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12. OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

Consistent with the Koniambo Sustainable Development Policy (KSDP) and the Koniambo Environmental Health and Safety Management System (KEHSMS), the Project will implement a comprehensive Occupational Health and Safety (OH&S) Management Program, similar to programs successfully implemented at other Falconbridge operations. Safety, occupational health, industrial hygiene and emergency preparedness will be integral parts of the OH&S Management Program.

The KSDP will guide the Project in meeting or surpassing OH&S performance goals as defined by applicable international guidelines and regulatory standards. The management framework described in Section 11.2 is the foundation for the implementation of the OH&S Management Program.

12.1 ORGANISATION AND RESPONSIBILITY

During the operation phase, the OH&S Department will include a Health and Safety Manager reporting to the Vice-President of Environment Health and Safety (EHS). This department will include supervisory and technical personnel in the areas of safety, health, industrial hygiene and emergency preparedness.

In addition to the OH&S Department, personnel from each operating department will be responsible for safety and industrial hygiene in their areas of activity. Managers and supervisors will be expected to lead by displaying the desired culture and behaviour through tangible actions. The main role of the OH&S Department will be to support operations management in the implementation and maintenance of the different OH&S programs, procedures and activities. A summary of key positions and responsibilities is given below.

Vice-president of environment, health and safety (EHS)

The Vice-President of EHS will have overall responsibility for development of the OH&S Management Program and will provide full support for successful implementation of the programs. The Vice-President of EHS will be responsible for health and safety reporting to the Project President and identified stakeholders. The Vice-President of EHS will affirm that health and safety programs are appropriate, aligned to business needs and implemented in all areas of operations. The Vice-President of EHS will provide technical, scientific and legal resources and expertise to facilitate problem-solving and decision-making regarding health and safety issues for the duration of the Project.

Health and Safety Manager

The Health and Safety Manager will be responsible for developing and facilitating the implementation of policies, plans, programs and procedures regarding safety, health, contractor OH&S management, risk prevention, emergency preparedness and security plans. The Health and Safety Manager will be responsible for reporting health and safety information internally and to governmental or non-governmental organisations (NGOs), as required by regulations. The Manager will also be responsible for directing and supervising on-site safety and health personnel. The Manager will organise and coordinate the Joint Occupational Health, Safety and Workplace Conditions Committee (JOHSWCC) according to New Caledonia (NC) regulations and internal procedures.

Safety and Risk Coordinator

The Safety and Risk Coordinator will be responsible for facilitating the implementation of safety and risk prevention programs, including workplace inspections, risk assessments and audits, and for supporting the training of personnel and contractors. The Coordinator also will be responsible for the availability of required personal protective equipment (PPE), for training in the proper use and maintenance of provided PPE and for training of fire and emergency response personnel.

Health and Industrial Hygiene Coordinator

The Health and Industrial Hygiene Coordinator will support the implementation of Health and Industrial Hygiene programs, including workplace monitoring and selection and maintenance of industrial hygiene PPE.

Area Safety Coordinators

The Area Safety Coordinators will provide leadership for preparation and implementation of OH&S plans and procedures for operation departments.

Medical staff

Project medical staff will be responsible for defining, implementing and coordinating all routine on-site and emergency medical services in order to respond efficiently and promptly to any medical emergencies. They will provide medical information and help develop training programs on health issues. They will be responsible for defining and coordinating post–job-offer medical requirements, co-ordinating pre-employment physical examinations and implementing and maintaining ongoing health surveillance programs. Onsite medical staff will consist of qualified and experienced nurses. The scope of activities of such staff will be defined by the appropriate regulatory body, including medical acts delegated by a qualified (licensed) physician (overseeing the medical staff).

12.2 SAFETY MANAGEMENT

The OH&S Department will develop and support the implementation of specific health, hygiene, safety and security policies, plans, procedures and best management practices (BMPs). It will take a leadership role in co-developing with line management a safety culture for all employees and contractors. Particular focus will be applied to high-risk activities, e.g., working with high-energy sources, handling molten metals, chemicals and explosives, and operating heavy mining equipment.

The Project will provide personnel with all necessary and approved safety equipment and provide training in its use, as required by regulations and workplace conditions. Health and safety personnel will have an appropriate level of education and experience.

The Project will develop key safety programs for all phases of construction and operation. These programs and activities will include, but not limited to:

- lock-out tag-out;
- hot work (e.g., welding);
- heat stress;
- working at heights;
- lifting equipment;
- electrical hazards;
- handling of compressed air and pressurised tanks;
- confined space entry;
- hazard assessments;
- driver safety program;
- safe handling and use of explosives;
- good housekeeping practices
- contractor safety;
- safety PPE; and
- emergency response.

Should an incident or accident occur, strict response and reporting protocols would be initiated promptly. An incident describes a situation in which something does not go as planned, whereas an accident is more serious usually involving damage to personnel, equipment, materials or the environment. Accident and incident investigations and reports will be completed by those responsible within clearly defined action plans and schedules. An electronic database will be used to document incident and accident reporting and analysis. This information will be used to help operations prevent similar incidents and accidents, to identify priority areas for future safety programs and to assist in tracking safety performance. Training for incident and accident reporting and analysis will be provided to all supervisors, and JOHSWCC and OH&S Department members. Serious near-miss incidents will also be the focus of in-depth investigation and reporting.

Safety meetings, inspections and audits will be tracked and managed, as will corrective actions and time lines by those responsible.

12.2.1 Joint Occupational Health, Safety and Workplace Conditions Committee

A JOHSWCC will be formed according to the roles and responsibilities required under NC regulations. Key duties of the JOHSWCC will include:

- promoting compliance with applicable regulations and guidelines;
- reviewing site-specific safety policies and procedures;
- reviewing results of industrial hygiene monitoring;
- providing suggestions pertaining to operational controls related to safety and health risks;
- informing and supporting the development of training programs for all employees and contractors;
- participating in all OH&S inquiries, investigating work accidents and making recommendations to management to prevent repeat incidents;
- promoting prevention programs and continuous improvement of OH&S global performance for all employees and contractors;
- advising before there are significant changes to working conditions;
- reviewing the Annual Safety Program and reports issued by the Project;
- conducting regular safety inspections;
- holding regular monthly, or more frequent, meetings; and
- maintaining documentation on meeting minutes, resolutions and action items.

12.2.2 Contractor OH&S

Contractors will be held to the same performance objectives and targets as SMSP/Falconbridge employees for construction and operation phases.

Contractors OH&S performance, personnel and programs will be a primary selection criterion. Contractors able to document superior safety performance and capability will be given preference during bid processes and reviews. More detailed training programs will be provided when required by the nature of the hazards and risks in areas where contractors may be required to work. Contractors will be required to provide effective and comprehensive health and safety plans. During the construction phase, the Engineering, Procurement and Construction Management (EPCM) contractor will review and approve contractors health and safety programs and plans based on a pre-qualification bid process. Work will not be allowed to proceed until plans are approved.

Contractor personnel will complete safety induction and orientation courses that review key site requirements. Contractors will remain responsible for the safety of their personnel. In the construction phase, the EPCM contractor will audit their performance to verify and report on compliance with OH&S programs and requirements.

Contractors that do not observe Project policies and procedures will be subject to disciplinary measures, which may include removal from the site and from future tender lists. Inspections and record keeping of contractor performance will be conducted on a regular basis.

12.3 OCCUPATIONAL HEALTH MANAGEMENT

Post–job-offer medical examinations will be conducted and random drug and alcohol testing of personnel would be carried out with the support of the Labour Department, labour unions and contractors. Physical capability testing for all jobs requiring manual activities will be included in pre-employment medicals and job placement/job transfers, as required. The nursing staff will assist in the completion of accident reports involving medical care and will implement job transfer and back-to-work physical assessments and disability-management programs. Ambulances with trained drivers and helipads will be located at the Vavouto Industrial Area and the Mine Industrial Area.

Key health programs will be developed for all Project phases and will include, but not limited to:

- occupational disease;
- hearing program;
- biological monitoring, as required;
- back injury prevention; and
- wellness promotion.

An industrial hygiene program will include employee and workplace monitoring and will verify the efficiency of emission control equipment and potential exposure to workplace hazardous substances. Monitoring will enhance workplace safety, worker protection and identify situations requiring corrective action. Specific health and hygiene monitoring programs will include evaluation of potential exposure to chemical (dusts, mists, fumes, fibres, vapours), physical (noise, heat, vibrations), ergonomic and biological hazards.

Other key aspects of the industrial hygiene program will involve:

- awareness training in recognition and control of occupational health hazards;
- training in the proper use of source emission controls;
- PPE selection, and training in its proper use and maintenance;
- PPE fit test; and
- potable water testing.

12.4 RISK MANAGEMENT

Essential components of OH&S management are the identification and mitigation of unacceptable risks. Multidisciplinary teams supported by risk specialists have completed risk assessments of the design and operability aspects of the project. Proven process safety methodologies such as Hazard and Operability Studies (HAZOP), Control Hazard and Operability Studies (CHAZOP), Failure Modes and Effects Analysis (FMEA), Management of Change and other techniques are used. Significant residual EHS risks will have appropriate management plans in place to eliminate or mitigate the risks to an acceptable level.

Risk identification and management plans will be required through all phases of the Project, from design to closure.

12.5 EMERGENCY PREPARDNESS/EMERGENCY RESPONSE PLAN

Emergency prevention, preparedness and response will be maintained to respond in a timely manner to situations that might occur during the construction or operation phase. On-site emergency vehicles and trained personnel will be available. All programs will emphasise emergency prevention.

Emergency response and reporting procedures will be established for all Project phases, including, at a minimum, the following considerations:

- medical and emergency response for identified potential emergency situations;
- identification of personnel to be contacted in case of an emergency, including telephone numbers providing 24-hour accessibility;
- proper emergency response actions for materials, reagents, fuels and other potentially hazardous materials that may be used or stored on site;
- description, location and maintenance of tools, equipment, materials and protective equipment available to assist in emergency response; and
- Crisis Management Plan developed within the Project, SMSP and Falconbridge.

Emergency response team training, including simulated emergency situations, will be conducted regularly. Emergency training will be based on the team concept to promote safety. On-site response plans will be coordinated with local communes, the North Province and Territorial authorities. Potential emergency situations include:

- cyclones;
- site and forest fires;
- fuel and chemical spills; and
- maritime emergencies.

12.5.1 Fire Prevention

A fire prevention plan will be developed to further document requirements for fire-fighting/suppression equipment, training, communication protocols and emergency response procedures. The Project will also implement a forest-fire management strategy for construction, operation and closure phases.

During induction, personnel will undergo training in fire prevention and management strategies, including:

- identification of construction, operational and natural areas with fire potential;
- appropriate and safe activities in fire-sensitive areas; and
- awareness of fire prevention, fire-fighting protocols and emergency response procedures.

12.6 MATERIALS HANDLING AND MANAGEMENT

Material Safety Data Sheet (MSDS), using management software will facilitate safe management of hazardous workplace materials. Wide access to the software will be provided, as will training in its use. Where required, process vessels, tanks and pipelines will be appropriately labelled with clearly legible hazard warnings, and employees and contractors will be trained in their recognition.

The MSDS software will help the procurement team substitute, wherever practical, less hazardous chemicals in the purchasing process. MSDS management software will assist in the control of contractor use of hazardous materials. Wherever possible, non-hazardous materials will be preferred over hazardous materials.

Personal protective equipment will be supplied and used for handling hazardous materials. Specific handling procedures will be developed and implemented for explosives, fuels and other hazardous materials.

12.7 TRAINING

Personnel and contractors will receive regular general training in safety, health, industrial hygiene and emergency response. They will be required to receive site-specific training prior to beginning job assignments. This training will be developed with assistance from the OH&S Department and will be coordinated by the Training Department.

First-aid training is available so that there are qualified first-aid providers in every area of the industrial facilities at all times, to assist in any emergency situation. Personnel required to operate motor vehicles and heavy-duty equipment will receive instruction from qualified instructors on proper driving procedures and techniques. These personnel are licensed by the Project before being allowed to drive company vehicles. Regular refresher training and skill evaluations will be provided to equipment operators to keep them advised of safe operating practices.

12.8 AUDITING AND COMPLIANCE

To verify that Project OH&S performance is in compliance with government regulations and KSDP programs, objectives and targets, a system of auditing will be developed. The EHS audit will be a systematic and documented process to verify that all elements of the management system and programs are in place.

EHS audits will be both internal and external and will be modelled on internationally recognised standards such as OHSAS 18001 Internal audits of Project OH&S programs and performance will be performed at least annually.

In addition to internal audits, external audits by SMSP and/or Falconbridge will be conducted periodically to determine the quality and the degree of implementation of the EHS and OH&S systems and programs. Results of these audits will be presented to the Project management team and appropriate action plans will be developed. Non-compliance issues will be dealt with in a diligent and timely manner

12.9 MANAGEMENT REVIEW

Reviews will be conducted to support continuous improvement in all areas of OH&S management. Reviews will include:

- policies and performance compared to OH&S objectives and targets;
- analysis of findings and action plans from internal or external audits;
- evaluation of the suitability of the OH&S Management Program in light of
  - changing statutory requirements, global and other trends, stakeholders expectations, processes, products and work procedures, market pressures and administrative structures and organisation
  - resources required to achieve targets and objectives
  - developing technologies
  - incident and accident investigation recommendations; and
  - reporting and communication requirements.

OH&S management review procedures and results will form the basis for relevant changes to policies, program components and improved objectives or targets. Significant risks will be identified and managed to define the strategic direction for future OH&S requirements and continuous improvement.