# OCCUPATIONAL HEALTH AND SAFETY PLAN

#### 1.1 Introduction

Occupational health refers to the identification and control of the risks arising from physical, chemical, and other workplace hazards in order to establish and maintain a safe and healthy working environment. These hazards may include chemical agents and solvents, heavy metals such as lead and mercury, physical agents such as loud noise or vibration, and physical hazards such as electricity or dangerous machinery. This Occupational Health and Safety Plan (OH&SP) is prepared for the Cashew-nut Processing Plant project by Diaoune Agro-Industrie sarl.

#### 1.2 Background

Diaoune Agro-Industrie is a subsidiary of Diaoune et Frères Sarl, established in Côte d'Ivoire in 2004. Diaoune et Frères Sarl has been a major player in the Cashew nut business, initially engaging in the cultivation and export of raw cashew nuts to the processing plant in Asian countries, particularly Vietnam and India. With the vast experience in the cashew nut agro-business industry spanning more than fourteen (14) years, the management of Diaoune Agro-Industrie is deploying this rich knowledge and experience to bring more added value to the cashew industry in the Republic of Guinea.

Diaoune Agro-Industrie Sarl is a registered agro-processing company in Guinea and has its headquarters in Conakry. The company engages in various activities in the cashew nut value chain, which includes sourcing and processing raw cashew as well as export of cashew kernel. Currently, Diaoune Agro-Industrie operates the largest cashew nut processing plant in Guinea, which was established in 2019.

Cashew Nuts plantation is one of Guinea's emerging sectors as the country produces nearly 100,000 tonnes of raw cashew nuts, 90% of which is exported to India for value addition and 10% processed. It has been estimated that no less than 50,000 people live from this sector (DAI Feasibility Report, 2020). The Cashew Nut trees are nicknamed green gold because of the value of its fruits. The Cashew Nuts are major raw materials source for various sectors such as: agrofood, pharmaceutical and cosmetic industries among others. The fruiting products are mainly intended for export with the main destinations of the United States, the Netherlands, India, Singapore, Vietnam, Ghana, Benin Republic.

#### 1.3 Scope

This Occupational Health and Safety Plan cover all Project activities including contractors' activities during the construction and operational phases. The implementation of this Plan by contractors is addressed in the Environmental and Social Management and Monitoring Plan. This Occupational Health and Safety Plan is part of the overall suite of Management Plans developed for the Project and cross linkages to number of the other Management Plans as Environmental and Social Management and Monitoring Plan.

OH&SP ensures the work safety of the employees working at site and aims to minimize the risks on employees arising from work-related activities. The measures mentioned in this Plan are applicable to all Project personnel, including subcontractors' personnel and covers both construction and operation phases.

## 1.4 Purpose

The general purpose of this Occupational Health and Safety Plan is to:

- demonstrate that the project will implement a system for organizing the safety and health at work efficiently and consistently;
- show how all hazards and effects on humans, property and the environment are identified, evaluated, controlled and mitigated;
- Notifying the constructors (contractors-subcontractors) with regard to the minimum safety and health requirements which will be imposed by the project.
- The establishment of a unitary framework for the implementation and the sequence of the initiatives of protection and health along the various stages of the construction activity.
- Specifying the mandatory requirement for all the constructors to have their own Plans for occupational health and safety at the sites and assessments of risks for all types of works they execute.
- Define training requirements, and set out references for supporting materials information,
- Assess and reduce/eliminate OHS risks and impacts on all employees of the work during construction and operation phases,
- Sustain continuous improvement of OHS at the Project site.

# 1.5 Roles and Responsibilities

Table 1: Key Roles and Responsibilities

Position	Responsibilities			
General Manager/Board of	• Approval of this Plan and resources required for			
Manager	implementation,			
	• Ensuring the Plan is implemented during the lifetime of			
	the Project.			
Operational Manager	• Having overall responsibility for the implementation of			
	this Plan by fulfilling project requirements,			
	• Ensuring implementation of the commitments in this			
	Plan,			
	• Providing necessary resources for proper			
	implementation of this Plan,			
	• Ensuring that the OHS rules are complied with by the			
	employees,			
	• Participating in incident investigation and reporting			
	studies.			
Health, Safety and	• Ensuring that relevant activities are undertaken in			
Environment (HSE)	accordance with this Plan and related procedures,			
Manager	• Reviewing the OH&SP for 3-monthly bases during			
	construction, annually in operation phase,			
	• Updating risk assessment reports and conducts internal			
	audits to determine whether the requirements of this Plan			
	are implemented,			
	• Ensuring that the OHS Trainings are organized and			
	ensuring that whole employees including Contractors are			
	fully trained on OHS,			
	• Expediting, monitoring and following up the whole			
	Project workers including contractors for proper			
	implementation of this Plan,			

Position	Responsibilities		
	• Ensuring all occupational health and safety incidents		
	investigations are undertaken and reported,		
	• Reporting all hazards, non-conformances and incidents,		
	• Coordinating the related activities of this Plan,		
	• Performing routine inspections for OHS and reporting		
	the results of the inspections to the Operational Manager.		
Occupational Physician	• Contributing to the implementation of health precautions		
	related to environment, health and safety objectives,		
	• Conducting health training of the related personnel on		
	the topics covered by this Plan,		
	• Performing routine health examinations,		
	• Investigating all relevant incidents and reporting those to		
	the HSE Manager,		
	• Cooperating with the HSE Manager and Operational		
	Manager to develop, monitor and review the Plan, as		
	necessary.		
Social Responsibility Staff	• Implementation of grievance mechanism and collecting		
(SRS)	concerns/suggestion related to OHS,		
	• Coordinating with parties for proper implementation of		
	this Plan.		
Site Engineers	• Ensuring that relevant activities are in accordance with		
	this Plan and related procedures,		
	• Providing oversight and conducting routine inspection		
	on site regarding OHS.		
Employees	• Obliged to follow the OHS precautions and rules set by		
	Operational Manager and HSE Manager.		
Representative of Employees	• Having the same responsibilities as general employees		
	for their core duties,		

Position	Responsibilities			
	• Being obliged to receive information provided by			
	employees and to convey it to the Operational Manager			
	or HSE Manager,			
	• Conveying the decisions made by the Operational			
	Manager and/or HSE Manager,			
	• Attending to the specific training performed for him/her,			
	• Informing the Operational Manager, HSE Manager and			
	Occupational Physician about risks.			
Contractors / Subcontractors	• Complying with the Occupational Health and Safety			
	Plan.			
Visitors	• Complying with, so far as they are reasonably			
	practicable, all safety directions provided by the			
	Company,			
	• Taking reasonable care for their own health and safety			
	and for the health and safety of others,			
	• Reporting all incidents to the Project personnel.			

## 2.0 Principles of Occupational Health and Safety

The core occupational health and safety principles put forth by the International Labour Organization (ILO) are as follows:

- All workers have rights. Workers, as well as employees and government, must ensure that these rights are protected and foster decent conditions of labour. As the International Labour Conference stated in 1984:
- Work should take place in a safe healthy environment;
- Conditions of work should be consistent with workers' well-being and human dignity;
- Work should offer real possibilities for personal achievement, self-fulfillment and service to society.
  - Occupational health and safety policies must be established. Such policies must be implemented at both the governmental and enterprise levels. They must be effectively communicated to all parties concerned.
  - There is a need for consultation with the social partners (that is, employers and workers) and other stakeholders. This should be done during the formulation, implementation and review of such policies.
  - Prevention and protection must be the aim of occupational health and safety programmes and policies. Efforts must be focused on primary prevention at the workplace level. Workplaces and working environment should be planned and designed to be safe and healthy.
  - Information is vital for the development and implementation of effective programmes and policies. The collection and dissemination of accurate information on hazards and hazardous materials, surveillance of workplaces, monitoring of compliance with policies and good practices, and other related activities are central to the establishment and the enforcement of effective policies.
  - Health promotion is a central element of occupational health practice. Efforts must be made to enhance workers" physical, mental and social well- being.
  - Occupational health services covering all workers should be established. Ideally all workers in all categories of economic activity should have access to such services, which aim to protect and promote workers" health and improve working conditions.

- Compensation, rehabilitation and curative services must be made available to workers who suffer occupational injuries, accidents and work related diseases. Action must be taken to minimize the consequences of occupational hazards.
- Education, awareness creation and training are vital components of safe, healthy working environments. Workers and employers must be made aware of the importance and the means of establishing safe working procedures. Trainers must be trained in areas of special relevance to different industries, which have specific OHS concerns.
- Workers, employers and competent authorities have certain responsibilities, duties and obligations. For example, workers must follow established safety procedures; employers must provide safe workplaces and ensure access to first aid; and the competent authorities must devise, communicate and periodically review and update occupational health and safety policies.
- **Policies must be enforced**. A system of inspection must be in place to secure compliance with occupational health and safety and other labour legislation.

## 2.1 **Project Standards and Guidelines**

During the construction and operational phases of the Project, the applicable national and international standards must be compiled for all the Project activities. The applicable Guinea standards and EIA requirements, applicable international standards, IFC Performance Standards and guidance notes are the base of the Project Standards.

## 2.1.1 Guinean Standards and Requirements

All activities in the management and monitoring of occupational health and safety will be performed in accordance with the following Guinean standards and requirements:

- Law N°L/2014/072/CNT of 10 January 2014 is the main source of legislation governing employment practices and labor relations in Guinea.
- The primary document in Guinea that addresses protection of worker health and safety is the Law N°L/2014/072/CNT of 10 January 2014 repealing the Labor Code of 1988.
- Law L/94/006/CTRN of 14 February 1994 establishing a Code of Social Security Act is the main source of Guinean legislation governing the protection of workers and their

families against economic or social poverty and against the difficulties arising from a significant loss of income.

- The Public Health Code (Act L/97/021/AN of 19 June 1997 on the Code of Public Health) ensures the protection and promotion of health, the rights and obligations of the individual, family and community throughout the territory of the Republic of Guinea.
- Order no 2791/MTASE/DNTLS/96 relating to the work of children, considering Decree D/94/078/PRG/SGG of August 23, 1994, on the Composition Partial of the Government supplemented by Decree D/94/079/PRG/SGG of 26 August 1994; Decree D/94/115/PRG/SGG of November 3, 1994, relating to attributions and Organization of the Ministry of Labour, Social Affairs and Employment; This code determines the working conditions of employees under the age of 18year and listed prohibited works for young workers under the age of 18.

## 2.1.2 Applicable International Standards

All applicable international standards and guidelines regarding OHS management within the scope of the Project are as follows:

- IFC Performance Standards on Social and Environmental Sustainability
- IFC General Environmental, Health and Safety (EHS) Guidelines
- IFC EHS Guidelines Construction and Decommissioning
- IFC EHS Guidelines Environmental Hazardous Materials
- IFC Industry Sector Guidelines
- IFC EHS Guidelines for Waste Management Facilities
- Interim Advice of IFC on Preventing and Managing Health Risks of COVID-19 in the Workplace,
- AfDB ISS Operational Safeguards 5 (OS5): Labour conditions, Health and Safety
- AfDB ISS Operational Safeguards 4 (OS4): Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency

## 3.0 Occupational Health and Safety Management

The management of OH&SP must be in accordance with the general principles, which should be applied to control workplace hazards in order to:

- eliminate the risks;
- assess the risks, which cannot be avoided
- reduce the risk at source;
- give priority to collective protective measures over individual protective measures;
- adapt the work to the individual, especially with regard to the design of workplaces and the choice of work equipment and production methods;
- adapt working methods to technical progress;
- develop a coherent overall prevention policy, which covers technology and work organization and
- give appropriate instructions to employees.

#### 3.1 Risk Assessments

The Operation/site/location Management team will evaluate the content of the risk assessment documents to ensure that they are relevant to the operation/site/location and adequate controls are in place for all known hazards associated with the work. A copy of all risk assessments and method statements will be held on site for referral to ensure that the safe systems of work laid down by the contractors are being followed.

Risk assessments and method statements for any work carried out by DAI operatives will be produced by the site management team in full consultation with the operatives involved. A full briefing will take place prior to commencement of the task and integral briefing registers are to be signed as proof that each operative has read, understood and agrees to accept responsibility for carrying out the works as detailed within each document.

All contractors are required to carry out site-specific risk assessments for significant hazards that fall within their sphere of activity and control. These risk assessments must be submitted to the Principal Contractors Safety Adviser for vetting prior to work starting on site. Hazards that are identified from the above assessments that cannot be eliminated at source will be presented in the form of a site-specific method statement defining the appropriate control measures. These method

statements must be submitted to the Principal Contractors Safety Adviser for vetting prior to work starting on site.

The method statements will be passed to the Principal Contractor, who will ensure that the work is carried out in compliance with them, and that they will be kept in a register in the site office with the Health and Safety plan, with copies being sent to the (PS) Coordinator.

A general method statement will be drawn up by the Principal Contractor for the contract and will be an integral part of the Health and Safety plan. In order to identify priorities, risk ranking table should be used as given in Table 2.

	Consequences				
Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	Low risk	Moderate risk	Extreme risk	Extreme risk	Extreme risk
Likely	Low risk	Moderate risk	High risk	Extreme risk	Extreme risk
Moderate	Low risk	Moderate risk	High risk	Extreme risk	Extreme risk
Unlikely	Low risk	Low risk	Moderate risk	High risk	Extreme risk
Rare	Low risk	Low risk	Moderate risk	High risk	High risk

Table 2. Risk Ranking to Classify Worker Scenarios

Above-mentioned rankings in Table 1 help to define potential consequences of exposure to a hazard. Low risk can be managed by routine procedures. In order to manage moderate risk class, management responsibilities should be specified. The jobs with high risk classification are required senior management attention. Extreme risks require immediate actions and it should be avoided as much as possible. The Project operations and facility itself should be designed according to reduction of high-risk classifications and protection of employees. Training and drills to practice the procedures and plans should be undertaken periodically to minimize the risks of occupational hazards.



Figure 1: Hazard identification

#### 4.0 OHS Management Approaches

OH&SP provides implementing programs that contribute to mitigation of health and safety risks that may arise as a direct or indirect result of the Project. By implementing the measures provided in this Plan, it is aimed to mitigate those risks arises from the work including construction and operation phases of the Project. Following issues are specified in the main approach of this OH&SP:

- Identifying and controlling occupational hazards and eliminating OHS risks,
- Ensuring that all necessary actions which are suggested in laws, regulations, standards and guidelines are taken to prevent any OHS incident,
- Ensuring third parties such as contractors, subcontractors, visitors and suppliers understand and comply with site safety rules,
- Ensuring safe procurement and proper use of hazardous materials,
- Raising OHS awareness of all employees and third parties by providing suitable and adequate site safety information, training and instructions,
- Ensuring minimization or elimination of risks regarding points of entry and exit to the site,
- Ensuring that actions regarding risks associated with falling object, excavation work, working at height, lifting operations, working in confined spaces, working alone, etc. are taken,
- Raising driving safety awareness of employees and ensuring the compliance of safe driving provisions for all vehicles,
- Ensuring the prevention of adverse impacts of chemicals/waste on human health and the environment,
- Raising OHS awareness of employees and third parties who use, store or transport hazardous materials/wastes,
- Ensuring that measures for fire are taken and providing to all personnel about emergency preparedness and response,
- Ensuring the prevention of traffic accidents and promoting traffic safety with all personnel and third parties.

#### 4.1 Communication and Co-Operation

#### • The Communication

Health and Safety issues will be dealt with in conjunction with other relevant issues as part of an integrated management approach. The co-ordination of contractors' activities will be planned by the Principal Contractor and will be set out in the project programme. Day to day co-ordination will however be achieved between contractors by daily morning meetings between the Principal Contractor, Site Manager and Contractors. Records will be kept of these meeting.

Weekly meetings will be held to discuss progress and plans for the following week and issues that have been highlighted during the course of daily meetings to ensure all health and safety issue is being addressed. The record of the meetings will be minuted and copies held in the site office. DAI will inform local stake holders of the project, times and any special deliveries which may impact upon them and take into consideration their views and wishes where it is reasonable and practicable

#### • The Management of the communication and cooperation

- The organization and the tasks relating to safety and health at work will be in accordance with section DAI policy for all suppliers and subcontractors
- The information relating to the safety and health at work and to the training requirements must be fulfilled by subcontractors.
- In case of deficiencies at the level of safety and health at work the contractor has the right to require additional training or termination of the activity. In the most serious cases he/she has the right to exclude the on-site employees, suppliers or subcontractors.
- The start-up meeting will be organized in order to have assurance that all subcontractors have complete information, understand the work, the implications for/towards other participants, the restrictions, declarations of methods and coordination of safety and health at work.
- All subcontractors to the site will be forced to participate in the meetings concerning the safety and health at work in accordance with DAI policy.

#### 4.2 General Facility and Operation

#### 4.2.1 General Site Rules

General site rules will be applied to all employees of DAI Cashew-nut processing facility including employees of contractors and subcontractors, all related personnel from third parties and visitors. Those rules are comprised of brief information about site emergency response plan, emergency contacts, map with permission marks and all other necessary information, and those will be shared with all employees and third parties.

#### 4.2.2 Site Entrance and Exit

The entry to the Project area will be subjected to the security personnel's supervision to ensure that all entries are performed in compliance with health and safety system and to prevent unauthorized access. Security personnel should be trained to meet both legislative and international standards by HSE Manager. Emergency exits of buildings and Project site should be clearly marked to be visible even in total darkness and be unobstructed at all the times. There should be minimum two exits from any work area.

#### 4.2.3 Safe Access

Passageways for pedestrians and vehicles within and outside buildings should be segregated to provide for easy, safe, and appropriate access. Equipment and installations requiring servicing, inspection, and/or cleaning should have unobstructed, unrestricted, and ready access. Only authorized personnel have access to dangerous operation areas and measures will be taken by locked door to prevent unauthorized access to dangerous areas should be in place.

#### 4.2.4 Parking in Plant Area

Parking at the Project site will only be restricted to the designated area. Parking shall be reversed and in the direction of exit. It is forbidden to park in front of fire extinguishers or hydrants, waste storage areas and emergency exits. Plant Management takes the necessary measures and informs the entire plant personnel.

#### 4.2.5 Smoking

Smoking on the construction site, in the processing plant area and in offices is strictly forbidden. There will be a designated open-air area or areas for smoking, where smoking is allowed only. Warning signs will be placed. Moreover, employees smoking other that the designated areas will be warned and fined, if necessary.

#### 4.2.6 Vehicles, Construction Machinery and Trucks

Back-up alarms of construction machinery and trucks shall be operational, and all vehicles will have a fire extinguisher and a first aid kit. If there is no sight during maneuvers, a banksman shall be present. It is forbidden to dump for trucks and reverse maneuver for construction machinery without a banksman.

#### 4.2.7 Industrial Hygiene

Industrial hygiene training will be included in general OHS training for all employees and further training, awareness sessions, etc. organized by workplace/company doctor to raise industrial hygiene awareness. Eating in the plant and construction site is forbidden. Only designated areas shall be used for eating purposes. Restrooms shall be cleaned, and soap and tissue dispensers shall be refilled daily.

Working environment in terms of dust, noise, lighting, temperature, airflow and quality, etc. will be adjusted according to related regulations and measurements should be completed according to the Regulation on Occupational Hygiene Measurement, Testing and Analysis Laboratories during the construction and operational phases.

## 4.2.8 Working Hours

The working hours in construction and operation phases of the Project will be in accordance with the legal work and overtime hours stated in the Labor law. Working hours can be shortened and additional required resting hours can be provided to the workers as a result of risk assessments and exposure to a hazardous situation.

Special working hour arrangements will be made under extreme conditions such as exposure to extreme hot, cold and humid environments to prevent health risks of employees. Work and rest

periods can be determined and implemented by work-specific risk assessments for the activities such as working in confined spaces, gaseous, dusty or noisy areas.

#### 4.2.9 Office Works

Offices will be cleaned and ventilated regularly. If it is not ensured, necessary warning signs shall be placed indicating the floor is slippery. Deteriorations, shelves and other materials will be repaired and/or fixed. Cleaning materials will be used with proper PPE and informed with the Material Safety Data Sheets (MSDSs).

Air conditioning devices will be regularly controlled according to industrial hygiene necessities. Sufficient lighting will be provided to the personnel working in the office. All employees shall be trained on office ergonomics.

Electrical equipment will be checked and labelled color codes in every three months by the electricians. Electrical distribution panels and fuse boxes will be kept locked, labelled and prevented from unauthorized use. Office will be equipped with detectors and fire extinguishers in case of fire hazards. Emergency exit doors and roads will be set at least 80 cm in length.

Employees who are exposed to workplace violence, retaliation, mobbing or any types of discrimination will be encouraged to report the situation in accordance with the Grievance Mechanism Procedure.

#### 4.2.10 Housekeeping

Employees will be informed through training that the major sources of hazards are negligence of keeping the site clean and tidy during all phases of the Project. Those training will include the some of the following consequences of lack of cleanliness and tidiness:

- Trip and fall hazards: Materials and equipment left on the floor can cause trip and fall of an employee. The result can be bone fractures and severe injury. If trip and fall is happened in a higher place without fall protection equipment, the incident may result with fatality.
- Drop of a Material: Materials left in higher places may fall down and cause injuries.
- Hygiene: Non-clean areas threaten employees' health. Biological risks that may arise in the site are also assessed in this context and are tried to be avoided. All employees should wash their hands regularly, especially prior to eating and drinking.

All wastes generated in the site will be stored in the designated waste storage areas, by segregating according to their type. Waste management implementations are specified in Waste Management Plan for all phases of the Project.

## 4.2.11 Storage Conditions

Spare parts and materials will be stored in designated areas by considering their availability in the market and storage conditions. Maximum stacking height should be 3 meters. Heavy materials will be stored on lower shelves while lighter ones on the higher shelves as a measure against falling. Chemicals will be stored according to their hazardousness classifications and MSDSs. All chemicals will be ordered according to need and stored according to MSDSs. Bulk buying and storage will not be allowed. Hazardous materials will be stored in accordance with the relevant national regulations.

## 4.3 Management of Physical Impacts

## 4.3.1 Noise and Vibration

In the construction and operation phases of the Project, noise sources include the machinery and equipment as well as the Project units. Noise limits of workplaces defined in EHS Guidelines of IFC are given in Table 3

Location/ Activity	Equivalent	Maximum
	Level	Level
	LAeq,8h	LAmax,fast
Heavy Industry (no demand of oral communication)	85 dB	110 dB
Light industry (decreasing demand of oral communication)	50-65 dB	110 dB
Open offices, control rooms, service counters or similar	45-50 dB	-
Individual offices (no disturbing noise)	40-45 dB	-

Table 3: Noise Limits for Working Environment Defined in General EHS Guidelines of IFC

Mitigation measures for reducing noise both in construction and operation phases including the measures against the occupational noise exposures are provided below:

- Equipment will be selected with lower sound power levels.
- Silencers will be installed where applicable.
- High noise areas will be identified and marked, and personnel will wear personal noise protecting gears all the time when working in such high noise areas where the noise level is over 85 dBA.
- Structures will be designed and constructed with effective noise isolation.
- No employee will be exposed to a noise level greater than 85 dBA for duration of more than 8 hours per day without wearing protection.
- The grievance mechanism will be used effectively.

Mitigation measures in order to minimize the impact of vibration are listed below:

- Tools and equipment with lower vibration levels will be selected.
- Protective clothing to keep the employees warm and dry will be supplied.
- Task rotation and time limits will be implemented on activities with high exposure levels.
- Right equipment for works with risks are needed to be provided and well maintenance in good condition will be ensured.
- Information on self-protection and training will be provided to employees in tool maintenance and usage, for example avoiding gripping the tool too tightly.

## 4.3.2 Electrical Works, Electrical Equipment and Hand Tools

Instruction in existing H&S Handbook will be followed. Additionally, recommended measures to prevent minimize and control electrical hazards that might result from electrical works, equipment and/or hand tools are presented below:

- All energized electrical devices and lines will be marked with warning signed.
- Devices will be locked-out and tagged-out during service and maintenance.
- Locked-out and tagged-out awareness will be provided by HSE Manager before the work.
- All electrical cords, cables and hand power tools for worn-out or exposed cords and manufacturer recommendations for the maximum permitted operating voltage of the portable hand tools will be checked.

- Power cords and extension cords will be protected against damage.
- Only approved extension cords will be used.
- No approach zones around or under high voltage power lines will be established.
- Cords will not exceed the maximum length stated in the related regulations.
- Hazard warning lights will be installed inside electrical equipment enclosures to warn of inadvertent energization.
- Appropriate labelling of service rooms housing high voltage equipment and where entry is controlled or prohibited will be ensured.
- Voltage sensors will be used before and during workers' entrance into enclosures containing electrical components.
- Specialized electrical safety training will be given to those personnel working with or around exposed components of electrical works.
- Deactivation and proper grounding of live power equipment and distribution lines according to applicable legislation and guidelines whenever possible before work will be performed.
- Electrical hand tools will be inspected by a qualified electrician every three months and by workers any time before starting the work.
- Electrical equipment that does not have a control mark on it will not be used.
- Electrical equipment shall only be repaired by electricians.
- Protective parts of any electrical hand tool will not be removed.
- If the electrical hand tool is sparkling, it will be used with Hot Work Permit or in the general permitted area.
- After the completion of work, electrical hand tools will be kept with pulling their plug out to prevent trip and falls.
- When the work with electrical hand tool is finished, it will be returned to its storage place.
- The employees that will use the electrical hand tool will be trained.
- The employees conducting electrical works or using electrical equipment and tools will use the relevant PPE.

#### 4.3.3 Eye Hazards

Eye hazards should be assessed in detail in risk assessment reports/plans. The protective equipment for eyes will be used depending on the work to be conducted.

#### 4.3.4 Drainage System

Drainage depths will vary but some deep excavation is inevitable predominantly to outfalls Ground conditions vary but some excavation will be through loose fill. Approaches will require addressing trench support system to be adopted. The existing building / existing drainage will be assessed for proper planning.

#### 4.3.5 Hot Works

The mitigation measures on the hot works such as welding, cutting, grinding, and post-weld heat treatment works to be conducted during the construction and operational phases of the Project are explained in this section.

Work permits will be required for the hot works and employees without Hot Work Permit will not conduct any hot work. The Work Permit might be given with necessary training, licenses or certificates. Risks of the work or related risk assessment should be read and understood by the employees who are going to involve in hot works. Minimum OHS requirements to start a hot work are: Work Permit, approved fire work equipment, fire extinguisher or fire extinguishing system, fire blanket, fire observe (if necessary) and hot work specific PPE according to related risks. The area where the hot work will be conducted will be free of any flammables and explosives, and the area will not be left without cooling.

## 4.3.6 Industrial Vehicle Driving and Site Traffic

Traffic and traffic-related risks and impacts will be eliminated, minimized or prevented through the following measures:

- Unauthorized vehicles will not be allowed to enter the Project area.
- All drivers will comply with the Highway Traffic Regulation.
- Pedestrian walkways will be marked and kept clear.
- On-site and off-site speed limits, which is determined by national legislation, will be complied with by employees.

- Drivers and passengers shall fasten the seat belts. Seat belts shall be fastened before driving and cannot be unfasten until the vehicle is properly parked.
- Regular and legal maintenance of the vehicles will be performed in line with the related regulations.
- Each vehicle will carry first-aid kit, fire extinguisher, reflector and spare tire.
- Overloading of the vehicles is forbidden, even if the vehicle tonnage is appropriate.
- Headlights, mirrors, windows and seat belt system of the vehicles will be operational and maintenance of those will immediately be provided when these systems have problems.
- No passenger is allowed to be carried on the back of a pickup or in heavier vehicles, or in the cabinets of construction machinery.
- Tires will be controlled regularly.
- Smoking is prohibited on vehicles.
- Cell phone usage in vehicles on the road is prohibited.

## 4.3.7 Work and Ground Level

Safeguards must be taken where necessary by the provision of guardrails, toe boards and /or mesh guards to prevent the fall of persons and materials. Materials must be thrown lower levels. All materials must be lowered by means of hoists, ginwheels, ropes or chutes to suitable skips etc.

## 4.3.8 Roof Work

Before any roof work commences assessment should be made of the suitability of the roof and its structure to withstand any loading including that of operatives and crawling boards etc.

Roof ladders or crawler boards must always be used on pitched roofs or roofs of a fragile nature. The weight of the operative and equipment used must always be borne by a roof ladder or crawler board. Where access to a workplace is alongside a fragile roof, the fragile roof must be covered or guard-rail provided to protect the access. Consideration must be given at the planning stage for the need for scaffolding to aid any roof work and to provide a base for edge protection etc.

## 4.3.9 Falls from Height

Falls from height is the biggest single cause of fatal accidents and major injuries at work. A place is considered at height where a person could fall and sustain an injury and this includes work places

that are at or below ground level such as excavations. Work will only be undertaken at height when it is safe and reasonably practicable and where it cannot be undertaken other than at height.

All work at height will be properly planned and supervised. Where work is undertaken at height consideration needs to be given to the selection of work equipment and processes, the selection of protective measures such as guard rails and harnesses and conditions on site.

All equipment and work platforms used for work at height shall be inspected prior to use and at specified periods thereafter and entered onto the inspection records contained within the Scaffold Log. Work at height shall be planned and co-ordinated and all those involved are to read and understand the site / task specific method statement where necessary.

#### 4.3.10 Confined Spaces

A confined space is any space of an enclosed nature where there is a risk of death or serious injury from hazardous substances or dangerous conditions. A number of dangers can arise in confined spaces including a lack of oxygen, poisonous gases and sudden ingress of water. Areas on the site may produce gas and therefore entry into deep excavations should be avoided and in no case undertaken without a suitable and sufficient risk assessment taking into consideration any conditions that may be considered as confined spaces.

Entry into confined spaces requires specialist training including the working knowledge of gas detectors and emergency and rescue arrangements and therefore will only be undertaken by trained and competent personnel and following the formation of a suitable plan of work.

#### **4.3.11** Working Environment Temperature

During working hours, the temperature must be adequate for the human body, having regard to the working methods used and the physical demands to which workers are subjected to. In order to ensure full traceability of safety and health at work on the construction site, the project manager will take account as well of the environmental conditions,

Mitigation measures for prevention and control of occupational exposure to heat occurring during the Project activities are listed below:

- Pressure vessels and piping will be inspected and maintained regularly.
- Adequate ventilation will be supplied to the work areas to reduce heat and humidity.

- The time required for work in elevated temperature environments will be reduced and access to drinking water will be ensured.
- Surfaces where personnel come in close contact with hot equipment will be shielded.
- Appropriate warning signs and PPE will be used near high temperature surfaces and environments.

## First aid

The employer must ensure that first aid can be done at any time. Also, the employer must ensure that the staff is trained for this purpose. Measures must be taken to ensure the evacuation, for medical treatment, of workers who have had an accident or have suddenly been ill. Provision should be made for one or more first aid rooms, in the light of the scale of the works or the types of activities.

Rooms for first aid must be equipped with facilities and with materials essential for first aid and be easily accessible to stretchers. First-aid equipment must be secured in all places where working conditions require it. It must be indicated by signs properly and must be readily accessible.

A panel of signals located in visible areas will clearly indicate the address and telephone number of the emergency service.

#### 4.3.12 Ergonomics

Employees will be provided with the appropriate tools, equipment, parts and materials.

Controlling and identification of ergonomic risk factors and reduction of hazards will be provided through the following means when and where necessary:

- Engineering controls; which are the most reliable means to controlling or preventing injury. This is achieved by focusing on the physical modifications of jobs, workstations, tools, equipment, or processes.
- Administrative controls; which mean controlling or preventing injury by implementing administrative changes such as job rotation, job enlargement, rest/recovery breaks, work pace adjustment, redesign of methods and/or worker education.
- Work practice controls; which means controlling or preventing injury through proper work practices. These include proper work techniques, posture and conditioning.
- PPE; which is personal protective equipment and can control or prevent injury.

## 4.3.13 Illumination

Light intensity of working areas should be adequate for the general purpose of the location and type of activity. Minimum limits for workplace light intensity defined in General EHS Guidelines of IFC are given in Table 3.

Location/ Activity	Light Intensity
Emergency light	10 lux
Simple orientation and temporary visits (machine storage, garage, warehouse)	50 lux
Workspace with occasional visual tasks only (corridors, stairways, lobby, etc.)	100 lux
Medium precision work (simple assembly, rough machine works, welding, packing, etc.)	200 lux
Precision work (reading, moderately difficult assembly, sorting, checking, medium bench and machine works, etc.), offices.	500 lux
High precision work (difficult assembly, sewing, color inspection, fine sorting etc.)	1,000 – 3,000 lux

Table 3: Minimum Light Intensity Limits for Workplaces

Measures regarding the illumination of the facility area are provided below:

- Energy-efficient light sources with minimum heat emission shall be used.
- Measures shall be undertaken to eliminate glare/reflections and flickering of lights.
- Precautions shall be taken to minimize and control optical radiation including direct sunlight. Exposure to high-intensity UV and IR radiation and high-intensity visible light shall also be controlled.
- Measurements shall be done according to Regulation on Health and Safety Measures to be taken in Workplace Buildings and Annexes.
- Emergency lighting shall be installed to all necessary areas and buildings according to Regulation on Protection of Buildings from Fire.

#### 4.4 Management of Chemical Impacts

#### 4.4.1 Air Quality

Air quality of working environment will be maintained and measured according to related legislations and standards. According to risk assessments of physical, chemical and biological hazards related with air quality will be eliminated and/or reduced at the source. Necessary PPE and training will also be decided according to risk assessments. Designs and constructions will be done according to related air quality and safety legislations and standards.

#### 4.4.2 Dust

Roads on site and in close proximity to site will have a road sweep once a week or when required to minimize dust and dirt. A wheel wash will also be in use for deliveries entering and leaving the site. Dust suppression units and damping down will take place on site haul roads when necessary.

#### 4.4.3 Fire and Explosions

Mitigation measures regarding fires and explosions resulting from self-heating fuel piles, ignition of flammable materials and sources are presented:

- Flammables shall be stored away from ignition sources and oxidizing materials.
- Flammables storage area shall be remote from entry and exit points into buildings, away from plant ventilation and intakes or vents. It should have natural or passive floor and ceiling level ventilation and explosion and use spark-proof mixtures.
- Electrical grounding, spark detection and if needed quenching systems shall be provided where the flammable material is mainly comprised of dust.
- Fire hazard areas shall be defined and labeled to warn of special rules such as prohibition in use of smoking materials, cellular phones, or other potential spark generating equipment.
- Specific worker training in handling of flammable materials and fire prevention and suppression shall be provided.
- Fire extinguisher equipment (ladders, ventilation devices, fire extinguishers, etc.) will be purchased and will be kept in good condition.
- Fire extinguisher equipment will be labelled /signed according to related regulations and will be placed at easily accessible locations.

- Fire extinguishers will be placed close to areas that have fire risks such as chemical storage and welding areas.
- Personnel shall not be allowed to interfere with electrical appliances; only authorized personnel will be allowed to change the electrical installation. Electrical appliances will be closed and unplugged when they are not in use.
- Personnel who are responsible for the management of inflammable materials shall be appointed and shall be trained. Storage, transportation, and use of these inflammables will be established in compliance with national and international standards.
- Leakage and spillage of inflammable liquids shall be immediately cleaned and repaired.
- Fire exits and exit doors will be installed in both temporary and permanent structures/buildings and will be kept open all the time.
- A smoking area out of the plant will be designated and a fire extinguisher will be provided for this area.
- Fire practices will be established according to health and safety regulations.

## 4.4.4 Hazardous Materials

Measures shall be taken to avoid or minimize the potential for occupational exposure to hazardous materials and substances that may be released by the Project. Mitigation measures regarding hazardous materials are presented below:

- All hazardous materials shall be assessed in accordance with relevant regulatory and international requirements.
- All chemicals purchased from suppliers used on the site will be accompanied by their MSDSs that meet the standards.
- Storage of fuel will be in tanks equipped with locking devices and which have secondary containment (with %110 volume capacity) that are located on a platform in a designated area located away from any watercourse or drain.
- Spill kits, protective equipment, and other necessary equipment will be available where hazardous materials are handled, to enable any spills to be cleaned up.
- Appropriate first aid will be located close to hazardous material storage areas such as eyewash, showers, and first aid kits.

- Hazardous materials will only be transported in vehicles authorized for the transport of hazardous substances.
- The transfer of hazardous materials from vehicles to storage tanks shall be conducted on impervious hard standing, which is sloped to a collection or a containment structure, not connected to municipal wastewater/storm water collection system.
- Incompatible materials (acids, bases, flammables, oxidizers, reactive chemicals) shall be stored in separate areas, and with containment facilities separating material storage areas.
- The storage and use of hazardous substances shall be done under conditions of maximum security.
- Drummed hazardous materials shall be stored in areas with impervious surfaces that are sloped to retain any spills/leaks.
- Containers holding flammable and/or toxic materials will be kept permanently closed and covered. They shall be kept in their original packaging and they shall be handled and transported under maximum security.
- Any accidental leaks of fuel or oil will be immediately cleaned up with absorbent material and collected in closed and labeled containers temporarily stored in specially designed spaces until delivery to an operator.
- Chemicals with different hazard symbols shall not be stored together.
- All Hazardous Materials shall be disposed of according to the requirements of relevant regulation.

#### 4.5 Exposure to Biological Hazards

Exposure to biological hazards may occur during demolition, renovation, sewer work, work on air handling systems, or other construction work from contact with contaminated or disease- carrying materials, such as soil, water, insects (mosquitoes, ticks) and animals. In the site, biological health hazards will be most commonly found from an accumulation of animal waste and the presence of rodents and insects. Common areas have potential of biological hazards.

#### 4.5.1 Fungi (Mold) Hazards

Fungi (mold) are found both indoors and outdoors, all year round. There are many thousands of species of mold and most, if not all, of the mold found indoors comes from outdoor sources. Mold

seems likely to grow and become a problem only when there is water damage, high humidity, or dampness. Molds are organized into three groups according to human responses: Allergenic, Pathogenic and Toxigenic. Potential health effects and symptoms associated with mold exposures include allergic reactions, asthma, and other respiratory complaints. There is no practical way to eliminate all molds and mold spores in the indoor environment; the way to control indoor mold growth is to control moisture.

- If mold is a problem in the workplace, the mold and eliminate sources of moisture must be cleaned up.
- Fixation of the source of the water problem or leak is needed to prevent mold growth.
- Reduction of indoor humidity (to 30-60%) is required to decrease mold growth.
- Cleaning mold off from hard surfaces with water and detergent, and drying it completely is required.
- Absorbent materials, such as ceiling tiles that are moldy may need to be replaced.
- Condensation on cold surfaces can be prevented by adding insulation.
- In areas where there is a perpetual moisture problem, do not install carpeting.

Respiratory protection for exposure to mold will depend on the size of the particle and its level of toxicity. It is important to take precautions to limit your exposure to mold and mold spores.

## 4.5.2 Poisonous and Infectious Animals

Many different poisonous and infectious animals might be found in or around the Project site and workers should be aware of these health hazards before starting work in a specific location. All bites by such wildlife must be considered a possible exposure to the biological hazards. Rodents can exist around the Project site. The most sensible way to avoid contact with rodents is to prevent them from infesting the work site. Safety precautions should be taken. Safe disposal of rodents and proper cleaning and disinfection of rodent-inhabited areas are keys to minimizing exposure to the virus.

## 4.6 **Personnel Protective Equipment (PPE)**

Other than office and allowed areas, minimum acceptable PPE that shall be used in the facility include but not limited to the following:

• Helmet (TS EN 397 +A1)

- Eye Protection Goggles (TS 5560 EN 166)
- Work Shoes (TS EN ISO 20345, TS EN 13832-3)
- Ear Protection PPE according to Decibel (dB), comply with standards (TS EN 352-1, 352-2, 352-3)
- Working at Height PPE;
- Positioning Points and Safety Rope (TS EN 358)
- Parachute Type Seat Belt (TS EN 361)
- Personnel Protective Equipment to prevent falling from a height-seat belt (TS EN 813)
- Rescue Equipment-Rescue Belts (TS EN 1497)
- Rescue Equipment-Rescue Rings (TS EN 1498)
- High Visibility Jacket (According to weather conditions) (TS EN ISO 20471)
- Respiratory Protection Face Mask against dust biological risks FFP-1,2,3 (TS EN 12942/A2)

Summary of recommended personal protective equipment according to hazards defined in General EHS Guidelines of IFC are given in Table 3.

**Table 3:** Minimum recommended personal protective Equipment defined in IFC: General EHS

 Guidelines.

Objective	Workplace Hazards	Suggested PPE
Eye and face protection	Flying particles, molten metal,liquid chemicals, gases or vapors, light radiation.	Safety Glasses with side- shields, protective shades, etc.
Head protection	Falling objects, inadequate height clearance, and overheadpower cords.	Plastic Helmets with top and side impact protection.
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs or earmuffs).
Foot protection	Falling or rolling objects, pointed objects. Corrosive orhot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and chemicals.

Objective	Workplace Hazards	Suggested PPE
	Hazardous materials, cuts or lacerations, vibrations,	Gloves made of rubber or synthetic materials (Neoprene),
Hand protection	extremetemperatures.	leather, steel, insulating materials, etc.
Respiratory protection	Dust, fogs, fumes, mists,gases, smokes, vapors.	Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapors and gases). Single or multi-gas personal monitors, if available.
	Oxygen deficiency	Portable or supplied air (fixed lines). On-site rescue equipment.
Body/leg protection	Extreme temperatures, hazardous materials, biologicalagents, cutting and laceration.	Insulating clothing, body suits, aprons etc. of appropriate materials.

The requirements of special PPE or any change according to site needs shall be determined by HSE Manager. Mitigation measures for PPE usage are provided below:

- If alternative technologies, work plans or procedures cannot eliminate, or sufficiently reduce a hazard or exposure, work-appropriate PPEs shall be used actively.
- Appropriate PPE that offers adequate protection to the worker, co-workers, and third parties, without incurring unnecessary inconvenience to the individual shall be identified and provided.
- PPE shall be maintained properly including cleaning when dirty and shall be replaced when damaged or worn out.
- Training programs for employees shall include proper use of PPE.
- Selection of PPE shall be based on the hazard and risk ranking and selected according to criteria on performance and testing established.

## 4.7 Implementation Schedule

This Plan will be reviewed on a minimum of a three-monthly basis during construction and annually during operation. During steady state operations, this Plan will be reviewed on an annual basis and any necessary revisions made to reflect the changing circumstances or operational needs of the Project. Revision of this Plan will be the responsibility of DAI HSE Manager.

If the circumstances change, this Plan may be updated on an "as required" basis. Any revisions to this Plan will be made available to ensure that all Project staff and Contractors have access to the OH&SP.

#### 4.8 Monitoring

#### **Overview of Monitoring Requirements**

The monitoring measures that are to be implemented during the construction and operational phase to assess the compliance of the Project with the relevant Project Standards are described in this section. In case that any non-conformances with the Project Standards are identified, these will be investigated, and appropriate corrective actions will be put forward.

## 4.8.1 Key Performance Indicators (KPI)

The table below summarizes the key performance indicators and associated key monitoring measures that can be used to assess the progress and effectiveness of the proposed mitigation strategies.

KPI	Target	Monitoring Measure
Number of the recorded worker (internal) grievances relevant to OHS	Minimize and achieve continuous improvement in the number of the recorded internal grievances related to OHS (Target: Zero)	Internal Grievance records
Number of the reported OHS incidents	Minimize and achieve continuous improvement in the number of the reported OHS incidents (Target: Zero)	Regular internal inspections (incident reports) and audits

Table 4:	Key	Performance	Indicators	(KPI)
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KPI	Target	Monitoring Measure
Total number of non- compliances with the measures identified in this Plan.	Minimize the number of non- compliances (Target: Zero)	Audit records

## 4.8.2 Key Monitoring Activities

The key monitoring activities will focus on ensuring compliance of the Project with the requirements set out in this Plan using the key performance indicators established in "Key Performance Indicators" heading below.

Key monitoring activities will focus on the topics and methods set out in the table below.

Indicator	Measure/Monitor	Results	Improvement
			Review progress at
	% Risk assessment	Track reported	monthly senior
Risk Assessment	complete	% monthly by	management
	% Control measures	area/department	meetings, and
	implemented		target areas for
			improvement
			Review progress at
		Track reported	monthly senior
Work procedures	% Written procedures	% monthly by	management
	complete	area/department	meetings, and
			target areas for
			improvement
	Indicator Risk Assessment Work procedures	IndicatorMeasure/MonitorRisk Assessment% Risk assessment complete % Control measures implementedWork procedures% Written procedures complete	IndicatorMeasure/MonitorResultsRisk Assessment% Risk assessmentTrack reportedRisk Assessment% Control measures% monthly by% Control measuresarea/departmentimplemented% Written proceduresTrack reportedWork procedures% Written procedures% monthly byarea/department% monthly by

Table 5:	Key	Monitoring	Activities
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Objective	Indicator	Measure/Monitor	Results	Improvement
	Work place	% Scheduled inspections		
	inspection target	completed by name and		
	for each frontline	work area/department.		
	supervisor across			Review progress at
	the whole site on	% Actions arising		monthly senior
Provision of	a monthly basis	completed by name and	Track reported	management
safe workplace	each with a	work area/department.	% monthly by	meetings, and
	specific area		area/department	target areas for
	Workplace	% Visibility/inspection		improvement
	visibility tour by	tours completed.		
	middle and senior			
	managers once			
	per month			
		% Employees working		Review progress at
	Performance	safely	Track reported	monthly senior
Employees	based	% Personnel protective	% monthly by	management
working safely	observations	equipment (PPE)	area/department	meetings, and
		compliance		target areas for
				improvement
		% Incidents reported		
	Timeliness of	within 24 hours		Review progress at
Incident	reporting Incident	% Near-miss incidents		monthly senior
reporting and	investigation	% Incident investigation	Track reported	management
implementation	effectiveness Log	complete on time	% monthly by	meetings, and
of remediation	of corrective	% Corrective actions	area/department	target areas for
measures	actions	implemented		improvement

Objective	Indicator	Measure/Monitor	Results	Improvement
Safe and competent employees	Performance assessment including trainingneeds identification andTraining records	<ul><li>% Performance assessments complete</li><li>% Scheduled training complete</li></ul>	Track reported % monthly by area/department	Review progress at monthly senior management meetings, and target areas for improvement

## 4.9 Training

All necessary training will be provided as part of induction training including health and safety issues and job-specific training, as necessary. All employees should be aware of importance of occupational health and safety. Training will consist of basic hazard awareness, site- specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Site-specific hazards or communication codes will be provided to all personnel. The important aspects of OHS management and requirements of this OH&SP will be provided all personnel of the Project. All visitors are subjected to the orientation programme. Visitors to the site can gain access to areas where hazardous conditions or substances may be present; it should be ensured that visitors do not enter hazard areas unescorted.

## 4.9.1 Induction Training

All employees of the Project, including the contractors and subcontractors, working at the Project site will be provided with general induction, site specific induction and a broad range of health, safety and environmental awareness training.

Appropriate Personal Protective Equipment will be made available to all personnel and relevant personnel will be trained in the use and maintenance of those protective equipment.

All personnel of the Project will be trained to get an adequate understanding of the provision of required safety level due to the work conducted at the site. Training Attendance Sheet will be filled for each training session. The following trainings will be provided to the personnel directly or indirectly:

- Induction Training
- Job-Specific Training

- Hazard Awareness/Compliance
- Emergency Preparedness and Response Training
- Code of Communication
- Human Resource
- Traffic Awareness
- Occupational Health and Safety Training

#### 4.9.2 Job Specific and Other Training Requirements

Various types of training that will be provided to increase the awareness of the project employees include:

- a. Specific Trainings: to be given to personnel that are required to be taken for execution of certain jobs. Before an employee is to be assigned for such kind of jobs, the competency certificate of the employee will be obtained.
- b. Additional Specialist Training: is to be conducted for the security personnel (including on the human rights and the use of force), drivers (Safe driving), and key personnel involved in activities that are conducted on-site and off-site, e.g. along the transport route. Drivers and operators will be trained in defensive driving skills if necessary.
- c. Specialist Training: shall be conducted to plant operators and key personnel involved in activities which involve off-site land clearance, construction or materials handling activities. Training will be provided by professional trainers or experienced employees. All employment records will be kept by HSE Manager and provided to Project Management as requested.

#### 4.10 Accidents, Incidents, Non-Conformances and Corrective and Preventive Action

Root or basic cause analysis is important for evaluating and investigating accidents, incidents and non-conformance and for establishing objectives and targets for a successful corrective action program. Through this process, the actions taken to address non-conformance can result in permanent and positive changes in the EHS Management System and continuous improvement. It is important that employees with health, safety, and environmental responsibility be part of this process to assist in identifying actual and potential health and safety risks, and adverse environmental impacts.

DAI operational controls for handling and investigating potential accidents, incidents, and nonconformance that include:

- Tracking and recording details of accidents, incidents, and non-conformance;
- Root or basic cause analysis;
- Mitigating any health and safety risks and adverse environmental impacts that arise from accidents, incidents, or other non-conformance, including corrective and preventive action;
- Where mitigation is necessary, conducting a health and safety risk assessment and significance evaluation of the environmental aspects of the proposed corrective and preventive action(s) to determine appropriateness and effectiveness; and
- Implementing, recording, and communicating changes arising from the corrective and preventive action, e.g., changes in operational controls.

## 4.11 Records and Records Management

DAI maintains and preserves internal and external records that are critical to design and performance of the EHS Management System. These records include:

- Employee training records;
- Inspection reports;
- Management of change checklists and outcomes;
- Consultation reports;
- Accident, incident, and non-conformance reports and follow-up corrective and preventive action reports;
- Medical test reports (medical test reports and health surveillance reports might be considered confidential);
- Health surveillance reports;
- Cases of occupational disease and compensation claims;
- Audits and assurances;
- Management reviews;
- Other reviews;
- Environmental aspect evaluations;
- Emissions measurements;

- Exposure measurement records;
- Hazard identification, risk assessment and risk control records; and
- Government reports.

## 4.12 Audit and Reporting

## 4.12.1 Internal Auditing

The annual audits will be performed to ensure the requirements of this plan are fulfilled by the Project and relevant subcontractors and suppliers.

## 4.12.2 External Auditing

The conformance with this Management Plan will be subject to periodic assessment as part of the DAI audit program and separately by Project Lenders.

# Accident Investigation Report Form

EMPLOYEE'S NAME:		JOB TITLE:							
SUPERVISOR'S NAME:		ACCIDENT INVESTIGATOR:							
ACCIDENT LOCATION:									
DATE OF ACCIDENT:	TIME:	D	DATE REPORTED: DATE: INVESTIGATED						
DESCRIPTION OF ACCIDENT:									
DESCRIPTION OF INJUR	Y:								
WITNESSES:									
ACCIDENT DIAGRAM/PH	HOTOGRAPHS A	TTA	CHED:		YES	NO			
DESCRIBE DAMAGE TO	EQUIPMENT OR	PRO	OPERTY:		YES	NO			
COMMENT:									
FIRST AID GIVEN:					YES	NO			
EMPLOYEE TREATED BY	Y PHYSICIAN:				YES	NO			
HOSPITALIZATION REQU	UIRED:				YES	NO			
ANY RESTRICTION IN W	ORK DUTY:				YES	NO			
ADDITIONAL INFORMAT	ΓΙΟN:								

# Accident Root Cause Analysis

## Check ALL that apply to this accident

Unsafe Acts	Unsafe Conditions			
Improper work technique	Poor workstation design			
Safety rule violation	Unsafe operation method			
Improper PPE or PPE not used	Improper maintenance			
Operating without authority	Lack of direct supervision			
Failure to warn or secure	Insufficient training			
Operating at improper speeds	Lack of experience			
By-passing safety devices	Insufficient knowledge of job			
Protective equipment not in use	Slippery conditions			
Improper loading or placement	Excessive noise			
Improper lifting	Inadequate guarding of hazards			
Servicing machinery in motion	Defective tools/equipment			
Drug or alcohol use	Insufficient lighting			
	Poor housekeeping			
CORRECTIVE ACTION:				
SUPERVISOR RESPONSIBLE FOR CORRECTIVE ACTION:				
DATE COMPLETED:				

## Global Harmonized Pictograms

HUS Fictograms and Hazards									
Health Hazard	Flame	Exclamation Mark							
<ul> <li>Carcinogen</li> <li>Mutagenicity</li> <li>Reproductive Toxicity</li> <li>Respiratory Sensitizer</li> <li>Target Organ Toxicity</li> <li>Aspiration Toxicity</li> </ul>	<ul> <li>Flammables</li> <li>Pyrophorics</li> <li>Self-Heating</li> <li>Emits Flammable Gas</li> <li>Self-Reactives</li> <li>Organic Peroxides</li> </ul>	<ul> <li>Irritant (skin and eye)</li> <li>Skin Sensitizer</li> <li>Acute Toxicity</li> <li>Narcotic Effects</li> <li>Respiratory Tract Irritant</li> <li>Hazardous to Ozone Layer (Non-Mandatory)</li> </ul>							
Gas Cylinder	Corrosion	Exploding Bomb							
· Gases Under Pressure	<ul> <li>Skin Corrosion/Burns</li> <li>Eye Damage</li> <li>Corrosive to Metals</li> </ul>	<ul> <li>Explosives</li> <li>Self-Reactives</li> <li>Organic Peroxides</li> </ul>							
Flame Over Circle	Environment	Skull and Crossbones							
· Oxidizers	(Non-Mandatory)	Acute Toxicity (fatal or toxic)							

(Insert Company Name)					(In	isert Job Tit	le or Work L	ocation Eval	uated)	
Job Function/Operations	Safety Shoes or Boots	Safety Glasse s	Reflectiv eVest	Har d Hat	Gloves*	Light colored Long Pants	Filtering Facepiec e	Respirator*	Hearing Protection *	Other (Indicate below)
I certify that on the above date(s), I perf hazard assessment. I understand that th addition, proper PPE selection, fitting, u	ormed a haz is document ilization and	ard assess facilitates communi	ment for the compliance ication must	e above e to the ł : be acco	named con nazard asse mplished i	mpany. This do essment require n accordance w	cument cons ements of O vith other re	stitutes the fi SHA 29 CFR 19 quirements o	ndings and ce 910.132 (d)(2 f 29 CFR 1910	rtification of the ) <u>ONLY</u> . In Subpart I.
Signatur	e (above)					Company Name (above)				
<b>R</b> = Required <b>REC</b>	= Recomm	nended	<b>P</b> = Re	quired	in Poste	d Areas	<b>A</b> = As Rec	ommendec	l by Safety I	Data
				She	eet					
* = See Supervisor for rec	ommende	d type	Other	= (e.g.,	safety h	arness, lanya	rd, or othe	er		
	special	needs p	rotective e	equipm	ent)					

# Hazard Assessment & Personal Protective Equipment (PPE) Selection Worksheet

## Personal Protective Equipment (PPE) Requirements Location/Job Title

Job Function/ Operation	Safety Shoes	Safety Glasses	*Chemical Splash Goggles	Face Shield	*Apron or Smock	*Gloves	Dust Particle Mask	*Respirator	HardHat	*Hearing Protection	Other (harness, lanyard, etc.) or special
											needs

\* See supervisor for recommended type