provides detail of project specific subcontractor requirements regarding the service these contractors supply. It also provides reference to the INTERFACE DOCUMENTS that have been developed for each that are stored in **FLAG** under the Project Level tab, which detail additional mitigation required to manage project specific requirements.

Subcontractor Name	Service Provided
Insert supplier details	Insert service provided. i.e. survey vessel, supply vessel, provision supply, fuel supply, helicopter service

4.0 STAKEHOLDERS AND CUSTOMER

4.1 Stakeholder Identification

Stakeholders that have been identified in the project are listed in **FLAG** under the stakeholder tab at the project level. Information in this tab includes: The *Company / Organization* name, *Relationship to the project*, *Means of communicating*, the *Contact Point* in the stakeholders organisation and other specific details regarding the stakeholders responsibilities, needs, expectation and requirements in the *Comment* section. The Project Team with full support from the QHSSE Department is reposibile for

identifing applicable laws, regulatory requirements as defined in BGPO-MP-018 Marine Seismic Operations. The Project QHSSE Manager details these requirements for the project in **FLAG** under the Project Level tab, Stakeholders.

The stakeholders that have been identified for the project, with specific responsibilites and expectations are listed in the table below.

Stakeholder	Responsibilities	Project Specific Expectations
Client	Ensure all activities are conducted in a way that preserve the health, safety, security and integrity of the environment in accordance with regulatory permits and company expectations.	Insert additional client expectations here. i.e. No Harm to the environment, people etc. Goal Zero
BGPO	Conduct and manage operations in accordance with the contract, BGPO Mission & Values statements, Policy and the BMS	Manage the project in accordance with Project Specific Plans and interface / bridging arrangements from client
Vessel management company (1) Add company name	Comply with contractual & interface arrangements. Holds the Document of Compliance (DOC), manages the Safety Management System (SMS) and crew for the following vessel(s): Insert vessel names	Click or tap here to enter text.
Vessel management company (2) Add company name		
Add other if applicable **Health & Safety Regulatory Body, Maritime, Environmental Regulatory Body, Top Side Support, Oil & Gas**		

Authority, Aviation		

5.0 RISK ASSESSMENT AND CONTROL

BGPO-M-04 Risk Management Manual has been developed to fulfil the requirements of ISO 31000 Risk Management and sets the framework for BGPO's Business Management System (BMS). BGPO manages risk at four (4) levels within the company, they are:

Level 1 – Corporate Risk: The highest levels of risks within the company which can have an effect across the organization if they are realized. Risk at this level is managed by the Senior Management team of BGPO in accordance with BGPO-MP-004 Corporate Risk Assessment

Level 2 – Project Risk: Risks at this level are managed in accordance with BGPO-MP-028 Project Risk Assessment by the Project Team and will require inputs from all departments supporting the project, clients, sub-contractors and other stakeholders that have an interest in the project.

Level 3 – Location Risk: Locations in BGPO are typically vessels, office locations and worksites. At this level, we focus on activities that are performed on that location in accordance with BGPO-MP-014 Location Risk Assessment. Location Risks are listed in **FLAG** as either an *Activity*, *Vessel* or *Facility* related risk. From these entries each location shall list the tasks related and personnel who are competent to perform the related work.

Location Risk Assessments in **FLAG** detail the following:

- Hazard / risk description
- Hazard effect
- Key Legal & Other Requirements
- Required Training
- Affected parties
- Risk Controls
- Risk ranking
- Work Instruction that has primacy according to the interface document
- Competent personnel who are authorized to perform associated work

Level 4 – Task Risk: Tasks that are performed at locations will fall under the activities that are identified at the location level. Task risks are managed by the departments that perform them which includes producing individual risk assessments in accordance with BGPO-MP-033 Task Risk Assessment and Work Instructions.

Typical task risk assessments at a location level will be associated with an activity defined by the Location Risk Assessments. Task Risk Assessments (TRAs) with their associated Work Instructions are used each time the task is performed. The process uses the ERIC-PD hierarchy; Elimination, Reduce, Isolations, Control, PPE, & Discipline with the department heads and or shift leaders responsible for planning & supervising the work activity.

5.1 Risk Matrix

The BGPO Risk Matrix shown below shall be used to quantify risk during the project.

SEVERITY RATING	PEOPLE	ENVIRONMENT	ASSETS	REPUTATION	FINANCIAL	Likelihood				
						A Never heard of in the E & P Industry	B Heard of in the E & P Industry	C Incident has occurred in the company	D Incident has occurred several times in the company	E Incident has occurred several times in a year in the company
1	**Slight Health Effect/ Injury** Not detrimental to work performance (First Aid, Medical Treatment). Return to duties next day.	**Slight Effect** Local risk. Contained onboard. Contamination < 10 L	**Slight Damage** No disruption to operations. Cost of repair 10 K$	**Slight Impact** Public alert, but no concern	$ 0 - 50 K	Low	Low	Low	Low	Low
2	**Minor Health effect/ Injury** Detrimental to performance of work. Lost Time Injury < 1 week (LTI and Restricted Work Case)	**Minor Effect** Spill to sea, but not lasting effect. Contamination > 10- < 100 L	**Minor Damage** Brief disruption to operations. Cost of repair 10 K$ - 100 K$	**Limited Impact** Slight local media and/ or local political attention with possible negative aspects for BGP Offshore	$ 50k - 100k	Low	Low	Low	Medium	Medium
3	**Major Health Effects/ Injury** Permanent partial disablement. Detrimental to work performance > 1 week	**Localized Effect** Localized environmental damage. Contamination >100- <1000L	**Localized Damage** Partial shutdown. Cost of repair 100 K$ - 1M$	**Considerable Impact** Regional public concern. Extensive negative attention in local media. Slight national political attention	$ 100K to 500K	Low	Low	Medium	Medium	High
4	**Fatality / Permanent total disability**	**Major Effect** Severe environmental damage. Extensive measures to restore. Contamination 1 000 – 10 000 L	**Major Damage** Partial loss. Shut down max two weeks. Cost of repair 1 M$ - 10 M$	**National Impact** National public concern. Extensive negative media attention. Possible restrictive measures. Mobilization of action groups.	$ 500K to 1,000,000	Low	Medium	Medium	High	High
5	**Multiple fatalities**	**Massive Effect** Persistence severe environmental damage over a large area Contamination > 10000L	**Extensive Damage** Total loss. Cost of repair > 10 M$	**International Impact** International public attention. Negative attention in international media. Possible severe impact on access to new areas	> $ 1,000,000	Medium	Medium	High	High	High

Figure 2 - Risk Matrix

5.2 Permit to Work and Lockout/Tagout Operations

Permit to Work & Stored Energy Lock Out Tag Out (LOTO) requirements are detailed in BGPO-MP-025 Permit to Work & BGPO-MP-032 Stored Energy Management. Interface documents developed for each companies' respective BMS/SMS specify primacy for which procedure will be used on each vessel. All Permits to Work shall be supported by a Task Risk Assessment and applicable checklists where appropriate.

The BGPO Permit to work system contains Hot Work / Cold Work and Confined Space Entry permits with associated checklists. Specific procedures are also in place in the BMS for the following PTW required activities:

- BGPO-MP-019 Mechanical Lifting Operations
- BPGO-MP-034 Working at Height
- BGPO-MP-003 Confined Space
- BGPO-MP-031 Stored Energy Management
- BGPO-MP-016 Management of Hot Work Activities

All permits shall be logged in **FLAG** by the Performing Authority.

Project Specific Permit to Work Requirements (Optional)

Insert details of project specific incentive program requirements here with how they will be managed.

Delete if not required

5.3 Manual of Permitted Operations (MOPO)

A summary of operational restrictions in a Manual of Permitted Operations (MOPO) set for the different types of operations conducted has been developed to ensure that operating conditions have been factored into the operating boundaries. The MOPO also specifies restrictions where parallel activities exist and incorporates a point risk evaluation system that allows the crew to determine if combined activities are within acceptable scope limits. Reference: BGPO-MP-050 Manual of Permitted Operation for additional details.

	Activities / Condition	Responsible Person(s)	Natural Limitations													Operational Limitations								Sub Total
			Normal Conditions	Hours of Darkness	Current >2 kts	Sea height >3m: Sea and Swell from RED Direction	Sea height >3m: Working decks <6.5 meters from sea level	Sea Height >5m	Wind force > 25 kts	Wind Beaufort force > 40 kts	Air or/and Water Temp below 5°C	Visibility <500m	Lighting Storm	Entering <50m Depth N/A for transit and Source Vessels	Guard Vessel not available during deployment/ retrieval WB/FRC Available	WN/FRC Inoperative due to malfunction or adverse weather Guard Vessel Available	FRC/WB Operations underway If more than one small boat deployed increase score by +1	Turning Radius <5km (2D<2km) N/A for transit and source vessel	Passing Obstructions <500m	Working in areas of significant local ships/ fishing N/A for transit	Vessel's main of bac up propulsion system is inoperative of under maintenN/A nce	Open PTW activity affecting operations	
Sailing Mode	In transit Or Normal seismic operations (Gear Deployed)	OOW	0	+1	N/A	+2	Note a	+1	+5	+2	+5	+1	+1	+1	+1	+1	+1	+1	+1	+5	+2	+5	+1	
	Streamer deployment/Retrieval	Ch Obs	1	+1	+2	+2	+2	+1	+8	+2	+8	+1	+1	+1	+3	+3	+3	+1	+2	+8	+3	+3	+1	
	Gun array deployment/retrieval	Ch Mech	1	+1	+2	+2	+2	+1	+8	+2	+8	+1	+1	+1	+4	+3	+3	+1	+1	+8	+1	+3	+1	
	Barovane deployment/retrieval	Ch Mech	1	+1	+2	+2	+1	+1	+8	+2	+8	+1	+1	+1	+3	+3	+3	+2	+3	+8	+1	+3	+1	
	Non-Routine Equipment Recovery/ deployment	Party Chief	3	+1	+2	+2	+3	+1	+9	+2	+9	+1	+1	+1	+4	+3	+3	+1	+3	+8	+8	+3	+1	
	Non-Routine Equipment Recovery/deployment	Party Chief	3	+1	+2	+2	+4	+2	+9	+2	+9	+1	+1	+1	+3	+3	+3	+1	+3	+8	+3	+3	+1	
SIMOPS	Supply vessel approach	Master	3	+7	+1	+3	N/A	N/A	+7	+3	+7	+1	+3	+3	+3	N/A	+2	+1	+7	+7	+3	+7	+2	
	Resupply at Sea including Bunkering and Crane Operations	Master	2	+2	+1	+3	N/A	N/A	+8	+3	+8	+1	+2	+7	+2	N/A	+2	+1	+3	+8	+4	+8	+3	
	Supply Vessel departure	Master	3	+2	+1	+3	N/A	N/A	+7	+3	+7	+1	+3	+3	+3	N/A	+1	+1	+7	+7	+3	+7	+2	
	Crane Operations (Not ship to ship)	Ch Off	1	+2	N/A	+4	N/A	N/A	+9	+4	+9	+1	+1	+7	N/A	N/A	+1	+1	N/A	+9	+1	+1	+1	
	Helicopter Operations Note b	HLO	3	+4	N/A	+3	N/A	N/A	+9	+3	+9	+1	+7	+7	N/A	+1	+1	+1	+3	+7	+2	+2	+1	
	Emergency Drills	Ch Off	1	+3	N/A	+2	N/A	N/A	+9	+2	+9	+1	+1	+3	N/A	N/A	+1	+1	N/A	+9	+5	+5	+9	
	Offshore Gangway Transfer	Ch Off	1	+9	+1	+9	N/A	N/A	+9	+9	+9	+1	+4 Note c	+7	+3	+3 Note c	+3 Note c	+1	+3	+9	+4	+7	+1	
																							Total MOPO Score	

Figure 3 – MOPO Example

5.3.1 Project Specific MOPO Requirements (Optional)

This project requires addition MOPO requirements to manage safe operations on the crew. Details of these requirements are described below:

Details of Project Specific MOPO Requirements
Insert details of project specific MOPO requirements here if needed for the project. I.E. specific project level MOPO etc. Delete section if not required

5.4 Management of Change

A MOC shall be required for any temporary or long-term changes (including those relating to materials, plant, equipment, process, products, services, procedures, practices and key personnel) that could either affect the health, safety, security of people or have an adverse impact on the environment or both in accordance with the BGPO-SP-009 Management of Change process and controlled in **FLAG**.

The BGPO project management team shall discuss all requests for a management of change (MOC) with the clients' project management team at each level of MOC to enforce the **'One Team'** approach to managing the project and gain approval if required by the contract. All such changes shall also be discussed during the daily operations meetings so that all potential issues can be discussed.

Management of change typically does not cover:

- Routine activities covered by standard maintenance and non-safety critical procedures. using other safety management controls, such as TRAs and work permits.
- Like-for-like replacements or repairs. (These are change proposals that replace equipment, a process, item or aspect with an identical one, as well as non-critical personnel. This results in no change occurring and hence a formal MOC process is not required.
- Similar equipment changes shall be reviewed with the client field representative to confirm it is aligned with client expectations.

5.4.1 Project Level

If it is deemed a change, in accordance with the definition above, is required during any phase of the project; the combined project management teams of BGPO and the client shall be involved to ensure that all potential risks have been identified.

Project Specific MOC Requirements (Optional)

This project requires addition MOC requirements to manage change on the project. Details of these requirements are described below:

Details of Project Specific MOC Requirements
Insert details of project specific MOC requirements here if needed for the project. I.E. specific approvals etc. Delete if not required

5.4.2 Location Level

If any changes are required in accordance with the definition above at the Location level within the crew, the Party Chief shall notify the Project Manager. The Project Manager shall then inform the Client Project Management Team of the required change and that a MOC process has been initiated in **FLAG**. The changes shall be discussed during the daily operation meeting so that all potential issues can be discussed and resolved.

5.5 Management System Interface

All companies within the project shall act under their own respective Business Management System (BMS) or Safety Management System (SMS). Where appropriate bridging and/or interface documents between individual and/or collective companies has been produced.

This provides a hierarchy of subsystems between each respective companies' BMS or SMS in order to prevent the potential of conflict of processes. Where conflicts do occur, an acceptance shall be raised within the bridging/interface document that has been agreed upon between the respective companies.

These documents aims to achieve the following:

- Act as the interface link between the BGPO BMS and subcontractor for operating and managing the assets contracted for the duration of the agreed contract project life.
- Cascade client contract and regulatory requirements to subcontractors.
- Ensure that roles and specific responsibilities for all activities are identified and communicated.
- Ensure that all personnel are aware of all key policies, procedures and appropriate channels of communication.
- Ensure that emergency response procedures are agreed.

5.6 Management of Project TOP HSSE Risks

Project risks have been detailed in **FLAG** which include client and stakeholder identified project-specific risks. These will be managed by the Project Team with input from the crew and client in accordance with BGPO-MP-028 Project Risk Assessment. Note that project risks may change and therefore will be reviewed and updated to reflect certain phases of the project.

The project top HSSE risks have been developed through a joint risk assessment process with the client, key subcontractors and other required stakeholders. These with other project specific risks, with their main treatment and control measures identified can be found in **FLAG** under the project tab. The top risks for the project are listed in the table below:

#	FLAG Ref ID	Risk Category	Task
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Choose an item.	Insert task – i.e. close pass operations

5.7 Environmental and Social Risks

The BGPO-M-03 Environmental Management Manual has been developed to fulfil the requirements of the environmental management systems (EMS) specification detailed in ISO 14001, and to demonstrate that a specific framework is in place to manage environmental risks. The document provides a clear understanding how environmental risks are managed in BGPO.

BGPO-SP-022 Corporate Social Responsibility details how BGPO aims to demonstrate its commitment to Corporate Social Responsibility (CSR) through showing how our daily operations and working environments are within the parameters of a socially responsible company and that of the voluntary standards of ISO 26000: 2010.

5.7.1 Atmospheric Emissions and Waste

BGPO has developed specific procedures in the BMS to support the Environmental and Sustainability Policy. BGPO-MP-047 Atmospheric Emission Monitoring and Management outlines our commitment to minimise our air emissions footprint generated by the vessels we operate. The procedure outlines guidelines for fuels used in our marine diesel engines as well as requirements for monitoring air emission by our facilities in compliance with the requirements of MARPOL 73/78 and ISO 8217:2017.

BGPO-MP-046 Waste Management details requirements to guarantee waste generated by BGPO is properly disposed of to protect local communities while providing information to reduce waste and create awareness amongst employees and other personnel involved in our operations. The procedure ensures discharges to land & sea are compliant with the appropriate; International, National and Industrial conventions, standards, regulations and contractual obligations. Reference sections 5.7.5 Management of Specific Environmental and Social Risks and 7.2 Project Specific & Supporting Plans for project specific details on waste management.

5.7.2 Marine Fauna

BGPO-MP-049 Protected Species Mitigation & Monitoring outlines a set of guidelines for minimizing interference to marine protected species by BGPO marine geophysical surveys. The procedure has been developed to support the Environmental and Sustainability Policy in line with industry best practice. Minimum requirements for the protection of marine mammals and sea turtles shall be implemented on all BGPO operations worldwide. Reference sections 5.7.5 Management of Specific Environmental and Social Risks and 7.2 Project Specific & Supporting Plans for specific details on marine fauna mitigations that will be implemented on the project.

5.7.3 Marine Debris and Ghost Net Initiative

BGPO is one of the biggest contributors to IAGC's Ghost Net Initiative.

Through the IAGC, BGPO participates in the Ghost Net Initiative to clean up fishing gear that has been lost, abandoned or discarded into the marine environment.

When a ghost net is found, personnel have been instructed to inform their supervisor immediately and:

- When safe and agreed with the supervisor, free entangled wildlife and remove the ghost net from the sea.
- Deliver the ghost net to the waste management contractor to be properly disposed of.
- Add figures in **FLAG** (waste management tab- Waste to shore - Fishing gear)

- Take pictures and attach additional information on the type of material and approximate coordinates the gear was recovered in **FLAG**.

More information regarding the IAGC Ghost Net Initiative can be accessed on: https://www.iagc.org/ghost-net-initiative.html





5.7.4 Environmental & Social Impact Assessments

BGPO has an established procedure, BGPO-SP-017 Aspects and Impacts, which details how aspects and impacts are managed in the company. The Project Team is responsible for reviewing the Aspects and Impacts register in **FLAG** to ensure project specific requirements are captured, controlled and mitigated.

At the project level, the Environmental and Sustainability Manager is responsible for:

- Assisting the Project Team to identify aspects for each BGPO location, record these in FLAG for the location, and assess all significant impacts.
- Identify applicable legal and other requirements related to each aspect/impact

5.7.5 Management of Specific Environmental and Social Risks

The following section details the environmental and social risks identified on the project from the Environmental & Social Impact Assessment and how they will be managed:

Project Specific Environmental and Social Risks / Sensitivities
Insert details of Project Specific Environmental and Social Risks / Sensitivities here with how they will be managed.

A more detailed evaluation of these risks and how they will be managed is contained within the Project Risk Assessment in **FLAG** as well as the WASTE MANAGEMENT PLAN, MARINE FAUNA MITIGATION PLAN as well as the additional plans that have been developed. Reference section 7.2 Project Specific & Supporting Plans

5.7.6 Engagement and Communication (Optional)

In addition to the COMMUNICATION PLAN, a project COMMUNITY ENGAGEMENT PLAN, has been developed for the project that details how BGPO identifies and mitigates potential negative social impacts for the project to support positive relationships with the communities.

The Project QHSSE Manager has developed this plan with support from the Project Team, the client's community relations team and the local communities through a variety of communication channels. This process includes where appropriate:

- Maintaining a stakeholder engagement log and commitments register.
- Publishing appropriate contact information for queries, grievances or emergencies.
- Establishing a dispute resolution process before a project commences.

Project Specific Community engagement requirements
Insert details of project specific community engagement requirements here with how it will be managed. Delete if not required

More detailed information on community engagement can be found in the additional COMMUNITY ENGAGEMENT PLAN that has been developed. Reference section 7.2 Project Specific & Supporting Plans

5.8 Security Risk (Optional)

Security risk management in BGPO is based on IOGP 512 Security Management System and UKMTO Best Management Practice 5 (BMP 5). A threat assessment was carried out by a third-party competent organisation prior to the start of the project. The Security Plan adapts as the threats levels changes.

The following section describes the security risks identified on the project from the Security Assessment and how they will be managed:

Project Specific Security Risks
Insert detail of project specific security risks here and how they will be managed. Delete if not required

A more detailed evaluation of these risks and how they will be managed is contained within the Project Risk Assessment in **FLAG** as well as the additional plans that have been developed. Reference section 7.2 Project Specific & Supporting Plans

5.9 Occupational Health and Safety Risk

BGPO-M-02 Occupational Health & Safety Management specifies how occupational health and safety risks and issues are managed within BGP Offshore in accordance with ISO 45001. This manual demonstrates that a specific framework is in place to manage H&S risks within BGPO operations. The following sections describes how H&S risks will be managed on the project.

5.9.1 Vector Borne Disease (Optional)

BGPO manages vector borne diseases in accordance with BGPO-MP-035 Vector Borne Disease Management. The procedure applies to all BGPO operations, employees and sub-contractors, where there is potential for personnel to be infected.

Vector borne disease has been identified as a risk for the project.

Project Specific Vector Borne Disease Management
Insert details of vector borne disease(s) that will be encountered on the project and how these will be managed. Delete if not required

A more detailed evaluation of this risk and how it will be managed is contained within the Project Risk Assessment in **FLAG** as well as the additional plan that have been developed. Reference section 7.2 Project Specific & Supporting Plans.

5.9.2 Communicable Diseases

Awareness training shall be provided to all crew on communicable diseases which may be prevalent in the area of operations or that may emerge during the project. Health awareness updates will be provided prior to and throughout the duration of the project by the crew Health Care Provider.

Optional

Regional requirements state additional requirements for infectious disease prior to entry to the worksite.

The following table details additional screening or vaccination requirements that must be met for the project:

Requirement	Reference
Screening / Vaccinations Required **Delete if not required**	Insert reference, i.e., contract, national requirement etc.

5.9.3 Non-Communicable Diseases

BGPO promotes a healthy lifestyle through implementation of health campaigns on a six (6) monthly basis as well as welfare initiatives as detailed in this plan and in accordance with the BGPO-M-02 Occupational Health & Safety Manual. This effort is promoted by the medical provider on the crew through:

- health awareness training.
- health and hygiene inspections.
- monitoring of health-related trends.
- identification and notification of employees' health concerns that may impact the safety of the vessel or crew.

5.9.4 Fatigue Management

All personnel operating offshore shall observe work and rest hours as detailed in BGPO-MP-043 Fatigue Management which states that offshore personnel shall not work offshore longer than eight (8) weeks for seismic personnel and twelve (12) weeks for marine crew. In accordance with the procedure, crew are provided training during HSE Induction, onboard theme weeks or campaigns on fatigue awareness to identify local causes and to determine effective countermeasures.

Project Specific Fatigue Management Requirements

Insert details of project specific fatigue management requirements here with how they will be managed. Delete if not required

A more detailed evaluation of fatigue risks and how they will be managed is contained within the additional Fatigue Management Plan that has been developed. Reference section 7.2 Project Specific & Supporting Plans

5.9.5 Noise

BGPO-MP-023 Noise Management defines the requirements for the control of noise within all BGPO's workplaces and to detail the control measures and limits in place. The procedure is based on UK- Control of Noise at Work Regulations in regard to permissible exposure limits and is designed to meet the requirements of IMO Code on Noise Levels on Board Ships. The procedure outlines recommendations for noise assessments for all the working location and management's obligation to provide personal hearing protection as necessary based on the defined threshold limits.

5.9.6 Hand & Arm Vibration (HAVS)

BGPO-MP-010 Hand Arm Vibrations (HAVS) Management ensures that all personnel that are required to regularly work with powered hand-tools, or on other work processes that may expose them to risks from vibration, are aware of the risks of developing Hand Arm Vibration Syndrome (HAVS). The procedure requires locations to assess work operations, maintain a register of tools and their vibration levels as well as monitor personnel using these tools to ensure permissible vibration exposure limits are not exceeded.

5.9.7 Personal Protective Equipment

BGPO-MP-026 Personal Protective Equipment Requirements defines the minimum requirements for the use, issuance and recording of PPE used throughout the company. Any health hazards that could be present in the workplace have been suitably assessed and that clear guidance is given on the selection, issuance, training and recording of use of PPE to protect the work force so far as reasonably practicable. The procedure aims to reduce the exposure for injuries and impairments when physical, toxic or chemical hazards are present that cannot be eliminated or reduced to acceptable levels through

process design or mechanical means or through procedures. When such hazards are present, the use of appropriate PPE for the specific hazard is mandatory.

PPE requirements are defined in location work instructions as well as BGPO-F-025 Personal Protective Equipment Matrix.

Project Specific PPE Program Requirements (Optional)

Insert details of project specific PPE requirements here with how they will be managed.

Delete if not required

5.9.8 Portable Appliances

BGPO-MP-053 Portable Appliance Testing is developed to provide guidance to crew on testing and inspecting of on board portable electrical equipment, including portable electrical appliance that are used on the crew. The procedure defines inspection, testing and labelling requirements for appliances used where personnel interface directly with appliances that present a risk of electrocution.

5.9.9 Display Screen Management

BGPO-MP-007 Display Screen Management provides guidance on the assessments and control measures in place for Display Screen Equipment (DSE) in accordance with occupational health regulations. It provides the route to follow for carrying out Display Screen Equipment assessments and provides best practice guidance for Visual Display Unit (VDU) users to ensure that they can use the equipment safely and without risk to their health and welfare. The procedure outlines processes for assessment of workstations and training for personnel.

5.9.10 Lifting Operations

BGPO-MP-019 Mechanical Lifting establishes the minimum standard and criteria for carrying out safe lifting operations within BGPO and ensure compliance with statutory obligations. Application of the procedure ensures that all lifting operations carried out are properly planned, supervised and conducted in a safe manner, by competent personnel according to regulatory requirements and in compliance with Lifting Operations and Lifting Equipment Regulations (LOLER).

5.9.11 Manual Handling

BGPO-MP-017 Manual Handling ensures that BGPO has a process for identifying “Lifting, Handling and Stepping Operations” and has an ergonomic approach to the prevention of injury while carrying out these tasks. The procedure sets out a hierarchy of measures for safety during handling & lifting and stepping operations though required task risk assessments when hazardous handling is unavoidable, addressing: the load to be lifted with recommended limits,

individual capability, ergonomics of the task and the environment that task is conducted in.

5.9.12 Lone Work

BGPO-MP-015 Lone Working gives a clear understanding of the requirements for personnel of BGPO and its subcontractors who are required to undertake any tasks that may involve them to work in a location as a lone worker due to a greater risk of harm in this type of work. The procedure requires that all tasks that require employees or subcontractors to work as "lone workers" shall be subject to a Task Risk Assessment.

5.9.13 Journey Management

BGPO-MP-021 Journey Management sets out expectations how journeys shall be managed in such context to ensure that travel risks to personnel, including social, political, security, safety and health risks are considered and effectively identified and managed. The procedure is applicable to all Routine and Non-routine travel that is carried out on the behalf of the Company employees in the course of its operations and covers land vehicle standards, inspection, travel by helicopter and support boats.

Project Specific Journey Management Requirements (Optional)

Insert details of project specific JM requirements here with how they will be managed.

Delete if not required

5.9.14 Driving

The BGPO-MP-051 Driving Standard has been developed in line with IOGP report 365 Land Transportation Safety Recommended Practice. The procedure covers driver competency, vehicle standards and monitoring requirements as well as general defensive driving guidance and rules such as prohibiting the use of cellular phones while driving.

Project Specific Driving Requirements (Optional)

Insert details of project specific driving requirements here with how they will be managed.

Delete if not required

5.9.15 Work Boat Operations

BGPO-MP-030 Workboat Management gives a clear understanding of BGPO's requirements for the safe manning, inspection, maintenance and general handling of workboats in our operations. The procedure covers requirements for inspections, maintenance, repair, recovery and replacement of in-sea seismic equipment, transportation of equipment and crew, as well as other operations conducted such as search and rescue operations in accordance with

IAGC Guidelines for Marine Small Boat Operations and IOGP 355 Watercraft & Water in Geophysical Operations.

Project Specific Workboat Requirements (Optional)

Insert details of project specific workboat requirements here with how they will be managed.

Delete if not required

5.9.16 Welfare

All vessels shall be inspected to ensure that adequate welfare facilities are available to all crew as defined in MLC 2006 and IOGP 432 (2.6.2 - Lifestyle and health promotion). This includes but is not limited to access to recreational equipment (appropriate to the vessel size), access to entertainment equipment, exercise and sporting facilities, religious facilities if appropriate, and access to internet or telephone facilities. Crews will also maintain a health promotion campaign, which is appropriate to the level of risk.

5.9.17 Drugs and Alcohol

Management recognizes that the adverse effects of drugs and alcohol may result in uncontrolled behaviours. Employees that work under the influence of drugs and/or alcohol are a risk to themselves and their co-workers. All personnel shall be committed to a workplace free of hazards and comply with a "ZERO" tolerance for breach of this policy.

The HCP and other designated competent crew members shall be trained in the use of the on-board Alcohol and Drug testing equipment as detailed in BGPO-MP-020-Drug and Alcohol Testing. The following screening shall take place: Pre-employment, Random, Unannounced Group, Reasonable Suspicion and Post Incident.

Project Specific Drug & Alcohol Testing Requirements (Optional)

Insert details of project specific drug and alcohol requirements here

Delete if not required

5.9.18 Fitness for Work

BGPO-MP-042 Medical Fitness Requirement details the standard for medical fitness for BGPO employees. BGPO-M-01 Human Resources Management states that an OGUK Medical or equivalent is required every two years for all crew and every 6 Months for catering staff.

Project Specific Fitness for Work Requirements (Optional)

Insert details of project specific fitness for requirements here

Delete if not required

5.9.19 Hazardous Substances

BGPO-MP-011 Hazardous Substances Management establishes a company standard format for assessing the risk to health of Hazardous Substances used at BGPO sites. The procedure ensures that the company complies with regulatory hazardous substance assessment requirements and provides clear instructions and guidance for management and all other personnel to follow. The procedure details the requirement for Area Assessments which involves the identification of tasks within a work area that may involve the use of/exposure to hazardous substances as well as a screening Task Hazardous Substance Assessment (THSA) based around each task which may involve a single or a number of chemicals. The THSA also serves as a chemical control document and the main means by which control measures, instructions and information are communicated to chemical/substance users in accordance with the product's Safety Data Sheet (SDS). Area Assessments and Task Hazardous Substance Assessment forms are completed by the department heads and recorded in **FLAG** under the Location's Risk Assessment tab (Hazardous Substances).

5.9.20 Last-Minute Risk Assessments

The Last-Minute Risk Assessments (LMRA) process as detailed in BGPO-MP-033 Task Risk Assessment provides workers with a mental five (5) step self-assessment process to identify and eliminate hazards. Cards are provided to workers to that can be used as a reminder while conducting a LMRA. This process consists of workers asking themselves key questions about the task or job they are about to perform and periodically during the execution of that task. Personnel should take a few minutes to assess the immediate task ahead, including the work area and surroundings, for items, other personnel, etc. that could present or introduce hazards to the task.

The steps are;

- Stop
- Think about the risks
- Look around
- Assess the risk
- Take action to control the risks
- Start Work



5.9.21 Behavioural Based Safety

Behavioural based training is provided to all BGPO personnel as defined in BGPO-MP-36 Behavior Based Safety. BGPO adopts a multi strategy approach due to the diversity of its work force and the multiple regions in which we operate. The aim is to achieve "Goal Zero" through developing a proactive safety culture and communicating to the crew that safety is the core of our everyday activities from planning to completion of tasks.

5.9.22 Time Out for Safety

A "Time Out for Safety" (TOFS) process will be applied on the crew and used to support the initiatives as stated above. This process incorporates five basic steps in how interventions are to be conducted. The five steps are: Observing, Approaching, Discussion, Agreement and Action. Reference BGPO-MP-36 Behaviour Based Safety for more detail on this intervention process.

5.9.23 Stop Work Policy

The Stop Work Policy states management commitment in providing a safe workplace for all employees and personnel working on behalf of BGPO and that:

"Employees are empowered and have a duty to stop to work without if there is cause for concern"

5.9.24 Life Saving Rules

The BGP "Life Saving Rules" shall be followed during this project and will be displayed on all locations. Copies can be found in **FLAG** under Document Management\Policies

5.9.25 Why Me Why Not

"Why Me Why Not" is an ongoing safety campaign used in BGPO to remind personnel of the consequences of not following the "Life Saving Rules". Posters for this campaign are supplied to the crew to post in conspicuous areas.

5.9.26 Safety Observation Program

The Safety Observation Program (SOP) is used to allow personnel to submit (anonymously if desired), any unsafe acts or conditions identified.

The system is also used to identify and commend good safety behaviour and practice. SOP is an open, honest, involving, proactive system of communication to assist in the elimination of dangerous or potentially dangerous situations and hazards, as further defined in BGPO-MP-038 Safety Observation Programme.

5.9.27 Incentive Program

The crew will operate an incentive program during the project as detailed in BGPO-MP-036 Behavior Based Safety. This system awards crewmembers who participate in HSSE activities and is designed to promote participation and awareness of proactive HSSE initiatives, like observations and interventions. Understanding and respecting cultural differences is paramount on all BGPO locations.

Project Specific Incentive Program Requirements (Optional)

Insert details of project specific incentive program requirements here with how they will be managed.

Delete if not required

5.9.28 Personal Performance Appraisal

Performance management within BGPO is aimed at planning, managing and improving employee performance. The BGPO employee performance and appraisal process is defined in BGPO-SP-006 Personal Performance Appraisal. This procedure details how employees and subcontracted personnel are evaluated annually and provided with objectives and incentive to improve their performance overall in their carrier with BGPO.

5.9.29 Disciplinary Action

Discipline in BGPO will be in accordance with BGPO-SP-005 Disciplinary Action which details what constitutes misconduct and how this is managed in the company with BGPO employees. This procedure defines the steps taken when employees fail to comply with safety rules and other requirements specified in BGPO-SP-002 Code of Conduct. Disciplinary action for subcontractor personnel will be managed under their own procedures in accordance with the interface documents.

6.0 ASSET DESIGN AND INTEGRITY

The QHSSE Department has responsibility for supporting the Project Team in vetting and approval of vessels brought to the project. The audit / inspection processes detailed in the following sections ensures vessels meet required standards and BGPO requirements. Additionally, BGPO has developed the BGPO-MP-057 Vessel Reactivation Management procedure to guide the project marine team in evaluating and reactivating “cold stacked” vessels when required.

6.1 Vessel Management Companies

All vessel management companies shall undergo an audit and where appropriate prior to the charter of any vessel as defined within the BGPO-MP-024 Marine Contractor Management to ensure they meet industry requirements. BGPO uses a process similar in design to the OVMSA to evaluate a vessel management company’s status for prequalification. Vessel management companies must achieve at least Level 1 under the system to qualify.

6.2 Vessel Audits and Inspections

All vessels within the project fleet shall have completed an OVID or IMCA inspection within the 12-month period prior to the expected end date of the project in accordance with BGPO-MP-024 Marine Contractor Management. BGPO also incorporates the use of BGPO-F-042 Marine Contractor Vessel Supplementary HSSE Inspection Checklist to cover industry related requirements as part of this inspection process.

Client and other stakeholder inspections may also be required according to the contract or regional requirements. Reference section 8.1.2 Audits and 8.1.3 Inspections for specific details on the audits and inspections that will be completed for the project.

6.3 Planned Maintenance

To ensure safety critical assets are designed constructed or selected to be suitable for their task or purpose on the project; they shall be operated, inspected and maintained to achieve and sustain robust standards of integrity and performance in accordance with BGPO-MP-008 Equipment & Materials Management and BGPO-MP-027 Preventative Maintenance Management.

6.3.1 Safety Critical Equipment

Safety Critical Equipment (SCE) is defined as components and functions subject to class or statutory survey that, if not maintained, may result in hazardous situations or incidents (or in the ship's inability to meet contractual obligations.

Vessels maintain their own specific lists in their Safety Management Systems for specific equipment that must be inspected and maintained in accordance with class and the vessel's specific Planned Maintenance & Inspection Process. This includes but is not limited to verification of:

- Static equipment integrity.
- Rotating equipment/machinery integrity.
- Electrical equipment integrity.
- Instrument and control equipment integrity.
- Structural integrity.
- Life-saving appliances, evacuation, and rescue system integrity.

6.3.2 Seismic Equipment Planned Maintenance

The seismic crew Party Chief is responsible for completing an inventory of all seismic related equipment for, machinery and plant that require regular preventative maintenance. This equipment and systems shall be available in the vessel's seismic planned maintenance system (PMS).

All equipment operated for the sole use of seismic operations shall be managed within the PMS. Examples of seismic equipment that are maintained in the system are:

Seismic Equipment Group	Details of Equipment
Streamer & source deployment & recovery systems	**Reel, trollies, guards and emergency shut-offs, Back deck winches, fairleads, tow points, hoists, pad eyes, I-beams**
Node & source deployment & recovery systems	Conveyors, lifting hoists. trollies, guards and automated stop sensors, LCE, charging systems. Back deck winches, hoists, trollies, pad eyes, I-beams
Source High Pressure Systems	Seismic Air Compressors, manifolds, pressure relieve valves, regulators,

	accumulators and piping.
Work boats	Workboat and davits
Pinging systems	Pinger poles and related deployment / recovery systems
Workshop equipment	Welding sets & power tools, grinders, compressed gas cylinders and gas cutting equipment)
Safety Equipment	Alarms & beacons, first aid and eyewash stations, Safety harnesses and back deck railings / safety chains, LOTO equipment & MOB rafts

6.3.3 Planned Maintenance Schedule

Each location shall have their own auditable planned maintenance schedule which includes seismic and marine related critical & essential equipment.

Masters should pre-warn of maintenance activities which have safety or environmental potential impact during operations and gain approval from the Party Chief prior to such work as detailed in the BGPO-MP-055 Support Vessel Manual.

6.3.4 Project Specific Planned Maintenance Requirements (Optional)

Insert details of project specific planned maintenance requirements here.

Delete if not required

6.4 Human Resources

BGPO-M-01 Human Resources Management details the strategy followed by BGPO in managing its greatest asset, “its people”, in accordance with ISO 30405:2016 and ISO 30409:2016. The BGPO-SP-004 Recruitment procedure in conjunction with the BGPO-SP-003 Training & Competency and BGPO-SP-006 Personal Performance Appraisal procedures ensures our organization recruits and maintains a pool of qualified human resources aligned with BGPO and client expectations.

6.4.1 Certification, Qualification and Experience

Vessel Level - It is the responsibility of the Master of each vessel to ensure that all on-signing maritime crew have the correct and valid certification for their position and that all non-maritime personnel on-board their vessel have the correct and valid survival and medical certifications.

Project Level - It is the responsibility of the Project Manager to ensure that all personnel holding a position that is deemed HSSE critical have the appropriate experience levels deemed required for the project.

6.4.2 Project Specific Human Resource Requirements (Optional)

Insert details of project specific human resource requirements here.

Delete if not required

7.0 PLANS AND PROCEDURES

7.1 Project Specific Work Instructions (Optional)

As stated in section 2.1.5 Work Instructions; Each vessel has its own related Work Instructions (WI) supported by a Task Risk Assessments (TRA) applicable to the location.

Project specific work instructions that have been developed are listed in the table below with reference to the applicable department that they relate to:

Work Instruction	Applicable Department
Insert project specific work instructions developed. Delete section if not required	

7.2 Project Specific & Supporting Plans

The following project specific plans detailed in the sections below are standard for each project that BGPO conducts. Specific project needs may require supporting plans which will be loaded in **FLAG** as an attachment to one of the main project plans.

7.2.1 Waste Management Plan

A Waste Management Plan has been developed for the project based on BGPO-MP-046 Waste Management Plan, the Environmental Impact Assessment and the National Regulatory Authorities which applies to all locations within the crew. This plan covers the following areas:

- Onboard Waste Management (solid waste, effluents and emissions)
- Transportation of waste to shore
- Onshore Waste Management

The purpose of this document is to enable all stakeholders within the project to:

- Identify the roles, responsibilities and authority of key personnel within the plan.
- Understand client and legal requirements related to waste management.
- Understand the types of treatment done with each type of waste onboard and onshore.
- Understand mandatory records and data keeping requirements.

7.2.2 Marine Fauna Mitigation Plan

The Marine Fauna Mitigation Plan shall be compiled based on local or client regulation when more stringent. In the absence of applicable guidelines, BGP Offshore's procedure BGPO-MP-013 Protect Species Mitigation Monitoring shall be used as reference.

The plan is designed to enable all stakeholders within the project to be able to:

- Identify the roles, responsibilities and authority of key personnel.
- Identify the resources available to support the plan.
- Understand client and local requirements.
- Understand the procedure to be followed when marine fauna are sighted.

Based on the requirements from the Project Environmental Impact Assessment and local regulations, BGPO has developed additional project documentation to mitigate environmental risks in the project area as detailed below:

Required Additional Plans	Legal / Contractual Reference
Insert plan name if required – i.e. Coral Reef Protection Plan etc - Delete if not required	Insert legal or contractual requirements (reference to why the plan is required)

7.2.3 Fatigue Management Plan (Optional)

A Fatigue Management Plan has been compiled based on local or client regulation when more stringent then the requirements specified in BGP Offshore's procedure BGPO-MP-043 Fatigue Management.

Required Additional Plan	Legal / Contractual Reference
Insert plan name if required – else delete section Delete if not required	Insert legal or contractual requirements (reference to why the plan is required)

7.2.4 Security Plan (Optional)

The project Security Plan sets out the measures and procedures that the crew will implement to prevent acts of unlawful interference and meet their obligations under local regulatory acts or client requirements. The plan provides a uniformed process for the management of the security threats to BGPO operations and further supports the vessel specific 'Ships Security Plan' (SSP).

The purpose of this document is to enable all stakeholders within the project to be able to:

- Identify the roles, responsibilities and authority of key personnel within the plan.
- Identify the resources available to support the plan.
- Identify the project specific support assets available.

- Identify and activate the appropriate assets required to bring an incident to a successful conclusion.
- Effectively implement the training and competency required to support the plan.

A Project Security Assessment has been conducted based on the security risk rating report for the project area. This was determined by the risk ranking level assigned through CNPC distributed to BGPO through the weekly security risk report. CNPC requires BGPO to prepare formal risk evaluation and a control plan for any high security risk locations.

The following additional supporting plans will be developed as detailed in the table below:

Required Additional Plan	Legal / Contractual Reference
Insert plan name if required – else delete section - Delete if not required	Insert legal or contractual requirements (reference to why the plan is required)

7.2.5 Emergency Response Plan

The Emergency Response Plan (ERP) is compiled to support each locations' response plans in accordance with their specific safety management system or location specific emergency plan. The ERP supports location / vessel specific plans and links them to the national and client provided support assets as well as the BGPO Crisis Management Team as outlined in BGPO-SP-018 Crisis Management, in the event that an emergency escalates into a crisis.

The purpose of this document is to enable all stakeholders within the project to be able to react appropriately to an incident, by:

- Identifying the roles, responsibilities and authority of key personnel in an emergency.
- Identifying the resources available to the Master in the discharge of their duties.
- Identifying the structure within the crew and any particular host nation or client support available in order to manage an emergency.
- Defining the method of contacting medical topside support.
- Defining the method of initiating an emergency response effort effectively.

This plan shall be read in conjunction with the following documents:

- Medical Emergency Response Plan
- Location Specific Contingency Plans

7.2.6 Medical Emergency Response Plan

The aim of this document is to enable all stakeholders within the project to be able to react appropriately to a medical incident. The plan supports location / vessel specific plans and links them to the national and client provided support assets as well as the BGPO Crisis Management Team by:

- Identifying the roles, responsibilities and authority of key personnel within the Medical Emergency Response Plan (MERP).
- Detailing the method to contact Topside Support.
- Defining the priority of medical treatment required for a patient based on the severity of injury or illness.
- Initiating a medical evacuation effectively.
- Provide the means in determining when to escalate a medical incident.
- Defining the management process of triage for the prioritisation for the treatment and evacuation of patients.
- Identifying and activating the appropriate level of medical assets required to bring a medical incident to a successful conclusion.
- Identifying the resources available to support a medical incident within the project fleet and third-party assets.
- Identifying the medical evacuation chain.
- Identifying the project crew's ability to receive helicopters and/or small boats to affect a medevac transfer.
- Tracking the progress and/or location of a patient(s) and/or escort throughout the medical evacuation chain.
- Effectively enacting the training and competency required to support the MERP.

8.0 EXECUTION OF ACTIVITIES - PROJECT PHASES AND ACTIVITIES

BGPO manages each project through a seven (7) phase support process. This model is used by all departments in BGPO and is structured in the following phase groups similar to the model defined in IOGP 423:



The QHSSE processes that support the project are further defined BGPO-MP-018 Marine Seismic Operations.

The management of HSSE in BGPO is divided into four phases of the project. These are: Pre-mobilisation, Mobilisation, Execution & De-mobilisation. All activities listed in the following

sections will be recorded in **FLAG** with appropriate action points raised and verifications made where required:

8.1 Phase 1 – Pre-mobilisation

The following actions will take place during the premobilisation phase:

8.1.1 Meetings

The following pre-mobilization meetings will take place. The project management team shall record meeting minutes and ensure all action points raised through these meetings identified with a high and medium priority are closed out prior to the beginning of the survey:

Type	Reference	Attendees
Subcontractor contract & interface clarification meeting	BGPO-SP-007 Subcontractor Management	BGPO Project Management Team Subcontractor Management & Subcontractor Key Personnel
Project Pre-Survey Meeting or Workshop	BGPO-SP-020 Meeting Procedure	BGPO Project Management Team Client Representative, Specialists
Project Kick-off Meeting	BGPO-SP-020 Meeting Procedure	BGPO Project Management Team Client and JV Project Management Teams, key subcontractors and suppliers
Insert rows / delete as required		

8.1.2 Audits / Inspections

The following HSSE Audits will take place, all action points as identified as high and medium priority are to be closed out prior to the beginning of the survey:

Type	Reference	Asset / Details
OVMSA – Long term contractors	BGPO-MP-024 Marine Contractor Management	Vessel management companies. Conducted by QHSSE Department resource

OVID / IMCA **BGPO-F-042 Marine Contractor Vessel Supplementary HSSE Inspection Checklist**	BGPO-MP-024 Marine Contractor Management	Project Vessels Conducted by QHSSE Department resource
Waste facilities	BGPM-MP-046 Waste Management Plan	Waste Management Contractor Conducted by QHSSE Department resource
Provisions	BGPO-SP-007 Subcontractor Management	Local provision supplier (Food, Fuel, Water etc) Conducted by Project Team resource
Crew Transportation Provider	BGPO-SP-007 Subcontractor Management / BGPO-MP-051 Driving Standard	Local transport provider (vehicles & busses) Conducted by QHSSE Department resource
Local medical facility	Medical Provider Process	Local medical facility review through BGPO medical provider
Project Audit	BGPO-SP-013 Auditing	Project audit for the phase to ensure all required actions have been taken Conducted by QHSSE Department resource
Insert rows / delete as required		

8.1.3 Review

Type	Reference	Area
Project Plans	BGPO-MP-018 Marine Seismic Operations	All project Plans developed for the project Conducted by Project Team
Project Risks	BGPO-MP-028 Project	**FLAG** Project Risks

	Risk Assessment	Verification that Project Risk controls and mitigations are agreed with client & implemented Conducted by Project Team
Insert rows / delete as required		

8.1.4 Project Specific Training

Type	Required to Attend
Insert project specific training requirements.	Insert who needs to attend

8.1.5 Personnel Certification

A review of the following human resources documentation will take place by BGPO Project Team's HR Department:

Type	Human Resources
Competency Assessment	**Maritime:** Master Chief Officer Chief Engineer
	Insert additional marine crew here if required
	Seismic: Party Chief Chief Observer Chief Navigator Chief Mechanic Chief QC Geophysicist QHSSE Advisor Others:

	Insert others here if required i.e. Health Care Professionals Maritime Security Liaison Officers
Task Specific Competency	Crane Operators Banksmen Slinger Helicopter Landing Officer Helideck Assistant Small boat coxswain Small boat crew
	Insert / delete as required ROV operator Magnetometer operator
Offshore Survival Certificates	Review of all crew offshore safety training certificates
Offshore Medical	Review of all offshore fitness to work certificates
Insert rows / delete as required	

8.2 Phase 2 - Mobilisation

The following actions will take place during the mobilisation phase:

8.2.1 Meetings

Type	Reference	Frequency
Offshore-Daily Operational Meeting	BGPO-SP-020 Meeting Procedure	Daily
Onshore and Offshore Joint Project Weekly Meeting	BGPO-SP-020 Meeting Procedure	Weekly
Pre-task Toolbox Meetings	BGPO-SP-020 Meeting Procedure	Pre-task
Insert rows / delete as required		

8.2.2 Audits / Inspections

Type	Reference	Frequency

Water Testing:	Vessel SMS	Monthly: Verify water testing has been carried out on all locations Conducted by Project Team
Location (vessel) medical facilities	HCP inspection process	Weekly: HCP inspection of medical facilities on vessel
Preventative Maintenance	BGPO-MP-027 Preventative Maintenance Management	As per PMS schedule
Project Audit	BGPO-SP-013 Auditing	TBA Conducted by QHSSE Department
Insert rows / delete as required		

8.2.3 Review

Type	Reference	Area
Project Risks	BGPO-MP-028 Project Risk Assessment	Project risks registered in **FLAG**. Verification that project risk controls and mitigations are implemented on all locations Conducted by Project Team
Location Risks	BGPO-MP-014 Location Risk Assessment	All new project locations Verify Location Risks register controls / mitigations, tasks and competent personnel are identified and added to FLAG Conducted by Location

		head
Aspects and Impacts	BGPO-SP-017 Aspects and Impacts	All new project locations Verify aspects and impacts loaded in FLAG for each new location Conducted by Location head
Fitness for Work	BGPO-MP-042 Medical Fitness Requirement	Medical Fitness evaluated by HR department
Fatigue Management Arrangements	BGPO-MP-043 Fatigue Management	Crew Change Plans developed in PEP / Logistics Plan to ensure Fatigue Management guidelines are met Conducted by Project Team
Minimum Training requirements as defined in the BGPO Training Matrix	BGPO-SP-003 Training Competency	STCW, HUET and minimum training requirements verified by Job Position per Training Matrix. Evaluated by HR department
Personnel Certifications & Licensing Requirements	BGPO-SP-003 Training Competency STCW	All crewmembers will have the required certifications required for their position. Evaluated by HR department & Subcontractor marine departments
Manual of Permitted Operations	BGPO-MP-050 Manual of Permitted Operation	Verify that activities are adequately controlled under the limits of the procedure for vessels on the project. Conducted by Location head

Remedial actions	**FLAG**	Remedial actions in **FLAG** closed for authorisation to begin execution phase Conducted by Location head
Insert rows / delete as required		

8.2.4 Training

Type	Audience	Frequency
Project Induction	All Crew	Mobilisation and for new crew joining
Vessel Induction	Vessel and Department Specific	Mobilisation and for new crew joining
BMS & FLAG	All new crew and clients	Required for new personnel working on seismic vessels
Project Risks	All Crew	Mobilisation (included in Project Induction)
Aspects and impacts register	Applicable crew members	Mobilisation (included in Project Induction)
Location Risks	Applicable crew members	Mobilisation (included in BMS / Flag Training)
Insert rows / delete as required		

8.2.5 Drills & Tests

Type	Reference	Frequency
Medevac Communication	Communication test	Insert frequency here
Insert rows / delete as required.		

An evaluation of all drills will be conducted on what went well and what needs improvement. Evaluations to be recorded in **FLAG** under Audit, Inspection & Review – Review – Drill Review

8.3 Phase 3 - Execution

The following actions will take place during the execution phase:

8.3.1 Meetings

Type	Reference	Frequency
Offshore-Daily Operational Meeting	BGPO-SP-020 Meeting Procedure	Daily
Offshore-Weekly Department Meeting	BGPO-SP-020 Meeting Procedure	Weekly
Onshore and Offshore Joint Project Weekly Meeting	BGPO-SP-020 Meeting Procedure	Weekly
Offshore-Whole Crew Meeting	BGPO-SP-020 Meeting Procedure	Bi-weekly
Offshore-Monthly Crew HSSE Committee Meeting	BGPO-SP-020 Meeting Procedure	Monthly
Toolbox meeting	BGPO-SP-020 Meeting Procedure	Prior to any task
Insert rows / delete as required		

8.3.2 Audits / Inspections

Type	Reference Document	Frequency
Operational Process	BGPO-SP-013 Auditing section 6.1	Reference BGPO Audit Schedule in **FLAG**
Housekeeping / Health and Hygiene	BGPO-MP-012 Housekeeping	Weekly
PMS inspections	BGPO-MP-027 Preventative Maintenance Management	As per PMS
Management Visit	BGPO-SP-013 Auditing	Reference schedule
Permit to work audits	BGPO-MP-025 Permit to Work	As per schedule defined in procedure. All CSE, 20% Hot work & 10% Cold work
Project Audit	BGPO-SP-013 Auditing	TBA Conducted by QHSSE

		Department
Insert rows / delete as required		

8.3.3 Monitoring

Type	Reference Document	Frequency
Active Monitoring	BGPO-MP-001 Active Monitoring	As per audit schedule on seismic vessels only
Insert rows / delete as required		

8.3.4 Review

Type	Area	Frequency
Project Risks	**FLAG** Project Risks	Each 6 months or when there is a significant change
Remedial Action Review	All crew locations	Weekly in Offshore-Weekly Department Meeting Monthly in Offshore HSSE committee meeting
Location Objectives	All crew locations	Monthly in Offshore-Monthly Crew HSSE Committee Meeting
Short Service Employee review	BGPO-MP-029 Short Service Employee	Track all SSE employees at all times. Review SSE ratios and crew assignments on each vessel to ensure operational criteria is met. Assigned mentor register Evaluated by Location head
Operational Work Instructions and TRAs	All crew locations with seismic WI & TRAs	According to schedule in **FLAG** document control

Client / BGPO Joint review	Project - Objectives	Weekly in Onshore and Offshore Joint Project Weekly Meeting
Insert rows as required		

8.3.5 Training

Type	Audience	Frequency
BMS & FLAG Refresher	All Crew	As required
Medical First Aid	Medical Team (squad)	As determined by HCP
First Aid Training (Including AED)	All Crew onboard Seismic Vessels	As determined by HCP
Fatigue Management	All Crew	As determined by Party Chief & QHSSE Advisor
HSSE Campaign Topic	All Crew	As defined by the campaign
Insert rows / delete as required		

8.3.6 Drills

Type	Reference Document	Frequency
Maritime Obligations	SOLAS, MARPOL and ISPS	As per vessel Flag State requirements
Medevac Communication	Contract or local regulations	Insert frequency as per contract or project requirements
Insert rows / delete as required		

8.4 Phase 4 - Demobilisation

The following actions will take place during the demobilization phase as defined in the Execution Plan:

- Review de-mobilization plan
- Project Risk Review - Update risk profile and update register to encompass de-mobilisation activities.
- Detail verification / monitoring activities for demobilisation.
- Renew training / awareness for end of project if required

- Review Management of Change & Lessons learned from Mobilization
- Site restoration and re-instatement if required
- Ensure marine mammal mitigation and waste management and disposal records are compiled
- Closing out litigation and grievances if any
- Make required government notifications / notice to mariners that work has ceased. (May be a client related task)

9.0 MONITORING, REPORTING AND LEARNING

9.1 Monitoring Performance

Location Key Performance Indicators that have been entered in **FLAG** as detailed in section 2.5 Location Objectives will be monitored during the Offshore-Monthly Crew HSSE Committee Meeting on the Location where the team monitors progress in meeting KPIs set for the Location. The Location Party Chief is responsible for updating progress that has been made in meeting these in **FLAG**.

Project Key Performance Indicators as detailed in section 2.6 Project Objectives will be monitored by the BGPO and Client Project Teams during the Onshore and Offshore Joint Project Weekly Meeting to verify KPIs set for the project are being tracked met.

9.2 Active Monitoring

Safety critical tasks refer to the top ten location hazardous tasks for each location. The process requires a full review of each activity in the top 10 to ensure controls and mitigations are in place as defined in the locations hazard register in **FLAG**. The QHSSE Advisor at each location helps to facilitate the process at the frequency set in the BGPO Audit Schedule for the location. More detail on the Active Monitoring process can be found in the BGPO-MP-001 Active Monitoring procedure.

9.3 Incident Reporting & Investigation

All incidents will be reported verbally to the Party Chief, Master, QHSSE Advisor and then on to the Field Client Representative through the Party Chief immediately as part of the 'One Team' approach.

Location Line Management is responsible for completing the initial incident report in **FLAG** which will generate email notifications and a work item to the Location Head (Party Chief). This ***initial notification*** report shall be based entirely on the facts and be sent to the client in accordance with the client agreed timeline or what is referenced in BGPO-SP-008 Incident Management procedure. Once the PC has approved the initial notification in **FLAG**, an email notification is sent to Project Manager/Vessel Manager, HSSE Offshore Team Manager, Director Marine Contractor, Director HSSE, Director Maritime (if it is a marine related incident), VP operation and VP QHSSE.

If the severity level is level 3 or greater an immediate telephone call to the VP Operations or Director of Operations should be made followed by completing the initial

report in **FLAG**. After initial notifications are made, the incident investigation process shall be initiated in accordance with the BGPO-SP-008 Incident Management procedure. Clients shall always be invited to join in all BGPO incident investigations.

Project specific reporting, reporting timeline and investigation requirements are detailed below:

9.4 Project Lessons Learned

Lessons learned identified through incident investigations, meetings, audits, non-conformance, project reviews and other forums such as distributed circulars, industry sharing, and alerts are logged and maintained within **FLAG.** Through **FLAG,** lessens can be distributed via broadcasts and where appropriate SMART (Specific, Measurable, Achievable, Realistic and Time-bound) actions may be assigned as further defined in BGPO-SP-012 Performance Management. Lessons learned may be entered in **FLAG** at three separate levels:

1. Company Level
2. Project Level
3. Location Level

10.0 ASSURANCE, REVIEW AND IMPROVEMENT

10.1 Auditing

The audit process in BGPO is defined in BGPO-SP-013 Auditing. The following audits are conducted in accordance with the procedure:

BMS Internal Audits

These audits make sure BGPO's BMS runs efficiently and are conduct internally focusing on system and management procedures. The audit frequency is determined by management reviews and scheduled in the BGPO Audit Schedule in **FLAG**.

Project Audits

Project audits helps the Project Team to get an adequate review of the project in order to identify what elements of the project were managed successfully and what were mismanaged. They also identify what can be improved in the future. The project audit is risk-based and will include client requirements.

Operational Process Audits

Operational Process Audits allows the Vessel Management flexibility to focus on what processes may not have been covered by Active Monitoring or which may need special attention. The audit topics include but is not limited to:

- Department Work Instructions & Department Task Risk Assessments

Sub-Contractor and Supplier Audits

External providers have a great influence on the success of BGPO. There are two procedures to support these types of audits, BGPO-SP-007 Subcontractor Management and BGPO-MP-024 Marine Contractor Management.

Management Visits

Management visits are conducted by senior management in BGPO in accordance with BGPO-SP-019 Management Visit. This process involves a senior manager visiting the location and performing an audit at that location. They are used to evaluate the status and continued suitability of the BGPO BMS and the safety culture at each worksite.

10.2 Project Self-Verification

BGPO utilizes a Project Audit process for self-verification in accordance with IOGP 423 - Working Together in a Contract Environment. This process includes specific actions that will be taken through the various project phases to ensure HSSE assurance measures have been implemented as planned. The BGPO Quality Department is responsible for this process through each phase of the project. Audit findings, either Non-Conformance or Ideas & Opportunities are entered into the Project level Audit tab with assigned workflows for corrective action.

Additional project specific self-verification processes required by contract are detailed below:

Project specific self-verification process	Reference
Insert details of additional project specific self-verification process if any required by contract. If none write "N/A"	

10.3 Client HSSE Assurance Process (Optional)

The following details the client's HSSE Assurance Process that will be used on the project:

Client HSSE Assurance Process	Reference
Insert details of client HSSE Assurance Process if any. i.e. RMV- Risk Management verification, audit / inspection process etc. If none delete	

10.4 Review

Corporate, Location and Project objectives entered in **FLAG** are set with appropriate monitoring and measuring arrangements to ensure that progress towards these objectives are being met as part of a Plan, Do, Check, Act approach. Performance monitoring will be reported/recorded in **FLAG**, reviewed by the process owners, and later reviewed by senior management in accordance with BGPO-SP-012 Performance Management.

10.4.1 Management Review

In BGPO there is an ongoing management review process where senior management evaluates the efficacy of the BMS and outlines direction for continuous improvement. During the review, senior management will review the organisation's past performance and determine the areas they want to prioritise for performance improvement.

10.4.2 Project Reviews

Project reviews are carried out by the BGPO and Client Project Management Team and where possible the Party Chief and Master(s). These reviews should cover the project objectives as set in **FLAG** and will allow the Project Teams to:

- Assess and learn from the information gathered on the project.
- Consider what is and what is not working on the project.
- Reflect on how the project is progressing towards its intended outcomes; and
- To implement any changes which might be needed to ensure that the outcomes for the end of project will be achieved.

Project Specific Review Process (Optional)	**Reference**
Insert details of any project specific review process required by the client, contract etc. **Delete if not required**	Insert contract reference etc

10.4.3 Location Reviews

Performance reviews are conducted at the location level to track progress through the locations key performance indicators on objectives set. The Party Chief for the crew is responsible for conducting these reviews and updating progress toward objectives in **FLAG** for each location.

10.5 Improvement

10.5.1 Non-Conformity

The BGPO-SP-014 Management of Non-Conformance procedure details the process by which BGPO manages non-compliance within the BMS and related activities. The QHSSE department is responsible for receiving and retaining the findings raised from locations and determines which process owner should be assigned corrective action. Any employee, subcontractor or client of BGPO can raise a non-conformance. It is company policy to encourage staff to report all issues considered as non-compliance they see in the course of their activities.

10.5.2 Ideas and Opportunities

A key element in the improvement process in BGPO is called Ideas and Opportunities. This programme as detailed in BGPO-SP-015 Ideas and

Opportunities allows for all personnel to input suggestions and or their ideas to improve any aspect of with BGPO operations and the BMS. Personnel may input their I&O directly into **FLAG** which is then allocated to the appropriate manager to consider and address. The process is also tied the incentive programme to encourage personnel to bring their ideas forward.

11.0 APPENDIX

11.1 Attachments

The following attachments have been added under this plan for the project in **FLAG**:

FLAG ID Reference	Name of Attachment

11.2 Glossary

Name	Definition
A	
Acute	A measure of the time, sudden or immediate effect
AED	Automatic Electric Defibrillator
ALARP	As Low as Reasonably Practical
B	
BGPO	BGP Offshore
BMS	Business Management System
BWMP	Ballast Water Management Plan
C	
CSO	Company Security Officer

D	
DOC	Document of Compliance
DPA	Designated Person Ashore
E	
ERT	Emergency Response Team
EIA	Environmental Impact Assessment
ERP	Emergency Response Plan
F	
FLAG	BGPOs electronic database. (File Locally Access Globally)
FIFI	Fire Fighting Appliances
G	
GP	General Practitioner
H	
HCP	Health care professional
HSEMP	Health, Safety and Environmental Management Plan
HACCP	Hazard Assessment Critical Control Point
HSSE	Health, Safety, Security, Environment
HUET	Helicopter Underwater Escape Training
I	
IAGC	International Association of Geophysical Contractors
ISOS	International SOS (Provision of medical care and staff)
IMO	International Maritime Organisation
IMCA	International Marine Contractors Association
IO	Ideas & Opportunities (in FLAG)
IOGP	International Association of Oil & Gas Producers
ISPPC	International Sewage Pollution Prevention Certificate
J	
JNCC	Joint Nature Conservation Committee (UK)
K	
KPI	Key performance indicators
L	

LSA	Life Saving Appliance
LMRA	Last Minute Risk Assessment
LOTO	Lock Out Tag Out
M	
MOC	Management of Change
MOPO	Matrix's of Permitted Operations
MARPOL	Maritime Pollution
MOB	Man Overboard
MLC 2006	Maritime Labour Convention 2006
N	
NGO	Non-Governmental Organisation
NC	Non-Conformance
O	
OTC	Over the Counter
ODS	Ozone Depleting Substance
OSC	On Scene Commander
OSHA	Occupational Safety and Health Administration
OVID	Offshore Vessel Inspection Database
OWS	Oily water separator
P	
PMS	Planned Maintenance System
POM	Prescription Only Medications
PEP	Project Execution Plan
PTW	Permit to Work
Q	
QA	Quality Assurance
QC	Quality Control
R	
RMV	Risk Management Verification
RWP	Remedial Work Plan
S	

SAR	Search and Rescue
SCE	Safety Critical Equipment
SEEMP	Ship Energy Efficiency Management Plan
SSF	Seismic Survey Fleet
SSO	Ships Security Officer
SOLAS	Safety of Life at Sea (an international maritime treaty)
SOP	Safety observation process
SOPEP	Shipboard Oil Pollution Emergency Plan
SMART	Specific, Measurable, Achievable, Realistic and Time-bound
SMS	Safety management system
SSE	Short service employee
STCW	Standards of Training, Certification and Watchkeeping
SIMOPS	Simultaneous Operations Plan
T	
TRA	Task risk assessment
TOFS	Time Out for Safety”
U	
UHF	Ultra-High Frequency
V	
VHF	Very High Frequency
W	
WI	Work instruction – Task base procedure
WTN	Waste Transfer Notice
WHO	World Health Organization
X	
Y	
Z	

November 15, 2019



Medical Emergency Response Plan

insert project (name)

QHSSE DEPARTMENT

insert client (name)

14th Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 300457, CHINA

Table of Contents

1.0 COMMITMENT AND ACCOUNTABILY....8
1.1 Project Manager....8
1.2 Deputy Project Manager....8
1.3 Designated Person Ashore....8
1.4 Fleet Manager (Optional)....8
1.5 Master....9
1.6 Chief Officer....9
1.7 Officer on Watch....9
1.8 Fleet Party Chief (Optional)....9
1.9 Party Chief....10
1.10 Health Care Professional....10
1.11 Medical Team....10
1.12 Fast Rescue Boat Coxswain....10
1.13 TOPSIDE....10
1.14 Onshore Emergency Response Team....11
2.0 OBJECTIVES....12
2.1 Onshore....12
2.2 Offshore....12
3.0 ORGANISATION, RESOURCES AND CAPABILITY....13
3.1 BGPO....13
3.2 BGPO Project Management Team....13
3.3 BGPO Medical Emergency Response Resources....13
3.4 Vessel Management Companies Resources....14
3.5 Client Project Management Team....14
3.6 Client Project Management Team Resources....14
3.7 Joint Venture Management Team Resources (Optional)....14
3.1 National Resources (Optional)....15
3.2 Communications....16
3.3 Offshore MERP Organizational Chart....16
3.4 Onshore MERP Organizational Chart....17
4.0 STAKEHOLDERS AND CUSTOMER....18
4.1 Stakeholder Identification....18
5.0 RISK ASSESSMENT AND CONTROL....20

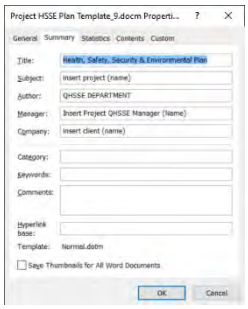
6.0 ASSET DESIGN AND INTEGRITY 21
6.1 Human Resources 21
6.1.1 Certification, Qualification and Experience. 21
6.1.2 Project Specific Human Resource Requirements (Optional) 21
6.2 Vessel Management Companies 21
6.3 Vessel Audits and Inspections 22
6.3.1 Planned Maintenance 22
6.3.2 Critical Spares 22
6.3.3 Life Saving Appliances 22
6.3.4 Helidecks (Optional) 22
6.3.5 Winch Points (Optional) 23
6.3.6 Davits 23
6.3.7 Embarkation Zones 23
6.3.8 Small Boats 23
6.3.9 Offshore Medical Facilities and Equipment 23
6.3.10 Project Specific Planned Maintenance Requirements (Optional) 23
6.4 Onshore Medical Facilities (Optional) 24
6.5 Ambulances (Optional) 24
6.6 Helicopter (Optional) 24
6.7 Medical Emergency Response Drills 24
7.0 PLANS AND PROCEDURES 25
7.1 Vessel Specific Medical Emergency Response Procedures 25
7.2 Vessel Specific Helicopter Operations Procedures 25
7.3 Vessel Specific Small Boat Operations Procedures 25
7.4 Priority of Medical Treatment 25
7.4.1 Priority 1 25
7.4.2 Priority 2 25
7.4.3 Priority 3 25
7.5 Triage 26
7.6 Escalation to a Major Medical Incident 26
7.7 COMMUNICABLE DISEASE 26
7.8 MEDICAL EVACUATION ROUTES 27
7.8.1 Helicopter Transit 27
7.8.2 Vessel Transit. 28

7.9 Client Specific Medical Emergency Response Procedures....30
8.0 EXECUTION OF ACTIVITIES....31
8.1 INITIATING AN ONSHORE EMERGENCY RESPONSE....31
8.2 ONSHORE REPORTING....31
8.2.1 Initial Report....31
8.2.2 Follow Up Report:....31
8.3 INTIATING AN OFFSHORE EMERGENCY RESPONSE....32
8.4 OFFSHORE REPORTING....35
8.4.1 Initial Report....35
8.4.2 Follow Up Report....35
9.0 MONITORING, REPORTING AND LEARNING....36
9.1 Monitoring Performance....36
9.2 Incident Reporting & Investigation....36
9.3 Lessons learned....36
10.0 ASSURANCE, REVIEW AND IMPROVEMENT....37
10.1 Auditing....37
10.1.1 Project Audits....37
10.1.2 Sub-Contractor and Supplier Audits....37
10.1.3 Management Visits....37
10.2 Project Self-Verification....37
10.3 Client MERP Assurance Process (Optional)....37
10.4 Review....38
10.4.1 Management Review....38
10.4.2 Project Reviews....38
10.4.3 Location Reviews....38
10.5 Improvement....39
10.5.1 Non-Conformity....39
10.5.2 Ideas and Opportunities....39
11.0 APPENDIX....40
11.1 Attachments....40
11.2 Glossary....40

Instructions: Delete before publishing.

This plan has been developed to allow the user to fill in required sections in BLUE. Other areas in the document are protected to maintain the integrity of the plan.

The document must be opened to allow macros as this enables the feature to add additional rows if required in the tables provided.



Meta data is used in this document and must be filled in first to load specific fields in the document. To access this:

Click File tab.

On Info part, move to Properties in the right side of the pane.

Click the down arrow and choose Advanced Properties in the menu.

You will get a pop-up window, where you can make change in the dialog box.

You may enter and edit information in the "**blue**" text form fields. If additional rows are required when adding information to the tables and form fields, select the "**+**" plus symbol on the bottom right of the table as shown below:

Revision Number	Amendment	Date
1	Updated Section X.XX to include: abcdef	6/2/2019

Some fields are "Optional" and may be deleted if not required for the project.

If you encounter any problems or find information in this plan that is inaccurate or needs to be updated. Please contact the QHSSE Department.

DOCUMENT REVISION & CONTROL

This plan has been developed by the BGPO QHSSE Department and has been reviewed & approved through FLAG workflows with the project management team prior to being distributed as per the distribution list on the following page. This plan is held as an active document in **FLAG** at the project level and shall be reviewed by the project management teams (both BGPO/Client *and JV Partner* as appropriate) prior to the initiation of each phase of the project.

AMENDMENTS

Revision Number	Amendment	Date
1	Updated Section X.XX to include: abcdef	6/2/2019

CUSTODIAN

Company	Name	Role
BGP Offshore	Insert Project QHSSE Manager (Name)	Project QHSSE Manager

APPROVAL

Company	Name	Role
BGP Offshore	Phil Bigg	QHSSE VP

DISTRIBUTION LIST

The following table identifies the distribution list for this document. Individuals on this list shall be sent a workflow action from FLAG [Add Follow Up Action] from the Custodian to the to the individual to acknowledge receipt and or to approve this plan.

It is the responsibility of the individual to cascade the information contained within this document and its supporting attachments to their direct reports and/or departments or organizations:

Internal Role	Name	Action by Workflow
QHSSE VP	Phil Bigg	Approve Plan
Insert Role	Insert Name	Acknowledge Receipt

External Role	Name	Action by Workflow
Insert Role	Insert Name	Acknowledge Receipt

INTRODUCTION

Emergencies can easily escalate into disasters unless they are managed efficiently and that depends on effective decisions being made quickly and calmly. This can only be achieved by following prescribed procedures that have been carefully planned and thoroughly tested.

This plan applies to all locations on the project and has been developed to support geophysical survey operations for the **insert project (name)** for **insert client (name)**.

PURPOSE

The purpose of this document is to enable all stakeholders within the project to be able to react appropriately to a medical emergency, by:

- Identifying the Roles, Responsibilities and Authority of key personnel within the Medical Emergency Response Plan (MERP)
- Contacting Remote Medical International Topside support
- Contacting host nation medical response assets
- Defining the Priority of medical treatment required for a patient based on the severity of injury or illness
- Initiating a Medical Evacuation effectively
- Identifying the Medical Evacuation Chain
- Defining the management process of Triage for the Prioritisation for the Treatment and Evacuation of patients
- Effectively escalating a medical incident to a Major Medical Incident appropriate to the incident
- Identifying and activating the appropriate level of medical assets required to bring a medical incident to a successful conclusion
- Identifying the resources available to support a medical incident within the project fleet and third-party assets
- Identifying the project Fleets ability to receive Helicopters and/or Small Boats
- Tracking the progress and/or location of a Patient(s) and/or Escort throughout the medical evacuation chain
- Effectively enacting the Training and Competency required to support this MERP

This plan shall be read in conjunction with the following documents:

- Project Execution Plan
- Emergency Response Plan
- Communications Plan
- Security Plan **(Optional)**

1.0 COMMITMENT AND ACCOUNTABILY

It is the duty of line management and their direct reports to understand their roles, responsibilities and authority throughout the lifecycle of this project in accordance with their respective job descriptions in **FLAG** and implement duties assigned. The following sections highlight these main ERP responsibilities:

1.1 Project Manager

The Project Manager shall support the Master and/or Party Chief of any vessel within the seismic survey fleet involved in an incident and any BGPO managed personnel involved in an onshore incident; in addition, they shall;

- Ensure that adequate resources are provided to support the management of the incident
- Liaise with the client's onshore project management team
- Liaise with the Vessel Management Company's onshore vessel management team
- Liaise with the Joint Venture partners onshore project management team **(Optional)**
- Liaise with onshore National Emergency Service Assets
- The management of onshore incidents

1.2 Deputy Project Manager

The Deputy Project Manager is responsible for supporting the Project Manager, and shall;

- Assume the duties of the Project Manager during period of absence of the Project Manager

1.3 Designated Person Ashore

The Designated Person Ashore shall act as a direct link between the vessel Master and crew to senior management, in addition they shall;

- Ensure that adequate resources are provided to support the management of the incident
- Provide advice and assistance to their respective vessel Master, Chief Officer and crew
- Provide updates to the senior management of their respective organisation
- Provide direct liaison with their organisations Protection and Indemnity (P&I) Club
- Provide direct liaison with the vessels Flag State authority

1.4 Fleet Manager (Optional)

The Fleet Manager is responsibility for the coordination of all vessels and assets employed to support the MERP and shall:

- Take Tactical Command of the movement of a patient to provide to shore.
- Provide a direct liaison between the contacted medical providers both onshore and offshore.

1.5 Master

Master of each vessel has the **ultimate responsibility and authority** for the safe operation of their respective vessel, they shall;

- Take Tactical Command of any incident occurring on-board their vessel.
- Determine and initiate the best Medical Evacuation Plan according to the condition of the patients and the operational and environmental conditions/restriction
- Anticipate and react to support requested by another vessel in where a medical incident has occurred
- Alert all vessels with the survey fleet should an actual or potential incident occur on-board their vessel
- Request any support they deem necessary from the immediate survey fleet or from their respective Emergency Response Team ashore
- Request any support they deem necessary from third party agencies identified within their emergency response plans and procedures
- Provide medical care in the absence of the Health Care Professional

1.6 Chief Officer

The Chief Officer shall take command and assume the duties of the Master should the Master be incapacitated and shall;

- Support the Health Care Professional (HCP) in the local management of a medical incident

1.7 Officer on Watch

The Officer on watch (OOW) shall maintain a listening and visual watch and inform the Master and Party Chief Immediately should an incident or potential incident occur, in addition they shall,

- Ensure the Voice Data Recorder is set to record
- Maintain an accurate log

1.8 Fleet Party Chief (Optional)

The Fleet Party Chief has responsibility for:

- Act as a liaison between the Master and the on-board client representative
- Act as a liaison between the vessel and BGPO onshore management
- Maintain an accurate log

1.9 Party Chief

The Party Chief shall provide incident management assistance to the Master

- Act as a liaison between the Master and the on-board client representative
- Act as a liaison between the vessel and BGPO onshore management
- Maintain an accurate log

1.10 Health Care Professional

The Health Care Professional (HCP) shall provide immediate trauma and/or cardiac life support to any injured person(s) and act as the Local Commander for all medical incidents, they shall also

- Package any patient(s) ready for medical evacuation
- Provide medical advice to the Master on the condition of a patient(s)
- Provide remote medical support via telecommunications to another vessel in the SSF
- Where practical provide close medical support to another vessel by means of small boat transport to that vessel
- Perform Triage during an incident with multiple injured/ill patients
- Perform the initial assessments, reach a diagnosis and commences stabilisation and initial treatment.
- Determine in consultation with TOPSIDE support the most suitable evacuation type. and prepare the patient for evacuation.

1.11 Medical Team

The Medical Team shall prepare medical equipment to support any incident, in addition they shall;

- Provide medical support to the Master and/or Health Care Professional

1.12 Fast Rescue Boat Coxswain

The Coxswain shall take command of the Fast Rescue Boat (FRB) and crew, in addition they shall;

- Prepare the FRB for immediate launch should the type of incident onboard their vessel or another vessel potential require support
- Ensure the handling of the boats speed and course in water does not adversely affect the patient's conditions

1.13 TOPSIDE

Provide medical advice and guidance to the Health Care Professional(s) and/or vessel Master(s) within the fleet

1.14 Onshore Emergency Response Team

All personnel within an onshore Emergency Response Team (ERT) are to be available at all times.

The ERT shall stay in close contact with the Vessel Emergency Response Team and their respective higher-level management.

The ERT has the following key tasks during an Emergency:

- Assess the emergency situation continually until it is resolved.
- Report frequently to the higher-level management.
- Assist in getting the emergency situation under control, without micromanaging
- Liaise between ERT's from other organisations involved in the incident
- Allocate sufficient resources required to bring the incident to a successful conclusion

2.0 OBJECTIVES

This document has been designed to ensure the following objectives can be achieved

2.1 Onshore

Tier	Description	Response Time
0	**First response, by anyone at the incident location**	**Immediate**
1	First Aid treatment provided Duty Manager and host nation emergency services informed/requested	4 minutes
2	Arrival of appropriate National Emergency Support Asset	15 minutes
3	Medical Evacuation to hospital for Priority 1 patients	4 hours
4	Referral to appropriate specialist hospital and definitive care	Specific to geographic location

2.2 Offshore

Tier	Description	Response Time
0	**First response, by anyone at the incident location**	**Immediate**
1	First Aid treatment (including defibrillation) by a competent person at the incident location	4 minutes
2	Injured Person assessment, stabilisation and treatment by site Health Care Professional	1 hour
3	Medical Evacuation to shore based hospital for Priority 1 patients	4 hours
4	Referral to appropriate specialist hospital and definitive care	Specific to geographic location

3.0 ORGANISATION, RESOURCES AND CAPABILITY

The following resources have been dedicated and/or identified to support the project. In order to uphold the principle of 'Duty of Care', BGPO shall ensure that all resources are appropriately audited and/or inspected to ensure that the standards expected by each company are met or exceeded:

3.1 BGPO

The BGPO Management Team provides the following:

- Direct Support to Project Management Team
- Corporate Emergency Response Team

3.2 BGPO Project Management Team

The BPGO onshore Project Management Team provides the following:

- Direct Project Management
- Local Emergency Response Team
- Client Liaison and Interface

3.3 BGPO Medical Emergency Response Resources

The following BPGO offshore MERP Resources have been allocated to support the project:

Location Name/Asset	MERP Resource	Notes
Vessel 1 name	**1. Lead Health Care Professional** **2. Master and Chief Officer** **3. Helideck** **4. Fast Rescue Craft**	**1. Medical Doctor with ATLS and ACLS qualifications** **2. Trained and Certified to STCW 95, A-VI/4-2 - Proficiency in Medical Care** **3. 24 Hour Operational**
Vessel 2 name	1. Health Care Professional 2. Master and Chief Officer 3. Helicopter Winch Point 4. Fast Rescue Craft	1. Paramedic with ATLS and ACLS qualifications 2. Trained and Certified to STCW 95, A-VI/4-2 - Proficiency in Medical Care
Vessel 3 name	1. Health Care Professional 2. Helicopter Winch Point 3. Fast Rescue Craft	1. Nurse with ATLS and ACLS qualifications

Vessel 4 name	1. Master and Chief Officer 2. Helicopter Winch Point 3. Fast Rescue Craft	1. Trained and Certified to STCW 95, A-VI/4-2 - Proficiency in Medical Care
Onshore	Agent Mr xxxx 24 hour Telephone xxxxx	Arranges for the collection of a patient with Port Authorities
TOPSIDE	24hour Telephone Medical Referral Support	

3.4 Vessel Management Companies Resources

All vessel management companies supply the following ERP resources for the vessels they operate:

- Designated Person Ashore (DPA)
- Emergency Response Team
- P&I Club

3.5 Client Project Management Team

The client onshore Project Management Team provides the following:

- Direct Project Management
- Local Emergency Response Team
- Contractor Liaison and Interface

3.6 Client Project Management Team Resources

The client onshore Project Management Team provides the following MERP resources:

Location Name/Asset	MERP Resource	Notes
Insert location / vessel name	**Lead Client Representative**	**Primary Contact with Client Onshore Duty Manager/Duty Doctor**
Insert location / vessel name	Medical Evacuation Helicopter	TBC Helicopter Management Company

3.7 Joint Venture Management Team Resources (Optional)

The Joint Venture (JV) onshore Project Management Team provides the following MERP resources:

Location Name/Asset	MERP Resource	Notes
Insert location / vessel name	Emergency Response Team	

3.1 National Resources (Optional)

The following national resources available to support the project:

MERP Resource	Capability	Contact Details
Police	**Police**	**Tele: xxxxxx**
Port Authority	Control of Access Egress for Port xxx	Tele: xxxxxx
Port Authority	Control of Access Egress for Port xxx	Tele: xxxxxx
Ambulance	24hour Operations	Tele: xxxxxx
Ambulance	24hour Operations	Tele: xxxxxx
Ambulance	24hour Operations	Tele: xxxxxx
Coast Guard	Helicopter Search and Rescue Search and Rescue Coordination	Tele: xxxxxx
Hospital 1	Primary Hospital 24hour Accident and Emergency General Surgery Burns Unit Intensive Care Unit	Tele: xxxxxx
Hospital 2	Secondary Hospital 24hour Accident and Emergency General Surgery Intensive Care Unit	Tele: xxxxxx
Hospital 3	Tertiary Hospital 24hour Accident and Emergency General Surgery Burns Unit	Tele: xxxxxx
Medical Evacuation Helicopter	24hour Operational No Winch Capability	Tele: xxxxxx

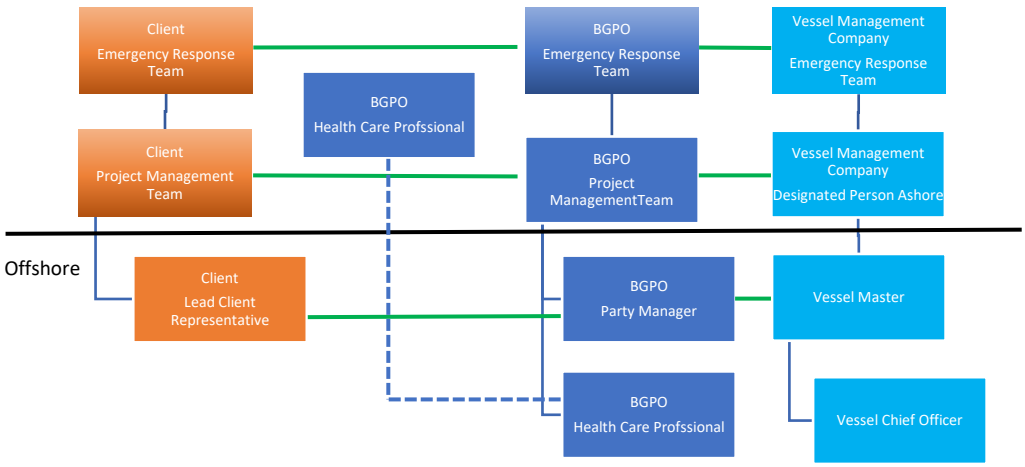
3.2 Communications

The project COMMUNICATION PLAN provides a framework for effective communication management for the complete lifecycle of the project. It is vital that strict communication protocols are to be adhered to in order to reduce the likelihood of passing incorrect information and breaching legal or contractual obligations.

The plan details communication mapping, protocols and the communication vehicles used to share and disseminate information.

3.3 Offshore MERP Organizational Chart

The diagram below shows the Offshore MERP reporting structure between all involved parties on the project:



Key — Update chart as required

Operational Reporting & Authority

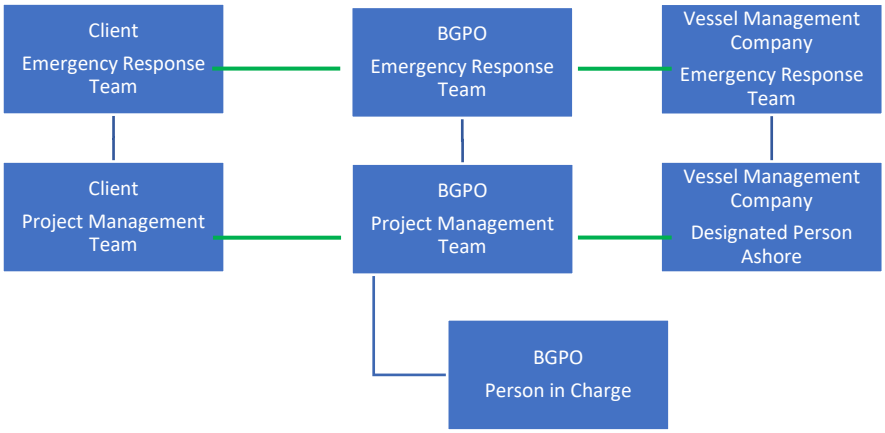
Functional Reporting & Authority

Consultancy – No Authority

Figure 1 - MERP Offshore Organisational Chart

3.4 Onshore MERP Organizational Chart

The diagram below shows the Onshore MERP reporting structure between all involved parties on the project:



Key

Update chart as required

Operational Reporting & Authority

Functional Reporting & Authority

Consultancy – No Authority

Figure 2 - MERP Onshore Organisational Chart

4.0 STAKEHOLDERS AND CUSTOMER

4.1 Stakeholder Identification

Stakeholders that have been identified in the project are listed in **FLAG** under the stakeholder tab at the project level. Information in this tab includes: The *Company / Organization* name, *Relationship to the project*, *Means of communicating*, the *Contact Point* in the stakeholders organisation and other specific details regarding the stakeholders responsibilities, needs, expectation and requirements in the *Comment* section.

The Project Team with full support from the QHSSE Department is reposibile for identifing applicable laws, regulatory requirements as defined in BGPO-MP-018 Marine Seismic Operations. The Project QHSSE Manager details these requirements for the project in **FLAG** under the Project Level tab, Stakeholders.

The following stakeholders have been identified for Medical Emergancy Response Plan with their specific responsibilites and expectations listed in the table below.

Stakeholder	Responsibilities	Project Specific Expectations
Client	Management of Client Supplied Medical Emergency Support Assets.	Insert additional client expectations here. i.e Authorisation for the Launch of the Medical Evacuation Helicopter
BGPO	Managerial Support to Medical Emergencies	
Remote Medical International /International SOS	Provision of 24hour TOPSIDE Medical Support	
Coast Guard	National Authority for the management of offshore incidents	
Vessel management company (1) Add company name	Management Support of Medical Emergencies Insert vessel names	Click or tap here to enter text.
Vessel management company (2) Add company name	**Management Support of Medical Emergencies Insert vessel names**	**Click or tap here to enter text.**
Agent	Support of Medical Emergencies	Click or tap here to enter text.
Hospital 1	Primary Medical Evacuation Hospital	Click or tap here to enter text.
Hospital 2	Secondary Medical	Click or tap here to enter text.

	Evacuation Hospital	
Hospital 3	Tertiary Medical Evacuation Hospital	Click or tap here to enter text.
Add other if applicable **Health & Safety Regulatory Body, Maritime, Environmental Regulatory Body, Top Side Support, Oil & Gas Authority, Aviation**	**Reporting of Incidents**	**Click or tap here to enter text.**

5.0 RISK ASSESSMENT AND CONTROL

The following project level risks have been identified to have a potential impact on the management of a medical incident, details of their control measures can be found in the FLAG Ref ID:

#	FLAG Ref ID	Risk Category	Hazard
1	**Insert Flag Ref ID - i.e. RA-Shell-19/04-002**	**Safety**	**Road Conditions**
2	Insert Flag Ref ID - i.e. RA-Shell-19/04-002	Health	Onshore Medical Support
1	Insert Flag Ref ID - i.e. RA-Shell-19/04-002	Health	Extreme Medical Evacuation Route
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Security	Onshore
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Security	Offshore
1	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Safety	Adverse Weather Conditions

6.0 ASSET DESIGN AND INTEGRITY

In order to provide a robust system to ensure that a medial incident is efficiently managed and brought to a rapid conclusion, and to prevent the medical incident from escalating it is vital that's all parts of the medical emergency response processes are appropriately managed and fit for purpose. The following shall be confirmed through Audits, Inspections Reviews, Training and Drills:

6.1 Human Resources

A review of the Certification, Qualification and Experience of all safety critical personnel shall be made to ensure that they have the competency levels expected to manage an emergency situation:

6.1.1 Certification, Qualification and Experience.

All Maritime Crew shall hold the appropriate certificate in accordance with their position on-board the vessel as determined in the vessels SMS and in compliance with the STCW Code.

The Master and Chief Officer shall hold the STCW 95, A-VI/4-2 - Proficiency in Medical Care

The Health Care Professionals (HCP) shall in addition to their professional qualification also hold an in-date certificate in Advanced Trauma Life Support (ATLS) and Acute Cardiac Life Support (ACLS).

Non-Maritime Crew all non-maritime crew shall be trained and drilled in the vessels and projects medical emergency response processes and procedures.

The Designated Coxswain(s) shall be certified as appropriate to the type of small boat in operation

The Helicopter Landing Officer (HLO) shall hold a valid OPITO approved standard Offshore Helicopter Landing Officer certification

The Heli-deck Assistants (HDA) shall hold a valid OPITO approved standard Offshore Helicopter Deck Assistant certification

6.1.2 Project Specific Human Resource Requirements (Optional)

Insert details of project specific human resource requirements here.

Delete if not required

6.2 Vessel Management Companies

All vessel management companies shall undergo an audit as defined within the BGPO-MP-024 Marine Contractor Management to ensure they meet industry requirements.

In addition, an Interface document between BGPO and the Vessel Management Company has been produced in order to determine the hierarchy of control should an incident occur:

6.3 Vessel Audits and Inspections

All vessels shall undergo the following audits and inspections to ensure compliance to International, National and Contractual Conventions, Regulations obligations for the management of an emergency and shall undergo the following:

- BGPO - HSE and Marine Inspection
- Client - HSE and Marine Inspection
- OCIMF - Offshore Vessel Inspection Document (OVID) Inspection
  - *Insert Vessel Name*
  - *Insert Vessel Name*
- OCIMF - Ship Inspection Report Programme (SIRE) Inspection **(Optional Tankers only)**
  - *Insert Vessel Name*
- IMCA - Common Marine Inspection Document (CMID) Inspection
  - *Insert Vessel Name*
- Flag State - Audits and Inspections
- CAA - Helideck Inspections **(Optional)**

During these audits and inspections, the following shall be confirmed:

6.3.1 Planned Maintenance

All vessels have a Planned Maintenance System (PMS) that has been audited by BGPO and shall hold sufficient critical spares as approved by the vessels Flag State.

6.3.2 Critical Spares

All vessels carry sufficient spares in accordance with the vessels' Planned Maintenance System (PMS) and the Safety Management System (SMS).

6.3.3 Life Saving Appliances

All vessels shall hold the appropriate Life Savings Appliances (LSA) as detailed in the SMS and approved by the vessel's classification society and Flag State and in accordance SOLAS and the LSA code requirements and maintained within the vessel's PMS.

6.3.4 Helidecks (Optional)

All operational helidecks are certified and comply to the CAP 437 Standards for Offshore Helicopter Landing Areas.

A documented procedure and risk assessment for the helicopter operations shall also be produced that is specific to that vessel

Insert Host Nation Requirement if appropriate

6.3.5 Winch Points (Optional)

All vessels without helidecks have winch points that are marked as described in CAP 437 Standards for Offshore Helicopter Landing Areas and the International Chamber of Shipping (ICS) 'Guide to Helicopter/Ship Operations'

A documented procedure and risk assessment for the use of the winch point shall also be produced that is specific to that vessel.

Insert Host Nation Requirement if appropriate

6.3.6 Davits

All small boats davits and ancillary items are controlled under a PMS and undergo regular servicing and inspections by a competent person, as defined by that vessels specific SMS.

In addition, the Coxswain shall assess the ships side to ensure that any obstructions that may pose a risk to a small boat coming alongside are identified.

6.3.7 Embarkation Zones

All Embarkation (Rescue) Zones comply with SOLAS Ch V/Reg. 23.1.1 and the provisions defined in. IMO Resolution A.1045 (27) Pilot Transfer Arrangements.

The ancillary items to the arrangements are controlled under a PMS and undergo regular servicing and inspections by a competent person, as defined by that vessels specific SMS.

In addition, the Coxswain shall has assessed the ships side to ensure that any obstructions that may pose a risk to a small boat coming alongside are identified.

6.3.8 Small Boats

All small boats are controlled under a PMS and undergo regular servicing and inspections by a competent person, as defined by that vessels specific SMS and class requirements appropriate to the type of small boat.

6.3.9 Offshore Medical Facilities and Equipment

All ships medical stores are regularly inspected and comply to the vessels Flag State requirement and the following provisions stated in the Medical Emergency Response Plan.

The ships medical stores undergo annual inspection from a third-party competent organisation, as defined in that vessels Safety Management System.

6.3.10 Project Specific Planned Maintenance Requirements (Optional)

Insert details of project specific planned maintenance requirements here.

6.4 Onshore Medical Facilities (Optional)

All onshore medical facilities identified within the Medical Emergency Response Plan have been assessed for the suitability and capabilities to support 24hour medical emergency care. An agreement shall be in place with BGPO and the medical facility to ensure payment for medical treatment.

6.5 Ambulances (Optional)

All onshore ambulance assets identified within the Medical Emergency Response Plan have been assessed for the suitability and capabilities to support 24hour medical emergency response and care. An agreement shall be in place with BGPO and the ambulance facility to ensure payment.

6.6 Helicopter (Optional)

All helicopter support assets identified within the Medical Emergency Response Plan have been assessed for the suitability and capabilities to support 24hour medical emergency response and care. An agreement shall be in place with BGPO and the helicopter management company.

6.7 Medical Emergency Response Drills

The Master of each vessel shall ensure that all company drills, and training are undertaken in accordance with the Safety Management System (SMS) of that organisation, and to carry out any project specific drills and training as defined in the contractual obligation and in the Health, Safety, Security and Environment Management Plan

The Master shall incorporate and participate where practical in the support of other vessels drills and training throughout the project (i.e. The FRB crew is stood by during the Man Over-board drill of another vessel).

The following project drills shall occur in addition to each vessels' standard training and drill matrixes:

Training/Drill	Responsibilities	Frequency
MERP Table Top	Master of Each Vessel	Weekly/Monthly etc

7.0 PLANS AND PROCEDURES

7.1 Vessel Specific Medical Emergency Response Procedures

The following list indicates the vessel specific Medical Emergency Response procedures that have been reviewed by BGPO and incorporated with the BGPO and Supplier Interface documents:

- *BGP Prospector - Medical Support Plan*
- *Geo Service 1 - Medical Support Plan*
- *MV Fenny - Medical Support Plan*

7.2 Vessel Specific Helicopter Operations Procedures

The following list indicates vessel specific Helicopter procedures that have been reviewed by BGPO and incorporated with the BGPO and Supplier Interface documents:

- *BGP Prospector - Helicopter Operations Procedure*
- *Geo Service 1 – Helicopter Winch Procedure*
- *MV Fenny - Helicopter Winch Procedure*

7.3 Vessel Specific Small Boat Operations Procedures

The following list indicates vessel specific Small Boat Operations work instructions that have been reviewed by BGPO and incorporated with the BGPO and Supplier Interface documents:

- *BGP Prospector - Work Instruction - Small Boat Patient Transfer*

7.4 Priority of Medical Treatment

All patients will undergo triage for treatment and evacuation, confirmation of the triage will be made through the use of TOPSIDE support:

7.4.1 Priority 1.

A patient whose life is in immediate danger and requires immediate treatment. This may include patients with airway obstruction or severe breathing problems

7.4.2 Priority 2.

AA patient whose life is not in immediate danger. Surgical or medical intervention is required within 2 - 4 hours. This may include patients with intra-abdominal bleeding or complicated fractures.

7.4.3 Priority 3.

A patient with minor injuries who will eventually require treatment (Minor fractures or lacerations).

When requesting an 'Emergency' medical evacuation only Priority 1 and 2 patients should be considered an 'Emergency', the evacuation of Priority 3 patients' medical may be delayed

7.5 Triage

The effectiveness management of an incident involving multiple patients, possibility in multiple separate locations is governed by the correct use of medical triage. In order to assist in triage, the following should be considered:

- The time it will take for an evacuation asset to arrive at the scene (Helicopter, Small Boat, etc)
- The number and types of patients the evacuation asset can effectively provide continuous medical treatment too (Medical Priority/Stretcher/Walking/etc)
- The expected number of evacuation trips required
- The expected time it will take for a medical evacuation asset to return
- The time it will take to stabilise a patient to enable an effectively managed medical evacuation
- Changes to weather, sea state and light throughout the evacuation period
- The impact to the provision of sustain security support to the project fleet and any vessel used for medical evacuation to port
- The impact to maintaining continuous medical treatment to patients should the HCP be required to escort a patient to shore.

7.6 Escalation to a Major Medical Incident

The escalation to a Major Medical Incident shall occur when:

- The medical treatment and evacuation assets available cannot sustain the number and types of patients
- The incident involves multiple sites (Collison between vessels)

7.7 COMMUNICABLE DISEASE

The management of patient(s) with a suspected communicable disease that are classified as P1 of P2 shall follow the guidelines in set by International SOS/Remote Medical International.

7.8 MEDICAL EVACUATION ROUTES

The medical evacuation routes are based on the; time, distance and speeds of the Asset (Helicopter/Vessel) transiting to shore from the furthest aspect of the survey area and for onward movement by Ambulance form the heliport or port to the nominated Hospital:

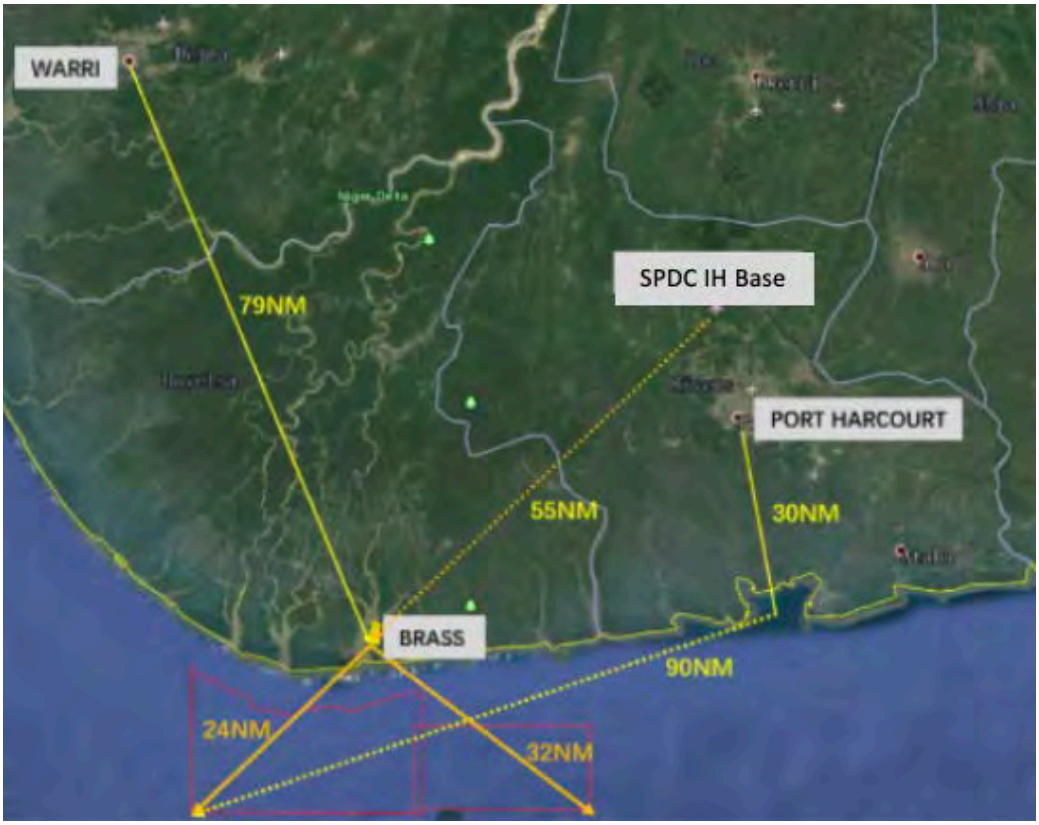


Figure 4 - Distance Chart

7.8.1 Helicopter Transit.

The expected time distance from the Heli-base to the furthest aspects of the survey area and to the heliport proximal to the receiving hospital based on the helicopter maintaining an average speed of 150knots and an ambulance maintaining and average speed of 20kmh is:

- **Port Harcourt - Primary Option**
  - Heliport Port Harcourt to vessel at OML 77/74 (75nm)
  - OML 77/74 to Hospital Heliport in Port Harcourt(75nm)
    - Distance 150nm
    - Time 1 hour
  - Ambulance Transfer from Heli-base to Primary Hospital 10km
    - Distance 10km
    - Time 0.5 hours

- **Total Time 1.5hours**

- **Lagos - Secondary Option (Optional)**
  - Heliport Lagos to vessel at OML 77/74 (125nm)
  - OML 77/74 to Hospital Heliport (100nm)
    - Distance 225nm
    - Time 1.5 hours
  - Ambulance Transfer from Heli-base to Secondary Hospital 15km
    - Time 0.75 hour
  - **Total Time 2.25 hours**
- **Somewhere Else - Tertiary Option (Optional)**
  - Heliport Somewhere Else to vessel at OML 77/74 (300nm)
  - OML 77/74 to Hospital Heliport (250nm)
    - Distance 550nm
    - Time 3.75 hours
  - Ambulance Transfer from Heli-base to Tertiary Hospital 40km
    - Time 1 hour
  - **Total Time 4.75 hours**

7.8.2 Vessel Transit.

The expected time distance from the furthest aspects of the survey area to the seaport proximal to the receiving hospital based on the helicopter maintaining an average speed of 8knots and an ambulance maintaining and average speed of 20kmh is:

- **Port Harcourt - Primary Option**
  - Vessel at OML 77/74 (10nm)
    - Time 1 hour
  - Ambulance Transfer from Seaport to Primary Hospital 15km
    - Time 0.75 hour
  - **Total Time 1.75 hours**
- **Lagos - Secondary Option (Optional)**
  - Vessel at OML 77/74 (30nm)
    - Time 3 hour
  - Ambulance Transfer from Seaport to Secondary Hospital 15km
    - Time 0.75 hour
  - **Total Time 3.75 hours**
- **Somewhere Else - Tertiary Option (Optional)**
  - Vessel at OML 77/74 (60nm)
    - Time 6 hours
  - Ambulance Transfer from Seaport to Tertiary Hospital 15km
    - Time 0.75 hour

- **Total Time 6.75 hours**

7.9 Client Specific Medical Emergency Response Procedures

The following project Client Specific Medical Emergency Response Procedures have been reviewed by BGPO and incorporated with the BGPO and Client Interface document and this plan:

Procedure	Activation
Insert Client Document Title ***Helicopter Medical Evacuation***	Insert who and how it is activated Lead Client Representative
Insert Client Document Title	Insert who and how it is activated Lead Client Representative

8.0 EXECUTION OF ACTIVITIES

8.1 INITIATING AN ONSHORE EMERGENCY RESPONSE

To initiate onshore emergency response all personnel shall be provided with the following credit card Emergency Response Card:

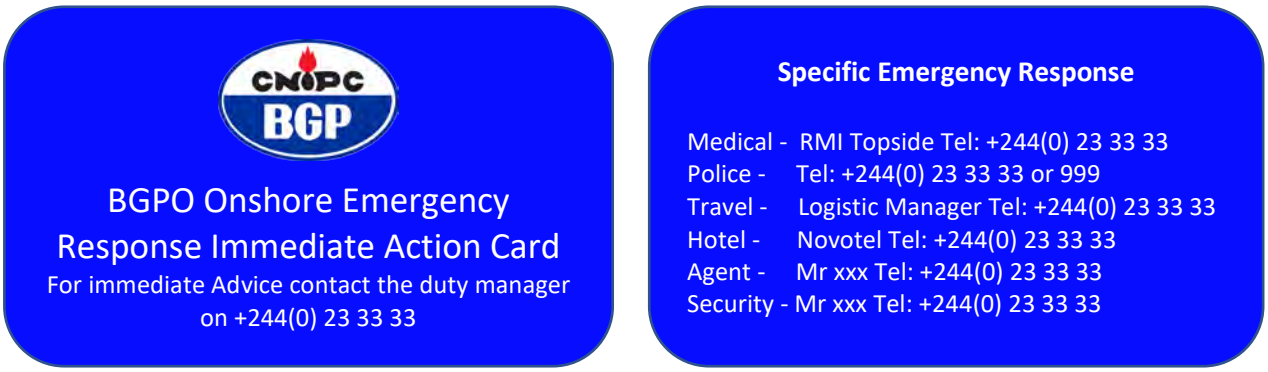


Figure 4 - Example Onshore Emergency Response Card

8.2 ONSHORE REPORTING

The Person in Charge (PIC) of a group or the individual is responsible for providing the initial and follow up reports to the ***Insert Agency*** and the BGPO Project Manager.

The BGPO Project Manager shall inform the Client. The reports shall at least contain the following details

8.2.1 Initial Report

- Time, Date
- Location
- Type of Injury or Illness
- Number person(s) involved
- Preliminary assessment

8.2.2 Follow Up Report:

- Time, Date
- Number of person(s) involved
  - Confirm number of patients
  - Confirm the patient(s) employer details
  - Priority of Medical Treatment
  - Confirmation of hospital receiving patient
- Actions be carried out
  - Evacuation Type
  - Expected or confirmed time for evacuation to take place

8.3 INTIATING AN OFFSHORE EMERGENCY RESPONSE

To initiate an offshore medical emergency response, use the following 'Medical Emergency Response Immediate Actions' flowcharts,

- Figure 5 - *Insert Vessel(s) Name*
- Figure 6 - *Insert Vessel(s) Name*

These shall be printed and displayed on the bridge and hospital of each respective vessel, A3 copies of these Medical Emergency Response - Immediate Action Plans.

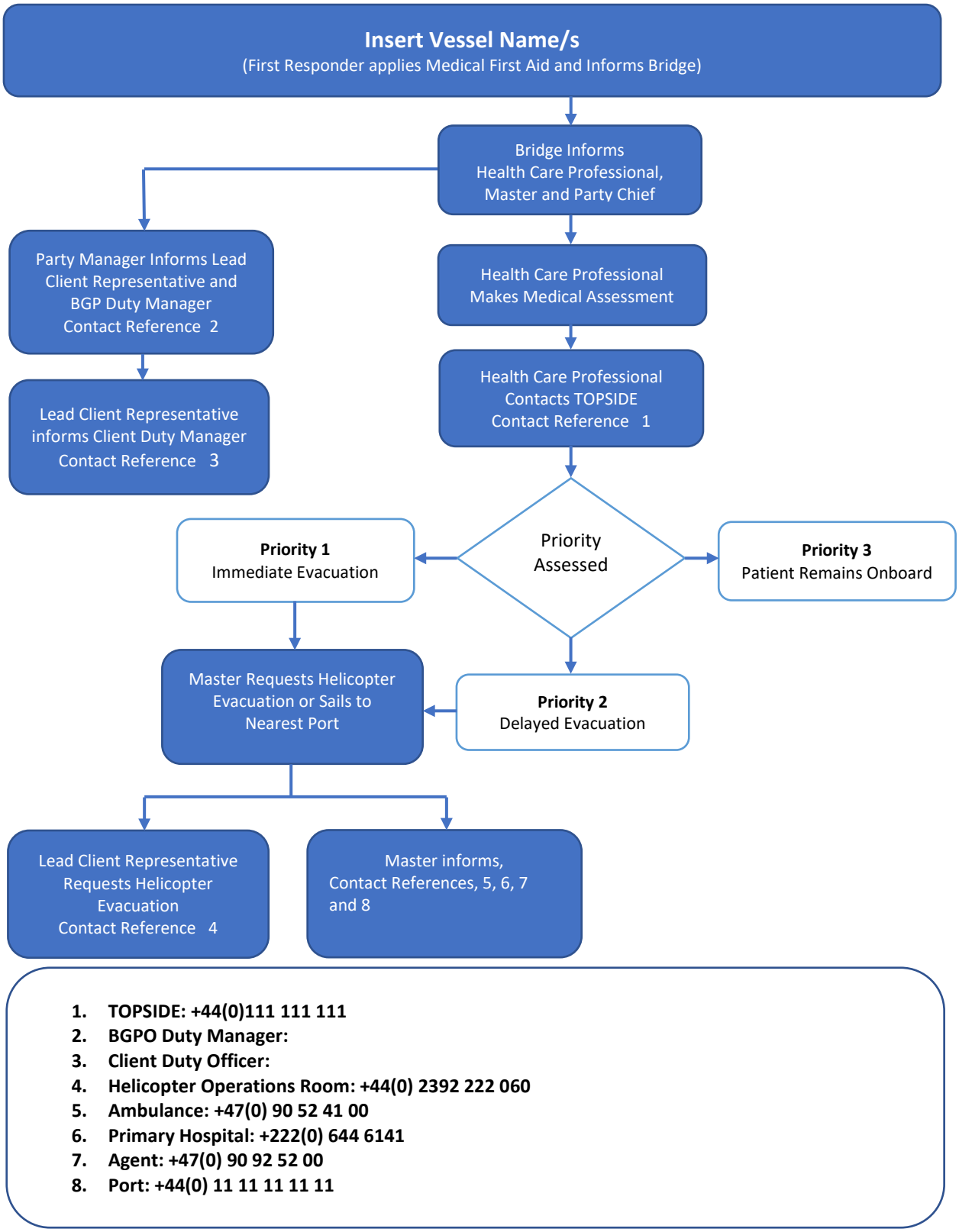
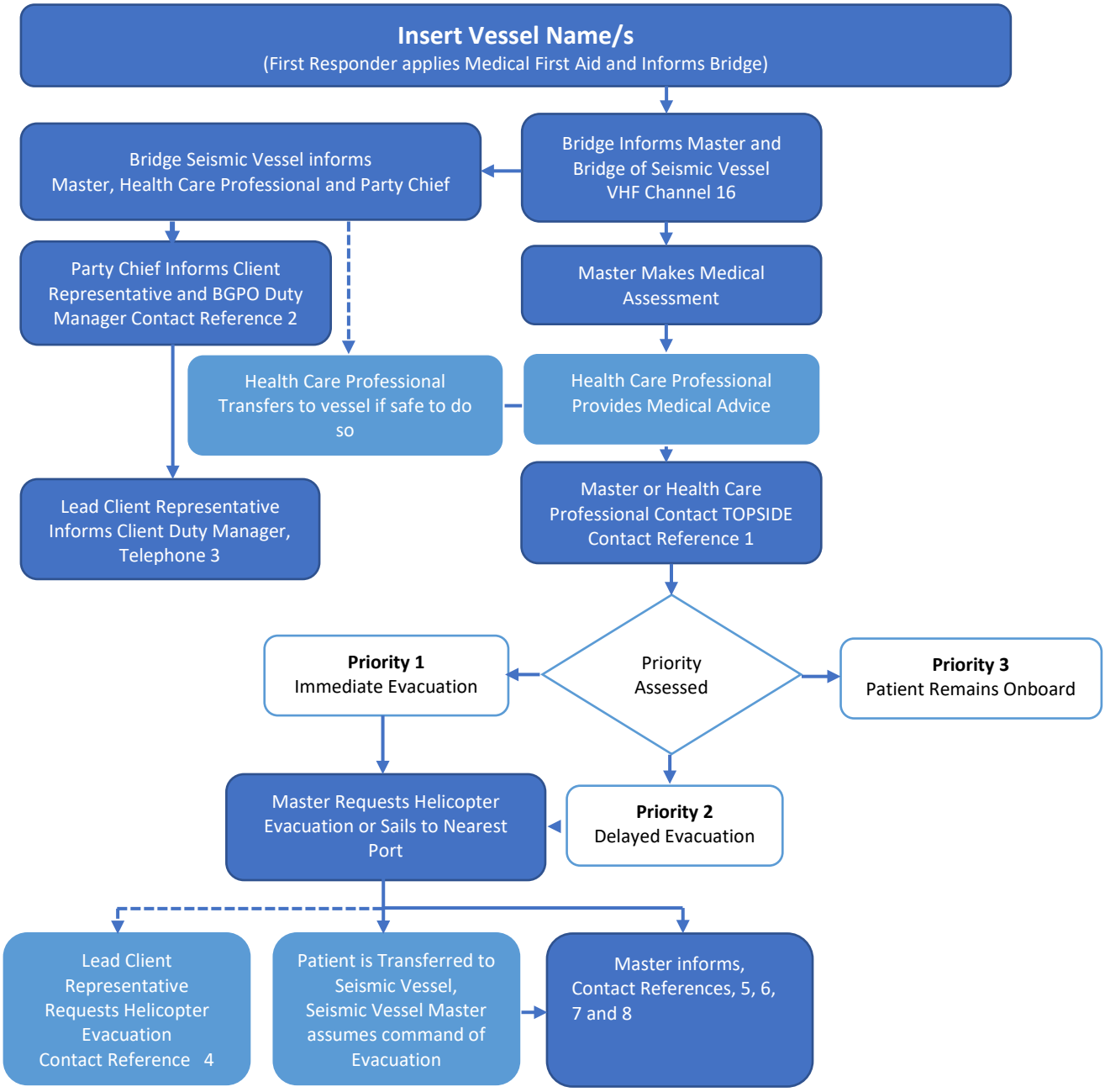


Figure 4 - MERP Flow Chart



1. **TOPSIDE: +44(0)111 111 111**
2. **BGPO Duty Manager:**
3. **Client Duty Officer:**
4. **Helicopter Operations Room: +44(0) 2392 222 060**
5. **Ambulance: +47(0) 90 52 41 00**
6. **Primary Hospital: +222(0) 644 6141**
7. **Agent: +47(0) 90 92 52 00**
8. **Port: +44(0) 11 11 11 11 11**

Figure 5 - MERP Flow Chart

8.4 OFFSHORE REPORTING

The Master or Chief Officer are responsible for providing the initial and follow up reports to the; ***Insert Agency***, their respective Emergency Response Team, and the Party Chief.

The client Representative is responsible for the immediate contact with the Clients helicopter operations room (Optional and based on client's notification requirements)

The Party Chief or QHSSE Advisor is responsible for providing the initial and follow up reports to the BGPO Project Manager and the on-board Client Representative.

The reports shall at least contain the following details

8.4.1 Initial Report

- Time, Date
- Type of Injury
- Number of injured person(s) involved
- Preliminary assessment

The on-board Client Representative is responsible for relaying the Initial report to the Client Project Manager

8.4.2 Follow Up Report

- Time, Date
- Actions to be carried out or underway
  - Vessel Transiting to Shore
  - Helicopter en-route
  - Helicopter departed vessel
  - Etc

9.0 MONITORING, REPORTING AND LEARNING

9.1 Monitoring Performance

The effectiveness of this plan and its supporting vessel specific medical emergency response procedures shall be monitored through the use of project and vessel drills, each drill shall be followed up by an immediate de-brief by the Master and a detailed Drill Report.

9.2 Incident Reporting & Investigation

All incidents shall be reported verbally to the Master, Party Chief, QHSSE Advisor and then on to the Field Client Representative through the Party Chief immediately.

All incidents shall be investigated in accordance with the respective organisations Investigation Procedures. Where appropriate BGPO and the client shall be involved within the investigation as an observer as defined in BGPO-SP-008-Incident Management and further described in the HSSE Plan.

9.3 Lessons learned

All Lessons learnt are identified through incident investigations, meetings, audits, non-conformance, project reviews and other forums such as distributed circulars, industry sharing, and alerts are logged and maintained within **FLAG.** Through **FLAG,** lessens can be distributed via broadcasts and where appropriate SMART (Specific, Measurable, Achievable, Realistic and Time-bound) actions may be assigned as further defined in BGPO-SP-012 Performance Management. Lessons learned may be entered in **FLAG** at three separate levels:

1. Company Level
2. Project Level
3. Location Level

10.0 ASSURANCE, REVIEW AND IMPROVEMENT

10.1 Auditing

The audit process in BGPO is defined in BGPO-SP-013 Auditing. The following audits are conducted in accordance with the procedure:

10.1.1 Project Audits

Project audits helps the Project Team to get an adequate review of the project in order to identify what elements of the project were managed successfully and what were mismanaged. They also identify what can be improved in the future. The project audit is risk-based and will include client requirements.

10.1.2 Sub-Contractor and Supplier Audits

External providers have a great influence on the success of BGPO. There are two procedures to support these types of audits, BGPO-SP-007 Subcontractor Management and BGPO-MP-024 Marine Contractor Management.

10.1.3 Management Visits

Management visits are conducted by senior management in BGPO in accordance with BGPO-SP-019 Management Visit. This process involves a senior manager visiting the location and performing an audit at that location. They are used to evaluate the status and continued suitability of the BGPO BMS and the safety culture at each worksite.

10.2 Project Self-Verification

BGPO utilizes a Project Audit process for self-verification in accordance with IOGP 423 - Working Together in a Contract Environment. This process includes specific actions that will be taken through the various project phases to ensure HSSE assurance measures have been implemented as planned. The BGPO Quality Department is responsible for this process through each phase of the project. Audit findings, either Non-Conformance or Ideas & Opportunities are entered into the Project level Audit tab with assigned workflows for corrective action.

Additional project specific self-verification processes required by contract are detailed below:

Project specific self-verification process	Reference
Insert details of additional project specific self-verification process if any required by contract. If none write "N/A"	

10.3 Client MERP Assurance Process (Optional)

The following details the client's HSSE Assurance Process that will be used on the project:

Client ERP Assurance Process	Reference
Insert details of client ERP Assurance Process if any. i.e. RMV- Risk Management verification, audit / inspection process etc. If none delete	

10.4 Review

Corporate, Location and Project objectives entered in **FLAG** are set with appropriate monitoring and measuring arrangements to ensure that progress towards these objectives are being met as part of a Plan, Do, Check, Act approach. Performance monitoring will be reported/recorded in **FLAG**, reviewed by the process owners, and later reviewed by senior management in accordance with BGPO-SP-012 Performance Management.

10.4.1 Management Review

In BGPO there is an ongoing management review process where senior management evaluates the efficacy of the BMS and outlines direction for continuous improvement. During the review, senior management will review the organisation's past performance and determine the areas they want to prioritise for performance improvement.

10.4.2 Project Reviews

Project reviews are carried out by the BGPO and Client Project Management Team and where possible the Party Chief and Master(s). These reviews should cover the project objectives as set in **FLAG** and will allow the Project Teams to:

- Assess and learn from the information gathered on the project.
- Consider what is and what is not working on the project.
- Reflect on how the project is progressing towards its intended outcomes; and
- To implement any changes which might be needed to ensure that the outcomes for the end of project will be achieved.

Project Specific Review Process (Optional)	Reference
Insert details of any project specific review process required by the client, contract etc. **Delete if not required**	Insert contract reference etc

10.4.3 Location Reviews

Performance reviews are conducted at the location level to track progress through the locations key performance indicators on objectives set. The Party Chief for the crew is responsible for conducting these reviews and updating progress toward objectives in **FLAG** for each location.

10.5 Improvement

10.5.1 Non-Conformity

The BGPO-SP-014 Management of Non-Conformance procedure details the process by which BGPO manages non-compliance within the BMS and related activities. The QHSSE department is responsible for receiving and retaining the findings raised from locations and determines which process owner should be assigned corrective action. Any employee, subcontractor or client of BGPO can raise a non-conformance. It is company policy to encourage staff to report all issues considered as non-compliance they see in the course of their activities.

10.5.2 Ideas and Opportunities

A key element in the improvement process in BGPO is called Ideas and Opportunities. This programme as detailed in BGPO-SP-015 Ideas and Opportunities allows for all personnel to input suggestions and or their ideas to improve any aspect of with BGPO operations and the BMS.

Personnel may input their I&O directly into **FLAG** which is then allocated to the appropriate manager to consider and address. The process is also tied the incentive programme to encourage personnel to bring their ideas forward.

11.0 APPENDIX

11.1 Attachments

The following attachments have been added under this plan for the project in **FLAG**:

FLAG ID Reference	Name of Attachment

11.2 Glossary

Name	Definition
A	
Acute	A measure of the time, sudden or immediate effect
AED	Automatic External Defibrillator
ALARP	As Low as Reasonably Practical
B	
BGPO	BGP Offshore
BMS	Business Management System
C	
D	
DPA	Designated Person Ashore
E	
ERT	Emergency Response Team
ERP	Emergency Response Plan
F	
FLAG	BGPOs electronic database. (File Locally Access Globally)
G	
GP	General Practitioner

H	
HCP	Health Care Professional
I	
IAGC	International Association of Geophysical Contractors
ISOS	International SOS (Provision of medical care and staff)
IMO	International Maritime Organisation
IMCA	International Marine Contractors Association
IOGP	International Association of Oil & Gas Producers
J	
K	
KPI	Key performance indicators
L	
LSA	Life Saving Appliance
M	
N	
NC	Non-Conformance
O	
OTC	Over the Counter
OVID	Offshore Vessel Inspection Database
P	
PMS	Planned Maintenance System
POM	Prescription Only Medications
PEP	Project Execution Plan
Q	
R	
S	

SAR	Search and Rescue
SCE	Safety Critical Equipment
SSF	Seismic Survey Fleet
SOLAS	Safety of Life at Sea (an international maritime treaty)
SMART	Specific, Measurable, Achievable, Realistic and Time-bound
SMS	Safety management system
STCW	Standards of Training, Certification and Watchkeeping
T	
U	
UHF	Ultra-High Frequency
V	
VHF	Very High Frequency
W	
WI	Work instruction – Task base procedure
X	
Y	
Z	

November 15, 2019



Security Plan

insert project (name)

QHSSE DEPARTMENT

insert client (name)

14th Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 300457, CHINA

Table of Contents

1.0 COMMITMENT AND ACCOUNTABILY....8
1.1 Project Manager....8
1.2 Deputy Project Manager....8
1.3 Company Security Officer....8
1.4 Designated Person Ashore....8
1.5 Fleet Manager (Optional)....9
1.6 Master....9
1.7 Chief Officer....9
1.8 Chief Engineer....9
1.9 Officer on Watch....10
1.10 Offshore Security Advisor (Optional)....10
1.11 Fleet Party Chief (Optional)....10
1.12 Party Chief....10
1.13 Onshore Emergency Response Team....10
1.14 Onshore Security Advisor (Optional)....11
2.0 OBJECTIVES....12
2.1 Onshore....12
2.2 Offshore....12
3.0 ORGANISATION, RESOURCES AND CAPABILITY....13
3.1 BGPO....13
3.2 BGPO Project Management Team....13
3.3 BGPO Security Resources....13
3.4 Vessel Management Companies Resources....14
3.5 Client Project Management Team....14
3.6 Client Security Resources....14
3.7 Joint Venture Security Resources (Optional)....15
3.1 National Resources (Optional)....15
3.2 Communications....15
3.3 Onshore Security Organizational Chart....16
3.4 Offshore Security Organizational Chart....16
4.0 STAKEHOLDERS AND CUSTOMER....17
4.1 Stakeholder Identification....17
5.0 RISK ASSESSMENT AND CONTROL....18

6.0 ASSET DESIGN AND INTEGRITY 19
6.1 Vessel Management Companies 19
6.2 Vessel Audits and Inspections 19
6.2.1 Ships Security Plan 19
6.2.2 Vessel Hardening. 20
6.2.3 Citadel 20
6.3 Hotel Audits and Inspections (Optional) 20
6.4 Onshore Security Training 20
6.5 Offshore Security Training 21
6.6 Human Resources 21
6.6.1 Certification, Qualification and Experience. 21
6.6.2 Project Specific Human Resource Requirements (Optional) 21
6.7 Onshore Drills 21
6.8 Offshore Drills 22
7.0 PLANS AND PROCEDURES 23
7.1 Relevant Intelligent Reports 23
7.2 Community Engagement (Optional) 23
7.3 Rules of Engagement 23
7.4 Onshore 23
7.4.1 Deterrence 23
7.4.2 Early Detection 23
7.4.3 Response 24
7.5 Offshore 24
7.5.1 Deterrence 24
7.5.2 Early Detection 24
7.5.3 Response 24
7.6 Layers of Protection 24
7.6.1 Onshore 24
7.6.2 Offshore 25
7.7 Control of Waters 25
7.7.1 Surveillance Zone 26
7.7.2 Warning Zone 26
7.7.3 Exclusion Zone 26
Figure 4 Example Multi-vessel Control of Waters 27

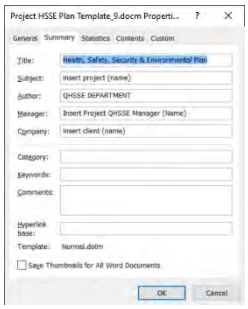
7.8 Client Specific Security Response Procedures 28
8.0 EXECUTION OF ACTIVITIES 29
8.1 Onshore 29
8.1.1 Onshore Personnel 29
8.1.2 Journey Management Onshore Personnel 29
8.1.3 Journey Management Offshore Personnel 29
8.1.4 Initiating an Onshore Security Response 30
8.2 Offshore 30
8.2.1 Mobilization 30
8.2.2 Vessel Entry and Departure form Survey Area (Optional) 31
8.2.3 Acquisition 31
8.2.4 Logistics 31
8.2.5 Demobilization 31
8.2.6 Initiating an Offshore Security Response 31
9.0 MONITORING, REPORTING AND LEARNING 33
9.1 Monitoring Performance 33
9.2 Incident Reporting & Investigation 33
9.3 Lessons learned 33
10.0 ASSURANCE, REVIEW AND IMPROVEMENT 34
10.1 Auditing 34
10.1.1 Project Audits 34
10.1.2 Sub-Contractor and Supplier Audits 34
10.1.3 Management Visits 34
10.2 Project Self-Verification 34
10.3 Client Security Assurance Process (Optional) 34
10.4 Review 35
10.4.1 Management Review 35
10.4.2 Project Reviews 35
10.4.3 Location Reviews 35
10.5 Improvement 36
10.5.1 Non-Conformity 36
10.5.2 Ideas and Opportunities 36
11.0 APPENDIX 37
11.1 Attachments 37

11.2 Glossary.....37

Instructions: Delete before publishing.

This plan has been developed to allow the user to fill in required sections in BLUE. Other areas in the document are protected to maintain the integrity of the plan.

The document must be opened to allow macros as this enables the feature to add additional rows if required in the tables provided.



Meta data is used in this document and must be filled in first to load specific fields in the document. To access this:

Click File tab.

On Info part, move to Properties in the right side of the pane.

Click the down arrow and choose Advanced Properties in the menu.

You will get a pop-up window, where you can make change in the dialog box.

You may enter and edit information in the "**blue**" text form fields. If additional rows are required when adding information to the tables and form fields, select the "**+**" plus symbol on the bottom right of the table as shown below:

Revision Number	Amendment	Date
1	Updated Section X.XX to include: abcdef	6/2/2019

Some fields are "Optional" and may be deleted if not required for the project.

If you encounter any problems or find information in this plan that is inaccurate or needs to be updated. Please contact the QHSSE Department.

DOCUMENT REVISION & CONTROL

This plan has been developed by the BGPO QHSSE Department and has been reviewed & approved through FLAG workflows with the project management team prior to being distributed as per the distribution list on the following page. This plan is held as an active document in **FLAG** at the project level and shall be reviewed by the project management teams (both BGPO/Client and JV Partner as appropriate) prior to the initiation of each phase of the project.

AMENDMENTS

Revision Number	Amendment	Date
1	Updated Section X.XX to include: abcdef	6/2/2019

CUSTODIAN

Company	Name	Role
BGP Offshore	Insert Project QHSSE Manager (Name)	Project QHSSE Manager

APPROVAL

Company	Name	Role
BGP Offshore	Phil Bigg	QHSSE VP

DISTRIBUTION LIST

The following table identifies the distribution list for this document. Individuals on this list shall be sent a workflow action from FLAG [Add Follow Up Action] from the Custodian to the to the individual to acknowledge receipt and or to approve this plan.

It is the responsibility of the individual to cascade the information contained within this document and its supporting attachments to their direct reports and/or departments or organizations:

Internal Role	Name	Action by Workflow
QHSSE VP	Phil Bigg	Approve Plan
Insert Role	Insert Name	Acknowledge Receipt

External Role	Name	Action by Workflow
Insert Role	Insert Name	Acknowledge Receipt

INTRODUCTION

Security incidents can easily escalate unless they are managed efficiently and that depends on effective decisions being made quickly and calmly. This can only be achieved by following prescribed procedures that have been carefully planned and thoroughly tested.

This plan applies to all locations on the project and has been developed to support geophysical survey operations and the Seismic Survey Fleet (SSF) for the **insert project (name)** for **insert client (name)**.

PURPOSE

The purpose of this document is to enable all stakeholders within the project to be able to react appropriately to a security emergency, by:

- Identifying the roles, responsibilities and authority of key personnel within the plan
- Identify the resources available to support the plan
- Identify the Command and Control structures within the plan
- Identify the project specific support assets available
- Identifying and activating the appropriate assets required to bring a security incident to a successful conclusion
- Effectively enacting the Training and Competency required to support the plan

This plan shall be read in conjunction with the following documents:

- Project Execution Plan
- Emergency Response Plan
- Medical Emergency Response Plan
- Communications Plan
- Community Engagement Plan **(Optional)**

1.0 COMMITMENT AND ACCOUNTABILY

It is the duty of line management and their direct reports to understand their roles, responsibilities and authority throughout the lifecycle of this project in accordance with their respective job descriptions in **FLAG** and implement duties assigned. The following sections highlight their main security responsibilities:

1.1 Project Manager

The Project Manager shall support the Master and/or Party Chief of any vessel within the seismic survey fleet involved in a security incident and any BGPO managed personnel involved in an onshore incident; in addition, they shall;

- Ensure that adequate resources are provided to support the management of the incident
- Liaise with the client's onshore project management team
- Liaise with the Vessel Management Company's onshore vessel management team
- Liaise with the Joint Venture partners onshore project management team **(Optional)**
- Liaise with onshore National Emergency Service Assets
- The management of onshore incidents

1.2 Deputy Project Manager

The Deputy Project Manager is responsible for supporting the Project Manager, and shall;

- Assume the duties of the Project Manager during period of absence of the Project Manager

1.3 Company Security Officer

All Company Security Officers (CSO) shall provide security advice and assistance to their respective vessel Master and Chief Officer, in addition they shall:

- Provide security updates to the senior management of their respective organisation

1.4 Designated Person Ashore

The Designated Person Ashore shall act as a direct link between the vessel Master and crew to senior management, in addition they shall;

- Ensure that adequate resources are provided to support the management of the incident
- Provide advice and assistance to their respective vessel Master, Chief Officer and crew
- Provide updates to the senior management of their respective organisation
- Provide direct liaison with their organisations Protection and Indemnity (P&I) Club

- Provide direct liaison with the vessels Flag State authority

1.5 Fleet Manager (Optional)

The Fleet Manager is responsibility for the coordination of the security vessels and assets employed to support the SSF and shall:

- Take Tactical Command of the movement of security vessel to provide direct support to each seismic vessel in its operations.
- Provide a direct liaison between the contacted Security Advisors both onshore and offshore.

1.6 Master

Master of each vessel has the **ultimate responsibility and authority** for the safe operation of their respective vessel, they shall;

- Take Tactical Command of any incident occurring on-board their vessel.
- Anticipate and react to support requested by another vessel in support of an incident.
- Alert all vessels within the SSF should an actual incident occur on-board their vessel or a potential threat or be observed.
- Request any support they deem necessary from the immediate SSF or from their respective Emergency Response Team ashore.
- Request any support they deem necessary from third-party agencies identified within their respective emergency response plans and procedures.
- Design and arrange regular security drills.

1.7 Chief Officer

The Chief Officer shall take command and assume the duties of the Master should the Master be incapacitated and shall;

- Act as the vessels Ships Security Officer (SSO).
- Provide advice on security to the Master and crew.
- Liaise and coordinate security drills with the other SSO within the SSF.
- Act as the liaison between the vessel and the vessel's Company Security Officer (CSO).
- Provide regular security training to the vessels' crew.
- Assist the Master in the Design and arrange regular security drills.

1.8 Chief Engineer

The Chief Engineer of each vessel shall provide technical support to the Master, in addition they shall;

- Ensure the security of the vessels propulsion and steering systems.
- Ensure that all vessel life support systems to the citadel are maintain in accordance to the Planned Maintenance System (PMS).

1.9 Officer on Watch

The Officer on watch (OOW) shall maintain a listening and visual watch and inform the Master and Party Chief Immediately should an incident or potential incident occur, in addition they shall;

- Ensure the Voice Data Recorder is set to record.
- Maintain an accurate log.

1.10 Offshore Security Advisor (Optional)

The Security Advisor on board the security or seismic vessel will be responsible for operational planning and briefing to Master and crew of the vessel, in addition they shall;

- Ensure the security escort vessel(s) are familiarised with the security plan and the security escort vessel SOP's.
- Assist the Navy during a security incident.

1.11 Fleet Party Chief (Optional)

Fleet Party Chief shall provide assistance to the Fleet Manager in providing security arrangements to support the SSF activities, and shall:

- Provide details of the progress and/or changes to the acquisition progress to the Fleet Manager throughout the survey
- Provide direct liaison and control of the Party Chiefs.

1.12 Party Chief

The Party Chief shall provide assistance to the Master in support of management of any security incident, in addition they shall:

- Provide technical support to the Master for the lockdown processes of seismic decks
- Act as a liaison between the Master and the on-board client representative
- Act as a liaison between the vessel and BGPO onshore management
- Maintain an accurate log

1.13 Onshore Emergency Response Team

All personnel within an onshore Emergency Response Team (ERT) are to be available at all times.

The ERT shall stay in close contact with the Vessel Emergency Response Team and higher-level management. The ERT has the following key tasks during an Emergency:

- Assess the emergency situation continually until it is resolved.
- Report frequently to the higher-level management.
- Assist to get the emergency situation under control, without micromanaging
- Liaison between ERT's from other organisations involved in the incident
- Allocate sufficient resources required to bring the incident to a successful conclusion
- Liaise with host nation national security organisations
- Liaise and coordinate information with crew nationality Embassies

1.14 Onshore Security Advisor (Optional)

The Onshore Security Advisor shall manage shore-side operations for the security vessels and shall;

- Monitor, organize and manage the resupply and crew change of all security vessel.
- Provide incident reports and response to support Offshore Security Advisor, 24/7 support
- Management control and communication in line with their organisations SOP's

2.0 OBJECTIVES

This document has been designed to ensure the following objectives can be achieved

2.1 Onshore

Tier	Description	Response Time
0	**Intervention and Interdiction by dedicated Security personnel**	**Immediate**
1	Government Security/Police services and BGPO Duty Manager Informed	2 minutes
2	Intervention and Interdiction by Governmental Security/Police Assets	15 minutes
3	Personnel arrive in Safe Haven	4 hours

2.2 Offshore

Tier	Description	Response Time
0	**Internal vessel alerted**	**Immediate**
1	All personnel enter citadel	4 minutes
2	Intervention and Interdiction by dedicated Security Vessel	5 minutes
3	Intervention and Interdiction by 3rd Party or Host Nation Security Assets	4 hours

3.0 ORGANISATION, RESOURCES AND CAPABILITY

The following resources have been dedicated and/or identified to support the project. In order to uphold the principle of 'Duty of Care', BGPO shall ensure that all resources are appropriately audited and/or inspected to ensure that the standards expected by each company are met or exceeded:

3.1 BGPO

The BGPO Management Team provides the following:

- Direct Support to Project Management Team
- Corporate Emergency Response Team

3.2 BGPO Project Management Team

The BPGO onshore Project Management Team provides the following:

- Direct Project Management
- Local Emergency Response Team
- Client Liaison and Interface

3.3 BGPO Security Resources

The following BPGO security resources have been allocated to support the project:

Asset	Security Resource	Notes
Seismic **Vessel 1 name**	**1. Security Liaison Officer**	
Seismic **Vessel 2 name**	1. Security Liaison Officer	
Security Vessel 1 name	**1. Armed Military Personnel** **2. Security Liaison Officer** **3. Ballistic** **4. Speed 12 knots**	**As further detailed in Asset Descriptions**
Security Vessel 2 name	1. Armed Military Personnel 2. Security Liaison Officer 3. Ballistic 4. Speed 12 knots	As further detailed in Asset Descriptions
Security Vessel 3 name	1. Armed Military Personnel 2. Security Liaison Officer 3. Ballistic 4. Speed 12 knots	As further detailed in Asset Descriptions

Security Vessel 4 name	1. Armed Military Personnel 2. Security Liaison Officer 3. Ballistic 4. Speed 12 knots	As further detailed in Asset Descriptions
Onshore	Security Provider 24hour Telephone xxxxx	Manages Security Vessels and crew change Provides regular security updates
Hotel 1	1. Armed Military Personnel 2. Security Liaison Officer	
Hotel 2	1. Armed Military Personnel 2. Security Liaison Officer	

3.4 Vessel Management Companies Resources

All vessel management companies supply the following security resources for the vessels they operate:

- Company Security Officer (CSO)
- Designated Person Ashore (DPA)
- P&I Club
- Emergency Response Team

3.5 Client Project Management Team

The client onshore Project Management Team provides the following:

- Direct Project Management
- Company Security Officer (CSO)
- Contractor Liaison and Interface
- Local Emergency Response Team

3.6 Client Security Resources

The client onshore Project Management Team provides the following security resources:

Asset	Security Resource	Notes
Insert location / vessel name	**Security Liaison Officer**	**Primary Contact with Client Onshore Security Team**
Insert location / vessel name	1. Armed Military Personnel 2. Security Liaison Officer 3. Ballistic	

	4. Speed 12 knots	

3.7 Joint Venture Security Resources (Optional)

The Joint Venture (JV) onshore Project Management Team provides the following secuirty resources:

Location Name	Security Resource	Notes
Insert location / vessel name	Emergency Response Team	

3.1 National Resources (Optional)

The following national resources available to support the project:

Security Resource	Capability	Notes
Police	**Police**	**Tele: xxxxxx**
Embassy/Consulate	Consulate Support	Tele: xxxxxx
Military	Naval Vessels	Tele: xxxxxx

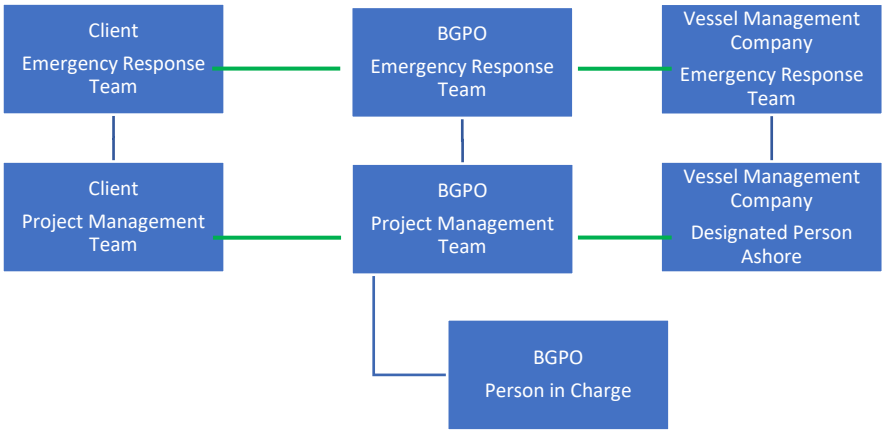
3.2 Communications

The project COMMUNICATION PLAN provides a framework for effective communication management for the complete lifecycle of the project. It is vital that strict communication protocols are to be adhered to in order to reduce the likelihood of passing incorrect information and breaching legal or contractual obligations.

The plan details communication mapping, protocols and the communication vehicles used to share and disseminate information.

3.3 Onshore Security Organizational Chart

The diagram below shows the Onshore security reporting structure between all involved parties on the project:



Key — Update chart as required

Operational Reporting & Authority

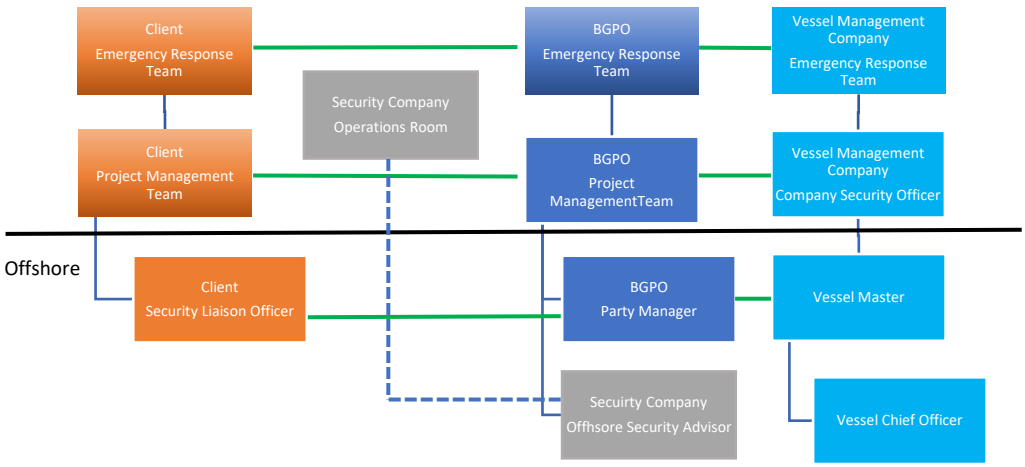
Functional Reporting & Authority

Consultancy – No Authority

Figure 1 - Onshore Security Organisational Chart

3.4 Offshore Security Organizational Chart

The diagram below shows the Offshore security reporting structure between all involved parties on the project:



Key — Update chart as required

Operational Reporting & Authority

Functional Reporting & Authority

Consultancy – No Authority

Figure 2 – Offshore Security Organisational Chart

4.0 STAKEHOLDERS AND CUSTOMER

4.1 Stakeholder Identification

Stakeholders that have been identified in the project are listed in **FLAG** under the stakeholder tab at the project level. Information in this tab includes: The *Company / Organization* name, *Relationship to the project*, *Means of communicating*, the *Contact Point* in the stakeholders organisation and other specific details regarding the stakeholders responsibilities, needs, expectation and requirements in the *Comment* section.

The Project Team with full support from the QHSSE Department is reposibile for identifing applicable laws, regulatory requirements as defined in BGPO-MP-018 Marine Seismic Operations. The Project QHSSE Manager details these requirements for the project in **FLAG** under the Project Level tab, Stakeholders.

The following stakeholders have been identified for this Security Plan with their specific responsibilites and expectations listed in the table below.

Stakeholder	Responsibilities	Project Specific Expectations
Client	Management of Client Supplied Security Assets.	Insert additional client expectations here.
BGPO	Managerial Support to Security Emergencies	
Insert Security Provide	Provision of 24hour Security Support	
Coast Guard	National Authority for the management of offshore incidents	
Community 1		
Community 2		
Vessel management company (1) Add company name	Management Support of Security Emergencies Insert vessel names	Click or tap here to enter text.
Vessel management company (2) Add company name	Management Support of Security Emergencies Insert vessel names	Click or tap here to enter text.
Add other if applicable **Maritime,** **Navy** **Police etc**	Reporting of Incidents	Click or tap here to enter text.

5.0 RISK ASSESSMENT AND CONTROL

The following project level risks have been identified to have a potential to impact on the security management of the project, details of their control measures can be found in the FLAG Ref ID:

#	FLAG Ref ID	Risk Category	Hazard
1	**Insert Flag Ref ID - i.e. RA-Shell-19/04-002**	**Security**	**Onshore** - **Organised and Opportunistic Crime**
2	Insert Flag Ref ID - i.e. RA-Shell-19/04-002	Security	Offshore - Organised and Opportunistic Crime
3	Insert Flag Ref ID - i.e. RA-Shell-19/04-002	Security	Disputes with Neighbouring Communities
4	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Security	Disputes with Non-Governmental Organisations
5	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Security	Corruption
6	Insert Flag Ref ID – i.e. RA-Shell-19/04-002	Security	Maritime National Boundaries

6.0 ASSET DESIGN AND INTEGRITY

In order to provide a robust system to ensure that a security incident is efficiently managed and brought to a rapid conclusion, and to prevent the incident from escalating it is vital that's all parts of the security response processes are appropriately managed and fit for purpose. The following shall be confirmed through Audits, Inspections Reviews, Training and Drills:

6.1 Vessel Management Companies

All vessel management companies shall undergo an audit as defined within the BGPO-MP-024 Marine Contractor Management to ensure they meet industry requirements.

In addition, an Interface document between BGPO and the Vessel Management Company has been produced in order to determine the hierarchy of control should an incident occur:

6.2 Vessel Audits and Inspections

All vessels shall undergo the following audits and inspections to ensure compliance to International, National and Contractual Conventions, Regulations obligations for the management of an emergency and shall undergo the following:

- BGPO - HSE and Marine Inspection
  - *Insert Vessel Name*
  - *Insert Vessel Name*
- Client - HSE and Marine Inspection
  - *Insert Vessel Name*
  - *Insert Vessel Name*
- OCIMF - Offshore Vessel Inspection Document (OVID) Inspection
  - *Insert Vessel Name*
  - *Insert Vessel Name*
- OCIMF - Ship Inspection Report Programme (SIRE) Inspection (**Optional Tankers only)**
  - *Insert Vessel Name*
- IMCA - Common Marine Inspection Document (CMID) Inspection
  - *Insert Vessel Name*
- Flag State - Audits and Inspections
- Insert Security Company Vessel Security Audit
  - *Insert Vessel Name*

During these audits and inspections, the following shall be confirmed:

6.2.1 Ships Security Plan

All vessels shall hold a Ships Security Plan (SSP) as defined by The International Ship and Port Facility Security Code (ISPS) and in addition they shall also hold a vessel Lock Down Procedure and Door Management Plan

6.2.2 Vessel Hardening.

Each vessel shall undergo a review by a competent third-party security company the measures required to harden each vessel, the hardening shall cover requirements for transit and requirements for seismic operations and a detailed Lock Down Plan procedure

6.2.3 Citadel

Each vessel shall have a designated Citadel, that has undergone a review with a competent third-party security company, which provides the following

- Two forms of external communications
- Provisions and potable water to last the entire crew for a minimum period of 48hours
- A toilet facility
- Air conditioning system
- Emergency Medical Equipment
- Sufficient seating capacity for the whole crew
- Entertainment systems

6.3 Hotel Audits and Inspections (Optional)

All hotels shall undergo an inspection by a competent third-party Security Provider to ensure the following security measures are in place:

- Control of Access and Egress
- Security personnel (Availability, Training)
- Security Alarm Processes
- Proximity to National Security/Police Asset

6.4 Onshore Security Training

All onshore personnel shall be given regular training by a Security Advisor, training shall cover at least:

- Facility Lock Down Procedures
- Facility Door Management Plans
- Journey Management Planning and Management
- Alarms
- Security Watch
- Threat analysis
- Conduct during armed/violent robbery
- Conduct during a kidnapping situation

6.5 Offshore Security Training

All crew shall be given regular training by the Chief Officer and/or the Offshore Security Advisor, training shall cover at least:

- Vessel Lock Down Procedures
- Vessel Door Management Plans
- Alarms
- Security Watch
- Threat analysis
- Vessel security communications systems including the vessels Ships Security Alert System (SSAS)
- Conduct during armed/violent robbery
- Conduct during a kidnapping situation

6.6 Human Resources

A review of the Certification, Qualification and Experience of all safety critical personnel shall be made to ensure that they have the competency levels expected to manage an emergency situation

6.6.1 Certification, Qualification and Experience.

The Master and Chief Officer of all vessels shall hold the STCW 95, A-VI/5, Ships Security Officer (SSO)

All maritime crew hold the STCW 95, AVI/ 6-2, Certificate of Proficiency in Designated Security Duties

All crew have completed the STCW 95, A-VI/6-4, Proficiency in Security Awareness.

6.6.2 Project Specific Human Resource Requirements (Optional)

Insert details of project specific human resource requirements here.

Delete if not required

6.7 Onshore Drills

All onshore personnel shall undergo the following security drills:

Training/Drill	Responsibilities	Frequency
Lockdown Drill	Project Manager	Monthly

6.8 Offshore Drills

All vessels shall undergo a security drill at least 24 hours before entering the Host Nations EEZ and also a start of project Security drill within the first 24hours of the start of the project, during the drills all contact numbers shall be tested.

All Masters within the survey fleet shall in addition to the start of project drills shall arrange regular security drills that involve all departments on-board their vessel

The following project drills shall occur in addition to each vessels' standard training and drill matrixes:

Training/Drill	Responsibilities	Frequency
Lockdown Drill	Master of Each Vessel	Once, 24 hours prior to entry to the EEZ
Security Communication Drill	Master of Each Vessel	Once, on entry to the survey area
Security Communication Drill	Master of Each Vessel	Weekly/Monthly etc
Lock Down Drill	Master of Each Vessel	Weekly/Monthly etc

7.0 PLANS AND PROCEDURES

The key to any effective security plan is response is the establishment of layered security zones. The focus is on; deterrence, detection and response to potential threats as far away as possible. This minimizes potential disruption to the operation and reduces the overall security risk.

7.1 Relevant Intelligent Reports

Throughout the project constant communication with BGPO onshore and the client will be on going, ensuring that intelligence is effectively cascaded from onshore to all key personnel.

This will be supplied via weekly situation awareness reports, flash reports, local knowledge and monitoring open source means, all of which provided a realistic perspective of the threat to the project, both offshore and onshore from the BGPO supplied competent third-party security provider.

7.2 Community Engagement (Optional)

Throughout the project constant communication with local communities and the client will be on going, ensuring that intelligence is effectively cascaded from onshore to all key personnel.

This will be supplied via weekly situation awareness reports, flash reports, local knowledge and monitoring open source means, all of which provided a realistic perspective of the threat to the project, both offshore and onshore from the BGPO project management team.

7.3 Rules of Engagement

The applicable Rules of Engagement (ROE) of the Nation will be engaged for the purpose of protecting the BGPO personnel.

These ensure any actions taken are lawful and within the parameters of National legislation and conform with the VPSHR, the Code of Conduct for Law Enforcement Officials - High Commissioner for Human Rights, the Basic Principles on the Use of Force and Firearms by Law Enforcement Officials - United Nations.

7.4 Onshore

7.4.1 Deterrence

Deterrence is maintained through having a credible security plan that utilises private and national security assets and intelligence gathering, monitoring and interpretation

7.4.2 Early Detection

The security personnel provided to protect facilities or journeys must be capable of responding quickly and appropriately to any security incident, as their actions will communicate to an attacker the readiness of the facility/vehicle(s) to repel an attack.

The most visible deterrent in this scenario will be the; physical hardening measures of the building, and an aggressive approach to access and egress protocols and the overt presence of armed security within a vehicle or convey of vehicles.

7.4.3 Response

Response to any incident will be timely, coordinated and proportionate to the threat posed by the incursion.

Each situation will be continually assessed as it occurs but may involve the deployment of the government security/police assets to intercept and the use of lethal force under the National Rules of Engagement.

7.5 Offshore

7.5.1 Deterrence

Deterrence is maintained through having a credible security plan, visible and obvious security assets (vessels) and a watch system that employs both visual and electronic systems that can be maintained capability during periods of darkness or low visibility.

7.5.2 Early Detection

The crew must be capable of responding quickly and appropriately to any security incident, as their actions will communicate to an attacker the readiness of the vessel to repel an attack.

The most visible deterrent in this scenario will be the physical hardening measures installed on all vessels and a rapid response shown by security vessels

7.5.3 Response

Response to any incident will be timely, coordinated and proportionate to the threat posed by the incursion.

Each situation shall be continually assessed as it occurs but may involve the deployment of the security vessel to intercept the suspected threat and attempts to communicate with the crew aboard through VHF.

The use of lethal force by armed national Navy personnel may be employed.

7.6 Layers of Protection

In addition to meeting requirements of the ISPS Code, as well as BGP International's security standards for high-risk areas, the project will use multiple 'layers' of security. These are summarised below:

7.6.1 Onshore

Layer	Description	Summary of Objective
0	Effective community relations strategy	Identify potential threats and changes to community's opinion/relationship to foreign

	Security Intelligence Monitoring and Threat Analysis	nationals/BGPO/Client
1	Control of the facilities perimeter that are monitored and do not include blind spots	Achieve 'detection' and provide a strong 'deterrent' to potential assailants.
2	Access control Rapid Interception and Interdiction by dedicated security personnel The use of Metal Detectors and Physical Inspections	Access to the facility will be strictly controlled so as to avoid unauthorized personnel into the facility.

If the integrity of all layers is compromised, a lockdown procedure and emergency response will be implemented. The importance of good communications between all personnel is essential, and the maintenance of liaison with other companies and governmental security forces is key to the plan's success.

7.6.2 Offshore

Layer	Description	Summary of Objective
0	Effective community relations strategy Security Intelligence Monitoring and Threat Analysis	To help ensure 'acceptance' and in order to detect potential threats. To be able to react to rapid changes to the security threats
1	Control of Waters around the seismic survey fleet Utilising effective RADAR and Visual Watch	Achieve 'detection' and provide a strong 'deterrent' to potential assailants.
2	A protective ring around the vessels. Utilising effective dedicated security vessel(s)	To provide a further deterrent and reactive capability.
3	Access control Rapid Interception and Interdiction by dedicated security vessel(s)	Access to the vessels will be strictly controlled so as to avoid unauthorized personnel in the survey area.

If the integrity of all layers is compromised, a lockdown procedure and emergency response will be implemented. The importance of good communications between all personnel and vessels is essential, and the maintenance of liaison with other companies and security forces is key to the plan's success.

7.7 Control of Waters

The Control of waters surrounding the SSF is achieved by maintaining protectives zones; Surveillance Zone, Warning Zone and Exclusion zone, Figure 3 illustrates an example of the Zones surrounding 1 seismic vessel, whilst Figure 4 illustrates an example of multiple vessels from the SSF operating at distance from each other.

7.7.1 Surveillance Zone

This is an area 6-10 nm centred on each seismic vessel, the aim within this zone is to detect all potential targets entering the area and track the course, speed and Closest Point of Approach (CPA).

From this information the target will be assessed as a potential threat or benign maritime traffic.

7.7.2 Warning Zone

This is an area extending from 3-6 nm from each seismic vessel. Once a target enters the Warning Zone the OOW will communicate with the target and warn the target to stay clear of the seismic vessel and her area of operations/spread.

Any target entering the Warning Zone that has not been classified as benign maritime traffic may initiate an escalation in security procedures, including tasking a chase or security vessel to escort the vessel away from the warning zone

7.7.3 Exclusion Zone

This is an area extending up to 0-3 nm each seismic vessel. Any target entering the Exclusion Zone without permission will initiate a lockdown on all project vessels, and in extreme circumstances may start an escalation in force to neutralize it as a threat.



Figure 3 Example Single Vessel Control of Waters Zones

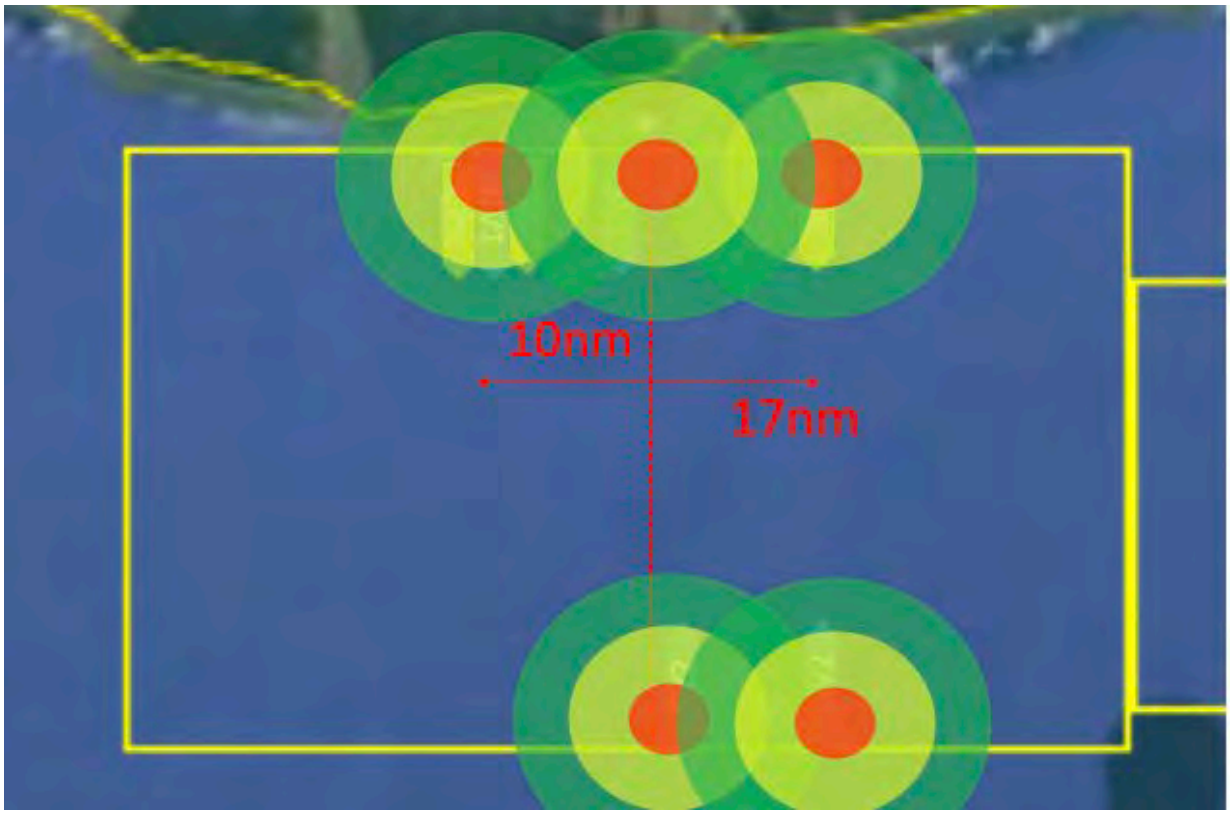


Figure 4 Example Multi-vessel Control of Waters

7.8 Client Specific Security Response Procedures

The following project Client Specific Security Response Procedures have been reviewed by BGPO and incorporated with the BGPO and Client Interface document and this plan:

Procedure	Activation
Insert Client Document Title	Insert who and how it is activated Lead Client Representative
Insert Client Document Title	Insert who and how it is activated Lead Client Representative

8.0 EXECUTION OF ACTIVITIES

8.1 Onshore

8.1.1 Onshore Personnel

All personnel based onshore shall be located in a facility (Office / Hotel / Accommodation) that has undergone a security assessment and maintains 24hour security protection and provided with an Onshore Emergency Response Card (example shown in figure 5).

8.1.2 Journey Management Onshore Personnel

All personnel travelling within the country shall be managed through a Journey Management Plan. The Plan shall provide at least the following information:

- Armed National Security Personnel
- A detailed route plan
- Contact details for Duty Manager
- List of restrictions
  - *Areas*
  - *Night-time Movement*

8.1.3 Journey Management Offshore Personnel

All personnel arriving or departing from an Airport/Heliport/Sea Port shall be managed through a Journey Management Plan as further described in BGPO-MP-021 Journey Management and be informed of the following details:

- Latest Threat Assessments
- An Onshore Emergency Response Card (example shown in figure 1).
- Name and Telephone number of PIC of the group (where appropriate)
- Name and Telephone Number of persons providing meet and greet services
- Vehicle(s) Registration Number
- Details of the next point of arrival/onward movement (Hotel/Airport/Etc)

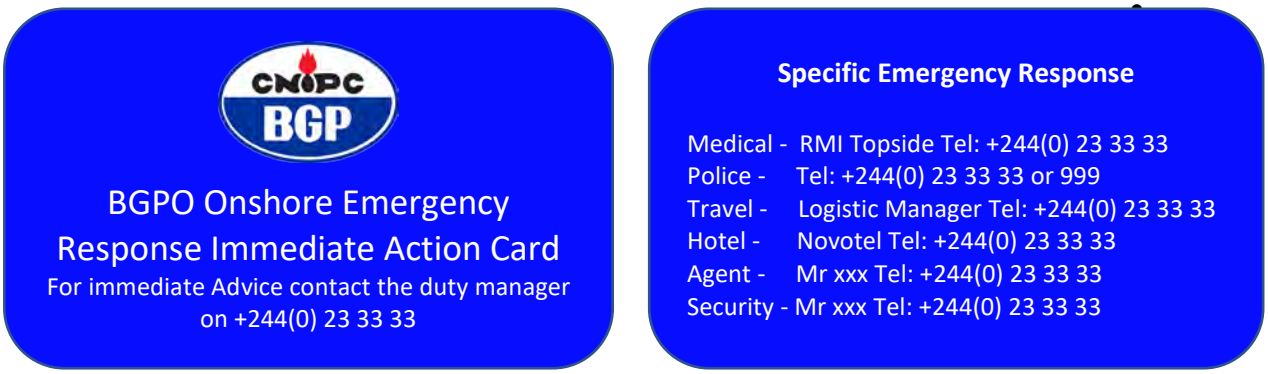


Figure 1 – Example Onshore Emergency Response Card

8.1.4 Initiating an Onshore Security Response

The Person in Charge (PIC) of a group or the individual is responsible for providing the initial and follow up reports to the ***Insert Agency*** and the BGPO Project Manager.

The BGPO Project Manager shall inform the Client. The reports shall at least contain the following details

8.1.4.1 Initial Report

The initial report shall contain at least the following information.

- Time, Date
- Location
- Brief description of security breach/incident
- Preliminary assessment
- Immediate actions

8.1.4.2 Follow Up Report

The follow up reports shall contain at least the following information:

- Time, Date
- Type of Breach/Incident
  - Description of vehicle(s) used
  - Number of assailants
  - Types of weaponry identified
- Details of any injuries
  - Number of persons
  - Type of injuries
- Details of any missing persons
  - Number of persons
  - Names of missing persons
- Actions carried out
  - Immediate actions
  - Follow up actions

8.2 Offshore

8.2.1 Mobilization

All vessels will be escorted from the edge of the Nations Exclusive Economic Zone (EEZ) to the survey area by a dedicated security vessel(s).

The Security vessel(s) shall arrive at least 4 hours before the arrival and rendezvous of the seismic vessels and maintain a; RADAR, visual and listening watch.

The location and details of the rendezvous and 'Meeting Protocol' will be provided to the security vessel immediately prior to the departure of the security vessel from port to reduce the likelihood of 3rd parties from gaining valuable security information.

On arrival of the BGPO vessels to the rendezvous area the Master of the BGPO vessel will initiate the Meeting Protocol with the security vessel Master.

8.2.2 Vessel Entry and Departure form Survey Area (Optional)

All vessels shall follow the Clients Entry and Departure protocols when entering or departing the clients-controlled waters.

8.2.3 Acquisition

Throughout the survey each seismic vessel will be allocated a dedicated security vessel. Non-seismic vessels will be paired with a seismic vessel and come under the security umbrella of the seismic vessels dedicated security vessel.

Where appropriate 2 or more vessels (including seismic vessels) may when operating within close proximity (Less than 1nm) to each other may share a security vessel.

8.2.4 Logistics

The movement to and from the survey area by a seismic or auxiliary vessel shall be provided with a dedicated security vessel and managed in combination with the Logistic Plan.

8.2.5 Demobilization

All vessels will be escorted from the survey area to the edge of the Nations Exclusive Economic Zone (EEZ) by a dedicated security vessel(s).

8.2.6 Initiating an Offshore Security Response

The Master or Chief Officer are responsible for providing the initial and follow up reports to the; ***Insert Agency,*** their respective Emergency Response Team, the Party Chief and the bridge of all other vessels within the SSF.

The Party Chief or QHSSE Advisor is responsible for providing the initial and follow up reports to the BGPO Project Manager and the on-board Client Representative.

The reports shall at least contain the following details:

8.2.6.1 Initial Report.

- Time, Date
- Location
- Brief description of security breach/incident
- Preliminary assessment

8.2.6.2 Follow Up Report:

- Time, Date
- Type of Breach/Incident
  - Description of vessel(s) used
  - Number of assailants
  - Types of weaponry identified
- Details of any injuries
  - Number of persons
  - Type of injuries
- Details of any missing persons
  - Number of persons
  - Names of missing persons
- Actions carried out
  - Immediate actions
  - Follow up actions

9.0 MONITORING, REPORTING AND LEARNING

9.1 Monitoring Performance

The effectiveness of this plan and its supporting vessel specific security response procedures shall be monitored through the use of project and vessel drills, each drill shall be followed up by an immediate de-brief by the Master and a detailed Drill Report.

9.2 Incident Reporting & Investigation

All incidents shall be reported verbally to the Master, Party Chief, QHSSE Advisor and then on to the Client Representative through the Party Chief immediately.

All incidents shall be investigated in accordance with the respective organisations Investigation Procedures. Where appropriate BGPO and the client shall be involved within the investigation as an observer as defined in BGPO-SP-008-Incident Management and further described in the HSSE Plan.

9.3 Lessons learned

All Lessons learnt are identified through incident investigations, meetings, audits, non-conformance, project reviews and other forums such as distributed circulars, industry sharing, and alerts are logged and maintained within **FLAG.** Through **FLAG,** lessens can be distributed via broadcasts and where appropriate SMART (Specific, Measurable, Achievable, Realistic and Time-bound) actions may be assigned as further defined in BGPO-SP-012 Performance Management. Lessons learned may be entered in **FLAG** at three separate levels:

1. Company Level
2. Project Level
3. Location Level

10.0 ASSURANCE, REVIEW AND IMPROVEMENT

10.1 Auditing

The audit process in BGPO is defined in BGPO-SP-013 Auditing. The following audits are conducted in accordance with the procedure:

10.1.1 Project Audits

Project audits helps the Project Team to get an adequate review of the project in order to identify what elements of the project were managed successfully and what were mismanaged. They also identify what can be improved in the future. The project audit is risk-based and will include client requirements.

10.1.2 Sub-Contractor and Supplier Audits

External providers have a great influence on the success of BGPO. There are two procedures to support these types of audits, BGPO-SP-007 Subcontractor Management and BGPO-MP-024 Marine Contractor Management.

10.1.3 Management Visits

Management visits are conducted by senior management in BGPO in accordance with BGPO-SP-019 Management Visit. This process involves a senior manager visiting the location and performing an audit at that location. They are used to evaluate the status and continued suitability of the BGPO BMS and the safety culture at each worksite.

10.2 Project Self-Verification

BGPO utilizes a Project Audit process for self-verification in accordance with IOGP 423 - Working Together in a Contract Environment. This process includes specific actions that will be taken through the various project phases to ensure HSSE assurance measures have been implemented as planned.

The BGPO Quality Department is responsible for this process through each phase of the project. Audit findings, either Non-Conformance or Ideas & Opportunities are entered into the Project level Audit tab with assigned workflows for corrective action.

Additional project specific self-verification processes required by contract are detailed below:

Project specific self-verification process	Reference
Insert details of additional project specific self-verification process if any required by contract. If none write "N/A"	

10.3 Client Security Assurance Process (Optional)

The following details the client's HSSE Assurance Process that will be used on the project:

Client ERP Assurance Process	Reference
Insert details of client ERP Assurance Process if any. i.e. RMV- Risk Management verification, audit / inspection process etc. If none delete	

10.4 Review

Corporate, Location and Project objectives entered in **FLAG** are set with appropriate monitoring and measuring arrangements to ensure that progress towards these objectives are being met as part of a Plan, Do, Check, Act approach. Performance monitoring will be reported/recorded in **FLAG**, reviewed by the process owners, and later reviewed by senior management in accordance with BGPO-SP-012 Performance Management.

10.4.1 Management Review

In BGPO there is an ongoing management review process where senior management evaluates the efficacy of the BMS and outlines direction for continuous improvement. During the review, senior management will review the organisation's past performance and determine the areas they want to prioritise for performance improvement.

10.4.2 Project Reviews

Project reviews are carried out by the BGPO and Client Project Management Team and where possible the Party Chief and Master(s). These reviews should cover the project objectives as set in **FLAG** and will allow the Project Teams to:

- Assess and learn from the information gathered on the project.
- Consider what is and what is not working on the project.
- Reflect on how the project is progressing towards its intended outcomes; and
- To implement any changes which might be needed to ensure that the outcomes for the end of project will be achieved.

Project Specific Review Process (Optional)	Reference
Insert details of any project specific review process required by the client, contract etc. **Delete if not required**	Insert contract reference etc

10.4.3 Location Reviews

Performance reviews are conducted at the location level to track progress through the locations key performance indicators on objectives set. The Party Chief for the crew is responsible for conducting these reviews and updating progress toward objectives in **FLAG** for each location.

10.5 Improvement

10.5.1 Non-Conformity

The BGPO-SP-014 Management of Non-Conformance procedure details the process by which BGPO manages non-compliance within the BMS and related activities. The QHSSE department is responsible for receiving and retaining the findings raised from locations and determines which process owner should be assigned corrective action. Any employee, subcontractor or client of BGPO can raise a non-conformance. It is company policy to encourage staff to report all issues considered as non-compliance they see in the course of their activities.

10.5.2 Ideas and Opportunities

A key element in the improvement process in BGPO is called Ideas and Opportunities. This programme as detailed in BGPO-SP-015 Ideas and Opportunities allows for all personnel to input suggestions and or their ideas to improve any aspect of with BGPO operations and the BMS.

Personnel may input their I&O directly into **FLAG** which is then allocated to the appropriate manager to consider and address. The process is also tied the incentive programme to encourage personnel to bring their ideas forward.

11.0 APPENDIX

11.1 Attachments

The following attachments have been added under this plan for the project in **FLAG**:

FLAG ID Reference	Name of Attachment

11.2 Glossary

Name	Definition
A	
ALARP	As Low as Reasonably Practical
B	
BGPO	BGP Offshore
BMS	Business Management System
C	
D	
DPA	Designated Person Ashore
E	
ERT	Emergency Response Team
ERP	Emergency Response Plan
F	
FLAG	BGPOs electronic database. (File Locally Access Globally)
G	
H	

I	
IAGC	International Association of Geophysical Contractors
IMO	International Maritime Organisation
IMCA	International Marine Contractors Association
IOGP	International Association of Oil & Gas Producers
J	
K	
KPI	Key performance indicators
L	
M	
N	
O	
OVID	Offshore Vessel Inspection Database
P	
PMS	Planned Maintenance System
PEP	Project Execution Plan
Q	
R	
S	
SSF	Seismic Survey Fleet
SOLAS	Safety of Life at Sea (an international maritime treaty)
SMART	Specific, Measurable, Achievable, Realistic and Time-bound
SMS	Safety management system
STCW	Standards of Training, Certification and Watchkeeping

T	
U	
UHF	Ultra-High Frequency
V	
VHF	Very High Frequency
W	
WI	Work instruction – Task base procedure
X	
Y	
Z	



[Client name and country]

[Type of acquisition] Seismic Acquisition

PD-08 WASTE MANAGEMENT PLAN

QHSSE DEPARTMENT
BGP Offshore
14 Floor, CNPC Tower, No.83, Second Avenue, TEDA, Tianjin, 3000457, CHINA

REVISION HISTORY				
Revision History	Date of Issue	Reason for Update	Issued by	Approved by (client)

DISTRIBUTION LIST			
Name	Company	Position	Email address
Phil Bigg	BGPO	VP QHSSE	Philipbigg@cnpc.com.cn

Table of Contents

1. INTRODUCTION 4
1.1. PURPOSE 4
1.2. OBJECTIVE 4
2. DEFINITIONS 4
3. APPLICABLE LEGAL AND OTHER REQUIREMENTS 5
4. ROLES AND RESPONSIBILITIES 5
5. STAKEHOLDERS 7
6. ESTIMATED WASTE GENERATION 8
7. RISK ASSESSMENT AND CONTROL 9
8. MITIGATION MEASURES 11
8.1. WASTE TYPES, HANDLING AND DISPOSAL ROUTES 11
8.2. WASTE STORAGE AREAS 14
8.3. EMISSION TO AIR 14
8.3.1 Engines/Fuel 14
8.3.2 Refrigerants 14
8.3.3 Incinerators 15
8.4. ANTI-FOULING PAINTS 15
8.5. TRANSFER OF SOLID WASTE TO SHORE 16
8.6. TRANSFER OF LIQUID WASTE TO SHORE 16
8.7. TRANSFER OF LIQUID WASTE BETWEEN VESSELS 16
8.8. WASTE CONSIGNEE NOTE 16
8.9. WASTE MINIMIZATION EFFORTS 16
9. WASTE MANAGEMENT CONTRACTOR 16
10. VESSEL SPECIFIC 17
10.1. VESSEL SPECIFIC PLANS AND PROCEDURES 17
10.2. OIL RECORD BOOK 17
10.3. GARBAGE RECORD BOOK 17
11. WASTE AND EMISSIONS MONITORING 17
12. INCIDENT INVESTIGATIONS 17
13. LEARNING 17
14. REFERENCES 17
[ADD CLIENT'S EIA/ESIA/HSEIA REFERENCE] 18

1. INTRODUCTION

This Waste Management Plan (WMP) has been developed to support the Project HSSE Plan for the **[client name]** in **[country].** It has been complied based on BGPO-MP-046 Waste Management Plan and applies to all vessels within the Seismic Survey Fleet (SSF).

- The Waste Management Plan covers the following areas:
  - Onboard Waste Management (solid waste, effluents and emissions)
  - Transportation of waste to shore
  - Onshore Waste Management

1.1. PURPOSE

The purpose of this document is to enable all stakeholders within the project to:

- Identify the roles, responsibilities and authority of key personnel within the plan
- Understand client and legal requirements related to waste management
- Understand the types of treatment done with each type of waste onboard and onshore
- Understand mandatory records and data keeping requirements.

1.2. OBJECTIVE

The objectives of this plan are to ensure that during the mobilisation, operations and de-mobilisation phases of this project:

- All discharges to sea are compliant to the appropriate; International, National and Industrial conventions, standards, regulations and guidelines
- All discharges to land are compliant to national standards and regulations
- All waste and discharges comply with contractual obligations

2. DEFINITIONS

IMO: International Maritime Organization

IOGP: International Oil and Gas Producers

IOPP: International Oil Pollution Prevention

MARPOL: International Convention for the Prevention of Pollution from Ships

MEPC: Marine Environment Protection Committee

PMS: Preventative Maintenance System

SEEMP: Ship Energy Efficiency Management Plan

SSF: Seismic Survey Fleet

WMP: Waste Management Plan

[ADD OR CHANGE DEFINITIONS]

3. APPLICABLE LEGAL AND OTHER REQUIREMENTS

Data can be obtained from the client's

ISSUE (topic e.g. water resources, waste management etc)	APPLICABLE LEGAL AND OTHER REQUIREMENTS Legislation number and title)

Table 1 Applicable legal and other requirements

4. ROLES AND RESPONSIBILITIES

It is the duty of all personnel detailed below to understand their role, responsibilities and authority and to ensure that all personnel in their direct line of management are aware of their role, responsibilities and authority throughout the lifecycle of the project.

The responsibility of each role involved in this plan is detailed below:

Environmental and Sustainability Manager is responsible for:

- Preparing this plan
- Identifying legal and other requirements applicable to waste management
- Providing Leadership in all environmental matters related to the management of projects
- Allocating resources to enable the implementation of this plan on all BGPO's facilities within the projects.
- Providing options and ideas for waste minimization.
- Reviewing the vessels performance towards waste management and ensure pollution control is maintained.
- Ensuring the best possible alternative for waste disposal have been chosen for each type of waste.
- Ensuring waste management company have been properly audited and selected.

Project Manager is responsible for:

- The coordination of resources and the effective execution of this plan
- Collecting project data, statistics and analyzing data to be used in reporting on a weekly, monthly and annual basis as required by BGPO
- Managing any client feedback or audit findings that present opportunities for improvements

Project QHSSE Lead is responsible for:

- Assisting with identifying waste management options available in country
- Assisting with waste management facility audits and ensuring all records of such audits are in FLAG
- Assisting with waste minimization alternatives.
- Checking waste records periodically in FLAG to ensure quality and accuracy.
- Ensure reports are compiled, when required.

Logistics Manager is responsible for:

- The coordination of resources and the effective execution of plan
- The identification of an appropriate onshore waste facility that complies to BGPO standards, client's requirements and host nation legal obligations
- Coordinating waste transfers from offshore facilities to onshore facilities.

Party Chief is responsible for:

- Demonstrating leadership in Environmental Preservation by leading by example
- The daily management, supervision and implementation of this plan
- Waste management at the work site; identification and mitigation of operational impact to environment in close cooperation with the master

QHSSE Advisors are responsible for:

- Leading by example
- Monitoring their location's compliance with this plan
- Provide guidance on any waste management issues that may arise in cooperation with Environmental and Sustainability Manager

Vessel Masters are responsible for:

- Demonstrating leadership in Environmental Preservation by leading by example
- Ensuring all necessary documentation are adhered to, and completed in support of this plan
- Coordinating training drills for the Maritime crew and Seismic team

Chief Officer is responsible for:

- Implementing this Waste Management Plan
- Liaising with shore authorities for port reception facilities
- Signing the waste record book as required by regulations
- Ensuring the designated waste handling personnel wear the correct personal protective equipment at all time during waste handling
- Implementing the vessel specific Garbage Management Plan
- Monitoring correct practices contained in the vessel garbage management are implemented.
- Ensuring placards are displayed in appropriate areas of the vessel
- Training & familiarization of Shipboard personnel to facilitate compliance to the Garbage Management Plan.
- Ensure Officers and Crew on-board comply with the Ship's Garbage Management Strategy & MARPOL 73/78 Annex V.

Chief Engineer is responsible for:

- Implementing this Waste Management Plan
- Signing the waste record book as required by regulations

Health Care Professional(s) is responsible for:

- Ensuring all clinical waste is handled and disposed of in accordance with this Waste Management Plan and the vessel Garbage Management Plan
- Liaising with the Chief Officer on the disposal of all clinical waste onshore

5. STAKEHOLDERS

The following stakeholders have been identified as well as their respective needs and expectations:

Shall be revised from project to project

Stakeholder	**Needs and Expectations**
Local Government	Compliance with applicable law
Local Community	No pollution from project's solid waste, effluent discharges and emission
Customer	High level of HSE Keep good reputation Follow local legislation and internal customer requirements
Waste Management contractor	Business opportunities Communication and project management Clear instructions on the requirements for this project
Vessel owners/Operators	Clear instructions on requirements Follow this plan and applicable regulatory requirements
NGOs/environmental groups	Good environmental stewardship Conservation of quality of air, water and soil
Staff	High levels of QHSE Company's reputation No environmental impacts

Table 2 Stakeholders needs and expectations

6. ESTIMATED WASTE GENERATION

The estimate waste and volume and method of treatment for the seismic vessel can be found in table 3.

Waste General Category	Specific Classification		Estimated volume per day (m^3)					
			[vessel name 1]	[vessel name 2]	[vessel name 3]	[vessel name 4]	[vessel name 5]	[vessel name 6]
Non- Hazardous waste		Food Waste						
		Plastic						
	Domestic waste	paper						
		Glass						
		Aluminium cans						
		Wood						
		Incinerator Ashes						
		Cooking oil						
Hazardous wastes	Operational waste	Oily waste (Rags/filters）						
		Fluorescent tubes						
		Medical waste						
		Aerosol Cans						
		Hazardous waste (Oily waste, etc.)						
		Waste oil/ Sludge						
		E-Waste						

Table 3 Estimated waste generation per vessel/day (m3)

7. RISK ASSESSMENT AND CONTROL

The following table identifies the specific environmental risks that where identified for the project, a

more detailed evaluation of these risks plus their mitigations are contained within the Project Risk Assessment.

All risks are evaluated according to BGPO's risk matrix.

Ranking	Risks	Risk Rating
1	Discharge to Sea Discharge to sea of untreated waste Discharge to sea of treated waste in environmentally restricted area Discharge to sea of treated waste within restricted areas Discharge to sea of restricted waste Wash off from deck cleaning Potential Outcome: Environment - Short lasting marine pollutants Financial - Fines Caused By Defective treatment plant Defective plant alarms Use of cleaning solutions containing marine pollutants Human error during discharge Human error during waste segregation Failure to identify restricted areas prior to discharge	L
2	Discharge to Air Incompletely burnt engine fuel Potential Outcome: Environmental - Short lasting local air pollutants Environmental - Greenhouse gases Caused by Poor quality fuel Poor power management of engines and compressors	L
3	Discharge to Air Release of ozone depleting substances Potential Outcome:	L

Ranking	Risks	Risk Rating
	Environmental - Short term environmental damage Caused by Human error release of refrigerant during maintenance and repair of plant Failure of plant refrigerant system	
4	Discharge to Land Incorrect management of waste stream Potential Outcome: People - Injuries up to medical treatment case Environmental - Short term pollutant Financial - Fines Caused by Human error during waste segregation and packaging Human error in completion of Waste Consignee Note Illegal dumping by waste management company	L

Table 4 Waste management risk assessment

8. MITIGATION MEASURES

8.1. WASTE TYPES, HANDLING AND DISPOSAL ROUTES

Guidance: To choose disposal routes, take into account client's requirements, country legal requirements (including permit requirements) and disposal methods available in country. Choose always the best possible option e.g. recycling the most possible, avoiding landfills, choosing best treatment for hazardous waste.

Waste Category	Main Constituents	Handling and Disposal Routes	Final Destination
Non-hazardous Waste			
Recyclable (non-combustible)	Plastic	Segregated and compacted waste is stored onboard for disposal at suitable facilities onshore	Recycling
	Glass		Recycling/Landfill
	Paper		Recycling
	Aluminum cans		Recycling

	Wood	Stored onboard	Landfill
Domestic (non-recyclable)	Domestic, contaminated with food	Segregated and compacted waste is stored onboard for disposal at suitable facilities onshore	Landfill
Food waste	Organic nutrients	Ground and disposed overboard per MARPOL	Or Landfill
Used cooking oil	From galley	Stored in drums	Treatment facility
Hazardous Waste			
Infirmary waste	Contaminated with bodily fluids, plastic, glass, medicines, needles	Segregated and stored separately for disposal	Incinerator
Chemicals	Solvents, degreasers and thinners, Water-based liquid paints and oil/solvent based liquid epoxy resin paints, lacquers and varnishes, Acids (substances and mixtures with a pH less than 7), Solvent based adhesives, including rags used with the above chemicals	Segregated and stored separately to be transferred to shore for safe disposal	Incinerator
Used oils	Used refined petroleum distillates incl. engine lubrication oil, motor oil, transmission oil and hydraulic fluid. Diesel from generators etc. that cannot be reused.		Treatment facility
Contaminated with oil	Oily filters, oily rags etc.		
Batteries	General purpose batteries		Incineration
Seismic Batteries	Ion-lithium battery polymer lithium batteries		
Fluorescent bulbs		Stored in a box separated from other waste	Crushed and sent out of Brunei
Incinerator Ash		Stored in metal drums to prevent fire risk	Landfill

T	Effluents			
	Bilge water (i)	Water contaminated with residual hydrocarbons and inorganic substances	Use of type approved oily water separator and discharge *en route* and < 15ppm (except in special areas).	Distillation/Incineration
5 W a s t e	**Sludge (ii)**	Oil residue from tanks	Either incinerated onboard using an IMO approved incinerator (> 12nm offshore), when allowed, or stored onboard and transferred onshore for treatment and disposal at licensed waste facilities.	Incineration
	Grey water	Water originated from showers and sinks	Discharge sewage treated in an IMO approved plant discharged *en route* (at least 4knots), at least three nautical miles from the nearest land.	N/A
n a n d	**Black water (iii)**	Sewage water		N/A

ling, management and final disposal

8.1.1 Bilge

The Oily Water separator on all vessels is type approved and will be used as per requirements of MARPOL discharging <15ppm and vessel proceeding *en route.*

The master is responsible for recording and maintaining the Oil Record book and a vessel's logbook.

Guidance: In areas such as the Caspian Sea Oily water Separators are not allowed to be used. Check legal requirements before.

8.1.2 Sludge

Guidance: Local and client requirements shall be checked to define the best management for sludge.

The master is responsible for recording and maintaining the Oil Record book and a vessel's logbook.

8.1.3 Sewage Water

Guidance: Check local and client regulation for Sewage Water (e.g. Marpol Special Areas.)

All vessels comply to Regulation 11, MARPOL 73/78 and shall only discharge treated sewage waste between at least three nautical miles from the nearest land, at a moderate rate with the vessel proceeding *en route*.

Vessels have a sewage treatment plant that is type approved and conforms to Sewage Treatment Plant IMO Resolution MEPC 159(55) and MARPOL Annex IV and an International Sewage Pollution Prevention Certificate (ISPPC).

8.1.4 Others

Guidance: Check local and client requirements (e.g. Marpol Special Areas)

All Ballasting activities will comply with the International Convention for the Control and Management of Ships' Ballast Water and Sediments.

Food waste discharges will comply with MARPOL Annex V requirements (discharges of ground food (using macerators) always more than 3 nm from the coast and while navigating).

8.2. WASTE STORAGE AREAS

All vessels have appropriate storage areas that prevents the unintentional discharge of waste and prevents the cross contamination of hazardous waste with non-hazardous waste.

8.3. EMISSION TO AIR

8.3.1 Engines/Fuel

The main source of atmospheric emissions during the seismic acquisition program will be from the burning of fuel (marine diesel oil) to power the engines, compressors and electrical generators onboard survey and support vessels. Gases emitted from the fuel combustion processes comprise:

- Carbon dioxide (CO_2);
- Nitrogen oxides (NOx);
- Sulphur oxides (SOx);
- Methane (CH_4);
- Volatile organic compounds (VOC);
- Carbon monoxide (CO), and
- Particulate matter.

8.3.2 Refrigerants

In order to reduce the impact of potential discharges to air of ozone depleting chemicals used within air-conditioning systems and refrigeration plants the vessels use the following refrigerants:

Vessel	Type
[vessel name]	R407C / R404A / R134A
[vessel name]	[add refrigerant type]
[vessel name]	[add refrigerant type]
[vessel name]	[add refrigerant type]
[vessel name]	[add refrigerant type]
[vessel name]	[add refrigerant type]

Table 6 Refrigerant type

8.3.3 Incinerators

Guidance: The use of incinerators may be prohibited in some countries and by some clients. Please check local legal requirements, EIA and client's standards.

Incinerators shall not be used whilst in port or within the 500m exclusion zone surrounding an oil field installation.

All vessels incinerators are type approved in accordance with MEPC.93(46).

The below mitigations are planned to decrease these impacts to as low as reasonably practicable:

- All shipboard emissions will be in compliance with MARPOL 73/78 Regulations for the prevention of air pollution from ships (Annex VI), aiming to reduce global emissions of SOx, NOx and particulate matter.
- When applicable, engines and generators shall be used in accordance with the vessels Ship's Energy Efficiency Management Plan (SEEMP) and vessels must present their International Air Pollution Prevention Certificates. *Ensure all SEEMP, when available are gathered and saved in the location certificates.
- In order to reduce the emissions, all fuel supplies will be strictly qualitied controlled and all vessels engines, diesel generators and compressors are to be maintained in accordance with the manufacturer's guidance and the vessels Preventative Maintenance Systems (PMS).
- Engines and equipment are to be switched off when not in use.
- Use of low-sulphur MGO, maximum sulphur content as per MARPOL.
- All vessel incinerators are class approved.

8.4. ANTI-FOULING PAINTS

Anti-fouling paints are used to coat the bottoms of ships to prevent sea life, such as algae and molluscs, attaching themselves to the hull and thereby slowing down the ship and increasing fuel consumption.

In the early days of sailing ships, lime and later arsenic were used to coat ships' hulls, until the modern chemicals industry developed effective anti-fouling paints using metallic

compounds.

These compounds slowly "leach" into the sea water, killing barnacles and other marine life that have attached to the ship. But the studies have shown that these compounds persist in the water, killing sea life, harming the environment and possibly entering the food chain. One of the most effective anti-fouling paints, developed in the 1960s, contains the organotin tributylin (TBT), which has been proven to cause deformations in oysters and sex changes in whelks.

All vessels carry a statement of compliance (Anti-fouling Certificate) in regard to anti-foul used on the vessels hull in accordance with the IMO Resolution MEPC 195(61), and the International Convention on the Control of Harmful Anti-Fouling Systems on Ships (2001).

*Ensure all certificates are gathered and stored in FLAG under Location Certificates.

8.5. TRANSFER OF SOLID WASTE TO SHORE

All waste sent to shore will be coordinated between the Project Manager, the Party Chief and the vessels Masters. In addition to the vessel's Garbage Management Plan and Garbage Record Book a Waste Consignee Note shall be produced.

8.6. TRANSFER OF LIQUID WASTE TO SHORE

The transfer of waste from a vessel to shore facilities shall be carried out in accordance with vessels specific plans and risk assessments.

8.7. TRANSFER OF LIQUID WASTE BETWEEN VESSELS

The transfer of waste between vessels for onward transit to shore shall be carried out in accordance with vessels specific plans and risk assessments.

8.8. WASTE CONSIGNEE NOTE

Waste shall be segregated, packaged and marked in accordance the requirements prior to sending ashore. The Waste Consignee Note shall be used for all waste sent to shore for disposal and recycling.

8.9. WASTE MINIMIZATION EFFORTS

Add efforts for minimizing waste in this project

9. WASTE MANAGEMENT CONTRACTOR

*waste management contractor shall be audited before approved as a supplier

*audit shall be entered in FLAG under the Project Page

[a contractor summary shall be added here]

10. VESSEL SPECIFIC

10.1. VESSEL SPECIFIC PLANS AND PROCEDURES

This Waste Management Plan is supported by the following plans held by each vessel and approved in accordance with MEPC and MARPOL 73/78 requirements:

- Shipboard Oil Pollution Emergency Plan (SOPEP)
- Shipboard Sewage Management Plan
- Garbage Management Plan
- Ship Energy Efficiency Management Plan (SEEMP)
- Preventative Maintenance Plan

*Ensure vessel's plans are uploaded to FLAG under the location certificates

10.2. OIL RECORD BOOK

The Oil Record Book is accurately maintained onboard as per Regulation 17, Annex I of MARPOL 73/78, and is kept in such a place as to be readily available for inspection at all reasonable times. It shall be preserved for a period of three years after the last entry has been made.

10.3. GARBAGE RECORD BOOK

The Garbage Record Book is accurately maintained onboard as per Regulation 10, Annex V of MARPOL 73/78 wherein all garbage disposals, discharges or even accidental losses are recorded.

11. WASTE AND EMISSIONS MONITORING

Waste and emissions monitoring are done through FLAG. An assigned person will be responsible for adding information daily (emissions) or during waste transfers on the location page under the Waste and Emissions monitoring tab.

12. INCIDENT INVESTIGATIONS

All non-compliances shall be logged in FLAG and when applicable, will be investigated in accordance with BGPO-SP-008 Incident Management.

13. LEARNING

All lessons learnt and identified shall be logged and maintained within FLAG and where appropriate SMART (Specific, Measurable, Achievable, Realistic and Time-bound) actions assigned as further defined in the BGPO-SP-012 Performance Management.

14. REFERENCES

OGP 413 Guidelines for Waste Management with Special Focus on Areas with Limited Infrastructure

The International Safety Management Code (ISM)

OGP 317 HSE Aspects in a Contracting Environment for Geophysical Operations

OGP 423 HSE Management Guidelines for Working Together in a Contract Environment

[ADD CLIENT'S EIA/ESIA/HSEIA REFERENCE]

[ADD OR CHANGE REFERENCE AS NEEDED]