

# SANKO GEOTHERMAL POWER PROJECT

## OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT PLAN

| Version | Revision | Date             | Prepared by                                    | Checked by                | Approved by     |
|---------|----------|------------------|--|---------------------------|-----------------|
| Draft   | A.0      | January 10, 2018 | Muhsin Dervişoğulları<br>Environmental Manager | Yener Esen<br>OHS Manager | Project Manager |
|         |          |                  |  |                           |                 |

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## ABBREVIATIONS

|                      |  |
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| <b>PROJECT</b>       | Sanko Geothermal Power Plant Project         |
| <b>PROJECT OWNER</b> | Sanko Energy Industry and Trade Co.          |
| <b>AoI</b>           | Area of Influence                            |
| <b>CO2</b>           | Carbon Dioxide                               |
| <b>GPP</b>           | Geothermal Power Plant                       |
| <b>EA</b>            | Environmental Assessment                     |
| <b>EHS</b>           | Environment, Health and Safety               |
| <b>EIA</b>           | Environmental Impact Assessment              |
| <b>EMF</b>           | Electromagnetic Field                        |
| <b>EPRP</b>          | Emergency Preparedness and Response Plan     |
| <b>EU</b>            | European Union                               |
| <b>H2S</b>           | Hydrogen Sulphide                            |
| <b>H&amp;S</b>       | Health and Safety                            |
| <b>IFC</b>           | International Finance Corporation            |
| <b>ISO</b>           | International Standards Organization         |
| <b>MEWP</b>          | Mobile Elevated Work Platform                |
| <b>MoEU</b>          | Ministry of Environment and Urbanization     |
| <b>NGO</b>           | Non-Governmental Organization                |
| <b>NCG</b>           | Non-Condensable Gas                          |
| <b>OHS</b>           | Occupational Health and Safety               |
| <b>OSHAS 18001</b>   | Occupational Safety, Health Assurance System |
| <b>PPE</b>           | Personal Protective Equipment                |
| <b>PS</b>            | Performance Standards                        |
| <b>PTW</b>           | Permit to Work                               |
| <b>QMS</b>           | Quality Management System                    |
| <b>TSA</b>           | Task Safety Awareness                        |

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## 1 DESCRIPTION OF PROJECT

This document is the Occupational Health and safety Plan (OHSP) for 'Sanko Geothermal Power Plant Project' (herein after 'the Project'). It is prepared by "Sanko Energy" -the Project Company).

Sanko Energy, an energy branch of Sanko Holding Group planned to develop Sanko Geothermal Power Project with capacity of 15 MW in Manisa, Salihli District, Yılmaz Neighbourhood. Sanko Energy projects the potential expansion of the Project to achieve a total capacity of 50 MW. Therefore, additional wells are planned to be established within the license area of the Project.

## 2 PURPOSE AND SCOPE

The purpose of this H&S Plan is to provide instruction and guidance to the, Project Management Team (both Operation and Site based personnel), Project Personnel and Sanko's Contractors.

This H&S plan outlines the organization and arrangements for managing H&S on the Project for the operation and construction phase incorporating activities within the İstanbul, Ankara Offices and Sanko GPP Site.

The implementation of the various elements contained in the plan requires prioritization and schedule of events produced that defines the H&S deliverables.

The purpose of this document is to demonstrate the provisions in respect of the following matters:

- the identification of hazards by employers and the elimination or control of risks at employers' places of work,
- particular risk control measures (including provisions regarding lighting, noise, atmosphere, electricity, confined spaces and manual handling),
- the manufacture and supply of hazardous substances for use at places of work and the use of hazardous substances at places of work,
- the regulation of hazardous processes at places of work (including such processes as spray painting, abrasive blasting, welding etc.),
- the regulation of construction work (including excavation work, demolition work etc.),
- the regulation of operation work,
- the notification of accidents and other matters.

The scope of this document is to:

- Transfer ownership and approval of the program at the appropriate level and to ensure that the Project Management is fully aware of the contents of this plan and the deliverables established against it,

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- Inform all Project and other interested parties of the steps and intentions the Project intend to implement to achieve the objectives of the Health & Safety program and of its contractual obligations,
- To inform Contractors of the contents of this H&S Plan and to gain their support in achieving its objectives.

The objective of the H&S Plan and program are:

- To create a cultural and step change environment of well informed and motivated people who will actively participate and share the belief that "Delivery of Safe Construction and Operation, is our only Objective",
- Provide a continuous H&S training regime for:
  - Project Personnel,
  - Contractors Management and Supervision,
- Develop Sanko's Contractors Workforce H&S Training Programme,
- Develop and maintain an H&S Audit and Inspection Programme,
- Provide a Risk Management Programme.

## 2.1 PROJECT COMMITMENT STATEMENT

The project objective is to guarantee the success of the Project by unrelenting promotion of a Preventative HS&E Culture between the Project Team, Operators and Contractors. Project key management staff such that Cost and Time constraints will be demoted as secondary considerations in order to realize commitment to ensure:

- NO harm to any Person,
- NO damage to Property or the Environment.

## 2.2 PROJECT HEALTH, SAFETY & ENVIRONMENTAL POLICY AND PRINCIPLES

### Policy Statement

In order to ensure work safety and protect health of Sanko's employees, who are Sanko's most valuable internal resource, and to minimize adverse effects on environment while offering high-quality projects meeting the expectations of Sanko's customers, we will carry out Sanko's operations by:

- Acting in compliance with all the applicable laws and regulations,
- Implementing training programs needed to enable the employees to familiarize themselves with the systems in those fields, and to improve their sense of responsibility and consciousness and to ensure continuous improvement,
- Achieve the target of "Accident, Injury Free" by eliminating the risks at their sources with the involvement of all employees,
- Ensuring that practicable precautions that would safeguard environment and prevent environmental pollution are taken during all phases of the process of designing or developing projects in cooperation with other firms and contractors.

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## Principles

The following principles will govern all Project practices:

**Accountability:** Management will take a leadership role in identifying and eliminating Health, Safety and Environmental risks and promoting safer ways of working; whoever, it is the responsibility of every Project employee to work together to carry out Health and Safety (H&S) policy and principles.

**Health and Safety:** Sanko will provide and promote a safe and healthy environment for It's employees and contractors.

**H&S Integration into Business:** Project will integrate, health, safety and environmental policy, principles, regulatory requirements and internal standards into It's business processes and services. H&S aspects will be integrated into all investment decisions.

**Communication:** Project will openly communicate health, safety and environmental objectives and performance to employees and to the public. Sanko will establish H&S goals and objectives designed to achieve industry leadership within the Project.

**Education and Training:** Project will provide effective education and training, which is critical to successful H&S performance.

**Pollution Prevention:** Project believes that sustainable growth, including cost-effective pollution prevention, and the efficient and responsible use of natural resources, is essential to the long-term success of It's business. Sanko will continuously strive to reduce energy consumption.

**Commitment:** Project will comply with H&S laws, regulations and internal standards. Sanko will establish and implement programs and procedures in order to conduct operations safely and in an environmentally responsible manner. Sanko will participate in the development of H&S laws, regulations, and Project policies and will support Project efforts that represent a reasonable balance of risk and benefit.

**Organization:** Project will provide the resources to maintain an organization, which fosters continuous improvement in H&S performance.

**Participation:** Recognizing that Sanko's employees are it's most important *recherché*, Project will strive to enlist their knowledge, dedication, and skill in formulating and achieving H&S goals and objectives. Sanko will work with It's employees to foster effective mechanisms for employee participation.

## **2.3 GETTING HSE RIGHTS**

### Leadership and Accountability

People at all levels in the Sanko organisation are responsible for leading and engaging the workforce in meeting their health, safety, technical integrity and environmental goals and objectives. Leaders will be held accountable for accomplishing this by demonstrating correct

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H&S behaviours, by clearly defining H&S roles and responsibilities, by providing needed resources, and by measuring, reviewing and continuously improving It's H&S performance.

#### Risk Assessment and Management

Management of risk is a continuous process and the cornerstone of all the HS&E elements. Sanko will regularly identify the hazards and assess the risks associated with It's activities. Sanko will take appropriate action to manage the risks and hence prevent or reduce the impact of potential accidents or incidents.

#### People, Training and Behaviors

People's behaviour is critical to Sanko's success; therefore, Sanko's workforce will be carefully selected and trained, and their skills and competencies regularly assessed.

#### Working with Contractors and Others

Contractors, suppliers and others are key to Sanko's business performance and Sanko will assess their capabilities and competencies to perform work on Sanko's behalf. Sanko will work together with them to ensure It's HS&E Expectations are aligned. Sanko will monitor Contractors' and Partners' performance and ensure its procurement processes contain the mechanism to deliver It's Expectations.

#### Facilities Design and Construction

New facilities and modifications to existing facilities will be designed, procured, constructed and commissioned to enable safe, secure, healthy and environmentally sound performance throughout their operational life, by using recognized standards, procedures and management systems.

#### Operations and Maintenance

Facilities will be operated and maintained within the current design envelope to ensure safe, secure, healthy and environmentally sound performance.

#### Management of Change

All temporary and permanent changes to organization, personnel, systems, procedures, equipment, products, materials or substances will be evaluated and managed to ensure that health, safety and environmental risks arising from these changes remain at an acceptable level. Sanko will comply with changes to laws and regulations and take account of new scientific evidence relating to HS&E effects.

#### Information and Documentation

Sanko will maintain accurate information on It's operations and products. It will be held securely yet readily available.

#### Community and Stakeholder Awareness

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Sanko value the importance of community awareness and will actively engage in dialogue with various stakeholders to maintain public confidence in the integrity of its operations and products and its Commitment to HS&E Performance.

#### Crisis and Emergency Management

Emergency response plan will be maintained to cover all of Sanko's facilities and locations. This plan will identify equipment, training and personnel necessary to protect the workforce, public, environment and Sanko's reputation in the event of an incident.

#### Incidents Analysis and Prevention

Incidents will be reported, investigated and analyzed to prevent recurrence and improve Sanko's performance. Sanko's investigations will focus on root causes and/or system failures. Corrective actions and preventive measures will be utilized to reduce future injuries and losses.

#### Assessment, Assurance and Improvement

Sanko will periodically assess the implementation of and compliance with these Expectations to assure stakeholders and Sanko that management processes are in place and working effectively. This will involve both internal self-assessments and appropriate external assessments. Sanko will use this information to improve its performance and processes.

Note: Addressing the full set of HS&E Expectations is mandatory for every activity across the entire Sanko organization.

Managers are accountable for putting in place appropriate documented systems and processes for each Expectation, for ensuring continuous improvement towards Sanko's HS&E goals and targets, and for confirming that these are effective via the H&S Assurance process.

In order for the Project to meet these expectations a number of systems and activities will need to be implemented.

The means by which the Project will achieve the above principles and elements are set out in this Project H&S Plan.

The Project H&S Plan is the key Project H&S guidance document, evolved as a result of the interpretation of agreed legislative and "Best Practice" requirements.



### 3 KEY ROLES & RESPONSIBILITIES

#### 3.1 OPERATIONAL MANAGER

Reports to the Project Management, and will have the following responsibilities:

- Active participation in the implementation of the safety program (e.g., audits, safety committees, training etc.),
- Participate as a member of the Accident Investigation Team for medium and high severity and high potential incidents.
- Will ensure that line management and supervisors participate, contribute actively and exercise leadership in their respective individual and collective project HSE meetings,
- Carry out audit reviews of the areas under his control with the HSE Team,
- On commencement of the permit to work system (where applicable) will act as area authority for the work,
- Will co-ordinate with the HSE Team and facilitate the site HSE meetings on two weeks basis,

#### 3.2 COMPANY MAN

Reports to the Project Management, and will have the following responsibilities:

- Active participation in the implementation of the safety program (e.g., audits, safety committees, training etc.),
- Participate as a member of the Accident Investigation Team for medium and high severity and high potential incidents.
- Will ensure that line management and supervisors participate, contribute actively and exercise leadership in their respective individual and collective project HSE meetings,
- Carry out audit reviews of the areas under his control with the HSE Team,
- On commencement of the permit to work system (where applicable) will act as area authority for the work,
- Will co-ordinate with the HSE Team and facilitate the site HSE meetings on two weeks basis,
- Ensure that all contractors at the site are aware and trained in the HSE requirements of the Project,
- Actively participate in Camp and Office inspections,
- Provide liaison between Project and the contractors.

#### 3.3 HEALTH, SAFETY COORDINATOR

The HS Coordinator reports to the Project Management, and has responsibility for the following:

- Reporting of status of the Project to the Project Management,
- Integrating a HS team,
- Audit the HS Teams and their roles at the work site,
- Involvement in the approval of design changes after the start of construction,



- Ensure that required training is being performed,
- Provide liaison between Project and Project Management about HS,
- Be fully conversant with the leadership, objectives and expectations of the Project,
- Will 'drive' the 'Step Change' and behavioural development, necessary to achieve a 'World Class' safety performance.

### 3.4 HS LEAD ENGINEER, INSPECTOR

The assigned HS Lead Engineer reports to HS Coordinator. He has the following responsibilities:

- Provide HS Administrative support for the HS Coordinator,
- Deputies for HS Coordinator in his absence,
- Assist in the tracking of action items,
- Develop core HS Strategies, Procedures, Instructions etc.
- Prepare the Project HS Plans and Procedures,
- Effectively manage the safety personnel under his control and provide appropriate direction and training as required optimizing their effectiveness on site,
- Implement a training program that addresses the requirements of Prime Rules established for the Project along with site specific skill training,
- Review the results of inspections of the site to identify safety issues and deficiencies,
- Co-ordinate the investigation of any incident,
- Identify any trends relevant to incident investigations that become apparent and to ensure that remedial actions have been agreed and corrective action performed and recorded,
- To liaise with the Site Engineers to ensure that he is involved and kept informed of all site activities,
- Create and implement any procedures that are required,
- Monitor the performance of the HS programme and initiatives introduced throughout the Project,
- Monitor the performance of HS Representatives of Contractors on site.

### 3.5 DOCTOR

The assigned Doctor reports to the H&S Lead Engineer and has responsibility for the following:

- Perform / Update assessments of health risks,
- Identify any trends relevant to incident investigations that become apparent and to ensure that remedial actions have been agreed and corrective action performed and recorded,
- Effectively manage the health personnel under his control and provide appropriate direction and training as required optimizing their effectiveness on site,
- Review the results of inspections of the site to identify health or medical issues and deficiencies, and to advise the Site Manager and HS Lead Engineer of findings,

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- Supervise all health related issues in relevance with contractors,
- Monitor and track all personnel Health and Medical issues during the define stages for Sanko associated with the Project.

### 3.6 PROJECT ENGINEERS

Reporting to the Operational Manager or Company Man according to the position, they will have the following responsibilities:

- Will set a personal example and assist in the proactive promotion of safety as a personal objective,
- Overall co-ordination of the disciplines and areas under their control with a view to eliminating any interface problems,
- Review all method statements and risk assessments as produced for the safe execution of the work,
- Attend Progress Meetings (on two weeks basis) and ensure that health and safety is being addressed for work in progress and for work being planned,
- Participation in the investigation of any incidents that result in serious property damage or high potential Near Misses occurring in areas under their control,
- Actively participate in all H&S awareness training and safety initiatives,
- Review workforce acknowledgement of work or workfaces they believe as being 'at risk' or 'unsafe',
- Be fully conversant with Project Prime Rules of Safety,
- **Note: the above responsibilities will also be fully adopted by all contractors personnel at site.**

### 3.7 EMPLOYEES (SANKO & CONTRACTOR PERSONNEL)

Employees will be responsible for:

- Learning, understanding and complying with all HS procedures, rules and practice which are applicable to their conduct at all times whether at or away from the workplace,
- Employees are responsible for their personal safety and the safety of their co-workers, through both their acts or their omissions,
- Be constantly aware of their work situation and report hazardous situations to their supervisors, stopping work and informing their immediate supervision if there is the potential for any harm,
- Comply with all health and safety requirements, practices and other initiatives at all times,
- Use and maintain the appropriate supplied Personal Protective Equipment, reporting all deficiencies and replacing as necessary,
- Reporting substandard procedures or conditions to their immediate supervisor,

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- Understand that any employee who jeopardizes their safety and health and /or the safety and health of others will be subject to disciplinary action (including immediate termination of employment),
- Working in a safe manner at all times.
- Stopping their immediate or impinging work where they consider the work being performed is 'at risk' or 'unsafe'.



## 4 PROJECT H&S MANAGEMENT SYSTEM

The Project H&S Plan is an integral part of the H&S Management System that is based on the OHSAS 18001- Occupational Health and Safety Management System.

The essence of the drilling, construction and operation phase is the setting of objectives based on project policy which contain these aspects.

H&S significant aspects and applicable regulatory requirements will be matched by a corresponding objective.

### 4.1 GENERAL REQUIREMENTS

The H&S Team in conjunction with the Project have developed, implemented and maintained an H&S Management System.

Within the H&S Management System, supporting procedures and instructions have been developed, many of which apply to this Project. These supporting procedures and instructions will be adhered and referred to, during the drilling, construction and operation phases and its associated activities.

The H&S Management system has been designed to ensure the successful delivery of Sanko's H&S commitment, expectations and legal compliance.

Personnel at all levels in the organization are responsible for achieving the Project H&S objectives; this requires clear communication between Project personnel, contractors and others.

Through this structured H&S Management system, specific roles and responsibilities associated with Sanko's objectives have been identified. Reviews will be undertaken periodically of objectives requirements that may lead to revision of the system, its components and associated personnel responsibilities.

The responsibilities and job descriptions of project personnel having been defined will be communicated to those personnel to ensure they are fully aware of these requirements.

Management have and will further ensure that competent personnel fill key positions in the project organization to aid development and implementation of positive H&S behaviour to achieve success with regard to the expectations and objectives at all levels.



## 5 PROJECT H&S STANDARDS

H&S expectations will be incorporated into business planning and decision-making processes such that they become a transparent and effective management measurement tool of the Project's success.

The Project H&S team will identify the regulatory requirements that apply to the H&S aspects of the Project. The requirements include relevant provisions of:

- Legislation (both Turkish and International requirements),
- Codes,
- Standards and guidelines.

Regulatory requirements include (as they apply to the project):

- The requirements of the National laws of Turkey,
- National and local guidelines supporting the Laws of Turkey,
- Specific requirements of the regulators of Turkey,
- International protocols ratified by Turkey,
- The requirements of project financiers and insurers,

Project Management will ensure that those responsible for H&S implementation and management have access to the relevant necessary information.

The applicable legislation etc. will be recorded in a Regulatory Requirements Register.

This will show, for each regulatory requirement:

- Type of regulation, e.g. statute, guideline, code of practice,
- Applicability: International; National; Regional; Local,
- Title, number and edition/ issue of regulation,
- Project activities or programmes to which it is applicable,
- Forward reference to corresponding Objectives.

The Register will be compiled with applicable reference to:

- Project design basis documentation,
- Turkish National H&S (Labor and Other relevant Laws / guidelines),

Project objectives will be set to ensure compliance with the applicable laws, regulations, government agreements, permits, project policies and procedures.

The objectives will be based on the edition or issue of the regulation that is current at the time the relevant activity is carried out, they will only refer to a future regulation if the regulation is in its final form and there is a clear timetable for its implementation, during the planned life cycle of the project.

### 5.1 EXPECTATIONS & OBJECTIVES

#### General

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The Project Management and HSE Teams, in accordance with the following drivers, set project H&S Expectations and Objectives:

- High level requirements,
- Regulatory requirements,
- Identified significant H&S aspects.

Objectives for each of the above requirements will be developed. Where the necessities of different requirements are similar, one will take precedence to avoid duplication.

### **Setting H&S Objectives**

At each phase of the Project, the HS Lead Engineer will conduct an Objectives review with appropriate disciplines. The outcome of the review will be a set of confirmed H&S objectives.

### **5.2 KEY PROJECT INITIATIVES**

Project will provide the following:

- This specific H&S Plan,
- Clearly defined roles and responsibilities for H&S personnel,
- Training of Project Personnel,
- Safety Inspection / Audit,
- Risk Assessment Plan,
- Emergency Response Plan,



## **6 CONTRACTOR SELECTION**

Sanko has developed a contractor selection process to ensure that H&S was addressed as part of the selection process, particularly reflecting their ability to do the work, and on their competence to conduct the work safely.

To aid the selection and future processes, the contractors has been required to conform issues stated in this document.

Minimum requirements include adopting and following Sanko H&S Plan and cover:

- Organization Charts showing Accountabilities and lines of Reporting,
- Nomination of a Competent H&S Representative and his support team,
- Contractual obligations to perform the work safety and in accord with the site regulations.

Contractors will ensure that their Project H&S requirements are fully communicated to, and appreciated by, their team as part of their selection process.

Furthermore they will ensure that:

- Contractors, the self-employed and designers to be appointed are competent,
- Suppliers of materials to Sanko will provide adequate health and safety information to support their products,
- Machinery and other plant supplied for use will be properly selected, used and maintained.



## 7 COMMUNICATIONS

### 7.1 PROGRESS MEETINGS

H&S will be the first an agenda item of site progress meetings (on two weeks basis).

Safety issues covered will not only include immediate areas of concern but will also address near future work and the methods of / 'work packs' for carrying out such work safely.

PTW requirements for the following month will also be discussed to ensure timely completion in readiness for the next month's activities.

Agenda items for health and safety will include:

- H&S Expectations Objectives,
- Key Performance Indicators,
- H&S roles and responsibilities,
- H&S Contractual requirements – Docs, reporting etc.
- H&S plans for contractors,
- Joint task risk assessments covering the scope of work,
- Vehicle safety systems,
- Crisis and emergency management (emergency response plan and bridging document),
- Communications protocol (equipment and process),
- Incident reporting, Investigation, analysis and prevention systems,
- Security arrangements and procedures.

### 7.2 SAFETY & SAFETY RELATED NOTICE BOARDS

Sanko HS Lead Engineer on site will arrange for H&S Notice Boards to be erected in a prominent position at the power plant site, site office(s) and accommodation. The Notice boards will be used for the communication of safety awareness bulletins, current safety issues etc.

### 7.3 SAFETY TALKS

The function of safety talk is to communicate relevant issues in a simplified manner, emphasizing awareness of H&S or other pertinent values.

When conducted in the correct manner using clear communication and two-way understanding enables "on the spot" transfer of sound preventative information and knowledge learning.

Safety talks, either respective to the task, the work environment or some other H&S awareness topic will be communicated to the workforce, before starting any work – Note: this applies to all personnel below the level of Operational Manager and Company Man.

Safety talks will be conducted by Supervisors / Foremen / Functional Managers of all personnel.

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Sanko H&S Lead Engineer at site will develop with the Supervision; Safety talks, specific to the tasks and environment in which they are conducted.

#### **7.4 POST TASK BRIEFING**

At the work face, it is often the case that improvements can be identified, to the way in which the previously conducted work was accomplished. Supervision will take adequate time to address these issues following the 'clean up' housekeeping task and before or following leaving the workface.

Any improvements identified will be discussed with the management team to ensure compliance with the aspect of 'management of change' before changes are made.



## 8 HAZARD AND RISK INFORMATION

### 8.1 DRILLING HEALTH & SAFETY HAZARDS & RISK

Throughout the Drilling phase of the project, specific Risk assessments will be held to identify risks associated with the Well Design and the Management of Change, key personnel from the project team will attend and provide input relating to hazards and risks associated with the project.

To support this function personnel attending will be encouraged to assess potential severity, probability and likelihood of occurrence.

Hazards will always be prevalent in virtually all drilling activities.

These hazards and the associated risks will be assessed in terms of their severity, probability and consequence, to ensure that Sanko identify appropriate controls for the work.

### 8.2 CONSTRUCTION HEALTH & SAFETY HAZARDS & RISK

Throughout the Construction phase of the project, specific Risk assessments will be held to identify risks associated with the Construction Design and the Management of Change, key personnel from the project team will attend and provide input relating to hazards and risks associated with the project.

To support this function personnel attending will be encouraged to assess potential severity, probability and likelihood of occurrence.

Hazards will always be prevalent in virtually all construction activities (that is one of the major factors that contribute to the industries high Incidence rate).

These hazards and the associated risks will be assessed in terms of their severity, probability and consequence, to ensure that Sanko identify appropriate controls for the work.

### 8.3 OPERATIONAL HEALTH & SAFETY HAZARDS & RISK

Throughout the Operation phase of the project, specific Risk assessments will be held to identify risks associated with the Management of Change, key personnel from the project team will attend and provide input relating to hazards and risks associated with the project.

To support this function personnel attending will be encouraged to assess potential severity, probability and likelihood of occurrence.

Hazards will always be prevalent in virtually all operational.

These hazards and the associated risks will be assessed in terms of their severity, probability and consequence, to ensure that Sanko identify appropriate controls for the work.



## 9 H&S MANAGEMENT FUNCTIONS

### 9.1 H&S AUDITING & REVIEW

Safety reviews will be performed as follows:

#### Audits

The audit schedule and process will be developed to assess H&S compliance of procedures and policies in place, their implementation in the field and to provide an assurance that they are being effectively communicated, understood and implemented by the workforce.

These audits will be structured to measure the implementation of the policies and procedures in place in terms of their effectiveness and implementation and will create a profile, which highlights the areas that need attention/improvement, thus establishing a baseline for continuous improvement objectives.

H&S Audit & Review Programme will comprise the following:

- Internal – Power Plant and Site Audits,
- Management - Power Plant and Site Audits,
- Management Review,
- Site Inspections.

#### Inspections

A schedule of inspections will be conducted to review drilling, construction and operation site status and conditions. These inspections could be carried out by Project Management, HS Coordinator, HS Lead Engineer, HS Inspector, field supervision / foremen.

Progress meetings will be conducted at site on two weeks basis. At the meetings, the inspection results will be discussed and where applicable follow-up actions and responsibilities will be assigned.

#### Reporting and Record Keeping

The results of inspections conducted by the HS Responsible of the Contractors will be reported to HS Lead Engineer on weekly basis. The signed reports will be kept on Sanko project office on site.

The weekly reports from contractors will be compiled by HS Lead Engineer and reported to HS Coordinator on weekly basis.

HS inspection, findings and results related with the Project activities will be reported to Project Management by HS Coordinator on two weeks basis.

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## 10 CRISIS MANAGEMENT & EMERGENCY RESPONSE

### 10.1 POLICY STATEMENT

It is the policy of the Project to protect its assets, accurate records and employees from threats that could damage its business.

Managers are held accountable for the continuation of Project business in line with both legal and Project requirements.

### 10.2 RECOVERY OBJECTIVES

- To ensure that the Project can continue to carry out the key support and administrative functions following a disaster or any serious incident,
- To ensure that any interruption at any Project site or office does not result in a significant loss to its overall performance.

### 10.3 DISASTER SCENARIOS

Potential events that could impact Project related activities or assets range from major physical incidents such as fire, to failure of significant computer or communications systems. These are shown below:

- Fire,
- Explosion (accident or terrorist),
- Earthquake
- Flood (natural and accident),
- Weather impact,
- Criminal, sabotage or arson attack,
- Interruption to utilities supplies (gas, water, electricity),
- Interruption to telecommunications system,
- Access roads closed.

A Risk Assessment approach was taken to consider the "Worse-Case Scenario" as a total loss of Project site.

In response to an unplanned disaster at this location the prime concerns are to:

- Protect personnel, assets and information,
- Ensure that the Project continues to with no effect on schedule,
- Ensure that stakeholders and staff do not lose confidence in the Project and its ability to continue.

There are three time frames defined:

- Critical functions to be restored within 24 hours,
- Important functions to be restored within 1-3 days,
- Other activities to be restored within 10 days.

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Recovery activities beyond 10 days will require extensive mobilization of resources and be subject to a detailed project plan.

#### **10.4 RESPONSIBILITIES**

Project Emergency Management Team will handle initial Emergency Response using local procedures. The team also manage and co-ordinate recovery for 10 days following a disaster.

#### **10.5 TESTING & REVIEW**

Each plan is to be tested annually to the policy guidelines issued by the Health & Safety Team. Plans are to be reviewed every six months by the Project Management Team.

#### **10.6 EMERGENCY RESPONSE**

An Emergency Response Plan has been developed that encompass all reasonably foreseeable events that pose serious injury to the workforce. The Emergency Plan allows for the fact that emergency events can occur and develop rapidly, requiring personnel to act without waiting for further guidance.

The following has been considered in the development of the procedure:

- Equipment requirements to assist in an emergency situation,
- Training requirements,
- Personnel needs – resources,
- Public interface,
- Environmental impact,
- Social impact.

This Plan will either reflect in its entirety the Project Plan by being comprehensive in its coverage of possible emergencies and their scale, or will take the form of a bridging document, showing how Sanko intends to link into and follow the Projects requirements.

#### **10.7 TRAINING**

All emergency duty personnel will be adequately trained to fill the emergency response role.

All Sanko and Contractors Emergency Response Procedures will be tested at specified intervals.

All drills and exercises will be recorded.

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## 11 PROJECT - PRIME RULES

### 11.1 INTRODUCTION

The Project Prime Rules of Safety are a collection of guidance notes and requirements, addressing both major hazard & risk activity concerns that in the past have contributed to high incidence rates in the industry, coupled with effective controls that must be implemented to safely conclude them.

The Prime Rules of Safety are shown below:

- Permit to Work,
- Vehicle Safety,
- Confined Space Entry,
- Working at Height,
- Working with electricity,
- Working with chemicals,
- Lifting Operations,
- Energy Isolations,
- Ground Disturbance,
- Management of Change.

In those identified high hazard and risk areas above, the Project will be complimented by the provision of both legislative and 'best practice' requirements such as those below to assure successful H&S management of the Project:

- Risk Assessments,
- Suitable and sufficient Training,
- Suitable and sufficient PPE – Personal Protective Equipment,
- Appropriate Emergency Response Plans.

### 11.2 H&S DELIVERABLES

To achieve Sanko's prime Objective contained in the statement "Safe Design, Construction and Operation is our Paramount Objective", various performance indicators and the measurement of them, will be identified for monitoring, improvement and recording purposes during the Drilling, Construction and Operation phase.

The following aspects will be addressed and suitable performance indicators for each implemented:

- Applicable Legislation,
- Equipment & Resources,
- Measurements (monitoring requirements),
- Variations (Best practices against National and International legislation),
- Contractors Impact,
- Risk Assessments,

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- Permit to Work,
- Vehicle Safety,
- Confined Space Entry,
- Working at Height,
- Working with electricity,
- Working with chemicals,
- Lifting Operations,
- Energy Isolations,
- Ground Disturbance,
- Management of Change,
- Education & Training,
- Safety Talks,
- Hazard Communication,
- Manual Handling,
- PPE (Personal Protective Equipment),
- Fall Prevention,
- Housekeeping,
- Scaffolding,
- Barricades,
- Floor & Wall Openings,
- Excavation & Trenching,
- Portable Ladders,
- Lifting / Rigging,
- MEWP's,
- Compressed Gas Cylinders,
- Temporary Electric's,
- Road Transport,
- Plant & Equipment,
- Night Work,
- Work In / Over Water,
- Hot Work / Welding.

### **11.3 H&S OBJECTIVES**

The following H&S Objectives have been implemented within the Project, these will be further communicated in an ongoing process to Sanko's Contractors as previously stated in the document. The objectives are clearly stated as:

- Zero Accidents – Accident performance will be monitored throughout the related phases of the project,
- H&S Orientation – NO personnel will be allowed to work on any site unless they have attended the Project H&S Education and Training programme,

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- H&S Site Induction - All new site personnel will attend within first week of assignment, and before they are allowed to work on site, to ensure they are aware of the specific hazards in the work area,
- Prime Rules of Safety – All personnel to attend specific training on Sanko's Prime Rules prior to mobilization to site,
- Audits / Inspections / Risk Workshops – Will be performed in accordance to the Audit and Risk Assessment Plans,
- Behavioural Based Safety - 'Safe' and 'At Risk' behavioural observations will be measured by the number of observations completed per month following contract award and introduction of the programme.
- Step Change Initiatives - Initiatives will be introduced to the project whereby all personnel can actively engage in the safety process and ultimately change behaviours and focus on Zero Accidents.



## **12 MEDICAL FACILITIES**

### **13.1 INTRODUCTION**

Sanko will identify all health risks associated with all workplaces, at all times, within his scope of work.

The Medical representatives on site will, through defined means, adequately communicate these risks to the site management and workforce in an expedient and proactive manner.

### **13.2 FIRST AID REQUIREMENTS**

First Aid is seen by the medical community as the primary intervention towards stabilization of injured or ailing patients, to this end, for the site requirements, Sanko will provide basic first aid training for all personnel.

### **13.3 H&S INCIDENT REPORTING**

The policy of the Project is that all incidents no matter how insignificant they might appear, will be investigated, reported and recorded.

The level of the investigation will be dependent on the severity or the perceived potential severity of the Incident.

Note: A Near Miss will be treated as if 'it actually happened', based on the potential severity of its perceived outcome.

The immediate managers will be informed immediately in the event of any incident and / or Near Miss.

Employees will be educated in the Incident reporting process.



### **13 H&S INCENTIVES**

A Safety Incentive programme will be considered and driven by the management, whereby positive H&S behaviours at all levels will be recognized by the Stakeholders, Project team and contractors during the drilling and construction stage of the project.

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## 14 DISCIPLINARY PROCEDURES

Similarly, a system of disciplinary measures will be established.

The first unsuitable behaviour of any personnel will be warned. After the first warning, Sanko will adopt a 'Yellow / Red card system', similar to that used in 'Football games', a second Yellow card and personnel will be dismissed.

Note: No one will be allowed to work on the Project who endangers individual lives – this if substantiated will lead to 'Instant dismissal from the Project'.

A written disciplinary procedure for violations of Project H&S Procedures is in place and the Project and its participants at all levels will be included.

The purpose of this procedure is to place accountability within the project organization and to avoid any disputes that may occur through any seemingly unfair decisions.

The disciplinary procedure will:

- Observe In-Country legal and H&S Regulations,
- Be in accordance with the Project H&S Plan and Procedures,
- Be fair and equitable to all employees.

The following safety guidelines apply to the development of a disciplinary procedure:

- Define the range of offences (e.g., safety procedural violations, on site traffic violations),
- Detail the actions against the different categories of offences (e.g., verbal warnings, written warnings, suspension and dismissal).



## 15 H&S TRAINING

Preliminary details of the training are shown below.

### 16.1 H&S TRAINING PROGRAMME

Covering Managerial and Supervisory legal responsibilities related to the health and safety of the employees require that the following is known and understood as part of their competencies:

- know the health and safety legislation,
- know the hazards in their workplace,
- ensure that workers follow safety procedures required by the Project and,
- ensure that their workers comply with regulations.

In addition, they are expected to:

- promote awareness of health and safety,
- establish and enforce healthy and safe work practices,
- resolve work refusals,
- investigate accidents, and,
- report certain injuries and accidents to the Regional Directorate of the Ministry of Labour,
- Report all incidents to the Project.

### 16.2 H&S ORIENTATION / INDUCTION

All Personnel working at all phase of the project will be required to attend an H&S Orientation / Induction briefing before commencing work.

This H&S Orientation / Induction will be developed by the Project H&S Lead Engineer and be implemented by all Contractors at all sites, taking place in a suitably equipped training facility within the workplace, all attendees will be assessed to ascertain their level of understanding of the Induction content and will sign an attendance log following satisfactory completion of the induction programme.

The programme will be repeated at a minimum of 6 monthly intervals or following major changes to legislative or on-site condition / working arrangements, whichever is the sooner.

This H&S Orientation / Induction training will be given to Project employees and Contractors personnel prior to commencement of their employment on site, and will be monitored by the project H&S Lead Engineer to ensure that the appropriate standards are being adhered to.

Subjects to be covered in the H&S Orientation / Induction will include:

- Overview of the project and scope of work,
- The organization on site,
- Legislative requirements,

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- The HS&E Policy and Objectives of the safety program - Zero Accident Performance, Prime Rules,
- Safety Leadership –Sanko’s role in changing behaviours and developing employee involvement and process improvement,
- Behaviour Based Safety – Employee involvement in safety and process improvement,
- The role of the individual in the Safety Talk,
- Project’s expectations of employees,
- Drilling activities,
- Driving and operating / maintenance and refuelling of equipment on site,
- Driving requirements, Safe Driving requirements (e.g. seat belts, speed restrictions),
- PPE, including clothing, minimum requirements and maintenance,
- Reporting of incidents, personal injury and near-misses,
- Medical facilities & Personal Health,
- Fire prevention and suppression,
- Housekeeping,
- Open communications policy,
- Hot work, Welding, Burning and Grinding,
- Hazardous materials,
- Portable tools,
- Overhead Power Cables,
- Drug and Alcohol awareness,
- Office & Site Environment,
- Lifestyle Safety.

Special emphasis will be given on the proactive role expected by all personnel working on the project and their ability to stop work. The open communications policy will ensure that people are not put into hazardous situations.

### 16.3 VISITORS

All visitors to Project site will also undergo a limited H&S Orientation / Induction. Sanko will develop this H&S Orientation / Induction which will be approved by the Project Team.

Notes: No visitor(s) will be allowed onto the site unless accompanied at all times. There will be no dispensation for this rule, should a visitor attend site on a regular basis he/she will attend the site’s full H&S Orientation / Induction.

As all sites will have specific differences, visitors will attend each site’s limited or full H&S Orientation / Induction programme.