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Amulsar Gold Project
Occupational Safety & Health Management Plan:
Construction

Version 7
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Contents

Table of Contents Error! Bookmark not defined.

1	Introduction	3
1.1	Purpose	3
1.2	Scope	3
1.3	Objectives	4
1.4	Terms and Definitions	4
1.5	Health and Safety Policies	5
2	Planning	5
2.1	Hazard Identification, Risk Assessment and Determining Controls	5
2.2	High Risk Activity	6
2.3	Risk assessment methodology	6
2.4	OH&S Planning	8
2.5	Legal and Other Requirements	12
3	Health & Safety Objectives and Programs	13
3.1	Health & Safety Policies	13
4	Implementation and Operation	13
4.1	Resources, Roles, Responsibilities, Accountabilities and Authorities	13
5	Health & Safety Operational Controls	25
5.1	Safety Standards – work areas	25

5.2	Safety Standards – Material Handling.....	27
5.3	Safety Standards – High Risk Activities	28
5.4	Safety Standards – Access	30
5.5	Safety Standards – Vehicles and Mobile Plant	33
5.6	Safety Standards – Classified Plant and Equipment	34
5.7	Safety Standards – Plant and Equipment	35
5.8	Safety Standards – Electrical	40
5.9	Fitness for work	41
5.10	Hours of work	42
5.11	First aid and medical services	42
5.12	Amenities and personal hygiene	42
5.13	Noise and Vibration	42
5.14	Radiation	43
5.15	Smoke free environment.....	43
5.16	Extreme temperatures	43
5.17	Fibrous materials	43
6	Environmental protection.....	43
7	Emergency response plan	44
8	Performance, measurement and monitoring.....	44
8.1	Positive performance indicators	44
8.2	Key Performance Indicators	45
8.3	Data collection and input	46
8.4	Evaluation of compliance	46
8.5	Incident investigation, Nonconformity, Corrective action and Preventive action	46
8.6	Control of records	49
8.7	Management Review	49
8.8	Health & Safety Audits	49
8.9	Project OH&S audit and inspection.....	49
8.10	Contractor OH&S performance review	50

List of APPENDICES (to be finalized as progress is made in development)

Appendix 1	Health & Safety Policy
Appendix 2	Essential Rules
Appendix 3	Project OH&S Standards List

1 Introduction

1.1 Purpose

- 1.1.1** The Amulsar Project Occupational Health & Safety Management Plan (OHSMP) provides for a guidance document which lays out the planned outcomes and requirements for the project Construction & Operations. This OHSMP will incorporate the requirements from Republic of Armenia laws, requirements under Lydian International Health & Safety Policy, requirements from Geoteam CJSC, the performance standards (PS) of the International Finance Corporation (IFC) and the Performance Requirements of the European Bank for Reconstruction and Development (EBRD), with the intention of meeting good International Industry Practice as well as best practice within Health & Safety for protection of the people, the Environment & Culture.
- 1.1.2** This OHSMP is not a standalone document and shall be used in conjunction with the project Health & Safety Standards, Safe Work Procedures, Guidelines and training packages. The OHSMP sets out “what” is to be accomplished while the remainder set out the how to accomplish our goal of Zero Harm.
- 1.1.3** The Project Management team believe that workers have the best knowledge of the hazards associated with doing their work, therefore we rely on their knowledge of the job to assist us with recognizing hazards and develop and implement methods to control those hazards.
- 1.1.4** Our Occupational Health and Safety Management System (OHSMS) will be driven by the elements contained in OHSAS 18001: 2007 and based on a combination of Risk Assessments, the Internal Responsibility System (defined in section 1.4), traditional Safety & health processes and some aspects of behaviour based safety where the workers, Supervisors and Management will assess risks associated with the work being planned and allow for the best hazard controls as practicality allows. The 5 base rules of behavior based safety are;
- Keep your eyes on your path
 - Stay out of the line of fire
 - Keep your hands on your tools
 - Keep your mind on your task
 - Maintain 3 points of contact
- These 5 simple rules, along with the Project Essential rules, will go a long way in preventing incidents.

1.2 Scope

- 1.2.1** The practices outlined in this plan are developed to ensure the management team and all contractors on the project:
- Prepare and implement Health and Safety plans and Procedures.
 - Ensure participation in the project induction programs.
 - Ensure participation in the projects HSE Audit program.
 - Maintain HSE records and provide required weekly and monthly reports.
 - Provide documents that verify personnel as trained and/or competent.
 - Provide documents that verify plant, machinery equipment and tools as fit for purpose.
 - Provide documents that verify effective execution of the contractor’s hazard and risk management processes, including risk assessments, JHA’s etc.
 - Implement the project Fit for work program.
 - Conduct emergency response drills and participate in any project emergency response planning or drills.
 - Provide for first aid and injury response on the project.
 - Attend and participate in all HSE training, meetings and workshops.

1.3 Objectives

1.3.1 The objectives of this plan are to:

- Provide systems and processes that are focused on the goal of “Zero Harm”.
- Outline the OH&S requirements for the PMT and contractors associated with the project.
- Identify and establish safe work procedures for effective management of OH&S risks.
- Provide an opportunity for contractors with no established OH&S programs to utilize this plan and its accompanying documents while working on the project
- Outline the actions to be carried out during the design, supply, manufacture, construction, installation and testing of the works, to ensure acceptable OH&S standards are maintained.
- Clearly communicate and implement OH&S standards, procedures and processes to ensure a safe, healthy, environmentally friendly and injury free workplace is maintained throughout the project.
- Ensure the relevant OH&S standards, specifications and requirements of Lydian International, IFC EHS Guidelines, Praetorian and statutory authorities are consistently and uniformly achieved and maintained throughout the project.
- Ensure documentary evidence is maintained and supplied to the project management team as required as well as upon request.
- Manage and mitigate risk exposure levels to “As Low As Reasonably Practicable” (ALARP) throughout the project.

1.4 Terms and Definitions

- 1.4.1 **Project Management Team (PMT)** - the group of people formed from Lydian International, Geoteam CJSC, and Praetorian construction management who are responsible for the management of the Amulsar Gold Project.
- 1.4.2 **As Low As Reasonably Practicable (ALARP)** – refers to the philosophy of managing and maintaining risk exposure levels to the lowest level reasonably practical and achievable within the constraints normally found during construction projects.
- 1.4.3 **Appointed Employee Health & Safety Representative** – an employee appointed or elected by the workers for the purposes of safety and health representation on their behalf to the employer and statutory bodies.
- 1.4.4 **Contractor** - Any company, body or person who is contracted to and/or managed by the PMT or Lydian International for the purpose of supplying goods or services in relation to the Project. This definition extends to Sub-Contractors who may be contracted to the ‘Contractor’.
- 1.4.5 **Construction Health & Safety Plan (CHSP)** – is a document, which sets out the specific OH&S management practices, resources, activities, responsibilities and requirements relevant to this particular project. See also Project Health & Safety Management Plan or Occupational Health & Safety Management plan below.
- 1.4.6 **Due Diligence** - When applied to this document, ‘Due Diligence’ means that all employers and responsible persons shall take all reasonably practical precautions to carry out company and individual obligations as stated in the provisions and other relevant sections of the appropriate Health and Safety Laws and Regulations, to prevent injuries or accidents in the workplace.
- 1.4.7 **Environment** - Surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interaction.
- 1.4.8 **Environmental aspect** - Element of an organization’s activities, products or services that may interact with the environment during the Project.
- 1.4.9 **Environmental Impact** - Any change to the environment, whether adverse or beneficial, wholly or partially arising from an organization’s activities, products or services.
- 1.4.10 **Essential Rules** – these are a set of Safety rules that must be adhered to at all times. They have been developed as the basis for preventing fatal or near fatal injuries.

- 1.4.11 Joint Health and Safety Committee (JHSC)** - A joint committee, comprising representatives from both management and workers, formed to discuss HS issues and to provide recommendations to the Construction Manager to actively promote HS on the Project.
- 1.4.12 Health & Safety Audit** - A detailed documented inspection and assessment of the OH&S management system requiring documentary evidence of compliance and implementation of Project OH&S requirements.
- 1.4.13 Health & Safety Assessment** - A documented summary and measurement for compliance to the implemented OH&S Management System for Project requirements.
- 1.4.14 Health & Safety Inspection** – a review of activities and conditions to measure compliance to project OH&S requirements;
 - **Formal inspection**, usually pre-planned and organized, results are documented on a form and usually reported to a set group of people.
 - **Informal inspection**, results may not be documented and are usually reported to a smaller group (area supervisor)
- 1.4.15 Internal Responsibility System**, This places responsibility for safety and health on everyone in the workplace; however, it also realizes that as the employer has the greatest degree of control over a workplace they also have the greatest degree of legal responsibility for safety and health. But, this does not relieve Supervisors and workers from their duty to co-operate in controlling workplace hazards and to take the necessary precautions to protect themselves and others from hazards.
- 1.4.16 Job Hazard Analysis** - A documented task specific analysis of job steps, the hazards involved, and the controls to be implemented to eliminate and/or minimize the risk of exposure to a particular hazard or hazards.
- 1.4.17 Incident** – an unplanned and unwanted event, which may or may not have resulted in injury, damage or production loss. This includes near misses, injuries, damage, environmental impacts, fires, or anything out of the ordinary, whether preventable or not.
- 1.4.18 Accident** – an unplanned, unwanted, unforeseeable, uncontrollable and unpreventable event which may or may not have resulted in injury, damage or production loss.
- 1.4.19 Near Miss** – an incident with no injury, damage or loss which, under slightly different circumstances, could have resulted in injury, damage or loss. These incidents could still be classified as a serious incident.
- 1.4.20 Occupational Health & Safety Management Plan (OHSMP) or Construction Health & Safety Management plan (OHSMP)** is a document, which sets out the specific OH&S management practices, resources, activities, responsibilities and requirements relevant to this particular project.
- 1.4.21** Also referred to as the Construction Health & Safety Plan.
- 1.4.22 Health & Safety Standard** - a written document, forming an appendix to the CHSP which sets out further details, requirements and procedures on specific aspects of the CHSP.
- 1.4.23 Shall** – in this document the word “shall” means that it must be done and is not negotiable.
- 1.4.24 Should** – in this document the word “should” means that it is strongly recommended to be done and may be open to cooperative arrangement and subject to practicality and risk exposure levels.
- 1.4.25 Will** – in this document the word “will” means that it should be done and may be open to cooperative arrangement.
- 1.4.26 Work Method Statement** – a simple outline of how a task or job will be completed. Can be a simple written outline of how the task is to be done. May also be referred to as a work plan.

1.5 Health and Safety Policies

- 1.5.1** Occupational Health & Safety Policy is provided in appendix 1.

2 Planning

2.1 Hazard Identification, Risk Assessment and Determining Controls

- 2.1.1** Hazard Recognition



A project team is made up of individual members, from different backgrounds and cultures, no one person can recognize all hazards, nor will all people recognize the same situation as hazardous. To overcome this, the project manager may instigate a hazard recognition training for all personnel involved with the project, this training will be controlled by the Project Management Team Health & Safety group and may be administered by contractors, this will be determined on a case by case basis.

2.1.2 Hazard identification and reporting

2.1.2.1 All personnel are required to report any hazardous conditions and near hits that occur during the life of the project. Contractors are required to participate in the Project hazard reporting framework.

2.1.2.2 Identified hazards are to be rectified as a matter of priority, in accordance with the level of Risk exposure, documented and reports promptly supplied to the Project OH&S group. Hazard reports and resulting corrective actions shall be tracked throughout the Project using the selected information management system. Hazards that may impact on other Contractors will be communicated to the relevant contractors on identification.

2.2 High Risk Activity

High risk activity will be defined as:

- Working at heights
- Confined space entry
- Hot work
- Crane & hoist use including Critical lifts
- Working in remote or Isolated areas
- Working Alone
- Grid mesh flooring removal (once installed)
- Isolation
- Excavation
- Extreme weather conditions (e.g. lightning, cold, blizzard, fog, high winds)

2.2.1 These activities will require additional control methods such as permitting, increased inspection frequency, special training, pre-planning and approval, additional Risk Assessment requirements or any additional requirements as set out in the various standards associated with this project. The Construction Manager may impose a higher level of diligence for any work that he declares as high risk. See section 5.3 of this plan and the relevant OH&S Standard for further details.

2.3 Risk assessment methodology

2.3.1 A risk assessment is a systematic method of recognizing the hazards, assessing the risk associated with that hazard, and developing controls. There are various forms and nomenclature used for the various ways to perform risk assessments, this project will use 3 types of risk assessment, Team based risk assessment, job hazard analysis, and personal risk assessment.

2.3.2 Prior to major phases of the project the project Manager shall establish a Risk Assessment team and authorize the team to develop a baseline risk assessment in accordance with this OH&S Plan to identify all potential hazards for that phase of the project, and to recommend suitable controls to mitigate the risk to as low as reasonably practicable (ALARP). This risk assessment will form the baseline register for each particular aspect of the project.

2.3.3 The Project Manager is responsible for providing sufficient resources to ensure risk controls are implemented. For all construction and commissioning work packages a formal Risk Assessment shall be required and documented. Contractors who identify the need to amend their own Company procedures shall supply a copy of the proposed amended procedure to the Project Manager or their delegate for review, prior to proceeding with the proposed works. Copies of any authorized project-specific procedures that may be developed are to be sent to the HESS Manager for review prior to implementation.

2.3.4 Level 1 Team Based Risk assessment (TBRA)

2.3.4.1 A TBRA involves an analysis of an identified “potential” hazard, identifying the most likely consequence that may result from an exposure to the hazard as well as the likelihood of the sequence of events occurring. The initial assessment should not take into account any existing hazard management, control methods, technical systems or safe work procedures as this may lead to overlooking an uncontrolled hazard and should only be considered when applying suitable control measures. The likelihood of an event occurring and the extent of the potential consequences are assessed and the potential risk given a “Risk Assessment Score” to assist with prioritizing hazards for control and monitoring.

2.3.4.2 TBRA’s are usually performed with a combination of people from the project Management team and contractors. However this may not always be practical and TBRA’s may be performed with just the project management group. This is a formal process and shall not be assigned to or undertaken by an individual. Follow the guideline in the risk assessment standard.

2.3.5 Level 2 Job Hazard Analysis (JHA)

2.3.5.1 JHA’s shall be carried out by the work teams prior to any job proceeding and shall be regarded as an integral component of the Project’s workplace hazard management strategy. The JHA shall be used to identify all potential hazards associated with the scope of the task and the immediate work environment and to provide risk control action that deals with the identified hazards.

2.3.5.2 The appropriate TBRA should shall be reviewed to identify specific hazard control measures.

2.3.5.3 Standard JHAs (eg. scaffold erection) shall be regularly reviewed for suitability to specific tasks and the hazards associated in different work areas. Where a TBRA has identified a JHA as a Hazard or Risk Control, the JHA shall be prepared with the input and acknowledgement of the personnel directly involved in the task and regularly reviewed to ensure validity.

2.3.5.4 JHA training will be provided by the project OH&S group.

2.3.5.5 Refer to the Risk Assessment Standard for further detail on JHA’s.

2.3.6 Level 3 Individual risk assessment

2.3.6.1 An individual risk assessment is a simple tool used by an individual to assess risks prior to performing a small task, even for a simple task as walking from one part of the project to another, this risk assessment is usually performed mentally with no recording on paper. However, the project management team maintains the right and ability to impose a written form of the individual risk assessment at any point in the project.

2.3.7 Risk Assessment recording

2.3.7.1 All Team Based Risk Assessments (TBRA) shall be recorded and carried out in accordance with standards set out in the Risk Assessment standard. The outcomes of Risk Assessments shall be recorded on a spreadsheet and/or database in a manner that is retrievable for JHA referencing and auditing purposes. The following data shall be recorded in a logical sequence as follows:

- Breakdown of tasks
- Description of hazards involved
- Inherent (initial) risk level
- Action plan (hazard controls)
- Responsibility for action
- Action date
- Residual risk level.

2.3.7.2 Contractors shall ensure that the risk assessment is reviewed for the preparation of any JHAs, procedures and plans.

2.3.8 Hazard management on the Project Site



2.3.8.1 The Construction Manager as the nominated representative shall ensure that all Contractors carry out a formal pre-construction hazard analysis on any hazardous work activity and prior to any hazardous material being introduced into the Project construction area. A pre-construction hazard analysis shall be a hold point on any hazardous activity. Refer to the Standard 18 for Hazard ID, Controls & Risk Assessment

2.3.9 Work method statement

2.3.9.1 Contractors' shall be required to prepare and submit a Work Method Statements (WMS) for critical activities and as requested by the Project Manager or Construction Manager prior to commencement of any task on the project. Work Method Statements shall be required to identify safety critical work activities and clearly define the safe work method planned for execution of the work, including, where required, detailed written safety procedures. Work Method Statements do not replace JHAs, WMS are normally used to better plan for TBRA's.

2.3.10 Construction Hazard Assessment

2.3.10.1 Construction Hazard Assessment shall be carried out regularly as required by Contractors and presented to the Construction Manager for review. The Contractor shall identify the detailed methodology of the project installation (crane positions, lift sizes, work at height etc.), in particular for hazardous activities. The Contractor's methodology shall indicate task by task, the potential hazards identified, and the actions required mitigating risk to As Low As Reasonably Practical (ALARP). The Construction Manager or nominee shall review the hazard assessment and make recommendations as required to implement further agreed controls.

2.3.11 Hazardous or high risk work areas

2.3.11.1 The Construction Manager and the team shall ensure that any hazardous areas defined within the project, such as "Restricted Plant Areas", "Ignition Risk Areas" or "Designated hot work areas" are identified and communicated to all personnel. Formal Risk Assessments shall take into account all identified hazardous areas as a minimum guide to ensure adequate controls are identified.

2.3.11.2 Any tasks, that are to be carried out within these areas, shall clearly identify the hazards that they introduce. The risks associated with these hazards shall then be managed to eliminate or reduce to ALARP.

2.4 OH&S Planning

2.4.1 OH&S project Documentation

2.4.1.1 The project OH&S management system consists of this OH&S plan and the appendices associated with it. Document control for OH&S is the responsibility of the project OH&S Manager. Each procedure shall be issued and implemented in accordance with the project document control requirements and the requirements of this plan and its appendices. For this project all OH&S documents will be available in both English and Armenian. Any discrepancies will be controlled through a cooperative communication and consultative process.

2.4.2 Contract Strategy

2.4.2.1 The identification and definition of contractual arrangements shall be developed using a systematic Risk Management approach. The OH&S input into the overall Risk Assessment shall take into consideration the following factors:

- Number of contracts
- Interfaces between the contracts
- Seriousness of potential OH&S consequences on the project
- Likelihood of any dangerous consequences
- Complexity of the Project as a whole (prequalification)
- Size and/or value of the Project (prequalification)
- Services being contracted for
- Number and experience of the workforce (prequalification)



- Safety program, record and commitment of the Contractors. Project OH&S to review all OH&S plans submitted with Tenders.

2.4.3 Contractor Safety Alignment

2.4.3.1 Effective alignment of the Project's and Contractors' OH&S values and goals shall be an integral part of the Project's OH&S management program. A Contractor's OH&S Management Plan shall incorporate the intent of this Plan and shall focus on key hazards and systems, as well as how it shall be monitored and reviewed during the execution phase. The alignment process managed by the Project Management Team covers the following stages in the Project.

2.4.3.2 Contract stages:

- Prequalification of contractors
- Pre-contract considerations
- Tender evaluation
- Pre-award alignment
- Award
- Pre-mobilization alignment
- Mobilization
- On-site
- Review and close out.
- The extent and level of detail to be considered shall be contract specific and shall depend on:
 - Services being contracted
 - Size and complexity of the job
 - Number and experience of the workforce
 - Risks and hazards associated with the works
 - OH&S program, record and commitment of the Contractor.

2.4.4 Pre-qualification of Tenderers

2.4.4.1 Potential tenderers shall have been screened to confirm that they have the necessary expertise, experience and capability to undertake the required role and that they are prepared to commit to this Project HSEC Management Plan. Screening should include:

- Contractor prequalification HSEC performance assessment
- Evaluation of previous experience of potential tenderer
- Commitment of management
- Assessment of potential tenderer's general reputation for management of HSEC during their work within industry
- OH&S policy and systems evaluation.

2.4.5 Tender Documents

2.4.5.1 Tender documents issued to selected tenderers shall include the Project OH&S Contractor Specifications' outlining the Project's OH&S expectations and requirements. This shall include as a minimum:

Contractors are to receive a copy of the OH&S plan as part of the bid process, which will include:

- Framework and procedures to deal with OS&H on the Project
- OH&S controls, monitoring, audits and inspection
- Project organization and interfaces
- Statement of the Project OH&S policy and plan
- Statement of the OH&S performance targets for the Project and the contract
- Instruction for the Contractor to submit a draft OH&S management plan specifically for this

contract

- Reference to the Project's minimum standards, regulations and procedures
- Instruction for the Contractor to submit hazard management plans addressing specific and critical hazards
- Coordinated tenderers project visits and inspections that shall include pinpointing of potential hazards identified the PMT in the preliminary hazard workshops
- The objective of tenderers' draft OH&S management plans shall be to identify:
- The OH&S risks and how these shall be eliminated or mitigated
- How Contractors shall comply with the Project OH&S Plan
- How nominated OH&S performance objectives shall be met
- How Contractors shall meet the intent of the contract and work in/with the Project culture
- Contractors' HSEC management structure and key personnel

The detail required in draft HSEC Plans shall be dependent on the size, complexity and relative risk of the contract.

2.4.6 Tender evaluation

The primary purpose of the tender assessment process is to achieve:

- Confirmation that tenderers have recognized the OH&S programs and expectations of the Project
- A thorough evaluation of each tenderer's OH&S plan to ensure they achieve at least the minimum acceptable standards defined in the contract documentation
- An evaluation of each tenderer's ability to do the job and meet the Project's OH&S objectives
- An evaluation of the contractors past OHSE performance including statistics and other lagging indicators. Such a review should also encompass corrective strategies
- An evaluation and comparison of the OH&S aspects in competing bids
- A checklist of the items to be clarified by tenderers.

2.4.7 Pre award alignment

Meetings with tenderers during the tender evaluation period may include clarification of project OH&S programs, finalize common goals, reach agreement on performance requirements, meet proposed supervisory personnel, and clarify what is in the price and what is not.

2.4.8 Award and approval to mobilize

Contracts shall include all of the project OH&S programs for the Works and any pre-award agreements. These must be available before mobilization of Contractors.

2.4.9 Pre-mobilization (orientation & Training of Contractor staff)

2.4.9.1 Pre-mobilization is time to finalize and clarify all details and arrangements before Contractors mobilize to the project. This phase covers meetings, orientation, screening and training. The Pre-Mobilization Safety and Health Meeting shall cover the following:

- Introduction of key personnel and their responsibilities
- Review of the Scope of Work, geographic layout and work environment
- Review of expected project hazards and OH&S objectives
- Review of the work schedule and Risk Assessments to identify high-risk operations and the control measures to be implemented
- Review of the HSE Management Plan highlighting requirements and responsibilities
- Project goals
- Non-negotiable requirements

- Hazard recognition skills
- Meeting/communication skills
- Incident management/Injury and Rehabilitation Management
- Hazardous activity management standards e.g. working at heights, manual handling, electrical safety
- Specific legislative requirements
- Project agreements
- Project wide procedures and programs
- Fit for Work requirements
- Employment process
- A clear auditable employment process shall be established for Contractors' workforce to ensure that personnel are competent, have appropriate qualifications, job skills, experience and specific training

2.4.9.2 Effective processes shall be established to manage this high-risk period by:

- personnel screening
- processes for plant and equipment inspections (or certification by third parties)
- access control onto project
- inductions before starting work
- management of contractor interfaces and facilities such as project office locations, materials lay down areas and plant pick-up areas.

2.4.10 Pre-mobilization Risk/Hazard Assessment workshops

2.4.10.1 Pre-mobilization risk/hazard assessment workshops will be conducted with Contractors nominated by the Project Management Team (PMT), prior to mobilization to site. These workshops shall involve the Project management team involved in the Contract, the Contractor management and supervision. Hazards identified in workshops for previous Contracts may be presented by the PMT for consideration. The Contractor shall, prior to this, identify the detailed methodology of the site installation (crane positions, lift sizes, work at height etc.), in particular for hazardous activities. At these workshops the Contractor methodology should be reviewed, potential hazards identified, and actions mutually agreed on to mitigate risk.

2.4.10.2 All identified hazards and risk control measures identified in these workshops are to be communicated by the Contractor to the work teams.

2.4.10.3 Guidance and further information on these workshops can be found in Standard 18 Hazard ID, Control & Risk Assessment.

2.4.11 Mobilization

2.4.11.1 A comprehensive Contractor employee screening, induction and training program is in place for this project. Contractors may be required to provide evidence of specified pre-requisites for all their workers, including the following:

- Pre-requisite generic induction training as specified in contracts
- Evidence of necessary skills attainment and competency
- Reference checks of previous employment (supervisors)
- A signed acceptance to comply with the project requirements.

2.4.12 On the project site

2.4.12.1 The Project Construction Manager shall ensure that Contractors OH&S Management Plans and programs are implemented, monitored, reviewed and improved. The primary aim is for all parties to work together as a team and provide a working environment in which Project activities can proceed in a safe manner. All personnel shall



complete the Project OH&S induction program before they commence work on the Project. The Project Emergency procedures shall be detailed and the security and access control procedures shall be explained.

2.4.13 Review and Close out

2.4.13.1 The OH&S performance of all Contractors shall be subject to an ongoing review, recognition of high standard of performance and appropriate response to sub-standard performance. On contract completion the Construction Manager may prepare a close out statement for inclusion in the Project OH&S Closeout Report.

2.4.14 Management of Change

2.4.14.1 The impact of changes on OH&S risks shall be documented and clearly communicated to all relevant staff, Project management and Contractors at every stage of the project.

2.4.14.2 All requests for changes shall be reviewed and approved by an appropriate person to ensure that all modifications are analyzed systematically and implemented in a manner that does not present an unacceptable risk to health, safety or the Environment.

2.4.14.3 The Project Management Team and Contractor Management teams are responsible for communicating all changes to the relevant responsible persons as they occur and to ensure the Management of Change procedure is followed.

2.5 Legal and Other Requirements

2.5.1.1 Projects are covered by the legislative requirements of the relevant Statutory Authority of the Country/Region/State in which the works are to take place. These legislative requirements impose a statutory obligation on all Employers, Employees, Contractors, Sub-Contractors, Designers and Manufacturers.

2.5.1.2 It is the responsibility of each company to ensure that the relevant statutory authority legislative requirements are strictly adhered to as the minimum standard to apply on this Project. Contractors and Sub-Contractors are required to maintain copies of the applicable Workplace Health and Safety legislation on the Project and ensure that they are readily accessible at all times, by all of their employees and lower tier Contractors.

2.5.1.3 Current copies of the above legislation, and any amendments that may arise during the Project, shall be maintained on the project by the OH&S Manager and be readily available to all employees and Contractors as may be required to ensure compliance with the relevant legislation.

Note: Contractors working under the Project OH&S Management System who do not possess current copies of the applicable legislation may reference the copies held on the project.

2.5.2 Acts, Regulations, Codes of Practice and Standards

2.5.2.1 The project will develop a register of applicable legislation, acts, regulation, codes of practices and standards that will be utilized and have this register available for all personnel onsite.

2.5.3 Commercial/Contractual issue

2.5.3.1 As legislation forms part of any Country's legal system, the Project Management Team requires all of its Contractors to fully conform to this legislation as part of the contract. All expenses to the Contractor, which result from conforming to this legislation as well as special requirements specific to the site, will be paid for by the Contractors.

2.5.3.2 The Project Management Team and the Client's Representative reserve the right to stop work whenever OH&S violations are observed. The expense of such work stoppage and resulting standing time shall be for the Contractors burden.

2.5.3.3 The requirements within this specification should not be considered to be exhaustive and the PMT or the Client reserves the right to add, delete or modify conditions where it is considered to be appropriate.

2.5.3.4 No claim will be accepted as a result of any costs or delays being incurred due to the Contractor or their sub-contractors not complying with this OH&S Management Plan.

2.5.4 Document Revision and Control



2.5.4.1 The Project Health & Safety Manager is the custodian of this document, and shall maintain and regularly review the OH&S Management Plan at least annually, on major changes and as required to ensure applicability. The Project Manager or their nominated representative may, at their discretion, authorize amendments of the OH&S Management Plan, as may be required during the Project to ensure the practicality and relevancy of the instructions contained herein.

2.5.4.2 All Contractors shall comply with this Project OH&S Management Plan and supporting procedures, policies and procedures relating to health & safety project rules and any amendments thereto that may be issued from time to time and the Contractor shall be responsible for ensuring that its employees and those of its Sub-Contractors or sub suppliers are familiar with and comply with such policies and procedures.

3 Health & Safety Objectives and Programs

3.1 Health & Safety Policies

3.1.1 The OH&S Policies contained in Appendix 1 commit all Project activities to the objective of 'Zero Harm' to people, the environment and the communities. All Employees and Contractors shall work toward compliance with the Project OH&S objectives and take appropriate actions to establish priorities, build team confidence, consult with the project management team and the workforce regularly, provide direction and create motivation towards action.

3.1.2 Safety Targets shall be defined and set, applicable to the Contract, using the following key principles:

- Work toward and promote 'Zero Harm' to people, the environment and the communities.
- Embed targets in the Contractor OH&S plan that embrace the OH&S Policies and this OH&S Management Plan.
- Compliance audits shall be conducted regularly.
- Schedule regular workplace inspections, audits and safety Interactions.
- Define actions which are specifically designed to achieve these targets.
- Allocate responsibilities and sufficient resources to meet the defined actions.

3.1.3 Various programs may be introduced throughout the project duration in order to improve the development towards meeting the objectives of this OH&S Management plan. Contractors will be responsible for adhering to the requirements of these new programs.

4 Implementation and Operation

4.1 Resources, Roles, Responsibilities, Accountabilities and Authorities

4.1.1 Demonstrated leadership and Commitment

4.1.1.1 The PMT will provide strong, visible leadership and commitment, and ensure that this commitment is translated into necessary resources to develop, operate and maintain the OH&S Management System and to attain the policy and strategic objectives.

4.1.1.2 The PMT will ensure that full account is taken of OH&S policy requirements and provide support for all actions taken to protect people, equipment and the environment. The PMT will create and sustain a Project culture that supports the OH&S Management System based on:

- Giving OH&S prevailing status over other primary Project objectives. Management through effective leadership shall visibly recognize and reward when and where this is successfully applied. Clear guidelines and supporting behaviors shall be established to enable management to act without hesitation in support of this strategy.
- Belief in the management desire to improve OH&S performance. Targets will be set for improvement in all areas of OH&S. These targets will necessarily include both input and outcomes. Performance measurement will include key leading indicators as well as lagging

indicators and project set KPI's.

- Acceptance of individual responsibility and accountability for OH&S performance. OH&S performance shall be included as a factor in the appraisal and reward of staff. Expected OH&S performance and behaviors for individuals shall be established. The consequences of success or failure to achieve these performance and behavior expectations shall be clearly defined and the application of these outcomes demonstrated.
- Participation and involvement at all levels in the OH&S process..
- Continuing training and education sessions regarding Health & Safety for supervisors and management.

4.1.2 Values Supporting this Commitment

4.1.2.1 The PMT will promote a culture to prevent harm to people, the environment and the community and to ensure that OH&S is a prime value that is not compromised. The basic values that support this commitment are:

- We are individually responsible for OH&S, yet work together as a team.
- We all take action to prevent harm.
- We never accept or condone substandard work practices or equipment.
- We go beyond the call of duty to identify hazards, mitigate risk and where required, intervene to correct unsafe acts and at risk behaviors.
- We believe that the safe way is also the right way and will yield cost effective results.

4.1.2.2 In addition to the above values, Geoteam expects all line managers and supervisors to exhibit and commit to the following values to ensure that a consistent and predictable safety culture is established throughout the project:

- Before commencing an activity I will always take time to consider what are going to be the consequences of my actions regarding myself and my fellow workers
- During my work I will continuously watch for new hazards and make sure I stop them from harming us
- I will not work if I consider it unsafe
- I will always follow the operating procedures in which I have been trained and report if they are unsuitable
- I will always encourage others to work safely by setting a good example by working safely myself
- I will ensure my first priority is always the Health, Safety and Welfare of all workers and stakeholders who may be affected by my actions
- I will demonstrate to my workers that I believe in safety by wearing the appropriate PPE I am provided with
- I will always ensure that I undertake my inspections of the whole workplace diligently, and that I discuss with my workers the identified hazards and the risks that arise from those hazards to demonstrate that we work as a team
- I will report all incidents, near misses and hazards brought to my attention and ensure that they are thoroughly investigated with appropriate remedial action taken, and that the investigation is undertaken in a positive manner
- I will encourage my workers to report all near misses and hazards, and encourage a proactive and open culture regarding reporting
- I will actively support safety initiatives proposed by my workers
- I will actively encourage all training for my workers to improve their competency
- I will encourage my staff to contribute to safety meetings and ensure I set a good example

myself

- I will communicate and cooperate fully with contractors particularly regarding their safety concerns
- I will ensure my workers only undertake work for which they are trained and competent

4.1.3 Health & Safety Duties and Responsibilities

4.1.3.1 The following section outlines the OH&S management structure and the responsibilities of each individual on the project from the Project Manager, Contractors to all Employees. As stated in the Project OH&S Policies all personnel including subcontract personnel have an obligation to afford the Due Diligence required to ensure the Health and Safety of themselves and other personnel and to care for the environment in accordance with statutory obligations and moral responsibilities.

4.1.3.2 The H&S specific duties and responsibilities of all Project personnel are as detailed within this OH&S Management Plan. Detailed in the following sections are the specific responsibilities of each person on the Project, which shall not in any way detract from the individuals' basic obligation to display Due Diligence in all matters relating to OH&S.

4.1.3.3 Project Director

The Project Director has the overall responsibility for health and safety of all personnel involved in the Project. The Project Director or a nominated representative shall establish the necessary policies, procedures, and resources for implementing effective incident prevention processes to meet the OH&S and production needs of the Project. The Project Director must exhibit strong leadership and absolute commitment to safety throughout all phases of the Project, and shall:

- Display 'Due Diligence' in all OH&S matters and champion the implementation of the Project OH&S Management Plan.
- Appoint sufficient competent people as may be required to assist with the effective management of the objectives of the Project OH&S Management Plan.
- Together with the management team lead by example, modeling the behaviour expected from all employees toward performing work in a safe manner.
- Communicate to the Project team and Contractors that cost, schedule, and quality shall not diminish the importance of OH&S implementation.
- Actively promote OH&S performance objectives to the Project Management team and Contractors.
- Actively promote an OH&S culture that shall mitigate the risk of injury to personnel and damage to equipment, environment and heritage aspects of the Project.
- Establish and maintain clear responsibility and accountability for implementation of the Project OH&S Management Plan.
- Allocate sufficient resources required to successfully implement the Project OH&S Plan.
- Report all matters relating to OH&S to the OH&S Manager in a timely manner.
- When onsite participate in the safety interaction program.

4.1.3.4 Project Managers

The Project Manager is responsible for the health and safety of all personnel involved in the project. The Project Manager must exhibit strong leadership and absolute commitment to safety throughout all phases of the Project, and shall:

- Display 'Due Diligence' in all OH&S matters and champion the implementation of the Project OH&S Management Plan.
- Appoint sufficient competent people as may be required to assist with the effective management of the objectives of the Project OH&S Management Plan.



- Together with the management team lead by example, modeling the behaviours expected from all employees towards performing work in a safe manner.
- Communicate to the Project team and Contractors that cost, schedule, and quality shall not diminish the importance of OH&S implementation.
- Actively promote OH&S performance objectives to the Project management team and Contractors.
- Actively promote an OH&S culture that shall mitigate the risk of injury to personnel and damage to plant, equipment, environment and heritage aspects of the Project.
- Establish and maintain clear responsibility and accountability for implementation of the Project OH&S Management Plan.
- Allocate sufficient resources required to successfully implement the Project OH&S Plan.
- Report all matters relating to HSEC to the HSEC Manager in a timely manner.
- When on site participate in the safety interaction program.

4.1.3.5 Construction Manager

The Construction Manager has the overall responsibility for construction of the Project and for the implementation of the Project OH&S Management Plan. The Project OH&S Manager shall assist the Construction Managers in an advisory capacity as required.

The Construction Managers shall:

- Display “Due Diligence” in all OH&S matters and lead by example to ensure the successful implementation of the Project OH&S Management Plan.
- Promote open communication, cooperation, and trust between the PMT, vendors, contractors, employees, and suppliers.
- Ensure OH&S Risk Assessments are undertaken for every construction activity.
- Participate in OH&S Audits and Inspections and interact with personnel and organizations concerning improving safe work practices on the project.
- Ensure members of the team, including contractors and their sub-contractors and employees working on the project, are informed of hazards associated with work assignments, and that compliance with OH&S requirements are adhered to.
- Actively support Contractors to maintain the OH&S objectives and desired outcomes of the Project.
- Ensure a practical OH&S interface is established between the contractors, enabling them to individually function in a safe productive and harmonious manner.
- Ensure that regular monitoring and assessment of the various contract areas is carried out in relation to health, safety and environmental activities.
- Recognize outstanding OH&S performance in order to increase commitment and participation.
- Ensure that there is no adverse environmental or heritage impact brought about through construction activity on the Project.
- Mitigate the risk of personal injury, equipment and property damage and prevent recurrences to ALARP.
- Report all incidents, injuries, hazard reports and near hits/misses to the appropriate people in a timely manner.
- Actively participate in all safety programs established on the project

4.1.3.6 Project OH&S Manager



The Project Health and Safety Manager serves as the PMT competent person, and Subject matter expert, in all matters relating to OH&S for the Project and shall have the authority to cease work activity in the event of imminent danger to the safety and health of workers, the public, or the environment. Work activity may resume only after consultation with the Contractor concerned, Project Manager or their nominated representative and the Project OH&S Manager. The Project OH&S Manager has a direct line reporting function to the Project Director/Manager and shall be required to regularly report to the Construction Manager and to regularly review all Contractors' OH&S performance to ensure the systems and procedures provided in the Project and Contractors' Project OH&S Management Plans are adequately meeting the objectives of the Project.

The Project OH&S Manager is responsible for:

- Providing professional OH&S advice to the Project Team.
- Actively promoting a culture of Safety that shall mitigate the risk of injury to personnel and damage to equipment, environment and heritage aspects of the Project.
- Reviewing all Contractors OH&S actual and statistical performance and provide appropriate advice to the Construction Manager.
- Monitoring the implementation of the Project OH&S Management Plan.
- Issuing OH&S bulletins as needed, and to generally ensure there is clear communications of all safety & health issues.
- Monitoring the OH&S status and drive continuous improvement providing for the best possible OH&S direction for the Project.
- Coordinating all OH&S activities with the PMT and Contractors.
- Maintaining all OH&S records in accordance with client, statutory and PMT requirements.
- Reviewing all accident/incident investigations including Near Hits/Misses.
- Reviewing and revising the Project OH&S Management Plan when required.
- Establishing and monitoring safety, health, and hygiene programs as requested.
- Assisting during any governmental agency inspections as directed by the Project Manager.
- Attending all Contractors kick-off meetings and weekly progress meetings.
- Ensuring all Contractors are made aware of the Emergency Response Procedures, Project First Aid facilities and ensure Contractors provide adequate personnel trained in first aid, for treatment and assessment of injured.
- Conduct regular safety interactions in the field.

4.1.3.7 Contractor OH&S Responsibilities

The Contractors shall be required to provide adequate and suitably qualified supervision which will entail hazard identification, risk assessments, incident investigation and communication. The Contractors shall be required to include the provision of suitably qualified OH&S personnel to assist with the implementation and coordination of the Project and Contractors OH&S Management Plans. Where the Contractor has more than 20 personnel they shall provide at least one suitably qualified OH&S Advisor and be able to cover rotational roster requirements. The Project Manager should approve all Contractor supervision and OH&S personnel.

Consistent with statutory and contractual obligations, contractors are responsible for the following, which shall be implemented and monitored regularly by the relevant Contractors Construction Manager and/or their appointed representatives:

- Displaying 'Due Diligence' in all OH&S matters and champion the implementation of this Project OH&S Management Plan and that of their individual company.
- Actively promoting an OH&S culture that shall mitigate the risk of injury to personnel and damage to plant, equipment, environment and heritage aspects of the Project.
- Appointing competent persons to assist with the effective management of the objectives of this Project OH&S Management Plan.

- Developing and submitting for review their company's Project specific OH&S Management Plan and associated procedures, checklists, forms, etc.
- Developing and committing to their OH&S Management Plan and to monitor the implementation of their OH&S system on the Project and complying with the Project OH&S Management Plan.
- Providing a safe and healthy working environment and maintaining adequate workplace amenities for their personnel.
- Attending Contractors kick-off meetings, Contractors safety meetings, toolbox and other meetings held in the interest of health and safety.
- Ensuring new employees'/visitors' attendance at induction/orientation sessions and specialized training sessions.
- Conducting formal OH&S risk assessments and hazard evaluations for all major work activities as requested by the Project management team.
- Ensuring risk controls resulting from risk assessments are implemented and monitored for effectiveness.
- Prior to work each day or commencement of a shift, ensure a tool box Meeting is conducted and recorded, with all those involved. A tool box meeting template will be available from the project OH&S manager as needed, there are specific content requirements for these meetings.
- Regularly inspecting all plant, tools and equipment to ensure they are free of defects and have current tagging and statutory certification as required and supply documentary evidence of all tagging and inspections to the project management team.
- Share information of hazards in particular work activity with their workers (team members).
- Will identify with team members specific hazards as they develop during the construction work.
- Establish measures to eliminate isolate or minimize exposure to such hazards.
- Conducting and documenting daily and weekly inspections of the Contractors work areas to monitor compliance with OH&S standards set for the project, to identify hazards and then take appropriate action to correct those hazards and supply documentary evidence of all inspections.
- Participating in all health and safety programs established on the project.

4.1.3.8 Supervisors (all)

Both PMT and Contractors' Supervisors are regarded as line management representatives of their respective employer and accordingly share the 'Due Diligence' requirements of management and statutory accountabilities. Supervisors are seen as the group that has the greatest impact on safety on the Project. Consequently the Project Management Team places a clear obligation on Supervisors to lead by example and set the standard for safety in every construction activity. They shall be held responsible for each of their statutory responsibilities.

All Supervisors shall be required to work in conjunction with the Project Manager and representatives. Supervisors shall:

- Be thoroughly familiar with this Project OH&S Management Plan and with their individual responsibilities regarding its implementation and enforcement.
- Be directly involved in implementing the OH&S Procedures applicable to their areas of responsibility.
- Participate in hazard evaluations and OH&S Risk Assessments for all work activities under their control.
- Take all reasonable action to protect the environment, and safety and health of each employee

under their control. Additionally, Supervisors shall emphasize the protection of equipment and property in their area of responsibility.

- Actively promote an OH&S culture to mitigate the risk of injury to personnel and damage to plant, equipment, environment and heritage aspects of the Project.
- Facilitate and support the Toolbox and other safety meetings and communicate and review the information necessary for the employee to work in a safe manner.
- Implement immediate action to correct reported or observed unacceptable environmental, safety, and health conditions and/or behaviours.
- Conduct ongoing assessments of the work areas and take necessary corrective actions to eliminate substandard practices, conditions, and/or behaviours.
- Document Toolbox and other safety Meetings applicable to their individual company and provide copies to the Project Management team on a weekly basis.
- Assist in accident/incident investigations and preparation of required reports.
- Enforce OH&S related work rules and take action as required to ensure compliance.
- Complying with the Fit for Work Policies and procedural requirements.
- Evaluate the safety performance of assigned employees/Contractors and report findings to their respective project Manager.

4.1.3.9 Employees (All)

All project employees (this means everyone) are to be aware of and responsible for the following:

- Accepting individual responsibility for their safe behaviours.
- Actively promoting an OH&S culture that shall mitigate the risk of injury to themselves and other personnel and damage to plant, equipment, environment and heritage aspects of the Project.
- Working in a safe manner at all times.
- Learning about and abiding by OH&S practices and procedures applicable to their work tasks and reporting immediately or promptly substandard practices, conditions, or behaviors to their Supervisor.
- Promptly reporting near hits/misses, environmental impacts and other incidents to their Supervisor.
- Complying with the instructions given for workplace health and safety at the workplace by their employer.
- Promptly reporting injuries to their Supervisor and their first aid provider. All personnel must know where medical facility and other emergency equipment are located.
- Identifying and correcting the unsafe acts of themselves, others and conditions within their area of responsibility.
- Any person who knowingly jeopardizes their own safety and health and/or the safety and health of others shall be subject to disciplinary action.
- Persons who display a total and/or continual disregard with the OH&S requirements of the Project may be subject to dismissal from the Project at the discretion of the Construction Manager.
- Complying with the Fit for Work Policy and Fit for Work Standard procedural requirements.
- Contributing to a positive, team managed approach to health and safety on the Project.
- Complying with all OH&S Management Plan requirements and OH&S Procedures.
- Attending all Toolbox and other safety meetings as requested.



- Assisting and cooperating with persons conducting incident and hazard investigations.
- Complying with all security requirements and emergency response procedures.
- Attend all required training for the project.

4.1.4 Awareness, Competence and Training

4.1.4.1 All personnel involved with the Project shall possess the required Nationally Recognized Statutory Certificates of Competency to carry out the tasks they shall be assigned for the duration of the Project.

4.1.4.2 Additionally, special OH&S training may be required for the performance of high risk, hazardous or unfamiliar tasks.

4.1.4.3 Occupational Health & Safety Awareness

OH&S awareness will be raised through

- Project specific inductions.
- Safety shares at the start of meetings.
- Active promotion of health and safety topics in communications.
- The project safety interaction and other behavioral safety programs which may be introduced from time to time.

4.1.4.4 Project Safety Inductions

Personnel required to work on, or visit the project Site must complete the following training and induction requirements as indicated.

4.1.4.4.1 General safety induction

- This induction is for all personnel who work on or visit the site regularly, and are not considered visitors under the visitor policy, they shall have attended the project general induction, and passed the associated test, prior to beginning work in the active construction area of the project.
- The content of this general induction is controlled by the Project OH&S Manager, in conjunction with the construction manager.
- Contractors are responsible to perform their own project general induction for all employees, contractor employees must still attend the project general safety induction. (See section 4.1.5.1.5 Contractor Project specific Inductions)
- These Inductions are given by the OH&S team.

4.1.4.4.2 Special project safety Inductions

- These inductions are to educate and train site personnel on a variety of topics, such as PPE, Driving, Confined space, etc.... These special inductions are given to those who require it in order to perform their job on the project.
- The PMT and Contractors shall identify any task-specific skills training required for the Project and ensure adequate training is conducted. All off project training completed shall be documented and be made available on the project for auditing purposes as requested.
- The Project Management team shall implement and direct project-specific Health and Safety training on an as-needed basis at the discretion of the Construction Manager. Contractors shall ensure all relevant personnel are made available as requested to attend project-specific training.
- These inductions will usually be given by the OH&S Team.
- Nationally or internationally recognized training certificates of competency may be recognized on the project, recognition of these certificates is at the discretion of the Construction Manager and OH&S Manager, examples are:
 - Work at heights

- Fall protection
- Rigging
- Crane operations
- Forklift operator
- Scaffolding
- Elevated work platform
- Electrical workers
- First aid
- Emergency response and rescue
- The above list is not all inclusive and each certificate and person will be considered on an individual basis.

4.1.4.5 Work Task Induction

- These inductions must take place and be recorded prior to the person performing work on the project. They are task specific and may occur quite often depending on job function. These inductions are given by a supervisor to the people working under their supervision.
- Specific topics that shall be covered in these induction include:
 - Who the supervisor is.
 - General task requirements of the job.
 - Emergency procedures.
 - Hazards associated with the job function.
 - Any other pertinent information.
 - This requirement list may change as the project progresses, changes will be communicated from the OH&S Team.

4.1.4.6 Visitor Induction

The visitor induction is given to those people who, according to the visitor policy (Appendix 4) are classified as visitors, this induction will usually be given by the manager responsible for the visitor, or the OH&S Department. Refer to the Visitor Policy for further information.

4.1.4.7 Contractor project specific Inductions

Contractor project-specific inductions shall adequately address items stipulated in all mandatory inductions and Project procedures and shall clearly:

- Outline the Contractors Scope of Work.
- Describe the commitment of the Contractor to Project OH&S implementation.
- Promote a positive OH&S culture that shall mitigate the risk of injury to personnel and damage to plant, equipment, environment and heritage aspects of the Project.
- Detail project-specific environmental requirements and obligations.
- Provide instruction in the project and area specific Emergency Procedures and specify the first aid and medical services.
- Detail all aspects of this Project OH&S Management Plan and the Contractors OH&S Management Plan not previously covered by other training on the project.

4.1.4.8 No PMT personnel, Contractors or their employees are to work on the project until they have successfully completed all indicated and required inductions. The Project Manager shall approve any deviation from this procedure.

4.1.4.9 Special short-term visitor inductions may, on approval of Project Construction Manager, be provided by all Contractors for Consultants, Vendors, technical advisers or short-term workers (less than 16 working hours), short term workers must be escorted and directly supervised at all times on the project. Persons on an approved visitor



permit shall be escorted at all times on the project by an approved escort as defined in the project visitor policy Standard 8.

4.1.4.10 Strict project access limitations may apply to this induction and all such personnel shall fully comply with the Project OH&S Management Plan requirements including Personal Protective Equipment (PPE) and clothing (long sleeved shirt and long pants). Personnel shall be required to supply sufficient evidence of competency for the tasks to be carried out to the construction management representative prior to commencing works.

4.1.4.11 At the end of each training course, a brief review of the major topics will be conducted. Assessments/tests will be administered to ensure that everyone has understood what was taught during the session.

4.1.4.12 Costs associated for any and all inductions and onsite OH&S training are born by the contractor.

4.1.4.13 Competence

4.1.4.13.1 All personnel operating mobile plant and other powered mobile equipment shall be required to hold an appropriate operating license or certificate of competency before they shall be permitted to operate any plant or equipment on the project. In addition all such personnel may be individually assessed by a competent person appointed by their employer, or as directed by the Project Manager, as competent to carry out their specific tasks in accordance with such license or certificate of competency.

4.1.4.13.2 Where licenses and certificates are not issued for the operation of the particular plant, standards of competency shall be documented and assessments shall be conducted by authorized, competent personnel before operation of that plant shall be permitted on project.

4.1.4.13.3 Employees, including Contractors employees, shall be required to present on request any certificates, licenses or tickets for any task or activity that requires such formal qualifications.

4.1.4.13.4 Challenge testing of all safety critical and designated tasks will be performed to ensure employees and contractors can competently perform their roles.

4.1.4.13.5 It is the responsibility of each contractor on the project to develop and update a skills/training matrix for their workgroups.

4.1.5 Training

4.1.5.1 In addition to the induction training mentioned previously, all site personnel, contractors, and company employees will be required to undergo training in accordance with the specific job function they are performing during the construction phase of the project.

4.1.5.2 A full training matrix will be established to show training required for each job classification, in order to perform this job on the project an individual must have completed all the training requirements within 60 days of starting on the project, some training must be completed prior to commencing work while other training is progressed over the 60 day period. The details for this will be in the matrix as well as the appropriate training standard contained in the appendices to this plan.

4.1.5.3 The following list of training requirements will serve as a minimum.

4.1.5.3.1 Managers and Supervisors;

- Amulsar Project Health & Safety Management System and Standards
- Introduction to the International Finance Corporation (IFC) and the European Bank for Reconstruction and Development (EBRD) requirements
- Leadership in Management and Supervision
- Understanding Hazard identification and risk assessment

4.1.5.3.2 All Geoteam and Contract employees;

- Accident/incident prevention
- Personal safety culture and personal accountability
- Safety tool box talks
- What to do in case of an accident/incident or near miss



- How to control risk
- Personal Protective Equipment (PPE) and its use
- Training on Standard Operating Procedures (SOP's) as required for the position
- Safety awareness

4.1.6 Safety Interaction program

4.1.6.1 A behavioral based approach has been adopted by the Project to identify 'at risk' individual behaviors and to identify specific hazards during task observation. These have been used as useful leading indicators for Safety.

4.1.6.2 Safety Interactions are a slight variation on the common "safety observation" performed at other organization, the main difference being that people must interact with each other, not just "observe" someone working.

4.1.6.3 Safety Interactions will be carried out regularly by each person in a leadership role on the Project Site at an interval defined by the Project Management Team. These interactions will be recorded in a method determined by the PMT.

4.1.6.4 As this is a mostly anonymous program, for the workers as we record who performed the interaction, and what topics were covered but the workers names are never revealed, it can be a very useful tool in improving safety and developing a higher level safety culture amongst the project workers and management. Details of the program reporting methods, performance frequency, level of leadership involved, as well as other details, will be found in the appropriate appendix. Training will be provided for anyone, in the leadership group, involved in this program.

4.1.6.5 Safety Interactions will generally be conducted in the following manner:

- Leaders go to a work front (assessing risk to themselves)
- Speak with work groups or individuals (using methods of program),
- Give verbal feedback,
- Complete safety interaction report
- Reports are analyzed by individual, hazards found, unsafe performance, safe performance etc..
- Also reviewed for KPI per person or company
- Communicate results to management and work groups

4.1.6.6 Safety Interaction introductory training and coaching will be available for all of the leadership group involved from the OH&S Team. All relevant contractor OH&S personnel will also receive the training. Peer to peer safety interactions, while encouraged, are not normally reported in this system.

4.1.7 Communication, participation and consultation

4.1.7.1 Effective communication and consultation is one of the keystones to enable OH&S compliance and ongoing improvement initiatives on the Project Site. Regular structured meetings will be held to ensure that effective communications occur between management and the Project workforce. Workplace representatives will also actively participate in the preparation of task level JSEAs, inspections and planned safety interactions.

4.1.7.2 A partial list of meetings will include:

- Weekly safety meetings for all OH&S personnel on site,
- OH&S attendance at weekly contractor management meetings
- Daily toolbox meetings, contractor groups and PMT
- Contractor weekly safety meetings
- PMT weekly meeting
- Contractor Kick off meetings
 - The Project Manager, or their designated representative, shall conduct Contractor's kick-off meetings where all HSE matters pertaining to the Project should be discussed. The HESS manager or his designate shall attend each of the kick-off meetings. All elements of the Project OH&S Management Plan and/or Contractor's OH&S Management Plan shall

be tabled at this meeting and minutes recorded. Specific items of OH&S compliance raised during the plan review and still outstanding shall be tabled at this meeting. Contractors shall ensure that all responsible Project management, supervision and OH&S personnel attend this meeting. See Standard 23 Contractor management for further detail.

4.1.7.3 Daily toolbox meetings

- Toolbox meetings shall be held daily by each responsible supervisor before commencing work, or prior to a shift commencing.
- As a minimum, the meeting shall discuss any changes to or new hazards, safety concerns or issues from the previous day, safety concerns or issues from other contractor work fronts, safety concerns for the day/shift, and brief opportunity for workers to raise safety questions.
- These meetings shall be recorded and filed for audit purposes, Attendance shall be recorded and attached to the meeting minutes.

4.1.7.4 Weekly Safety Meetings

- All contractors, and the PMT, shall have a weekly safety meeting. This meeting is intended to enhance safety training and specific topics should be discussed at length, while the specific topic is left up to each group, the PMT may issue specific issues, concerns or reports for discussion at these meetings.
- These meeting should be chaired by management, not supervisors or OH&S personnel, although they may be consulted for content.
- All incidents within the contractors scope shall be reviewed during this meeting, workers shall be afforded an opportunity to discuss safety concerns.
- These meetings shall be recorded and filed for audit purposes, Attendance shall be recorded and attached to the meeting minutes.

4.1.7.5 OH&S Promotion

- The Project Management Team shall promote a Healthy & Safe workplace culture on the Project to actively promote OH&S in all activities from design to commissioning aspects of the Project. Positive interactions, observations and feedback shall be encouraged at the time and recognized via toolbox and weekly meetings. Exemplary performance, continued high compliance, and cooperation with OH&S activities shall be recognized at the discretion of the Construction Manager.
- The OH&S promotion shall focus on the main identified and agreed risks of the construction phase of the Project, which shall be discussed and agreed at the commencement of the Project and reviewed regularly to ensure positive outcomes are being achieved.

4.1.7.6 Health & Safety Committee

- A project joint health & safety committee (JHSC) will be established for the project, the makeup of the committee will be dependent on legal requirements as well as the number of contractors and people involved with the project. JHSC will meet at least monthly.
- Minutes and Attendance shall be recorded in an appropriate format and communicated to the representative group via site safety notice boards.
- As a minimum contractors with less than 20 workers shall have a OH&S worker representative, contractors with more than 20 workers shall have a JHSC.
- Further details on JHSC for this project is available in the appropriate standard.

4.1.7.7 OH&S Dispute Resolution

- Health & Safety disputes should be resolved in a cooperative discussion format. An issue raised by a worker should first be handled with the immediate supervisor, failing resolution the worker



representative or JHSC member should be consulted.

- The Project has a more detailed dispute resolution and “Right to Refuse” process in standard 15 Right to Refuse.
- The intent at all times is to resolve the issue at the lowest level possible and in a cooperative manner.

4.1.7.8 OH&S Notice Boards

- Designated OH&S Notice Boards shall be placed in strategic locations throughout offices and project sites to ensure that topical information relating to health, safety and environment is communicated and available to all employees and Contractors. As a minimum, these notice boards will be located at the entrance to the PMT site Offices and each contractor office and/or workers lunch area, which ever will give the workers the best opportunity to see and read the board.
- Contractors who have a preferred location shall discuss with the H&S Manager prior to changing the location. Contractors wishing to have more than one notice board may do so at their discretion so long as all required information is properly posted on each board and they do not become a hindrance.

4.1.7.9 OH&S Reporting

All OH&S Data shall be reported daily, weekly or monthly, daily, weekly and monthly report format shall be established for the Project. Daily reporting will be a minimum of the various types and levels of incidents within each contractors group. See Standard 3 Document retention for further information.

5 Health & Safety Operational Controls

Construction, Pre-commissioning and commissioning are required to comply with the relevant legislative requirements, this OH&S Plan, standards, codes of practice and guidelines in use from time to time during the project.

All PMT and Contractor employees and all visitors shall maintain the following health and safety standards as a minimum requirement for all activities on the project.

These standards are summaries of the full standards included as appendices or standalone documentation associated with this OH&S Plan.

5.1 Safety Standards – work areas

The following information is not in full detail, for further detail on each subject refer to the appropriate detailed project OH&S Standard or separate plan. These standards are listed in Appendix 3.

5.1.1 Standard of work dress and PPE

- All personnel shall be required to wear basic PPE (hardhat, safety glasses, gloves, safety boots & Vest) as stipulated in a relevant JHA and standard 4 PPE. Consideration shall be given to the purchase of PPE to ensure all PPE provided meets the relevant Standard. For specific tasks additional PPE may be required. Personnel are required to comply with the PPE instructions and requirements of any Material Safety Data Sheets (MSDS) when handling any substance.
- Special consideration shall be given to the type of respiratory protection that must be worn when handling toxic or hazardous substances, abrasive blasting, spray painting, welding, gauging or grinding of hazardous materials.
- The controls detailed on the manufacturers’ MSDS shall be used as a minimum guide for all Hazardous Substance PPE requirements.

5.1.2 Subcontracting and purchasing



The Contractor shall establish Procedures to ensure that all plant, materials, equipment services purchased or hired and all subcontracts conform to the required legislative OH&S and Project OH&S requirements. The Contractor shall ensure:

- All materials, equipment, plant and services to be purchased or hired for the Project are assessed against the relevant legislative OH&S and Project OH&S requirements.
- Procedures are implemented addressing the delivery, handling, storage and disposal of hazardous substances.
- Lower tier subcontractors display and maintain at least a compatible OH&S management system as required of the Contractor or work directly under the Contractor OH&S management system and provide evidence that subcontractors are selected as per the OH&S requirements.
- Monitor and document OH&S performance of their subcontractors while on the project site for compliance of site OH&S requirements.

5.1.3 Handling, storage, packaging and delivery

The Contractor shall establish procedures to ensure compliance with legislative and Project requirements for handling, storage, packaging and delivery of products and materials. The Contractor shall:

- Establish a manual handling program to control manual handling hazards.
- Implement a Procedure for the storage, labeling and use of hazardous substances which shall include a Register and MSDS file, this shall be in compliance with the requirements of this OH&S Plan.
- Screen the entry to site of new products and plant for OH&S hazard.
- Ensure all vehicle, plant and equipment operators are correctly instructed, trained and certified/licensed.

5.1.4 Transport

5.1.4.1 The Contractor shall ensure that its transport subcontractors have safe systems of work in compliance with this OH&S Plan and the Fatigue Management requirements in Standard 9 Fit for Work for Commercial Vehicle Drivers as applicable in the state, region or country of operation. The Contractor shall ensure that safe systems of work are in place for both direct employees and Subcontract transport operators.

5.1.4.2 Fit for Work procedures (Where permissible) and other site access protocol information shall be included in all procurement and contact tender documents and shall be reinforced by the project expediting and logistics team.

5.1.5 Site Transportation – non-standard loads

5.1.5.1 Various load clearance restrictions for height, width and length exist on Site. Prior to any material/equipment being brought to Site, the Contractor shall seek the relevant information from the PMT on specific Site transport restrictions to develop an appropriate safe access route.

5.1.5.2 Where loads carried by cranes extend a significant distance beyond the physical extremities of the crane the Contractor shall take special precautions to ensure the load is clearly identified, clears all obstructions and does not pose a risk to personnel, plant, vehicles or in progress construction activities during transportation.

5.1.6 Trailer loading/off loading

The Contractor shall ensure that vehicle/trailer loading/offloading is undertaken in accordance with safe work procedures, practices or guidelines established for the project.

5.1.7 Housekeeping

The Contractor shall incorporate the housekeeping function into all processes, operations and tasks to ensure housekeeping is an integral part of these processes. Material stored in open areas shall be stored in a tidy manner and in appropriate containers. Aisles, walkways, corridors, doorways, entrance, exits, etc., shall be unobstructed,



free from slippery hazards and the accumulation of combustible materials. Waste material and rubbish shall be removed from job Site areas, on a continuous basis so as to prevent a buildup of rubbish and construction waste. Loose objects such as sheeting shall be secured against movement from strong wind conditions.

5.1.8 Trash collection and disposal

The Contractor shall ensure suitable and adequate trash receptacles are supplied and strategically located throughout the workplace. All bins used for food scraps shall have plastic liners, fitted lids, cleaned on a regular basis and shall be emptied daily. Refer to project waste management plan for further details.

5.1.9 Manual handling

All Contractors shall ensure that all tasks are planned in such a manner that personnel are not required to lift any object that may be beyond their individual capacity. The preferred method for load shifting and equipment handling shall be firstly by means of mechanical load shifting device or secondly by obtaining assistance.

5.1.10 Road Closure

The Contractor shall only close roads with the prior approval of the PMT. Any requirements for road closures greater than one shift (10 hours) shall require a minimum of 48 hours' notice. Prior to road closures the PMT will distribute a safety bulletin with attached map of the proposed closure and ensure that the emergency services or site ERT are notified of the closure. The Contractor is responsible for the maintenance and removal of all road closure barriers.

5.2 Safety Standards – Material Handling

5.2.1 Hazardous material Management

All chemicals and Hazardous Substances must be approved prior to arriving on the Project by the Project OH&S Manager and Environment Manager. The Hazardous substance approval form, (as found in the appropriate Standard) must be completed and accompanied by a current MSDS, and a plan outlining the purpose of the substance. A minimum of 72 hours is required to gain approval. All hazardous substances must be entered on the Contractors Hazardous Substance Register. See standard 19 Hazardous Substances for further details.

5.2.2 Cyanide

All information regarding the purchase, transport, use or disposal of Cyanide can be found in the Amulsar Cyanide Management Plan and any standards, safe work practices or guidelines developed in association with the Cyanide Management Plan.

5.2.3 Petrol/Gasoline use

Diesel fuel is the preferred fuel on the Project. The Contractor shall notify the PMT if it intends to use petrol/gasoline vehicles and/or equipment and to store petrol/gasoline on Site. Bulk storage of petrol/gasoline may be permitted on Site upon authorization from the Construction Manager, OH&S Manager and Environment manager.

5.2.4 Abrasive Blasting and Spray Painting

5.2.4.1 Silica should not be used for abrasive blasting. Where possible abrasive blasting shall be wet garnet blasting in accordance with relevant legislation and/or codes of practice.

5.2.4.2 Abrasive blasting areas shall be screened off to minimize the effect in other areas and signs with wording 'Danger Do Not Enter - Abrasive Blasting in Progress' erected.

5.2.4.3 If spray painting involves the use of paints containing Isocyanates, then personnel exposed to Isocyanates should be provided with health surveillance monitoring. Prior to performing any spray-painting or abrasive blasting outside designated workshops the Contractor shall assess the risks involved and carry out a TBRA.

5.2.4.4 Personal Protective Equipment (PPE) shall be provided in accordance with the relevant MSDS and personnel trained in the use, care and maintenance of the required PPE.



5.2.5 Fire Protection

The PMT & Contractors shall supply, install, and maintain portable fire extinguishers in workshops, Site offices, plant, equipment, vehicles, construction areas and flammable storage areas in accordance with the relevant Standards, the OH&S plan and as required by statutory regulations. Management shall ensure that all employees are instructed in the basic inspection, safe use and operation of all relevant fire extinguishers types. The PMT and Contractor shall maintain records of inspection and maintenance of fire extinguishers on Site files for audit purposes.

The PMT and Contractors shall ensure sufficient supply and regular maintenance of fire extinguishers is carried out in accordance with the appropriate Standards.

The PMT will accept responsibility for supply and maintenance of fire extinguishers as each area of the project is handed over from the contractors.

5.2.5.1 Hot Work is defined as:

Any welding, cutting, grinding, drilling, heating or anything capable of generating sparks or heat which may cause ignition of a flammable or combustible material. This includes chemical substances which, when mixed, may cause enough heat to ignite a substance.

A hot work permit system will be in place on the Amulsar project, further details can be found in OH&S Standard 10 Fire Prevention.

5.3 Safety Standards – High Risk Activities

5.3.1 Construction Permit to work

5.3.1.1 The project Construction manager may implement a weekly permit to work, this permit is intended to aid in scheduling and project management in addition to aiding in planning for safety.

5.3.1.2 Weekly Permits to work shall only be issued by personnel authorized by the Construction Manager or their delegate for the Project. Prior to implantation a permit form and the details of its use will be developed and distributed to all affected contractors and/or work groups.

5.3.1.3 Weekly work permits shall contain information on:

- the work planned for the week,
- what Mobile powered equipment is planned for use during the week,
- manpower plans for the week,
- any high risk work permits which will be required,
- agreement, between the contractor & PMT, that the work may go forward, and
- that a risk assessment has been carried out for the high risk work

5.3.2 High Risk work permits

5.3.2.1 A Work Permit is required before any of the following work is commenced:

- Hot Work (Welding, cutting, grinding).
- Grid Mesh or flooring removal.
- Confined Space Entry.
- Excavation.
- Isolation and lockout.
- Critical or Significant Lifts.
- Any other specific permit as deemed necessary by the PMT, Construction Manager and/or OH&S Manager

5.3.3 Hot Work Permit



Hot work is defined as “any welding, cutting, grinding, drilling, heating or anything capable of generating sparks or heat which may cause ignition of a flammable or combustible material. This includes chemical substances which, when mixed, may cause enough heat to ignite a substance.”

Further details on the hot work permit are detailed in the Standard 10 Fire Prevention.

5.3.4 Grid mesh or Flooring Removal permit

The Contractor shall ensure a Grid Mesh or flooring Removal Permit is obtained from the PMT prior to the removal of any grid mesh, Checker plate or other flooring.

Covering of the open floor area is detailed in the working at heights standard for the project.

5.3.5 Confined Space Entry Permit

5.3.5.1 Confined space shall be defined as an enclosed or partially enclosed space which:

- Has been identified as a confined space in a Risk Assessment.
- Is not intended as a place of work.
- Is not designed primarily as a place of work.
- May have restricted entry and exit.
- May:
- Have an atmosphere which contains potentially harmful levels of contaminant or explosive substance.
- Not have a safe level of oxygen.
- Have a risk of entrapment or engulfment.

5.3.5.2 Confined spaces may include, but are not limited to:

- Storage tanks, process vessels, boilers, pressure vessels, tank like compartments that have only a manhole for entry, ceiling and floor.
- Open top spaces such as pits or excavations more than 1.5 meters deep.
- Ventilation pipes or ducts and sewer systems.
- Abandoned workings and exploration openings.

5.3.5.3 All personnel required to enter or work in Confined Spaces shall be required to be trained in accordance with local regulation and the standard set for the project.

5.3.5.4 A Risk Assessment shall be conducted to determine if the work area is to be defined a confined space and the extent of controls required for safe entry. This risk assessment shall be reviewed by an appropriate representative of the PMT.

5.3.5.5 No entry into a confined space shall take place unless the air has been proven safe before entry.

5.3.5.6 Further details are contained in the project Confined Space Standard.

5.3.6 Excavation (Dig) Permit

5.3.6.1 All excavation shall be carried out in accordance with Excavation and Ground Penetration Permit Requirements.

5.3.6.2 An Excavation Permit must be used when penetrating the earth greater than 300mm and re-validated (or a new Excavation Permit issued) if there is any need or intention to change the size, depth or means of excavation or the works will not be completed by the indicated expiry date.

5.3.6.3 Contractors shall identify the site area to be excavated in detail on site drawing. Site area to be scanned by a Competent Person - only required in areas where services are known or highly suspected to exist. Scanned cleared area must be clearly marked on ground.

5.3.6.4 The Construction Manager is responsible to ensure that an Environmental Land Clearance Permit is completed prior to issuing of excavation permits.

5.3.7 Isolation Permit



5.3.7.1 Isolation, locking and tagging shall be conducted in accordance with standard 18 Isolation.

5.3.7.2 At no time will work on “live” electrical circuits take place without the written permission of the project OH&S Manager and the project Construction Manager.

5.3.7.3 Isolation of high voltage (600 volts and higher) equipment shall only be performed by personnel authorized by the project Construction Manager.

5.3.8 Critical or Significant lift permit

5.3.8.1 A Critical lift is defined as any lift with one or more of the following characteristics:

- A lift which must move the load or boom over workers,
- A lift at 80% of the rated capacity of the lifting device,
- A lift in excess of 80% of any cranes indicated load chart SWL for any given load mass,
- A lift using more than one crane or lifting device,
- A lift where the load is over a building or substantial structure,
- A lift, using a crane or hoist, of a person or persons in any type of work platform,
- A lift in which the center of gravity of the load changes during the lift.
- A lift in which the length of one or more legs changes during the lift.
- A lift over, between or within 10 meters (30 feet) of energized high voltage electrical conductors. This does not apply to underground conductors.
- Any lift which involves workers in a confined space.
- Any lift where it is intended for the crane to travel with the load lifted.
- A lift involving an item that is regarded as project critical or has or may have a long lead time, regardless of load mass or crane capacity (at the discretion of the construction manager)

5.3.8.2 All Critical lift permits shall be required to be preplanned, the PMT reserves the right to request an “engineered” lift plan for any critical lift.

5.3.8.3 Further details are contained in the project Cranes and Hoisting Standard

5.3.9 Man cage/workbox use Permit

A man cage is a device used to elevate a person to height, this rule applies to any such device which is locally manufactured and not intended to be applied to elevated work platforms such as JLG lifts.

5.3.9.1 The Contractor shall ensure all Man cage/Workboxes comply with the relevant legislative requirements and standards. All Man cage/Workbox use shall require a ‘Workbox Approval Permit’ (produced locally) authorized by an Engineer (acceptable to the construction Manager) or a person designated by the Project Manager. This rule does not apply to emergency situations.

5.3.9.2 See the working at heights standard for further details.

5.3.10 High Voltage Overhead powerlines access permit

A high voltage access permit is required prior to encroaching on live high voltage conductors, the encroachment distance can be found in the Project Electrical work Standard.

5.3.11 Working at heights permit

The construction manager reserves the right to implement a working at heights permit at any time during the project. This permit may be applied across the complete site or applied to one contractor as the construction Manager sees the requirement. This form will be produced locally.

5.4 Safety Standards – Access

5.4.1 Roads, Footpaths and access ways

5.4.1.1 All PMT personnel and Contractors shall:

- Be aware of vehicle/pedestrian interface issues and have a traffic management plan in place to

eliminate the potential for injury, particularly where it is necessary for vehicles, plant or equipment to reverse.

- Obtain specific approval from the PMT prior to implementing any form of vehicle and/or pedestrian access restriction.
- Ensure all restricted access areas are clearly identified and barricaded as required for both day and night conditions as per the traffic management plan.

5.4.1.2 At least one day notice is required prior to long term changes (more than 3 hours) in access and egress routes.

5.4.2 Barricading and Demarcation

5.4.2.1 All personnel and Contractors shall comply with the project Standard 7 barricades, demarcation, Excavation and Trenching.

- Excavations and areas where the risk of a fall exists are to be 'hard' barricaded a significant distance past the opening to prevent persons from falling.
- Warning tape, flagging or Bunting shall only be used as a last resort for minor short term temporary works such as identifying the slew radius of a crane or identifying hot work above areas.
- Appropriate signage and notifications shall always be used with all barricades and warning tape.

5.4.3 Surfaces and floors

5.4.3.1 Temporary flooring shall be of sufficient strength to withstand any load which may be imposed and shall be secured to prevent accidental removal or dislodgement. Temporary flooring shall be inspected for integrity by a competent person prior to the commencement and completion of work, on each working day.

5.4.3.2 Every open-sided floor (temporary or under construction) where there is a risk of fall, shall have physical barricades installed such as handrails (top and mid rail) to eliminate the risk of a fall.

5.4.3.3 Further information is contained in the project OH&S Standard for working at heights.

5.4.4 Hand Rail Removal

5.4.4.1 The Contractor shall ensure that tasks requiring the removal of handrails are controlled to eliminate the risk of a fall in the area. Signs, barricades and fall protection controls are required to be in place prior to the removal of handrails.

5.4.4.2 Handrails must be reinstated immediately on the completion of the task and prior to removal of signs and barricades.

5.4.4.3 When Hand rail removal requires a method other than unbolting to remove the hand rail, written permission of the PMT must be obtained prior to removal.

5.4.5 Access and Egress

5.4.5.1 The Contractor shall ensure a safe means of access and egress is provided in every work place. Ladders shall be secured and extend to at least one meter above the landing at an angle of 4:1.

5.4.6 Form work and Shoring

5.4.6.1 All personnel shall ensure that design and construction of 'Form Work' is in accordance with the project standard for the design and construction of form work. Persons shall not be permitted to work above or adjacent to (where there is a likelihood of them falling or stumbling) vertically or horizontally protruding reinforcing steel, unless such steel has been adequately guarded to eliminate the potential of impalement.

5.4.6.2 Sides of excavations shall be adequately sloped and/or stepped to prevent collapse in accordance with the relevant standard. Spoil resulting from excavation shall be set down away from the edge of the excavation.

5.4.7 Working at heights

5.4.7.1 Contractors are to ensure the safety of all personnel while working at heights or where there is a risk of a fall and that no person is allowed to work at heights in an unprotected manner at any time, all personnel required to

work at heights shall attend a recognized training course and records of such training shall be supplied to the Project Manager or their nominated representative prior to commencing any work at heights on the Project.

5.4.7.2 The preferred method of ensuring safety at heights is to provide safe access where fall prevention PPE is not required. Fall Prevention control measures shall at all times consider the 'Hierarchy of Controls' method to eliminate the hazard as a matter of priority. Fall protection or prevention must be in use when working more than 1.8 meters from a safe level.

5.4.7.3 Roofing Contractors shall be required to provide a safe work procedure and/or JHA to clearly detail the control measures that shall be applied to the Construction Manager or their nominated representative prior to the commencement of any work which involves working at heights.

5.4.7.4 Edge protection in accordance with project Standards shall be provided for all work areas and access ways above 1.8 m in height, or lower as designated by the project OH&S Manager. Personnel working off ladders must be protected at all times and at no time shall personnel work on stepladders past the center of gravity of the ladder unprotected. Fall restraint or fall arrest gear is required for all work off ladders where the risk of a fall is present.

5.4.7.5 The Contractor shall ensure PPE used as fall arrest is only used as a last resort. In all cases where PPE is considered appropriate, fall restraint should be considered as the preferred option rather than fall arrest.

5.4.7.6 See Standard 5 Work at heights for further details.

5.4.8 Falling Objects

5.4.8.1 Hazards related to falling objects must be identified during the planning of work activities. A risk assessment must be completed in order to determine the potential to do harm and to allow development of appropriate control measures.

5.4.8.2 Effective risk control measures must be determined, implemented and monitored in the following order of priority:

- Preventing an object from falling - for example, by using containment sheeting, toe-boards, lanyards to secure tools and equipment, lift boxes, brick cages and loads secured to cranes and hoisting equipment.
- Protecting people from falling objects - for example, exclusion zones, overhead gantries, catch platforms, signs, warning devices and traffic controllers.
- Personal protective equipment - personal protective equipment is a last line of defense and must be worn.

5.4.9 Scaffolding and Scaffolds

5.4.9.1 The Contractor shall ensure that all Scaffolding erection and dismantling complies with the requirements of the project working at heights standard, local regulations, and manufacturer's instructions.

5.4.9.2 Scaffolding shall be controlled using a Scaffold access tag system and shall be inspected and recorded as required in the standard. During erection scaffolders shall be protected from the risk of falling and shall at all times work from at least two secured planks. It is unacceptable to work only on scaffold tubes or to climb scaffolds unprotected. Scaffold erection and dismantling shall only be carried out by, or under the direct supervision of, certified competent scaffolders. The Contractor shall appoint a responsible person as the scaffold supervisor responsible for scaffold management for the Contract. See Standard 5 Work at Heights for further details.

5.4.10 Ladders – fixed and portable

5.4.10.1 The Contractor shall ensure all ladders comply with the relevant local legislation and the project working at heights standard:

- Fixed ladders shall comply with the requirements of good engineering practice and local regulations.
- Portable ladders (wood, metal, and fiberglass) shall comply with Canadian or European safety standards.

- The contractor shall maintain an inventory of “all” ladders under their control, this inventory must contain a method to clearly identify each ladder a date of inspection by a competent person.
- The Contractor shall ensure portable ladders are regularly inspected by a competent person and a register of such inspection is maintained on Site files. Ladders are required to be inspected for damage and integrity prior to use on any task. Any ladders with damage rungs or side rails must be tagged “Out of Service”.
- Always ensure the foot of the Portable ladder is on a firm, level surface and at a safe distance from the vertical (ratio of 4:1)
- Ensure that the ladder extends one meter above the access level
- Ladders are tied off at the top or secured to prevent accidental movement
- When using extendable ladders, always have at least four rungs overlapping at the center of the ladder
- Always face the ladder and use both hands when ascending and descending (3 points of contact).
- Further detail is contained in Standard 5 Work at Heights.

5.5 Safety Standards – Vehicles and Mobile Plant

5.5.1.1 The Project management team has identified the management of safety risks associated with light vehicles and surface mobile equipment as critical.

5.5.1.2 The Site Traffic Management Plan sets out the required site traffic rules for all vehicles or mobile plant and their drivers or operators on site. All light vehicles and mobile equipment that are used on site will be required to undergo a vehicle inspection for site compliance and a specific operational and maintenance risk assessments conducted before being mobilized.

5.5.1.3 No item of plant or vehicles shall be driven on the project without an inspection. All plant and vehicles shall be inspected by the Project Manager or their nominated representative prior to the use on the project. This inspection shall be recorded and kept on file.

5.5.1.4 All vehicles and mobile equipment shall be fixed with a yellow beacon light of an appropriate wattage.

5.5.1.5 All vehicles and mobile equipment shall be fitted with a reversing alarm. Tampering with the reverse alarm in any way shall be considered a serious offence.

5.5.1.6 See Standards 6 Driving – Light Vehicles & Standard 13 powered mobile equipment for further details.

5.5.2 Vehicle site access permits

5.5.2.1 The Construction Manager reserves the right to implement a vehicle site access permit for the project. This permit will be issued upon passing inspection mentioned in paragraph 5.5 .

5.5.2.2 The access permit must be clearly displayed on the relevant vehicle or mobile equipment at all times on the site. Any vehicle found without a site permit shall be immediately removed from the project. Delivery vehicles shall be escorted by the receiving contractor.

5.5.3 Maintenance and Mechanical inspection

All vehicles and powered equipment should be maintained in accordance with Manufacturer’s instructions and mechanically inspected by a competent person on a regular basis. Records of such inspection and repairs required/carried shall be maintained by the Contractor and made available for auditing on request. The PMT and Contractors shall ensure all Site vehicles and mobile plant have a documented daily operator inspections completed with records of inspection maintained on Site files for audit purposes.

5.5.4 Speed Limits



Speed on site shall not exceed 40 K/Hr on any road, lower speed limits may be imposed at the discretion of the Project Management Team, and lower speeds should be used in rough or adverse conditions. Speed in parking areas shall be limited to a walking speed. Speed on the project site may be monitored by radar. Drivers shall slow down and allow sufficient clearance in congested areas or where plant, equipment and personnel are working in close vicinity to roads.

5.5.5 Off Road Vehicles

The Contractor shall ensure personnel do not operate off road vehicles to the detriment of the environment or community. Government and statutory controls must be strictly adhered to off Site. Motorized Trail bikes of any description are not permitted on Site.

5.6 Safety Standards – Classified Plant and Equipment

5.6.1 Cranes

5.6.1.1 All cranes are to be used and inspected in accordance with regional laws standards and the requirements in the cranes and hoisting standard for the project.

5.6.1.2 Mobile Cranes owned or leased by Contractors shall carry the current plant logbook and manufacturer's operation and maintenance manual/s at all times. Details of maintenance history and modifications shall be entered in the plant logbook and where possible the same operator shall be utilized on the same crane on Site.

5.6.1.3 No crane is to be used on the Project without first supplying to the PMT the following evidence:

- statutory plant design registration,
- third party annual inspection certification in accordance with regional Standards,
- mechanical inspection by competent person.

5.6.1.4 Refer to section 5.3.8 or the cranes and hoisting standard for information on critical lifts.

5.6.1.5 The Contractor shall be responsible for the coordination and review of all technical details, preparation of a detailed rigging study and shall approve all lifting instructions and drawings prior to the lift. The detailed rigging studies shall be supplied to the PMT for review and approval prior to any significant lift taking place.

5.6.1.6 The Contractor shall:

- Coordinate construction activities with the PMT.
- Ensure compliance with the rigging study written instructions.
- Appoint a competent senior rigging supervisor who shall have overall responsibility for the field operation of all significant lifts in accordance with the rigging study written instructions.
- Ensure no loads are left unattended for any reason or any length of time.
- Taglines shall be used at all times to help manage the load when moving a suspended load.

5.6.2 Elevated work Platforms

5.6.2.1 Contractors shall ensure the safe operation of Elevating Work Platforms (EWP) in accordance with Regional Standards for Elevating Work Platforms and the project working at Heights Standard. Contractors are required to submit evidence of a current inspection by a competent person, for Elevating Work Platforms to the Project Manager.

5.6.2.2 Contractors are required to ensure that:

- Employees using elevating work platforms are certified competent.
- Logbooks are kept in the EWP and the EWP is inspected daily and regularly maintained.
- The SWL of the work platform is not exceeded.
- Ladders are never placed on steps or other items to provide additional reach for any purpose.
- Operators shall wear a full body harness and attach a lanyard with fall arrester to an attachment point whenever the equipment is in use.
- Where entry or exit from a raised platform is required, a Risk Assessment and JHA clearly identifying that this is the safest means of access, must be submitted and approved in writing by

the Project OH&S Manager or the nominated representative.

- Elevated Work Platforms are never used as a lifting or hoisting device for the raising of materials or equipment.
- High Voltage Access Permit must be applied for if operation of a EWP is required within 6m of any overhead high voltage power lines.
- EWPs shall not be used as cranes/lifting devices, unless fitted with an approved lifting attachment, in any case the weight restriction shall not be exceeded.
- Personnel do not exit the basket whilst it is elevated unless there is no safer means of access/egress and the conditions and the risks involved are assessed by means of JHA and/or risk assessment.

5.6.3 Forklifts

5.6.3.1 The Contractor shall ensure:

- Forklifts owned or leased by the Contractor shall carry the current plant logbook and manufacturer's operation and maintenance manual/s at all times. Details of maintenance history and modifications shall be entered in the plant logbook.
- All forklifts used on Site shall be fitted with a seatbelt, which must be worn by the operator.
- Where lifting attachments are fixed to the forklift that the equipment is not loaded beyond its design capacity.
- Attachments are securely fastened to the machine to prevent dislodgement.
- Where the load is large and obscures vision, the machine must travel backwards or a spotter used.
- Forklift log books are to be maintained on a regular daily basis.
- Forklifts are only operated by certified and competently assessed operators.
- Equipped with reversing alarm.
- An operator daily inspection must be performed by any operator prior to use each day.

5.7 Safety Standards – Plant and Equipment

5.7.1 Plant & Equipment

5.7.1.1 The Contractor shall ensure all plant and equipment, including portable hand tools, is in a safe and serviceable condition and meets the requirements of the PMT for Equipment Safeguarding.

5.7.1.2 An inspection of all plant and equipment shall be conducted before first use on the project, this inspection will be performed in coordination with the PMT. A record of this inspection must be handed to the construction manager or their delegate for record keeping.

5.7.2 Identification of tools and equipment

The Contractor shall ensure that all tools and equipment, which are taken onto the Project, are clearly identified as belonging to the Contractor.

5.7.3 Equipment Safeguarding

The following general rules shall be implemented and followed by all stakeholders on the Project:

- Access to equipment shall be controlled and monitored where safeguarding and interlock systems are insufficient to protect persons from moving plant and equipment.
- Fail-safe switches or devices shall be installed on all rotating fixed plant and hand tools (e.g. saws, lathes, drill presses, etc.).
- Guards shall only be removed for maintenance and repair, and only once equipment is isolated and locked out. Guards shall be replaced prior to equipment being put back into service.

- Procedures shall be in place for situations when safeguards on operating plant and equipment need to be removed temporarily for any purpose.
- A system shall be in place for the management of change to equipment and/or processes to ensure the integrity of safeguarding is maintained and to determine requirements for additional safeguarding.
- No guarding shall be modified or altered in any way except through the application of a detailed risk assessment and change management process.

5.7.4 Metal presses and breaks (Guillotines)

5.7.4.1 Guarding requirements and safe use of guillotines and metal presses shall conform to regional and project standards. Guillotines and metal presses used on the Project shall be provided with guards and controls equal to accepted standards for machine shop equipment. Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains or other reciprocating, rotating or moving parts exposed to contact by any person, shall be permanently guarded.

5.7.5 Pedestal drills, grinders and buffers

5.7.5.1 Installation of electric pedestal drills, grinders and buffers shall be in accordance with regional and project standards. The selection, installation, construction, safe guarding, care and use of grinding wheels and buffers shall be in accordance with all these standards.

5.7.5.2 No person shall remove any safety guard device from a grinding or drilling machine unless the equipment is isolated. Buffing, grinding and drilling operations produce airborne projectiles. Operators of such machines shall protect themselves and others in the work vicinity by the use of personal protective equipment, the minimum being hearing and double eye protection.

5.7.5.3 No person shall operate a bench or pedestal drill, grinder or buffer in a temporary work situation until the equipment has been leveled and securely anchored. No grinder or buffer shall be fitted with any other cutting wheel, e.g. saw blade, polishing disc or pad, etc. than those recommended by the manufacturer.

5.7.6 Lifting equipment and winches

5.7.6.1 Lifting gear includes, chain, rope, fastening, coupling, fitting, hoist block, stay, pulley, hanger, sling, brace, or movable contrivance of a similar kind, used or intended for use on or in connection with construction work.

5.7.6.2 Lifting gear shall be visibly marked in accordance with the relevant regional and project standards. Such markings shall be legible throughout the working life of the equipment. Rigging and lifting equipment shall be inspected regularly by a competent person for the purposes of determining their suitability for safe use; this inspection shall be recorded in a rigging and lifting equipment register. A qualified engineer shall approve manufactured lifting attachments.

5.7.6.3 Non Destructive Testing (NDT) shall be carried out as required. All lifting attachments shall be included in all Lifting Equipment inspections. All lifting gear shall be tagged, or otherwise identified as having undergone a Quarterly inspection. The colour of lifting gear tags and/or identification will be in accordance with the Site electrical tagging colour codes listed in this Standard Specification. Fibre ropes shall not be used for crane lifting activities and when used for the temporary suspension of pipe work etc. shall be restricted. Consideration shall be given to hot work and plant processes and its effects on the rope. The use of synthetic fibre slings is restricted and must be inspected by a competent person for defects each time before use. All rigging gear shall be stored off floor level and away from hazardous substances.

5.7.6.4 Refer to the project Standard 16 Crane and hoisting.

5.7.6.5 Colors for quarterly tests compliance are:

January - March	RED
April – June	GREEN
July - September	BLUE
October - December	YELLOW

5.7.6.6 An optional method for identifying quarterly inspections may be used by contractors on approval of the PMT OH&S Manager.

5.7.7 Welding and gas cutting

5.7.7.1 When carrying out welding, cutting, gouging and grinding tasks the Contractor is responsible for ensuring that when working in any area, hot material is prevented from falling or entering areas below or adjacent to the operation and the correct permits have been issued and precautions have been taken to prevent incidents.

5.7.7.2 The minimum eye protection when carrying out the above operations shall be:

5.7.7.2.1 all tasks - safety glasses fitted with side shields

5.7.7.2.2 full welding face shield or approved welding shield which attaches to a safety helmet in areas where a risk of falling objects exists

5.7.7.2.3 oxy cutting - oxy goggles with suitable lenses

5.7.7.2.4 The use of double eye protection is required for all specified tasks.

5.7.8 Hot Work

5.7.8.1 Hot work is defined as “any welding, cutting, grinding, drilling, heating or anything capable of generating sparks or heat which may cause ignition of a flammable or combustible material. This includes chemical substances which, when mixed, may cause enough heat to ignite a substance.”

5.7.8.2 The following special conditions shall apply on the Project, for all Hot Work (i.e. welding, cutting, gouging and grinding tasks):

- A hot work permit system shall be developed in accordance with Standard 10 Fire Prevention
- Electric welding cables and gas welding/cutting lines in work areas, walkways and access ways shall be protected against physical damage at all times. Where possible, they shall be routed overhead or under elevated walkways, but in all cases routed in such a manner as to eliminate tripping or other hazards.
- Electrical welding and gas welding/cutting units are inspected and maintained in accordance with the relevant regional and project standards.
- Flashback arrestors shall be fitted on the hand piece and cylinder end of oxy/acetylene hoses.
- Cylinders shall be stored in an upright position in appropriate cages, cradles or trolleys and secured with a non-flammable material (e.g. chain, wire rope) to ensure stability when being transported, stored or used on Site.
- Display appropriate signage when transporting or storing compressed or flammable gas.
- Keep electric welding cables and gas welding/cutting apparatus free from grease and oil. Worn or damaged electrical welding cables with exposed wire or bare conductors shall be replaced or discarded immediately.
- Suitable fire resistant screens are required when electric arc welding to ensure that adjacent workers are not adversely affected.
- Fire extinguishers shall be available at all work locations where hot work is being undertaken, flammable gases are stored or on vehicles transporting flammable gas.
- Prior to the commencement of hot works, all combustible/flammable material shall be removed to a minimum distance of 10 meters or adequately protected.
- Gas cylinders shall not be transported, raised or lowered to another work level unless an approved holder or carrier designed for the transport of gas cylinders is used.
- Cylinders shall be kept at a safe distance and shielded from welding or cutting operations and not be exposed to electrical circuits or heat.
- Opening keys shall not be modified nor extended and the key shall remain connected to the cylinder when in use.

- Acetylene and other fuel gases shall not be stored in enclosed spaces e.g. vans, vessels or containers.
- Voltage reductions devices (VRD) shall be used with all welding machines.

5.7.8.3 Further information on hot work and the requirements of the hot work permit can be found in the Standard 10 Fire Prevention.

5.7.9 High Pressure water equipment

Only competent personnel experienced in the handling of the equipment being used shall carry out high-pressure water jetting operations. The term 'high pressure water jetting' covers all water jetting systems including the use of additives or abrasives with an output capability greater than 800 bar. High pressure blasting areas shall be barricaded (red & white) and danger signs with wording 'Danger Do Not Enter - High Pressure Water in Use' shall be erected.

5.7.9.1 Personal protection equipment suitable to the work being done shall be worn and shall include:

- double eye protection - combination of visor and safety glasses
- foot protection – rubber safety boots or safety boots with steel toecap
- head protection - safety helmet
- body protection - gloves and waterproof clothing having regard to the nature of work being done
- hearing protection - ear plugs and/or ear muffs.

5.7.10 Compressed air equipment

Compressed air operations shall only be carried out by competent personnel experienced in the handling of the equipment being used. Personal protection equipment suitable to the work being done shall be worn and shall include:

- eye protection - face shield and safety glasses with side shields or goggles
- foot protection - safety boots with steel toecap
- head protection - safety helmet
- body protection - gloves and clothing having regard to the nature of work being done
- hearing protection - ear plugs and/or ear muffs
- do not use compressed air to clean off clothing or body parts.

5.7.11 Hoses, air, water, hydraulic and gas

5.7.11.1 All hoses shall comply with the relevant regional and project standards for Air, Rubber, Hydraulic and Gas.

5.7.11.2 All hose connections shall be installed in such a manner to reduce the risk of a hose parting from the coupling or connections as follows:

- Safety clips and retainers shall be securely installed and maintained on pneumatic impact tools to prevent them from being accidentally expelled.
- Where two or more air hoses are joined, they shall not be used unless couplings/connections are fitted with approved safety pins/clips and hose clamps.
- LPG, butane, acetylene and oxygen, hoses shall be of an approved type, complying with appropriate standards, easily distinguishable and shall not be interchangeable.
- High pressure service hoses shall be fitted with approved 'whip checks'.
- All hoses to be inspected, repaired or replaced as required prior to each use.

5.7.12 Hydraulic and Mechanical jacks, & equipment support stands

5.7.12.1 All hydraulic and mechanical jacks shall comply with regional and project standard with respect to stability, durability, loss of height under load, ease of operation and load capacities. Equipment support stands used on Site



shall follow guidelines set out specifically relating to strength, stability, access, and height adjustment and labeling requirements.

5.7.12.2 Other requirements shall include:

- Equipment support stands shall be marked with the safe working load for the stand.
- Drawings indicating structural and mechanical design specifications shall be available for inspection on request.
- Hydraulic and mechanical jacks shall be installed in accordance with manufacturer instructions.
- No person shall remain on or in any equipment being lifted or supported by a mechanical or hydraulic jack.
- Lifting support equipment shall be inspected prior to use to ensure safe operating conditions.
- Packers shall not be placed between the lifting support equipment and the load.
- If packers are required they shall be designed for the purpose and be placed between the lifting support equipment and the supporting floor.

5.7.13 Portable hydraulic power equipment

On Site use of high-pressure hydraulic equipment in the form of 'Porta Power' type units (electrically, air, petrol or manually powered) shall be operated in strict accordance with the manufacturer's instructions. Hydraulic hosing shall comply with manufacturer's Standard. Other requirements shall include:

- Only manufacturer recommended hydraulic oil is to be used in 'porta power' hydraulic equipment.
- Pressure shall only be applied to loads once the cylinder has been centered and has a solid firm foundation.
- Adequate supplementary bracing for loads may be necessary.
- Packers shall not be placed between the porta-power equipment and the load.
- If packers are required they shall be designed for the purpose and be placed between the porta power equipment and the supporting area.

5.7.14 Concrete and brick cutting equipment

Use of any masonry cutting equipment on Site shall comply with Equipment Safeguarding standards. Any electric concrete cutting device brought on Site must comply with regional and project standards and used in accordance with the manufacturer's instructions. When operating a concrete/brick-cutting device on Site, the Contractor shall take effective measures to suppress and/or control dust generated by the cutting operation through wet cutting procedures and operators must wear the appropriate PPE for the task.

5.7.15 Portable tools

The Contractor shall ensure all portable tools conform to appropriate standard. A portable tool is defined as any hand tool or power tool (electric, pneumatic, hydraulic or fuel driven) that can be manually transported by one person. Excessively worn tools and tools requiring maintenance shall be removed from the project Site. Electric power operated tools shall be used in accordance with the manufacturer's instructions. All portable tools shall be in good state of repair and safe for the user and other people in the same area. They shall be used only for the task they were designed, and maintained in accordance with the manufacturer's instructions. Guarding shall be used and maintained in accordance with manufacturer instructions. All portable tools shall be inspected prior to use. Use of portable GFCI (Ground Fault Circuit Interrupters) or RCD (Residual Current Devices) is mandatory for all instances on equipment where a socket does not have a RCD in the circuit.

5.8 Safety Standards – Electrical

All electrical equipment selected for use on the Project shall comply with appropriate standards and shall be used, inspected and maintained in accordance with this OH&S Management Plan.

5.8.1 Testing

The Contractor shall ensure inspection, testing and tagging of electrical equipment is carried out as follows:

- Daily - Users of any electrical equipment.
- Quarterly - All portable electrical equipment portable tools extension leads, generators, welders, fixed electrical plant and equipment, installations such as crib huts and workshops.
- Yearly - Fixed and portable electrical equipment and appliances used in offices.

5.8.2 Tagging

5.8.2.1 All electrical equipment shall be tagged after quarterly inspections, tag colours shall be as follows:

January - March	RED
April – June	GREEN
July - September	BLUE
October - December	YELLOW

5.8.2.2 An optional method for identifying quarterly inspections may be used by contractors on approval of the PMT OH&S Manager.

5.8.3 Flexible cords/extension cords

The PMT & Contractors shall ensure:

- Extension cords shall not exceed 30 m in total length and are not to be joined in lengths at which the total length exceeds 30 m. exceptions may be granted under certain conditions by the PMT.
- All connection plugs shall be of a shrouded bonded type or made of transparent material.
- Power leads shall be suitably restrained, supported above ground level using either cable stands or standard lead restraining clip.
- Power leads shall not be routed along access ways, walkways or handrails unless supported by lead restraining clip/s.
- Portable Residual Current Protection units shall be used to distribute power directly to power tools only and not as an adapter to extend the length of power leads or for multiple distribution of power leads.
- Double adapters shall not be used in construction.

5.8.4 Generators and welding machines

The Contractor shall ensure all generators and welding machines used on Site comply with the requirements of this Standard Specification and are fitted with compliant voltage reduction devices (VRD). No exemption shall be granted from the requirement to use VRD on Site, except in exceptional circumstances where the technical nature of the welding may indicate this as impractical. Exemption shall be requested in writing to the Construction Manager.

5.8.4.1 Generators

5.8.4.1.1 This section covers portable, transportable or mobile generators including welding machines with auxiliary power outlets or terminals. Self-contained transportable generating sets driven by internal combustion engines which are intended to provide an independent 50 Hz ac supply at above 32 Vac, single phase or three phase, shall meet the following requirements:

- Comply with regional standards with the additional features, as varied below. All live parts, including 'neutral' parts shall be guarded and insulated, including terminals at the back of the

outlet.

- Single-phase windings shall have the neutral terminal connected to the ground terminal of the device. Three phase units shall have the star point of neutral connected similarly.
- All socket outlets providing non-welding power shall be weatherproof hi-impact polycarbonate or similar construction, with an isolating switch that operates in all live conductors.
- The single-phase outlets indicated above shall be protected by a residual current operated circuit breaker set to trip at a maximum earth leakage of 30mA.
- Generators shall be inspected and tested by a licensed electrical worker and tagged in accordance with the tagging Procedure and be protected from wet weather conditions at all times.
- Earthing or grounding of generators must comply with manufacturer instructions and the requirements of regional standards. As required this shall include earth stakes buried to a depth of at least 600 mm unless specifically stated otherwise for safe operation of the generator.

5.8.4.2 Welding machines

The Contractor shall ensure all welding machines used on Site are fitted with standard compliant Voltage Reduction Devices (VRD). The location of welding machines shall be as close as possible to the work area, with the earth returns securely clamped as close as practicable directly to the area of the task or at minimum at a distance not exceeding 3m. Welding machines shall be stopped or switched off before the connection or disconnection of leads to the machine terminals. All exposed terminals and wiring shall be insulated or covered.

5.8.5 Electrical Storms and lightning safety

Refer to the project Standard 26 Weather conditions and hazards for further details.

5.8.6 High voltage electrical safety

Contact with live overhead electrical wires or power lines can cause death. To avoid this risk, all personnel must follow these minimum standards:

- Contractors shall apply for High Voltage Access Permit for any task that is required to be carried out within 6 m of any overhead power lines.
- No work is to be done above live overhead power lines.
- The minimum clearances for the movement of vehicles and machinery under and in the vicinity of overhead power lines are in accordance with regional and project standards or equivalent being greater than a distance of 3.0m. A spotter and High Voltage Access Permit are required for any movement of plant or machinery that may have the potential to breach this minimum clearance.

5.9 Fitness for work

5.9.1 The project Fit for Work Policy and Procedure shall be implemented for the Project. Further details can be found in the appropriate Appendix or Standard. The program shall include controlling the risks associated with:

- The consumption of alcohol.
- General level of personal fitness and medical conditions.
- The effect of drugs (prescription, pharmaceutical or illicit).
- Fatigue.
- stress.

5.9.2 All Contractors shall be required to have a comprehensive Fit for Work Program that complies with the project Fit for Work policy and procedure. Any person who is feeling the effects of ill health should seek



medical assistance and refrain from entering the project, to avoid the spreading of illness and to ensure the fitness of the individual does not impair their ability to carry out their work in a safe manner.

- 5.9.3** The project management team and Contractors shall be encouraged to provide personal health and hygiene programs on a regular basis for their employees and shall be required to participate in Client project specific programs as may be required.

5.10 Hours of work

- 5.10.1** Hours of work on the project shall be in alignment with the Armenian laws regarding this topic as well as the fatigue management plan for the project.

5.10.2 Scheduled rest and recreation

All project personnel shall be required to have regular Rest and Recreation (R&R) breaks as scheduled for the Project. No deviation from this requirement shall be permitted without the written authorization of the project Construction Manager in consultation with the project OH&S Team. Records shall be maintained by all Contractors to identify R&R rosters and rest day breaks and supplied to the PMT on request for auditing purposes.

5.11 First aid and medical services

- 5.11.1** Suitably qualified First Aid Personnel shall promptly attend to all injuries in accordance with their level of training. Only qualified medical personnel shall attend to all serious injuries, eye injuries (foreign bodies) or any injury requiring diagnosis.
- 5.11.2** The required level of First Aid services shall be established in accordance with the local regulatory requirements and made available for the use of all Contractors on the project. The responsibility for ongoing medical treatment and management of injuries shall be that of each Contractor company.
- 5.11.3** Contractors are required to provide sufficient qualified first aid personnel and to provide a comprehensive First Aid Kit. At least one Contractor person shall be qualified to relevant First Aid level or above and onsite at each work location when any work is in progress. Emergency First Aid assistance shall be immediately available to all personnel as required. All first aid injuries are to be reported in accordance with the incident reporting standard for the project.

5.12 Amenities and personal hygiene

- 5.12.1** Suitable and adequate amenities shall be supplied and maintained regularly, in a clean hygienic manner, by each Contractor in accordance with the relevant Legislation or Code of Practice for the project. Contractors shall maintain a high standard of hygiene at all times. The standard shall be such as to prevent an environment conducive to bacteria, disease, and infection. Common rooms and eating areas shall be kept clean and free of all food scraps, wrappers, paper cups, and other disposable items. Contractors are required to provide for the general health and hygiene needs of their employees. Contractors shall provide an adequate supply of personal cleaning products, barrier creams and sunscreen protection for their employees.
- 5.12.2** Contractor and PMT facilities provided shall include but not be limited to the following:
- Adequate shaded areas during rest breaks.
 - Sufficient seating for all personnel during their allocated rest breaks.
 - Food storage and consumption facilities.
 - Drinking water.
 - Contained refuse disposal.

5.13 Noise and Vibration

- 5.13.1** The Contractor shall manage the risk of exposure to noise and vibration hazards in accordance with statutory regulations and project standards and shall include scheduled periodic surveys of noise and vibration exposure.



5.13.2 During the project hearing protection becomes mandatory when noise levels reach 80 DbA, and there may be noise levels which require double protection. Further information is contained in the project hearing conservation standard.

5.14 Radiation

5.14.1 Prior to mobilization of any radiation source all contractors are required to obtain written approval of the project manager or construction. Contractors, or the person requesting the use of radiation on the project, are responsible to perform a risk assessment and develop controls to prevent over exposure to radiation.

5.14.2 Contractors shall protect people from harmful ionizing and non-ionizing radiation by identifying radiation sources and implementing hazard control measures. It is the responsibility of Contractors to provide appropriate information and training to all personnel exposed to radiation. X-rays and gamma rays may be used to examine welds, and for various measuring or activation devices on the Project. Lasers are another source of radiation and are commonly used for surveying purposes. It is the responsibility of Contractors to provide proper training to all personnel engaged in the use of, or exposed to lasers. The appropriate warning signs must always be displayed during the use of radiation devices. Personnel shall be made aware of such warning signs and must keep clear of the laser beams.

5.15 Smoke free environment

Smoking is prohibited on many areas of the site. Non-smoking areas include all buildings, tool rooms and lunch areas, confined spaces, cabs of vehicles, hazardous substance and lubricant storage areas, designated restricted areas and in any location where passive smoke is a nuisance to other employees. Contractors shall clearly mark smoking areas and ensure that their employees observe the smoke free status of other areas.

5.16 Extreme temperatures

5.16.1 The project management team and Contractors shall ensure adequate controls are implemented to suitably protect people who work in extreme temperatures.

5.16.2 Where an environment of extreme temperature exists, the PMT and Contractors shall use means of control that include, but are not limited to:

- ensuring that people who have to work in such conditions are capable of doing so in a safe manner,
- providing shelter and adequate drinking water,
- hygienic means of water distribution and consumption to limit exposure to health risks
- using power tools, lifting aids and/or other devices to reduce physical exertion
- planning of work to minimize personnel exposure to extremes of temperature
- training and instruction in recognition of heat stress and frostbite symptoms
- provide appropriate PPE for the environment.

5.17 Fibrous materials

Prior to work commencing the Contractors shall investigate to establish the exact nature of the material involved, and develop the appropriate control measures. Any work, which entails the possibility of encountering fibrous material, such as asbestos, shall be referred to the PMT. Current legislative compliance standards and best practice shall be rigidly adhered to for working with and/or removal of fibrous materials.

6 Environmental protection

Environmental protection for this project is covered in the Amulsar Gold Project Environmental Monitoring Plan, refer to that document and its references for further details.

7 Emergency response plan

- 7.1.1** The project manager, in conjunction with Geoteam CJSC shall ensure an emergency response plan (ERP) is established for the project, the ERP shall be introduced to all project personnel through the site induction process.
- 7.1.2** The ERP shall be a living document and as such will be reviewed and updated as the project construction advances and equipment becomes available.
- 7.1.3** The ERP shall be managed and maintained by the project OH&S Manager, this plan will cover response plans for a variety of foreseen emergencies including:
- Fire
 - Injury
 - Spills
 - Earthquake
 - Winter storms
- 7.1.4** The primary purpose of the ERP will be protection of life, and will:
- Describe the method for gathering and accounting for all personnel on site, including visitors,
 - Describe how the emergency response is initiated and how the emergency teams are activated,
 - Specify command, control and communication arrangements during an emergency,
 - Identify the roles and responsibilities of all personnel likely to be at the site of the emergency or involved in the response,
 - Include a responsible person nominated as the site emergency control officer
 - Identify emergency resources and personnel
 - Provide an easy to understand emergency response flow chart,
 - Include the requirement for drills (all site personnel involved) and exercises for the command and control group.
- 7.1.5** Contractors will be required to develop Emergency Response Plans for their area of responsibility, these plans shall be established in accordance with the emergencies mentioned in 7.1.3 and describe the method of evacuation, accounting for personnel, how alarms are raised internally, and the requirement for drills.

8 Performance, measurement and monitoring

8.1 Positive performance indicators

- 8.1.1** The Lead Indicator analysis will incorporate the objective study of the following records.

Hazard Studies	Communication meetings	Training undertaken
Project Risk Assessment	Toolbox meetings	Persons Inducted
Safety inspection/audits-planned/conducted	Weekly safety meetings	Training Needs Analysis
Job Hazard Analysis	HSE	Hours of Task Specific Training
Behavioral safety interactions	Project Management	
Hazard reports	Safety Committee	

- 8.1.2** Lag Indicator analysis will incorporate the objective study of the following records.

Incident records	Non conformances	Action close outs
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Injury records Near hit event. Damage event. Environmental damage Lost Time (Production Loss) Task Observations Hazard reports	HSE Breaches Complaints	Hazards Reported Inspection records Audit records Training records Behavioral safety interaction reports
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8.2 Key Performance Indicators

8.2.1 The following list of Key Performance Indicators will be maintained and reported on a continuous basis throughout the project. This list is not exhaustive and may be added to at any time.

KPI	Target	Method of Evaluation	Relevant Standard
Lost Time Injury (LTI)	Zero LTI's	LTI frequency to total hours worked	Incident Reporting, management & Investigation
Medical Treatment Injury (MTI)	Zero MTI's	MTI Frequency to total hours worked	Incident Reporting, management & Investigation
First Aid Treatments (FTI)	Zero FTI's	FTI frequency to total hours worked	Incident Reporting, management & Investigation
Occupational Health Incidents (OHI)	Zero OHI	Yearly examination record against reported occurrence against total of workforce	Incident Reporting, management & Investigation
Reduction of Risk	Target 10% reduction	Percentage reduction in total risk score from quantitative risk assessment	Hazard ID, Control & Risk Assessment
Incidents of property damage	Target zero	IPD frequency to total hours worked	Incident Reporting, management & Investigation
Training for competence	Target 100% of training completed against identified needs	Percentage achieved per month	Induction & Training
Safety Interactions	Target 80% of requirement	Percentage achieved per month Reported by contractor and overall	Safety Interaction standard from OHSMIP
Near Miss Reporting	Target Total reported	Total number received per month Reported by Contractor & Department	Incident Reporting, management & Investigation

8.2.2 Additional KPI's may be developed as the project progresses at the discretion of the Project Manager.

8.3 Data collection and input

- 8.3.1** Management must ensure that all data required by government authorities is collected and reported in a timely manner. This will include lost-time injury records, environment dust sampling, noise sampling and other similar requirements.
- 8.3.2** In addition Contractors should collate and analyze more data regarding safety and occupational health. The data should include all injuries, all incidents, workplace dust and noise records, consumption and use of PPE and safety and health expenditure. This data should include sufficient detail to identify the work areas so that it can be used to identify safety and health trends and assist managers to improve their safety and health performance. Contractors should have a system to record each individual employee's health data, particularly when the employee may be working in a job with high noise or dust exposure.
- 8.3.3** The data required for reporting may be adjusted as requirements change during the project. All contractors are expected to adjust to these requirements as they change.
- 8.3.4** Project reporting requirements are set out in the various OH&S standards.

8.4 Evaluation of compliance

- 8.4.1.1** The Contractor shall coordinate with PMT OH&S to ensure all Project compliance issues are addressed. The Contractor is to prepare and maintain a legal compliance register to identify actions under the relevant legislation.
- 8.4.1.2** Responsibilities shall be allocated to implement, monitor and review the legal compliance register action items.

8.4.2 Legal Compliance

- 8.4.2.1** The Contractor OH&S Management System and associated Procedures shall ensure full reference to the relevant Client and PMT documents listed within this OH&S Plan. The PMT reserves the right to issue site specific instructions and standards throughout the Project to ensure all OH&S requirements are met. The Contractor shall be required to comply with all site specific directions in relation to all OH&S matters. The Contractor shall comply with the requirements of documents listed and/or referenced in sections of this OH&S Plan.
- 8.4.2.2** Each Contractor will identify and document all of the applicable legal obligations and document them in a register. Each Contractor will implement processes to assess and maintain compliance with applicable Health and Safety legal obligations.
- 8.4.2.3** The project management team will maintain an on-going review of legal obligations and make any appropriate changes to its processes to ensure continued compliance.
- 8.4.2.4** The PMT will ensure that individuals with statutory responsibilities:
- understand the nature and scope of their responsibilities
 - formally acknowledge these responsibilities
 - are provided with adequate resources and have the necessary skills to effectively discharge their responsibilities.
- 8.4.2.5** Each group will ensure that all identified corrective actions or opportunities for improvement are incorporated into the corrective action log.

8.5 Incident investigation, Nonconformity, Corrective action and Preventive action

- 8.5.1** The PMT and Contractors shall implement Procedures to ensure rehabilitation programs are in place where an OH&S incident occurs. The Contractors OH&S management system procedures shall ensure controls are implemented in accordance with the hierarchy of controls method and ensure priority is given to the immediate care of the injured and to the immediate implementation of controls to prevent, as far as is practicable, the recurrence of an event and/or the elimination of hazards.
- 8.5.2** The PMT and Contractors shall ensure:
- implementation of effective OH&S Procedures for incident and hazard reporting
 - as far as practicable that no unsafe work practices occur

- no unsafe areas or uncontrolled hazards exist in its work areas on site
- occurrences are reported to the regional Authorities and the PMT OH&S team in accordance with statutory requirements & OH&S Plan, see Standard 11 Incident reporting, management and investigation.
- corrective actions are effectively implemented to rectify any identified potential OH&S issue/hazards
- a rehabilitation and injury management program is in place and promotes early return to work for injured and ill workers
- the community is not affected by the Contract works or the Contractor personnel within the community and that systems are developed to efficiently and effectively deal with community issues.

8.5.3 Incident Investigation

8.5.3.1 The Project Management team actively promote a 'no-blame', based investigation method, in which the focus is on identifying the root causes to the incident so that effective actions can be taken and monitored to prevent recurrence. Detailed investigation shall be required for all Medical Treatment Injuries (MTIs), Lost Time Injuries (LTIs) and Serious Potential Incidents (SPIs) (regardless of whether or not harm actually occurred).

8.5.3.2 Discipline of any person shall only be carried out if it is clearly demonstrated that a person is subsequently found to have knowingly violated health and safety requirements and shall follow the appropriate employee relation's disciplinary procedures.

8.5.3.3 If an Essential Rule is violated, the project management team will openly investigate and discuss the potential disciplinary actions and the strictest actions will be considered.

8.5.3.4 Further information can be found in Standard 11 Incident reporting, management and Investigation.

8.5.4 Incident Notification

8.5.4.1 All Incident Reporting shall be exclusively in accordance with the procedure established for the project Standard 11 Incident reporting, management and investigation. All incidents, regardless of how minor or whether harm actually occurred or not, shall be documented and reported to the PMT in accordance with the above standard.

8.5.4.2 The Contractor shall report the following occurrences immediately to the Construction Manager, or OH&S Manager:

- incidents involving injury which may result in other than a First Aid Treatment (FTI)
- incidents involving vehicles, cranes and elevating work platforms
- Serious Potential Incidents (SPI), near miss with serious potential for injury or damage
- incidents involving electricity
- incidents involving a fire
- other statutory reportable occurrences as a defined in the Armenian legislation.

8.5.5 Nonconformity, corrective and preventive action

8.5.5.1 Any items that do not conform to specified requirements shall be prevented from inadvertent use or installation. The procedure for identification, segregation (when practical), classification, documentation, disposition and re-inspection of the nonconforming product is dependent on actual conditions and product, the procedure may be established at the time in cooperation with the contractor and PMT. All repaired and reworked items shall be re-inspected and verified prior to being put back into service. Where contractually required, concessions or waivers shall be sought from the Client for the proposed use of the product, which does not conform, to specified requirements. All nonconformities shall be documented and actioned in accordance with this OH&S Plan or the project quality plan.



8.5.5.2 Complaints from any source of any type (e.g. public, EPA, Safety, Quality or Environmental) will be investigated and action taken will be documented as specified in the Corrective Action log, see Standard 11 Incident reporting, management and Control.

8.5.6 Incident investigation reports

8.5.6.1 All Contractors shall be responsible for reporting, investigating and implementing remedial actions for incidents involving their personnel, in accordance with Standard 11 Incident reporting, management and control. The PMT shall have active involvement in all incident management processes. The Project shall maintain a register of all incidents. Contractors shall provide copies of all incident reports and investigation documentation for entry into the register for audit and review purposes.

8.5.6.2 All incidents should be reported to Project Office on the same day of the occurrence. This shall only be carried out by the Project OH&S Manager, construction Manager or the nominated representative.

8.5.6.3 It is an OH&S Plan requirement that all incidents including near-hits be reported and investigated, e.g.:

- any injury to any person, including first-aid
- any illness
- any damage to property or equipment
- any loss of containment of hazardous materials
- any environmental incident
- any 'near-hit', that is, an incident with no injury, damage or loss but which had potential to cause harm to environment, injury to people, damage or loss.

8.5.6.4 No matter how minor, the employee is to report the incident immediately to the relevant Supervisor. In every case the Contractors Supervisor is to document the incident and notify the PMT OH&S team. Verbal notification is to take place as soon as possible after the occurrence.

8.5.6.5 A completed Incident Report and Investigation form shall be lodged within 24 hours. All reportable and serious potential incidents shall be reported to the Contractor Supervisor or the nominated representative immediately following the incident. All employees on the Project shall be instructed in the incident reporting process and each Sub-contract employer shall make forms readily available.

8.5.6.6 The Project Manager shall ensure all incidents are investigated in accordance with Incident Reporting Procedures and those serious occurrences have detailed investigations conducted and recorded. Each Contractor Company shall ensure that all injured personnel receive prompt medical assistance and rehabilitation with a prompt return to work without jeopardizing the employee's early recovery.

8.5.6.7 The Contractor shall ensure that the statutory Workers Compensation documents are completed in accordance with the relevant statutory bodies' guidelines. Failure to comply with this requirement may prejudice the employees' workers compensation entitlements and/or expose the Company to non-compliance with statutory legislation.

8.5.6.8 The Construction Manager shall notify the Project Manager in accordance with the Incident Reporting Procedures and statutory requirements. The Project Manager shall be notified of all incidents and the methods applied to control the incident to prevent a reoccurrence. All statutory reporting shall be communicated via the appointed project person.

8.5.6.9 See Standard 11 Incident reporting, Management & Investigation for further details.

8.5.7 Corrective and Preventive action plans

- Corrective and/or preventive action shall be taken to eliminate the causes of actual or potential nonconformities. The action taken is to a degree, appropriate to the magnitude of problems and the risks encountered. Preventive action is also taken by analyzing feedback of problems reported by team members in the field.
- Contractors shall establish a record of all action items requested, this record shall contain information on responsibility, implementation date, etc...

- Corrective actions, from sources other than workplace inspections, shall be recorded on a corrective action log, as set out in the Standard 11 Incident reporting, management & Investigation.

8.6 Control of records

8.6.1 The Contractor shall ensure all OH&S documents comply with the document control Procedures detailed in the Amulsar Project OHSMP & the standards associated with it.

8.6.2 The Contractor shall:

- Establish Procedures for the identification, filing, retrieval and retention of OH&S records.
- Ensure all OH&S management system records are maintained including providing evidence of legal compliance and benchmarking against OH&S performance criteria and can be assessed and opportunities identified to improve performance in accordance with the Project OH&S requirements.
- Maintain relevant records which include audit and inspection reports, incident investigations and statistics, minutes of management meetings, inductions, training records, corrective actions, non-compliances, employee skills and competencies, incident analysis, details of hazardous goods held, quantities and locations, design review reports, toolbox and weekly safety meetings, statistics and other records as required to demonstrate statutory and OH&S compliance in accordance with the Project OH&S Requirements.

8.7 Management Review

8.7.1 Geoteam will carry out regular workplace monitoring to verify compliance with statutory requirements and Project OH&S requirements, either directly or by independent third party process at any time throughout the Project.

8.7.2 Geoteam & the PMT shall review the OH&S plan and standards every three years, or more often if the need is shown, and make amendments as needed. Any amendments shall be properly communicated to all project personnel.

8.8 Health & Safety Audits

8.8.1 The Contractor shall conduct regular internal OH&S management system reviews, which shall include results of audits and workplace inspections.

8.8.2 The Contractor shall:

- conduct internal OH&S management system reviews at least on a monthly basis with representation from Contractor senior management at each review session
- maintain records of OH&S management system reviews
- ensure corrective actions are allocated to a responsible person, documented, implemented, monitored and closed out.

8.9 Project OH&S audit and inspection

8.9.1 The Construction Manager or their nominated representative together with the Contractors Supervisors nominated by him shall conduct an inspection of all current work areas at least once per month. A Monthly Project HSE Inspection shall be carried out and areas of concern and/or non-conformance shall be placed on corrective action lists. The frequency of these inspections may be increased at the discretion of the project management team.

8.9.2 A copy of the Project Inspection shall be provided to each Contractor Project Manager to allow corrective action to be undertaken on items outlined within their Scope of Work. A HSE Corrective Action Register shall be maintained and checked at the commencement of each monthly Project HSE Audit and Inspection, to



ensure items marked for action have been addressed and closed out by the specified date. All High or Extreme risk hazards or statutory non-conformances noted shall be rectified immediately.

- 8.9.3** HSE Audits shall be carried out by the HESS group. These audits will be completed on Contractors as well as Internally on the PMT.
- 8.9.4** Notification in advance of these audits shall be at least 48 hours to allow for the scheduling of needed manpower for these audits. This advance notice is not required if the audit is in aid of an incident investigation.

8.10 Contractor OH&S performance review

- 8.10.1** The Contractor shall be subjected to a monthly review of OH&S performance based upon statistical KPIs to be developed at the commencement of the Project.
- 8.10.2** Based on these performance evaluations, and other statistics available at the time, the project construction manager may request implementation of a contractor OH&S recovery plan.

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