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|  | HS-701 | Revision n° | 01 |
| | CONTRACTOR HEALTH, SAFETY, ENVIRONMENT & COMMUNITIES MANAGEMENT PROGRAM | | |

Safety Procedure

HS-701

CONTRACTOR HSEC MANAGEMENT PROGRAM

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1. INTRODUCTION :

This document sets out the minimum Health, Safety, Environment and Communities requirements with which a Contractor or service provider engaged on a specific piece of work for Ambatovy must comply to. Additional documentation referred to within this specifications can be requested from the Company.

2. DEFINITIONS AND ABBREVIATIONS :

| | |
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| Company | The term Company refers to Ambatovy, unless otherwise specified. |
| Contractor | A person or organization providing services to Ambatovy at a workplace in accordance with agreed specifications, terms and conditions. |
| Contract Owner | The Ambatovy person assigned to each Contract who is responsible for the performance and outcomes of the Contract. |
| Contractor Representative | The person nominated by the Contractor who is responsible for the execution and performance of the contracted works. |
| H&S | Health and Safety |
| HSEC | Health, Safety, Environment and Communities |
| Sub-contractor | A person or organization who takes a portion of a contract from the principal contractor or from another Sub-contractor. |
| Standard Operating Procedure (SOP) / procedure | A written document clearly describing the best known way to complete a task with the goal of zero harm to our people, environment, communities, equipment and processes. Associated responsibilities and accountabilities must be clearly defined in these procedures. |

3. PURPOSE :

The purpose of this document is to provide contractors with the minimum HSEC requirements to support the design, development and implementation of a Contractor HS Management Program The overall goal is to avoid, minimize, mitigate, rehabilitate, offset impacts to the employees, our communities and employees by designing, and operating in a responsible manner.

The general objectives of the HSEC Management Program are:

- Ensure the development of Health, Safety and Environmental knowledge of the contractors engaging with us working towards a goal of Zero harm to all workers and contractors.
- Commit to best-practice with regards to HSE management
- Minimize the project footprint and avoid, where possible, sensitive social environments such as village, their water sources, and related structures
- Maximize use of existing infrastructure such as roads and energy infrastructure if feasible
- Protect local villages from unacceptable security, safety, health and amenity impacts
- Maximize project socioeconomic and environmental benefits for the project affected people, stakeholders and Madagascar.

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4. MANAGEMENT SYSTEM :

4.1 HSEC MANAGEMENT PROGRAM

Controls applied to the supplier must be proportioned with the assessed risk to the operation. This assessment must be documented.

All tasks to be performed by contractors must be first subject to a risk assessment identifying and mitigating risk and managing residual risk.

All contractors must be categorized and managed as defined. SCM and management teams must apply the stated categories and rules to their contractor management.

Contractor type:

- **Type 1 contractor:** Individual or small businesses engaged by contract to work on site. Such companies may include; consultants, subject matter experts, company representatives, trainers, etc...
- **Type 1 contractor** will be assigned a contractor manager and be managed as an employee of the business. He will be included in tool box meetings, participate in monthly themes and be subject to interactions, Take 5 and inspection/audit process as all other Ambatovy employee.
- **Type 2 contractors: National** companies engaged for a project or specific work activities within the facility such as building facility, shut down maintenance, heavy mobile equipment maintenance, etc...

Type 2 contractors will be supported to develop a HSEC management program that meets the business HSEC, legal and legislative requirements. An action plan with timeline will be developed to support the business in implementing the program. Health, Safety and Environmental departments will be acting as subject matter experts and support in the development of the HSEC management program in all aspects. The responsibilities and accountabilities will remain with the contractor as the implementation progresses, meeting will be held regularly to validate progress against timeline. Such contractors will ensure trained competent HSE advisor are part of the management team in the order of one HSE advisor per 150 employees and will have no other duties other than support and coach the management team in Health and Safety matters.

Type 3 contractor International companies engaged for a projects or specific work activities such as building facility shut down maintenance, heavy mobile equipment maintenance, etc...

Type 3 Contractor will be required to develop a HSEC management program that meets the businesses HSEC, legal and legislative requirements. This will be auditable by the business and all contractors who are under contract for longer than a one year period will be audited. Such contractors will ensure trained competent HSEC advisor are part of the management team in the order of one HSE advisor per 150 employees and will have no other duties other than support and coach the management team in Health and Safety matters.

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All contractors must have a designated onsite contractor Owner for ensuring the effectiveness of the HSEC policies, procedures and quality of workmanship and services provided in relation to that contract. Reporting hierarchy and contractor responsibilities must be defined and documented.

Before work begins on any contract, all contractor personnel must be given appropriate induction training including emergency response procedures. All contractor employees must be subject to appropriate technical, craftsmanship and HSE training. The training of contractor personnel must be aligned with the tasks and risks established for the tasks identified in the scope of works risk assessments. This includes, but not limited to knowledge of Material Safety Data Sheets, specific knowledge such as; working at heights, confined space entry, scaffolding procedure, Permit to Work, Isolation, and interaction training, incident investigation and risk management for the management team.

The course content for the training and quality of training will be validated by the business HSE departments. Competencies and training requirements must be validated for every individual contractor employee before access to site is granted. The contractor will be responsible to ensure all workers receive adequate, quality and approved training prior to start.

All contractors coming to site must be engaged to meet Ambatovy policies, HSEC standards and procedures, legal and legislative requirements. Contractors not meeting HSEC business or legal legislative requirements, quality of workmanship and services provided shall be mandated to prepare an action plan with timeline which will cover the gap identified within a reasonable timeframe.

Contractor not meeting these requirements may be removed from site.

Twenty eight days before work commencement, the Contractor shall submit to the Contract Owner a is Contractor's HSEC Management Program for approval. This Program will also apply to Sub-contractors if the Company does not require the Sub-contractors to submit their own Program.

The length and complexity of the HSEC Management Program will depend on the scope of works .

The Program must be reviewed and revised periodically by the Contractor during the Term of the Contract to ensure on-going compliance with the Contractor's HSEC obligations under the Contract.

Unless otherwise agreed with the Company, the HSEC Management Program must, as a minimum, be aligned to the requirements outlined in this document, and address the following elements:

- The Contractor's HSE and Quality policy(ies)
- The Contractor's compliance with the applicable legal requirements, and Company HSEC and operational standards/procedures Hazard identification and risk management
- Risk register and its mitigations based on the scope of works must be presented prior to bidding and accepted by Ambatovy HS&E services.
- The Contractor's HSEC objectives and targets in relation to the performance of the Works and to drive continual improvement
- The organizational resources and the accountabilities & responsibilities of personnel the Contractor intends to commit to ensuring compliance with the Contractor's HSEC and technical obligations
- Training of personnel, competency and awareness measures
- Supplier and contractor management
- Hazardous materials management
- Documentation control and data and records management
- Communication and consultation
- Contract specific work procedures or SOPs for the management of HSEC and operational aspects

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- Management of change
- Emergency preparedness and response
- Monitoring and measurement
- Non-conformance, incident and action management
- Performance assessment and auditing
- HSEC operational control

The specific obligations of the Contractor arising from the above elements are set out in further detail below.

4.2 HSE POLICY

The Contractor and its personnel shall comply with the HSEC systems, standards, policies and procedures listed in this document, including the applicable statutory requirements.

The HSEC Program shall detail the Contractor’s commitment and leadership with regards to the management of HSE aspects. The Contractor’s HSEC and Quality policy (ies) must be supportive of the Company HSE and Quality Policies, and communicated in the HSEC Management Program

4.3 LEGAL REQUIREMENTS

The Contractor shall:

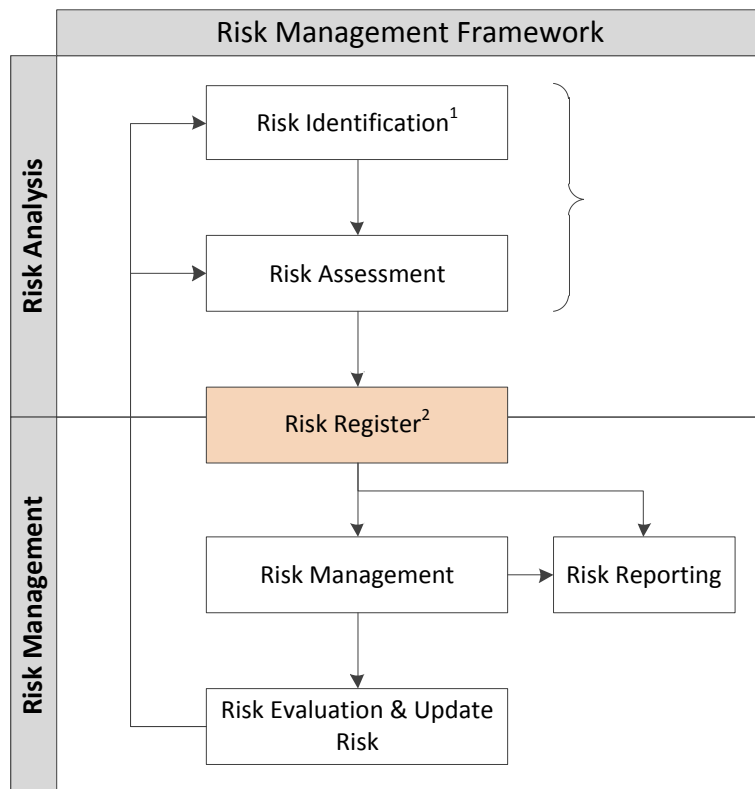
- Identify legal and other requirements relevant to the Works.
- Comply with the Company HSEC and operational requirements, as well as with any applicable statutory/legal requirements.
- Ensure that all HSEC obligations set out in this document are understood by the personnel of the Contractor and any Sub-contractors who are accountable for compliance with such obligations.
- Ensure identified legal obligations relating to project approvals are clearly assigned and accepted by a responsible person.
- Manage the records of all HSEC documentation relevant to the Works (e.g. medical records, licenses and approval applications).
- Supply to the Company or the Contract Owner (as directed) copies of any registrations, certificates of competency, inspection certificates, licenses or permits required by law for the proper performance of the Works and provide reasonable assistance to the Company in relation to compliance with regulatory requirements relating to the works.
- Where required by the Company or the Contract Owner (as directed) and as set out in relevant environmental licenses, permits or approvals, develop and implement procedures for the monitoring of resources extracted and/or discharged to the environment, including groundwater extraction and authorized discharges of materials to the environment related to the works.
- Where required by the Company or the Company Representative (as directed), monitor the extraction, discharge, movement and storage of material as set out in relevant environmental licenses, permits or approvals.
- Prepare and maintain an up-to-date compliance and conformance register (in the format prescribed by the Company) of all legal and other requirements, including clear accountabilities. These requirements must be implemented, monitored and maintained to demonstrate compliance/conformance.

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- Establish a system to record all non-conformance and non-compliance issues identified, and monitor remedial action plans through to completion.

4.4 HAZARD IDENTIFICATION & RISK MANAGEMENT

The Ambatovy risk Management Framework shall be used by the contractors for all risks and impacts. Hazard identification and risk management defines the process that needs to be established and maintained to first identify and analyse all hazards and their risks to the projects activities and then to put in place appropriate steps and actions to manage risk.

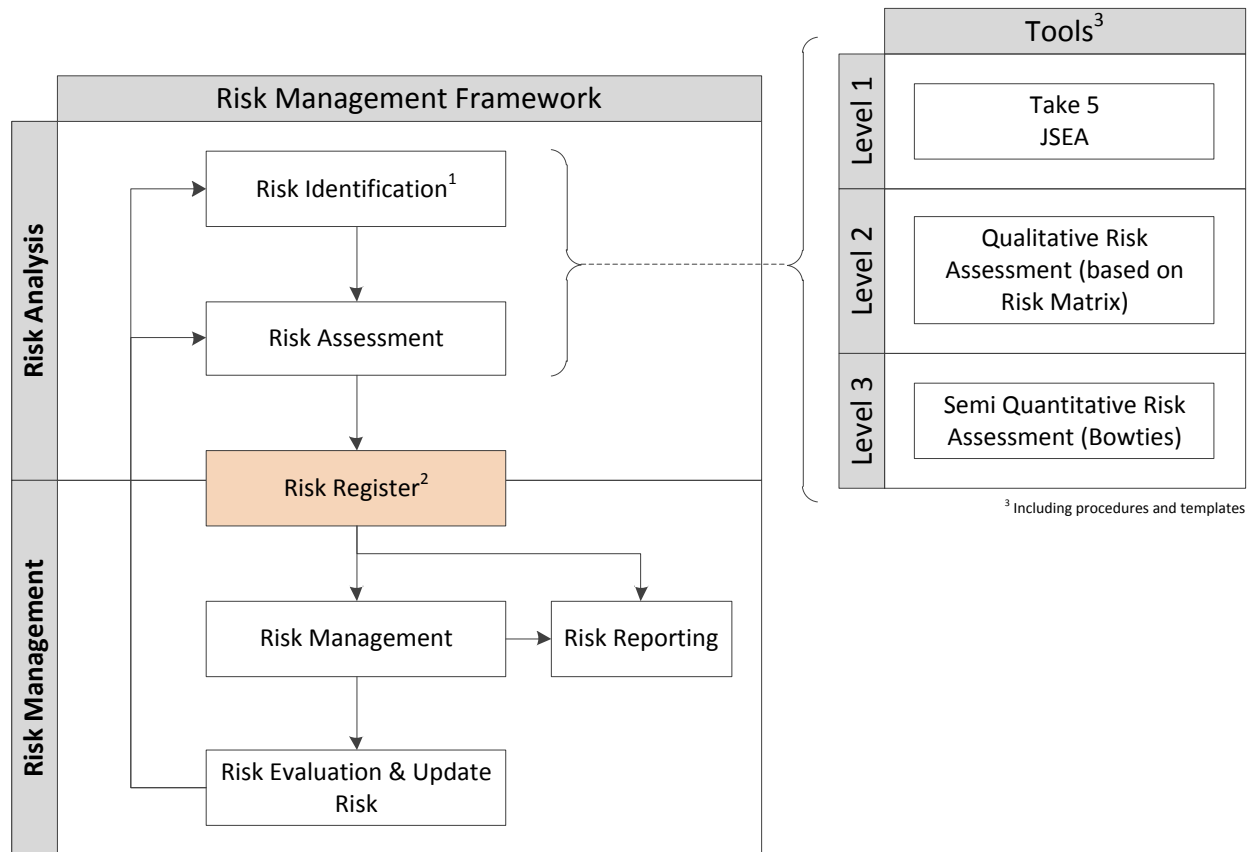


¹ Includes the identification of hazards and risks (i.e. threats and opportunities)
² Only outcomes from Level 2 & 3 risk assessments are entered into the site Risk Register

4.4.1 RISK ANALYSIS

Risk analysis includes risk identification for a hazard and risk analysis. These steps principally relate to applying the level of assessment as selected through the initiation step.

There are three levels of assessment applicable within Risk Analysis. The three-level assessment approach enables the appropriate level of assessment to be used to match the context, nature and scale of the risks. The more significant and complex the process the more formal and 'methodology driven' the assessment method will be.



¹ Includes the identification of hazards and risks (i.e. threats and opportunities)
² Only outcomes from Level 2 & 3 risk assessments are entered into the site Risk Register

➤ **The three levels of Risk Assessment:**

- Level 1: Take 5 / Job Safety & Environmental Analysis
- Level 2: Qualitative risk assessment / QRA
- Level 3: Semi Quantitative risk assessment / SQRA, HAZOP, What if

➤ **Level 1: Take 5 Assessments**

Take 5 is a hazard analysis performed prior commencing the task/ job, during the task or during shift handover. This level of assessment is “task based” and occurs as a part of day to day activities by all contractors personnel and is reviewed by the team leader for the specific task crew. The objective of the Take 5 and risk assessment is to remove complacency and increase awareness through ensuring the workforce consciously thinks through their jobs or tasks prior to initiating the work. Should the task or work environment changes personnel are expected to stop their work and complete another Take 5 to ensure new risks are managed.

The tool which is used in Ambatovy is Take 5. It is a 5 step process tool to help identify hazards and control any possible risks;

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- **Stop** and review the task or activity at hand
- **Think the task through**, what are the potential hazards.
- **Identify the hazards** and assess the risk
- **Plan the task/activity** safely
- **Proceed** once the hazards have been controlled

➤ **Work method**

Before any tasks are performed the contractor will have to prepare a scope of works and submit it for approval to the contractor owner. A Work method is the expected starting point for applying the JSEA as it describes the sequence in which the task and sub-tasks will be carried out and identifies the hazards, risks and mitigation/controls for the risks.

The following are the steps required to carry out a scope of works:

- Obtain a copy of scope of works form
- Assemble personnel and collate existing information

Assemble experienced trade workers, supervisors and engineers who will develop the JSEA Obtain and review all existing information. This may include work method statements, drawings, manufactures manuals, previous incidents and persons knowledgeable in the carrying out of the task to be described in the JSEA.

- Identification of job steps, hazards and risk levels
 - Identify the key steps in the task
 - Identify the hazards associated with each of these steps
 - Determine the inherent risk associated with each hazard (The Ambatovy risk matrix is used to determine the level of risk).
- Determination of Controls and Residual Risk
 - All identified hazards are to have appropriate controls applied
 - Any risk that is rated Critical must be controlled using either of the first three steps of the Hierarchy of Controls, in order most effectiveness:
 - Elimination of the risk
 - Substitution for less hazardous process, product or activity
 - Engineering out the hazard

Any inherent risk that is rated **High or critical** must be controlled using any of the steps of the Hierarchy of Controls, in order of effectiveness:

- Eliminate
- Substitute
- Engineering
- Administrative (supervision, job rotation)
- Personal protection equipment

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If the residual risk cannot be reduced to **Low** or **Moderate** then the process must not continue and the Contractor Owner for Ambatovy must be contacted. At this point the Job Safety and environmental analysis will be elevated to level 2 risk assessment /QRA At all times the risk shall be reduced to its lowest level.

- Authorization of the work method

Once the task JSEA related to the task is completed it must be passed on to the designated contractor Owner to authorize. The timeline to be respected for the approval of JSEA's are;

- First draft 28 days prior to work commencing
- Second review 14 days
- If required, third review 7 days,
- If required, Final review 3 days prior to work commencing

In all cases work will not begin until the JSEA is fully approved by the contractor owner.

It is the contractor representative responsibility to consult with the Ambatovy contractor Owner or the Ambatovy HSE Superintendent or supervisor.

- Controlled document

After authorization by the responsible person in the area, the JSEA is required to be a controlled document and entered into a formal system available to the team.

The originator receives the controlled document

- Review of work method

All personnel involved in carrying out the task must sign on to the completed work method on the "Sign On" section (Permit to work form). This signifies that the personnel actually participated in the risk assessment process; and they know and understand:

- The identified hazards for the task
- The risk assessment applicable to those hazards
- The controls required to be followed
- Changes in the Task or Job

If additional hazards are recognized that relate specifically to the carrying out of the task

- Work must stop
- Evaluate the identified risk using the Take 5
- The changes need to be hand written on the relevant work method (Permit to work)
- All members of the workgroup are informed of the changes and of the new controls and they must sign that they are aware of the changes and controls on the "Sign On" page.
- The documented changes are to be noted and forwarded to the person responsible in the area for updating of the work method
- The work can only restart, following completion the above steps 1-5

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➤ **Level 2: Qualitative Risk Assessment**

QRA is a Qualitative Risk Assessment of hazards, it is specific to a task and evaluates all aspects and identifies opportunities which may expose personnel to a risk greater than acceptable to our business. Such risks are evaluated using a formalized approach and a specific approved format, consequence descriptor and likelihood which allows establish maximum reasonable consequence, likelihood and finally a maximum reasonable outcome criticality for all aspects assessed. (See HSEQ 5x5 Qualitative risk matrix below)

Qualitative Risk Analysis - Reference Card

| | | Likelihood | | | | |
|-------------|--------------|------------|----------|----------|----------|----------------|
| | | Rare | Unlikely | Possible | Likely | Almost Certain |
| Consequence | Minor | Low | Low | Low | Moderate | Moderate |
| | Medium | Low | Low | Moderate | High | High |
| | Serious | Moderate | Moderate | High | High | Critical |
| | Major | High | High | Critical | Critical | Critical |
| | Catastrophic | High | Critical | Critical | Critical | Critical |

Risk = Consequence x Likelihood

The fundamental rule is to define the Consequence first, as different Consequences have different Likelihood.

Figure 3: Ambatovy Risk matrix

The assessment involves the evaluation of the *maximum reasonable consequences* risk impact could have and the *likelihood* that this could occur in the specific environment.

This activity is conducted in a formal risk workshop environment and is required to be completed for every risk identified in the task which originates from the scope of works. QRA's must include the appropriate level of knowledgeable personnel to adequately appreciate and mitigate the hazards and risk identified.

The results (maximum reasonable consequence and likelihood) are used to classify the risk (applying the HSEQ 5x5 Qualitative risk matrix) and identify the appropriate responses (risk management) to control the risk. It allows to establish which risk are required to be actioned prior to work engagement.

Risk identified using the QRA methodology must be documented and populated in a specific approved risk register.

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➤ **Level 3: Semi Quantitative risk assessment**

Level 3 assessment methodologies utilize more systemic, in-depth and specialized risk analysis approach to identify and evaluate hazards, work environments and manage opportunities.

For HSEC and purposes the semi-quantitative risk analysis (SQRA™) methodology, commonly applied to Safety risks, is seen as part of Level 3 assessments.

Hazards and risks which are identified at the inherent risk level having an MRO of high or critical, MRC of catastrophic and likelihood of rare, process safety risks identified from HAZOP, what if, significant incidents will draw upon data derived from historical records, or upon theoretical models to assess event frequencies, establish critical controls, and their adequacy.

The Contractor shall:

- Develop an operational risk register at the start of the process based on the scope of works and submit to the Contract Owner for approval and, once approved, maintain a HSEC and operational risk register which identifies all potential HSEC and operational hazards relating to the works, detailing the resulting risks to people, the communities, property, processes and the environment, and outlines controls that will be implemented to reduce the level of risk to an acceptable level..
- Appoint appropriately qualified personnel to prepare/facilitate risk assessments (using the Ambatovy approved risk process) on each of the hazards identified in the HSEC and operational Risk Register.
- At a task level, apply job hazard analysis or equivalent to identify potential HSEC risks and appropriate control measures.
- Develop and implement risk management activities to identify appropriate control methods to minimize or eliminate the risks of HSEC and operational hazards in accordance with the defined hierarchy of control..
- Ensure that the identified risk management activities are reflected in the appropriate HSEC Management Program.
- Ensure that its personnel and the personnel of any of its Sub-contractors comply with the Company's personal protective equipment (PPE) requirements.
- Coordinate and participate in Company H&S activities as required, to assist in identifying and managing potential fatal events in the workplace.

4.4.2 HSE OBJECTIVES AND CONTINUOUS IMPROVEMENT

The Contractor shall establish and implement HSEC objectives and targets:

- Consistent with the Company's objectives and targets
- That supports the achievement of project/process specific objectives, KPIs and targets as directed by the Contract Owner.

The Contractor shall also outline how the agreed objectives and targets will be achieved by developing measurable actions with clear accountabilities and timeframes.

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4.4.3 RESPONSIBILITIES AND ACCOUNTABILITIES

The Contractor shall:

- Appoint competent and qualified HSEC personnel to establish, implement and maintain the HSEC systems, management program and performance required to meet relevant standards and specifications. The HSE representative resume will be presented for approval to the HSEC Superintendent, in all cases the representative will be required to have or participate in a NEBOSH general certification within the first 6 months of the contract.
- Document HSEC responsibilities which must be complied with by the key persons, including any relevant statutory appointments and, upon request by the Company or the Contract Owner (as directed), submit a copy of such documentation.
- Submit to the Company or the Contract Owner (as directed) upon request and maintain for the duration of the performance of the Works and organizational chart.

As a minimum, the following HSE accountabilities must be reflected in the Contractors and Sub-contractors role descriptions:

➤ **Contracting Company**

- Operate in a manner consistent with Ambatovy code of conduct
- Be aware, understand, communicate and comply with the Ambatovy HSEC and Quality Policies and approved HS-701 Contractors HSEC Management Program
- Be aware and comply with relevant legal and other requirements applicable to Contractor activities
- Understand the HSEC and operational risks relevant to their area of responsibility and ensure the use of the approved risk framework for their management
- Ensure that improvement initiatives support the intent of the Company HSEC and Quality Policies
- Provide input to the business program process, and track progress against HSEC program items
- Ensure budgets provide for adequate resourcing to enable HSEC accountability
- Ensure adequate resources are assigned to manage HSEC and operational risks
- Support the continuous improvement of the Company HSEC and operational performance
- Provide direction in an emergency situation, in alignment with Company requirements
- General environmental duty not to carry out any activity that causes or is likely to cause environmental harm
- General duty of care to self and others.

➤ **Contractor Representative**

- To ensure that relevant Ambatovy HSEC procedures are fully implemented by the Contractor and Sub-contractor employees
- Being the accountable person for communications and all interface arrangements with the Company
- Ensure all access conditions agreements are met before any work can begin
- Demonstrate ownership, leadership, and actively participates in all phases of the HSEC and operational procedures.
- Lead a monthly field HSEC audit with the Contract Owner (or delegated person)
- Immediately report serious injury and significant events to the Contract Owner as per requirements outlined in this document

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- Hold all levels accountable for HSEC and operational performance through ongoing monitoring of performance
- Positively recognizes outstanding HSEC and operational performance (individual or group)
- Champion the communication of HSEC and operational expectations and compliance issues to Contractor and Sub-contractor employees
- Participate in all required meetings as per Company's Contract Management Process
- Conduct a minimum of 4 documented interactions in the field on a weekly basis
- Hold the prevention of job-related injuries and illnesses equal to quality, cost and production related incidents
- Ensure the implementation of the approved HSEC Management Program.

➤ **Contractor Superintendents, Supervisors and Crew Leaders**

- Operate in a manner consistent with Ambatovy code of conduct
- Be aware, understand, communicate and comply with the Ambatovy HSEC and Quality Policies, approved Contractor's HSEC Management Program and relevant manufacturers' recommendations for equipment that will be used on and off-site (works in connection with the project). Monitor compliance to these requirements
- Be aware and comply with relevant legal and other requirements applicable to work to be conducted by their teams
- Understand the HSEC and operational risks relevant to your area of responsibility and ensure the use of the approved risk framework for their management
- Ensure that improvement initiatives support the intent of the Company HSEC and Quality Policies
- Directly supervise the activities of the Contractor and Sub-contractor employees within their area of responsibility. Act as ambassadors for HSEC, and ensure conformance to the Contractor HSEC Management Program
- Complete daily interactions with Contractor and Sub-contractor employees and use these opportunities to coach and mentor workers. If they observe safety violations they will contact the Contract Owner and correct the non-conformance immediately. This includes stopping work until the hazardous situation is corrected
- Run pre-start meetings, to discuss relevant HSEC and operational information and ensure engagement of the team
- Ensure that a hazard assessment and JSEA has been completed and in place before work can commence or re-start if there has been a change in risk or conditions
- Participate in audits, inspections and in the management of non-conformances, incident, grievances/complaints and actions, as required. Review the findings at HSEC meetings and ensure that team members act upon findings and recommendations in a timely manner
- Organize and conduct regular inspections and task related observations/interactions
- Ensure that all personnel in their area of responsibility know and understand their specific HSEC and operational responsibilities and are held accountable for their behaviors
- Ensure job-specific procedures and specialized work rules are prepared, communicated and complied with, as required
- Conduct ongoing informal safety interactions and take necessary corrective actions to eliminate, or effectively control, substandard conditions and at-risk behaviors. Recognize safe behavior
- Conduct a minimum of 4 documented formal H&S interactions in the field on a weekly basis
- Participate in relevant meeting as requested by the Company or Contract Owner
- Provide the Company or Contract Owner (as instructed) with copies of all incident reports, weekly statistical reports and other documents as per requirements outlined in the approved Contractor HSEC Management Program
- Hold the prevention of job-related injuries and illnesses equal to quality, cost and production
- Provide direction in an emergency situation, in alignment with Company requirements

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- General environmental duty not to carry out any activity that causes or is likely to cause environmental harm
- General duty of care to self and others

➤ **All Contractors HSE Representative(s)**

The HSE representative will have no other duties different to:

- Support and coach contractor management in the implementation of the HSEC Management Program and associated documents/procedures
- Drive the implementation of the HSEC Management Program and associated risk assessments
- Ensure the weekly inspections and audits are communicated and correctives actions are known, that leading and lagging indicators are timely distributed to Company or Contract Owner (as directed), that they are accurate and in line with Company requirements
- Actively coach and participates in all phases of the HSEC and operational procedures
- Conduct/participate in field HSE inspections and required audits
- Raise concerns related to HSEC performance to the Contractor relevant personnel
- Maintain project HSEC statistics for the contract
- Champion the communication of HSEC expectations and compliance issues to the team
- Conduct a minimum of 1 daily documented safety interactions in the field
- Champion the analysis of the data from safety interactions and provide guidance on appropriate actions needed to be taken to continuously improve positive trends and to stop negative trends
- Monitor and report on corrective actions following incidents. Facilitate the communication of lessons learned from incident management
- Review and have approved by the Company or Contract Owner (as directed), all MSDS before transport to site
- When required, participate in relevant meetings as per the Company Contract Management Process
- Support and coach employees in the completion of risk analysis and mitigation with the use of the approved tools, as per approved Contractor HSEC Management Program
- When required, interface with Company HSE Advisors and management representatives
- Participate actively in the HSEC audit program
- Maintain current copies of applicable HSE acts and regulations on the project site

➤ **All Contractor Personnel**

- Operate in a manner consistent with Ambatovy code of conduct
- Be aware, understand, communicate and comply with the Ambatovy HSEC and Quality Policies and approved Contractors HSEC Management Program
- Be aware and comply with relevant legal and other requirements applicable to the work to be conducted by themselves
- Understand and participate in the identification of HSEC risks pertinent to your work area
- Undertake quality pre-task hazard assessments and implement controls as identified using the hierarchy of controls
- Personnel to undertake work they are authorized to do, and that has been fully risk assessed
- Ensure the use of approved PPE as per work area and risk management requirements
- Ensure implementation of safety instructions for the management of hazardous substances
- Everyone has the Stop-Work-Authority in case of non-identified hazardous conditions
- Ensure that improvement initiatives support the intent of the Company HSEC and Quality Policies
- Participate in pre-start meetings, to discuss relevant HSEC and operational information

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- Participate in the management of non-conformances, incidents, grievances/complaints and actions as required
- Report all incidents, substandard and hazardous conditions or practices to their supervisor as quickly as possible
- Consult first-aid worker in all cases where first aid is required
- Ensure that in cases of injury, the injured person is taken directly to International SOS
- Learn from all incidents and near misses
- Act as directed in an emergency/disaster situation
- Participate in audits and inspections as required
- General environmental duty not to carry out any activity that causes or is likely to cause environmental harm
- General duty of care to self and others.

4.4.4 TRAINING AND COMPETENCIES

The purpose of this section is to ensure that, the awareness level and competencies of all contractors and visitors are developed and are appropriate to ensure adequate management of Health, Safety, Environment and community risks associated with their respective roles and duties and ensure compliance to the Contractor HSEC management Program. This is to be achieved through appropriate training needs analyses and the development and the implementation of appropriate training programs and awareness raising activities.

➤ Induction and orientation

All contractors must undertake relevant induction training before access to site. Ambatovy has developed and shall implement a training matrix for the induction and competent based training requirements for each role and task.

Management must make sure that the agenda of the induction session covers the elements listed below.

Induction and orientation training must cover the following topics:

- Key provisions of the Code of conduct;
- Ambatovy HSE Policy requirements;
- Relevant HSE and operational hazards, risks and controls;
- Relevant process hazards and the risks and controls;
- Relevant Ambatovy operational controls requirements;
- Incident reporting and investigation requirements;
- Tool and equipment inspection and use requirements;
- Hazardous materials awareness and handling requirements relevant to the scope of work;
- Emergency procedures and site evacuation;
- Provisions for stopping work in the event of an unsafe condition, and
- Site access and security requirements (including identification of off-limit / restricted areas).

All visitors accessing Ambatovy facilities must have followed an induction that includes the following:

- An introduction to the site;
- Identification of significant HSE risks, security controls and emergency response procedures;

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- Must be accompanied at all times when on site by their host.

Induction attendance records, internal and external competency based training must be kept on file by the Contractor for review at any time by Ambatovy. Ambatovy refers to an established contractor for its employees and the recording of training completed. The system will also be used by contractor management to manage training needs and refreshers as the project progresses.

➤ **Supervisor induction & continuing training**

All contractor management personnel, assigned to Ambatovy will be expected to attend various training courses provided. The courses will cover:

- Supervisor's HSEC responsibilities and Ambatovy requirements
- JSEA, Take 5, Safety Interactions, leadership in the field.
- Fatigue and heat stress management
- Safe practices for specific crafts, ex; welding safety practices, grinder inspection and use
- Incident management
- Conducting effective tool box meetings
- Hazardous materials

All contractor management personnel must learn and enforce all the Ambatovy HSEC requirements applicable to their work. They must set an example for their subordinates and co-workers by their compliance with all HSEC procedures and their leadership in safety. They must actively participate in the HSEC development program by observing, encouraging safe behaviors while addressing and correcting unsafe acts.

The attitude of employees toward incident prevention depends a great deal upon the attitude of the contractor management team. They shall take an active interest in ensuring that the necessary HSEC information has been provided and that the workers are adjusting well to the job. A major focus area for Ambatovy will be toward the attitudes and behaviours of the contractor management personnel working on the site. The following action steps are a part of the contractor management personnel orientation of worker:

- Issue and train on PPE
- Ask about performance on last job
- Inform about the HSE Inspections
- Describe the HSE procedure for this job
- Show worker around work area; identify hazards
- Ensure the worker as received appropriate training for the task he will be assigned
- Describe basic rules
- Give worker a test run on tools and equipment
- Monitor new employee HSE performance, provide coaching where necessary.
- Check back to see how the worker is progressing.

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➤ **Take 5 training**

- Take 5 training will be required for all contractor management personnel and workers on site. Every contractor management personnel and worker is asked to stop and consider the HSE risks in the work he is about to do and take the necessary steps for do the work safely. Refer to section 4 of the present document for more comprehensive detail on Ambatovy hazard identification and risk management process.

➤ **Trade licenses and evidence of competency training**

Appropriate craft skill training is given through craft training and experience and/or by the contractor to ensure that a jobholder, either supervisor or worker, is competent to do his job safely. Trade and skill training that is required but are not limited to :

- | | |
|----------------------------|-------------------------|
| ▪ First Aid | Electrical Workers |
| ▪ Scaffold Erectors | Truck Drivers |
| ▪ Loader Operators | Graders Operators |
| ▪ Dozer Operators | Excavator Operators |
| ▪ Crane License | Rigging |
| ▪ Driver's license | Overhead Crane Operator |
| ▪ Fork Lift Operator | Bus-bar worker |
| ▪ Carpenter | Plumber |
| ▪ Welder | Mechanical engineer |
| ▪ HSE Advisor / Specialist | |

Contractors and Sub-contractors shall ensure that such training has been provided and that any required refresher courses are available at periodic intervals as required. All training information, records, and certificates will be properly documented, these documents will be managed through the training Contractor.

4.4.5 CONTRACTOR MANAGEMENT

The Contractor shall:

- Ensure all contractors, Sub-contractors and suppliers are registered in the Company Contractor register.
- Ensure Sub-contractors HSEC and operational duties are embedded in all contracts. This includes the requirement for the Sub-contractor to prepare a contract-specific HSEC Management Program that identifies and addresses the risks towards the physical and human environment, as well as the applicable legal and other requirements.
- Ensure the tender assessment process includes evaluation of the Sub-contractor HSEC Management Program and its ability to implement the program. The Program must adequately address the management of HSEC and operational risks.
- Monitor Sub-contractor work and conduct reviews of HSEC and operational performance.

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4.4.6 COMMUNICATION AND CONSULTATION

The purpose of this section is to define the communication, consultation and participation processes that are relevant to HSEC management required for projects / studies.

➤ **Internal communication**

Project management must ensure that efficient communication processes are implemented, so that:

- All visitors, employees and contractors remain alert and are aware of all potential risks, prevention methods, performance levels and improvement initiatives and, that;
- Management is informed in a timely and appropriate manner of any situation, information or suggestion that may affect HSE performance or management.

This shall be achieved through formal as well as informal communication channels.

The project management team must define, implement and follow-up on the communication strategies needed to achieve objectives. The internal communication strategy must include a variety of media and types of interventions to ensure that all project personnel are aware. It shall include daily activities, such as pre-shift meetings, as well as periodic, weekly or monthly activities. The beginnings and ends of project phases are ideal moments to present results and objectives and encourage safe behavior and work practices.

The communication strategy may take the form of a communication plan presenting the main communication processes as well as tools, responsibilities, topics to be addressed and timelines.

Communication processes must include:

- Information from management to employees and back up the chain of command to ensure that everyone is adequately informed. This also includes communication across the contractor workforce.

➤ **Communication tools and processes**

Communication processes and tools will include, among others:

- Daily meetings, Monthly or quarterly HSE meetings, Pre-shift/handover briefings;
- Specific presentations;
- Induction & Emergency situation alerts/briefings;
- Notice boards & Newsletters;
- Intranet & E-mail;
- All meetings shall start with an “HSE share” period.

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Typical HSE communication forms for Ambatovy are summarized in the following table.

| No | Forum | Attendance | Run By | Frequency | Minutes |
|----|--|---|-------------------------------|-------------------------------------|--|
| 1 | Pre-job Briefing | All contractor employees | Contractors | Start of shift | Note subject discussed |
| 2 | Take 5 (task risk assessments) | Conducted by all personnel on site | Task Crew or task team leader | Each shift or when the task changes | Keep a copy of the Take 5 document |
| 3 | Toolbox Talks | All contractor employees | Contractors supervisor | Weekly | Copy of toolbox talk and attendance register |
| 4 | Weekly HS superintendent, Advisor meetings | All Superintendent HS Advisors | Ambatovy HS Superintendent | Weekly | Meeting Minutes formally recorded |
| 4 | HS Monthly Meeting | All contractor employees | Ambatovy HS Superintendent | Monthly | Meeting Minutes formally recorded |
| 5 | HSE Interactions | All Contractor | Contractor Management | Daily | Action list to be developed after each walk |
| 6 | Weekly Leadership in the field | All Contractor management | Contractor Management | Weekly | Action list to be developed |
| 7 | Contractor Coordination Meeting | Contractor management, contractor managers and HS | Ambatovy HS Superintendent | Weekly | Meeting Minutes formally recorded |
| 8 | Incident Management | As required by the investigation protocol | Project Management | As applicable | Project Specify Procedure |
| 9 | Quarterly HSE meeting with contractor senior management. | Contractor senior management | Ambatovy VPO / or Director | Quarterly | Meeting minutes formally recorded |

➤ HSE activities, meetings and committees

Meetings are an important method of ensuring successful supervisor - employee communications by making effective use of communication time by allowing employee participation and providing equal exposure to vital information. These meetings can also help in creating a cooperative communication climate, encourage team spirit, and enhance the supervisor's leadership role. The meetings are to promote safety behaviour and observations for effective implementation of principles, values and safe work practices.

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➤ **Pre-Job Briefings**

Pre-Job Briefings will be held at the beginning of each work shift; when starting any new tasks during the day, or when a HSE problem has been identified. The work to be done will be reviewed verbally with the crew, identifying any potential hazards of each aspect of the job, the tools, the equipment to be used, the type of training required, etc. Employees will be encouraged to identify any hazards they recognize, and how they can perform the tasks more safely. During this meeting JSEA's will be reviewed at the start of each work task and then on a weekly basis as the task progresses.

➤ **Take 5 Assessment**

Take 5 is an informal pre task hazard identification and risk assessment. This level of assessment is "task based" and occurs as a part of day to day activities by all contractors personnel and is facilitated by the team leader for the specific task crew. The objective of this pre-task hazard identification and risk assessment is to remove complacency and increase awareness through ensuring the workforce consciously thinks through their jobs or tasks prior to initiating the work.

The take 5 is conducted:

- Prior to all tasks or duties and at the start of each shift
- When there is a change in work scope
- When new hazards with potential to impact the outcome of the activity are identified.
- Contractors supervision to visit, check and sign the Take 5 during morning rounds
- Take 5 documentation will be displayed/stored on or near the jobsite

➤ **Tool Box Talks**

Contractor/Sub-contractor supervisors are required to conduct weekly a 45 to 60 minute "Toolbox HSE Meetings" the first thing prior to start on a weekly basis, for their employees. A record of HSE issues discussed is to be submitted to the Ambatovy HS Superintendent at latest Friday of each week for the following week. It is also intended that the contractor/sub-contractor supervisor/foremen include safety planning as the first topic of discussion during daily Pre-job briefings with their crews. Supervisors are encouraged to use these in their toolbox meetings. "Topics" periodically will be distributed by the Ambatovy HS Superintendent. These topics will cover current HSE issues and the required solution, new safety requirements and regulations and safety educational items.

NOTE: Contract owner senior management staff will attend the toolbox meetings monthly to demonstrate their participation in, and support of the HS program. Contractor/Sub-contractor management is expected to do the same.

➤ **Weekly HS Superintendent & HS Advisors Meeting**

The contractor superintendent and HS advisors will meet once a week with contractor managers and Ambatovy HS Superintendent and discuss and plan all current HSE matters.

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➤ **HSE Interactions**

The HSE interaction process is planned and managed with the aim of providing for all employees / contractors, the knowledge and opportunity to observe and to provide coaching and feedback on HS behaviours and practices. The purpose of HSE interactions is to reinforce desired behaviours amongst the workforce and to gain commitment from people to practice desired behaviour by:

- Demonstrating leadership commitment to HS
- Supporting and recognizing safer or desired behaviours
- Identifying and assessing the effectiveness of safety systems
- Identifying where people take risks or demonstrate less –safe or undesired behaviours and why (i.e. through the identification of impediments and barriers)
- Clarifying the requirements of Ambatovy HS procedures and setting performance expectations
- Raising awareness of HS issues
- Understanding and removing impediments to safer or desired behaviours
- Identifying safer ways of doing work
- Observing and discussing the potential consequences of less-safe or undesired behaviour

➤ **Weekly Leadership in the field**

As a part of the Ambatovy HS management Program a weekly leadership in the field activities will be conducted.

Leadership in the field activities will be conducted with joint representation of the Owners team, contractors, and Contractors Line management. (Owners team will provide the weekly theme and the training for completing the leadership in the field activities)

The monthly team will be derived has a learning opportunity identified during the housekeeping and conformance inspections completed weekly.

During the field activities the theme will be discussed with workers, with the objective of teaching contractor workers through discussion and interaction specific Operational control requirements found at Ambatovy.

The process will continue in the same theme until all contractors can demonstrate sufficient knowledge to move on to the following selected theme.

It will also be an opportunity to note examples of good conduct, compliance, exemplary behaviour and worker initiative, in order to properly recognize - and reward - positive behaviours. Such behaviours will be celebrated during internal contractor communications.

UNSAFE or UNDESIRABLE behaviours or work practices are also noted, including the type of unsafe acts, unsafe conditions, degree of compliance; corrective actions that are required shall also be noted.

When a hazard or unsafe condition or act is observed, IMMEDIATE ACTION MUST BE TAKEN to correct or remove the hazard. If a supervisor is not present, then the inspection team shall correct the unsafe condition or practice and informs the Supervisor of your actions; make a note of the probability of an injury and the potential severity of an injury.

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All members of the contractor Team are expected to regularly participate in site safety interactions and field audits. The management team will draft a schedule for these activities and it will be monitored weekly.

The HS Superintendent, Contractor superintendent, HS advisor will consult and review inspection trends to provide continuous improvement focus to the site initiatives for contractor HSE performance.

➤ **Contractor Housekeeping and conformance Inspections**

The Ambatovy Contractor manager and the HS Superintendent are responsible to ensure that regular inspections are completed weekly for all on site contractors. Corrective actions followed up and completed in the appropriate system.

➤ **Incident Management**

In case of incident, incident investigation meetings will be organized Incident management procedures. Temporary corrective action and results of incident investigation and corrective action will be communicated to personnel

➤ **Quarterly HSE meeting with contractor senior management.**

Purpose of the meeting is to communicate and document the current HS performance of the Contractor versus the requirements in the contract. Participants; Vice- President Operations, Mine or Site Director, Contract Owner and HSE manager and HS superintendent with the Contractor Senior management and site senior management. Meeting is hosted and led by the Mine or Site director and lasts no more than 1 hour. . Agenda is limited to the field contract and contractor/ project performance and the discussion is in 3 parts;

- Appreciation for the good (specifics) that the contractor has done in the last 3 months,
- Discuss areas (specifics) that need improvement;
- Ask the contractor what we can do to help him improve his HS performance.

Ambatovy HS Superintendent minutes the meeting, signatures by all parties, and sends copy to the participants and to Ambatovy Contract Owner for the procurement history record. This meeting and minutes of the meeting fulfil the Contractor Safety Management step of "Evaluation and Post Evaluation of the Contractor's safety performance" as required by Ambatovy contractor management procedure.

4.4.7 OPERATIONAL CONTROL

Based on Ambatovy risk management process, the HS Management Plan shall include, or refer to, applicable Health and Safety Standard for the management of the relevant operational control areas (as per outcomes of the risk assessment):

- Isolation
- Heavy Mobile Equipment
- Light vehicle operation
- Cranes and lifting equipment

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- Confined spaces
- Fitness for Work
- Hazardous materials
- Noise
- Respiratory protection for particulates and gas vapors
- Heat Stress
- Permit to work
- Hot work
- Excavation requirements
- Barricading
- Grinder usage
- Scaffolding
- Elevated work platforms
- Working at heights
- Housekeeping
- Vibration & Ergonomics
- Welding

These procedures shall meet the requirements of Ambatovy’s HS-702 Contractor Operational controls and clearly outline:

- The best known way to complete a task with the goal of zero harm to people, environment, communities, equipment and processes
- The associated responsibilities and accountabilities to complete the work.

4.4.8 ERT AND EMERGENCY PREPAREDNESS

The Contractor shall:

- Submit information on emergency response requirements to the Contract Owner for inclusion in the Site Emergency Management Plan.
- Participate in the development of emergency response risk assessment relevant to the works and high risks recognized through the risk assessment process, to identify, assess and document potential emergency events that can affect people and communities, the environment and company assets or processes.
- The outcomes of the risk assessment process must be reflected in the Ambatovy emergency response procedure(s),
- Participate in emergency response training coordinated by Ambatovy
- Participate actively in the post drill meeting Provide outcomes of the drills done.
- Maintain appropriate emergency response equipment and personnel on site duration of the Works.
- Ensure up-to-date emergency contact numbers are supplied to Ambatovy.

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4.4.9 DOCUMENT AND DOCUMENT CONTROL

The purpose of this section is to describe the process for development, modification, approval, issue, reviews, archiving and retention of all documents required under the HSEC Management Program. The procedure helps to ensure that all work will be carried out in a manner that is efficient, logical, and in line with Ambatovy policies.

➤ Requirements for Documentation and its Control

Refer to the Ambatovy Document Management Procedure for more detail but each document must contain at a minimum: (to be developed by end 2016)

- Name of document meaningful and significant. For HSE documents the name will include HSE
- Version number, starting at 0
- Approval date.
- Unique identifier, for internal controlled documents, this “Document Number” will also be used as Control Number.
- Document Owner: job title of person responsible for document content and maintenance.
- Document Authorization: job title of person responsible to approve the document the document.
- Version / Revision history and status: the list of the modification that was done in a new version.
- Page numbers

The Drafting of a document involves the use of the approved template for that document type and follows the Standards applicable to that type of document.

All documents must:

- Be approved for adequacy by authorised personnel prior to issue
- Be reviewed periodically and revised as necessary
- Have all changes and current revision status identified, including the author(s)
- Be legible and readily identifiable
- Be released by the Ambatovy document controller

All documents of external origin relevant to the business must be identified and their distribution controlled. Obsolete documents must be promptly removed from all points of issue and use. A master copy must be retained for the duration of the retention period (xx years or as directed by applicable standards and procedures).

➤ Documentation management of change process

All changes affecting HSE weather electronic or hardcopy documents must be recorded and authorized in compliance with Ambatovy Change Management procedure and using the Change Recording system.

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4.4.10 MANAGEMENT OF CHANGE

The Contractor shall:

- Implement and maintain, for the duration of the works, a system to identify, assess and manage the risk of change and ensure change (whether temporary, permanent, emergency) does not cause injury to people, or damage to property or the environment, or have any impact on the community. This system shall be aligned with the requirements set out in Ambatovy Management of Change procedure.
- Train its personnel in the management of change processes as necessary to ensure compliance with the Contractor's HSEC and technical obligations.

4.4.11 INCIDENT, ACTION MANAGEMENT

The Contractor shall:

- Develop and implement a procedure for incident reporting, investigation, corrective and preventive action management as per Ambatovy requirements.
- Inform the Contract Owner immediately upon becoming aware of the occurrence of a HSEC or operational incident or grievance.
- Report all incidents, complaints, grievances, hazards and near misses to the Contract Owner using the Ambatovy Incident Report system AIMS within the timeframe prescribed by the Ambatovy HS-1301 Incident management procedure
- Comply with all directions of the Company and the Contract Owner (as directed) in relation to HSEC and operational incidents and grievances/complaints.
- Ensure key roles are trained in incident investigation techniques and that incidents and grievances/complaints are classified in accordance with the definitions prescribed by in the Company procedures.
- Participate in and co-operate fully with the Company in relation to incident investigations by preparing and submitting incident/investigation reports to the Contract Owner.
- Other procedures and documentation the contractor must use in the process of managing incident include;
 - HS-F301 Ambatovy Risk matrix;
 - HS-F1301 Incident reporting flowchart;
 - HS-F1301.3 Initial SPI safety alert;
 - HS-F1301.4 Final Safety Alert;
 - HS-F1301.2 Investigation report form;
 - HS-F1301.5 ICAM investigation Quality form.

Training will be provided to contractor management personnel.

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4.4.12 PERFORMANCE ASSESSMENT, INSPECTIONS AND AUDITS

The Company HSEC Service will conduct regular inspections/audits of all Contractor, Sub-contractor and supplier activities done on behalf of Ambatovy. In addition, the contractor shall:

- Provide the Company or Contract Owner (as directed) with a schedule of proposed inspections (or audits when required) for approval.
- Conduct regular inspections, retain their records and provide the Company or Contract Owner (as directed) with copies of such records upon request.
- Retain all inspection records and document any corrective actions in an action register.
- Participate in inspections (or audits when required) conducted by the Company or Contract Owner (as directed) where requested.
- if required by the Company:
 - Participate in external audits
 - Conduct a HSEC audit to ensure compliance with the Contractor's HSEC Management Program and HR obligations.
- Implement a reporting plan that regularly assesses HSEC performance.

4.4.13 MONITORING AND MEASUREMENT

The Contractor shall:

- Participate in monitoring and measurement programs or procedures to meet legal and other requirements and to monitor significant HSEC and operational risks. The programs will include procedures for sampling, analysis, care and maintenance, and calibration of equipment. These programs results must be included in the Contractor HSEC Management Program and for the approval of the Company Representative.
- Ensure that personnel are trained and competent and have adequate technical oversight where appropriate.
- Establish a feedback mechanism to communicate monitoring results to its personnel and other stakeholders.

Where directed by the Contract Owner, or identified within the HSEC and operational Risk Register, the Contractor must document details of measuring and monitoring requirements into a monitoring plan

4.4.14 ENVIRONMENTAL AND COMMUNITIES OPERATIONAL CONTROL REQUIREMENTS

Based on risk assessments, the HSEC Management Program shall include, or refer to, applicable Standard Operating Procedures (SOPs) for the management of the relevant environment and social risks:

- Social explosion
- Gas emission
- Water pollution
- Cultural heritage
- Grievances

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These procedures shall clearly outline:

- The best known way to complete a task with the goal of zero harm to people, environment, communities, equipment and processes
- The associated responsibilities and accountabilities to complete the work.

4.4.15 DELIVERABLES PRIOR MOBILIZATION

The following deliverables prior to mobilization are not all inclusive and can change dependent on Ambatovy needs.

- Risk register and appropriate mitigation
- Contractor HSE Management program and Improvement plan, if required
- HSE management personnel resume for approval
- Engagement to train HSE personnel in recognized general certification within 6 months of contract commencement.
- Contractor employees certification training and pertinent HSE training
- Engagement to have personnel trained in approved Ambatovy training provider
- Certificate of inspection for vehicle, Heavy Mobile Equipment, Cranes and lifting accessories, Working at Heights PPE, Isolation locks for every contractor employee meeting Ambatovy Isolation requirements,

Registers of all equipment brought to site.

| Procedure approved by | Signature | Date |
|-----------------------|---|------------|
| MARK MITCHELL |  | 16/08/2016 |