



REPUBLIC OF TURKEY
MINISTRY OF TRANSPORT
AND INFRASTRUCTURE



ÇUKUROVA REGION AND İSKENDERUN BAY RAILWAY CONNECTION PROJECT

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT PLAN

CNR-ADN-OHSMP-002

Rev.02

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Altyapı Yatırımları Genel Müdürlüğü



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ABBREVIATIONS & DEFINITIONS

AFR	Accident Frequency Rate
ASR	Accident Severity Rate
Contractor	Expert Firms responsible for the construction of the Project on behalf of DGII
DGII	General Directorate of Infrastructure Investments
EHS	Environmental, Health, and Safety
ESIA	Environmental and Social Impact Assessment
ESIRT	Environment and Social Incidence Response Toolkit
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
HAZID	Hazard Identification
HAZOP	Hazard and Operability Study
HS	Health and Safety
KPI	Key Performance Indicators
m³	Meter cube
MoEUCC	Ministry of Environment, Urbanization, and Climate Change
OHS	Occupational Health and Safety
OHSMP	Occupational Health and Safety Management Plan
PPE	Personal Protective Equipment
QRA	Quantitative Risk Assessment
RCA	Root Cause Analysis
WB	World Bank

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1 INTRODUCTION

This plan outlines the principles of Occupational Health and Safety Management for the land preparation and construction activities of the Çukurova Region and İskenderun Bay Railway Connection Project.

The Occupational Health and Safety Management Plan (OHSMP), one of the documents included in the ESIA package, delineates the measures and controls formulated in alignment with the mitigation hierarchy to manage the impacts identified during the impact assessment process. It also establishes the implementation timeline, assigns roles and responsibilities, and outlines reporting and monitoring requirements.

Given the evolving nature of environmental and social conditions throughout the project's progression, the OHSMP remains a living document subject to regular review and updates. Both DGII and all contractors/sub-contractors share the responsibility for implementing the OHSMP, including the overarching principles within it, as well as the more detailed plans and procedures.

Before commencing construction, the Contractor will craft its own OHSMP, addressing the Occupational Health and Safety aspects associated with the project.

1.1 Scope

The main purpose of the OHSMP is identification of measures and practices for managing occupational health and safety ("OHS") hazards and risks relevant to the Facility's operations and determination of roles and responsibilities within that scope.

Specifically, the purpose of this OHSMP is to;

- Determining the working and environmental conditions of the project within the national and international standards,
- Define measures for protecting workers from injury, illness, or impacts associated with exposure to hazards while working,
- Define monitoring and reporting procedures,
- Define training requirements,
- Eliminate, or whenever elimination is not possible, reduce OHS risks and impacts,
- Define applicable legislative requirements and standards (Project Standards) relevant to the plan, and
- Define roles and responsibilities relevant to the plan.

The measures, practices, managerial actions, and implementations provided in this plan are applicable to all Project employees, subcontractors and service providers' personnel, and visitors accordingly. Contractors are also required to adopt OHSMP requirements within their management plans. Roles and Responsibilities for the implementation of OHSMP are presented in Chapter 2.

The OHSMP has been prepared in line with IFC Performance Standards, WB Environmental and Social Standards, Turkish regulatory framework, WBG General and relevant Sector Specific EHS Guidelines, and other applicable Good International Industry Practices.

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1.1 Objectives

OHSMP has been developed to establish strategies for managing occupational health and safety (“OHS”) hazards and risks relevant to the Facility’s operations. These Key Performance Indicators (KPIs) play a crucial role in evaluating the OHSMP effectiveness and providing guidance for management strategies. The selection of specific KPIs will depend on the project’s objectives, scope, and priorities.

The KPIs used to monitor the implementation of OHSMP are outlined as follows. Performance indicators for the implementation of OHSMP are given below and related indicators will also be included in the Project’s Environment, Health and Safety (EHS) procedures and plans:

OHS Management

Table 1. Key Performance Indicators for OHSMP

Key Performance Indicator	Timeframe	Record	Responsibility
H&S Audit and Review Schedule	At least once a week	H&S Records Audit Reports	HS Expert
H&S Policies communicated to all project personnel	At least once a month	Minutes of Meetings Training Records	HS Expert
Management engagement in H&S Meetings/ Reviews to demonstrate visible leadership	At least once a month	Minutes of Meetings	Project Manager
Weekly H&S Meetings	At least once a week	Minutes of Meetings	HS Expert
H&S Walkdowns	At least once a week	H&S Records Audit Reports	HS Expert
H&S Induction - All project site personnel received before commencing the work at site	Before starting the works	Training Records	HS Expert
Emergency Drills	Twice a year	H&S Records Audit Reports	Project Manager
H&S Reporting	Quarterly	Quarterly Monitoring Reports	Project Manager

Lagging Indicators

Table 2. Key Performance Indicators for Lagging

Key Performance Indicator	Timeframe	Record	Responsibility
No of fatalities	0 in a year	H&S Records Incident Reports	Project Manager
Lost Time Incident	0 hours in a year	H&S Records Incident Reports	Project Manager
Total Recordable Injury	0 hours in a year	H&S Records Incident Reports	HS Expert
Incidents reported and investigated	After each incident	H&S Records Incident Reports	HS Expert

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2 ROLES AND RESPONSIBILITIES

The participation of everyone in implementing, sustaining, and consistently enhancing OHS processes stands as the cornerstone for the successful accomplishment of the management's quality objectives. Hence, all project personnel are obligated to acquaint themselves with the contents of this plan and actively engage in the implementation, maintenance, and enhancement of the management system. The project manager and all key personnel hold the responsibility of ensuring the fulfilment of quality requisites for the tasks under their jurisdiction.

Moreover, new staff members and individuals assigned new responsibilities are to be thoroughly oriented not only with the general specifications outlined in this plan but also with the specifics of their roles and responsibilities.

2.1 Project Manager

- Demonstrates the values outlined in this H&S plan through H&S Leadership.
- Provides appropriate and adequate resources (e.g., personnel, equipment, and budget) to ensure the H&S department's full functionality.
- Regularly reviews H&S performance to offer support and commitment, while identifying and effectively managing areas of concern.
- Actively participates in the execution of the safety program (e.g., audits, safety committees, training, etc.).
- Acknowledges individuals who consistently exhibit commitment and proactive leadership in H&S matters.
- Ensures that H&S is the foremost topic in all Project-related meetings.
- Continuously reviews H&S performance, providing support and commitment to manage identified H&S concerns.
- Establishes coordination to address non-compliance issues beyond the scope of the line organization's resolution.
- Takes active part in the implementation of the safety program (e.g., audits, safety committees, training, etc.).
- Approves specific work method statements and risk assessments for relevant tasks.
- Coordinates with the H&S Expert and facilitates weekly H&S meetings.
- Sets a personal example and contributes to the proactive promotion of safety as a personal objective.
- Ensures that all on-site subcontractors are informed about and trained in the Project's H&S requirements.
- Actively participates in inspections of construction sites, camps, and offices.

2.2 H&S Expert

- Offers necessary office H&S support and assistance when needed.
- Regularly evaluates and monitors safety performance on a weekly and monthly basis.
- Develops all essential OHSAS 18001 Systems Documents.
- Possesses comprehensive understanding of the leadership, objectives, and expectations outlined in the DGII HSSE Policies.
- Creates fundamental H&S strategies, procedures, instructions, etc.
- Efficiently oversees the safety personnel under their supervision, providing suitable guidance and training as required to optimize their effectiveness on site.
- Institutes an inspection scheme and schedule involving all levels of site supervision, office personnel, and others exposed to the defined stages of the project.
- Implements an H&S training program.

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- Reviews inspection outcomes at DGII to pinpoint safety concerns and shortcomings, offering insights to Supervisors.
- Coordinates the investigation of any incidents (such as LTI, near misses, property damage, etc.) as deemed necessary.
- Identifies relevant trends in incident investigations and ensures that agreed remedial actions are carried out and documented.
- Reviews, compiles, analyzes, and interprets contractor Key Performance Indicator data to discern causes, trends, and relationships related to injuries/illnesses, major incidents with high severity potential, and all other unforeseen events.
- Inspects the workplace through visual observation and mechanical equipment testing to identify and report potential violations of the aforementioned H&S standards.
- Collects evidence and prepares reports on safety violation complaints, occupational accidents, and fatalities.
- Scrutinizes accident, injury, and illness reports to identify problem areas associated with employee/contractor safety.
- Participates as a team member in all Incident Investigation committees as required.

2.3 Staff of Construction Contractor

- Learn, comprehend, and adhere to all applicable Health & Safety procedures, rules, and practices, whether at the workplace or outside it.
- Assume responsibility for their personal safety and the safety of colleagues, by way of their actions or inactions.
- Maintain a constant awareness of their work environment, promptly informing supervisors about hazardous situations. If the potential for harm arises, they should cease work and inform their immediate superiors.
- Adhere to all health and safety requisites, practices, and other initiatives consistently.
- Properly utilize and upkeep provided Personal Protective Equipment, promptly reporting any deficiencies and replacing items as needed.
- Report any substandard procedures or conditions to their immediate supervisors.
- Understand that any employee jeopardizing their safety, health, or that of others may face disciplinary action, including immediate termination.
- Consistently work in a safe manner, without exception.
- Halt ongoing or imminent work if they perceive it to be 'at risk' or unsafe.

2.4 Social Team

- Manages and implements the social issues indicated in this Plan,
- Manages the grievance mechanism,
- Keeps records relating to grievances received and their resolution,
- Conducts regular inspections of grievance mechanism,
- Reports to the Project Manager on the performance of the implementation of the social aspects of this Plan.

3 LEGAL FRAMEWORK

3.1 National Legislation

The National Legislation in relation with environmental, social, health and safety management constructing the legal basis for the Project are identified in the following sections.

The Occupational Health and Safety Law No. 6331, which was issued in the Official Gazette No. 28339 on June 30, 1983, describes duties, authority, responsibility, rights and obligations of employers and workers, ensure occupational health and safety at workplaces and improve existing health and safety conditions. The Law provides a legal framework for the development of regulations in accordance with national and international standards.

The national laws and regulations that the project is subject to on occupational health and safety is as follows:

Table 1. Environmental Regulations in Türkiye

Community and Occupational Health and Safety and Labor and Working Conditions		
Name	Official Gazette Date	Numbered
Regulation on Occupational Health and Safety Risk Assessment	29.12.2012	28512)
Regulation on Occupational Health and Safety Services	29.12.2012	28512
Regulation on Duties, Authority, Responsibilities and Trainings of Occupational Health and Safety Specialists	29.12.2012	28512
Regulation on Procedures and Principles of Occupational Health and Safety Training of Employees	15.05.2013	28648
Regulation on the Occupational Health and Safety Committees	18.01.2013	28532
Regulation on the Health and Safety Measures to be taken in Workplace Buildings and Additions	17.07.2013	28710
Regulation on Protection of Buildings from Fire	19.12.2007	26735
Regulation on the Emergency Cases in Workplaces	18.06.2013	28681
First Aid Regulation	29.07.2015	29429
Regulation on Protection of Workers from Dangers of Explosive Environments	30.04.2013	28633
Communique on Hazard Classes List related to Occupational Health and Safety	26.12.2012	28509
Regulation Concerning the Protection of Workers from Risks Associated with Noise	28.07.2013	28721
Regulation Concerning the Protection of Workers from Risks Associated with Vibration	22.08.2013	28743
Regulation on Health and Safety Conditions in the Use of Work Equipment	25.04.2013	28628
Regulation on Occupational Health and Safety on Construction Works	05.10.2013	28786
Regulation on Health and Safety Regarding Temporary and Time Limited Works	23.08.2013	28744
Regulation on Health and Safety Precautions Regarding Working with Chemicals	12.08.2013	28733
Regulation on Health and Safety Signs	11.09.2013	28762
Regulation on Dust Management	05.11.2013	28812
Regulation on Safety Information Forms Regarding Hazardous Materials and Mixtures	13.12.2014	29204
Regulation on Personal Protection Equipment	01.05.2019	30761
Regulation on Usage of Personal Protective Equipment in Workplaces	02.07.2013	28695
Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces	13.07.2013	28706

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Regulation on the Provisions of Occupational Health and Safety Training of Employees	29.12.2012	28512
Regulation on the Control of Polychlorinated Biphenyl and Polychlorinated Terphenyls	27.12.2007	26739
Regulation on Transportation of Explosives via Highways	24.04.2019	30754
Act on the Procedures and Principles on Manufacture, Import, Transportation, Storing, Sales, Usage, Disposal and Control of Explosive Materials, Hunting Equipment and Similar Exempted from Monopoly	29.09.1987	19589
Regulation on the Implementation of Law Concerning Private Security Services	07.10.2004	25606



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3.2 International Standards

As the World Bank is the lending institution for the project, it should be in line with National Legislation as well as international standards and good industrial practices.

IFC has established Environmental and Social Performance Standards to define its clients' responsibilities for managing their environmental and social risks. During the investment period, the borrower is required to comply with these standards. The international standards and guidelines applicable to this OHSMP are listed below:

- WB ESS 1: Assessment and Management of Environmental and Social Risks and Impacts
- WB ESS 2: Labor and Working Conditions
- WB ESS 4: Public Health and Safety
- WBG General EHS Guidelines (2007)
- Articles Relating to Occupational Health and Safety in the Universal Declaration of Human Rights
- Occupational Health and Safety in EU Directives
- Occupational Health and Safety in EU Progress Reports
- ILO Conventions ¹
 - ◆ Convention on Occupational Health and Safety No. 155
 - ◆ Convention on Occupational Health Services Agreement No. 161
 - ◆ Framework Convention for the Improvement of Occupational Health and Safety No. 187
 - ◆ Convention on Health and Safety in Construction Works No. 167
 - ◆ Convention on Health and Safety in Mines No. 176
 - ◆ Convention on Freedom of Association and Protection of the Right to Union No. 87
 - ◆ Convention on Right to Organize and Collective Bargaining No. 98 on the
 - ◆ Convention on Forced Labor No. 29
 - ◆ Convention on the Abolition of Forced Labor No. 105
 - ◆ Convention on Minimum Age No. 138
 - ◆ Urgent Action No. 182 Convention on the Prohibition and Elimination of Worst Forms of Child Labor
 - ◆ Convention on Equal Pay Agreement No. 100
 - ◆ Convention on Discrimination (Employment and Occupation) No. 111

¹ Türkiye is a party of all 8 fundamental (Freedom of Association and Protection of the Right to Organize Convention (No. 87), Right to Organize and Collective Bargaining Convention (No. 98), Forced Labor Convention (No. 29), Abolition of Forced Labour Convention (No. 105), Minimum Age Convention (No. 138), Worst Forms of Child Labor Convention (No. 182), Equal Remuneration Convention (No. 100), and Discrimination Convention (No. 111)), 3 of 4 priority, and 48 of 177 technical ILO Conventions.

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4 MITIGATION MEASURES AND MANAGEMENT CONTROLS

4.1 Risk Assessment and Management

Risk assessment and the effective management of risks stand as pivotal processes within Health & Safety (H&S) management, fundamentally contributing to the achievement of the Project's H&S objectives. This approach revolves around the meticulous identification, evaluation, and control of H&S-related risks across all Project undertakings.

This systematic approach involves the identification of hazards, their meticulous documentation, the undertaking of comprehensive risk assessments, and the formulation of risk control measures aimed at either eliminating or reducing risks to a level that is deemed "As Low as Reasonably Practicable (ALARP)."

The main categories of activity for which risk assessments are required on a case-by-case basis are:

- Hazard Identification (HAZID);
- Hazard and Operability Study (HAZOP);
- Quantitative Risk Assessment (QRA);
- Layout reviews;
- Design and engineering reviews;
- Utilization of an Action Tracking Register.

In preparation for construction, the Contractor will execute a series of risk assessment and risk management activities. This encompasses organizing and facilitating a HAZID study before construction, followed by a HAZOP exercise jointly undertaken by DGII and the Contractor.

The HAZOP process will engage in a collaborative risk assessment endeavor, assessing risks associated with equipment procurement, facility design, and operational aspects upon project completion. This process will involve brainstorming, identification, discussion, and agreement among various project teams regarding appropriate management controls for hazards arising during the execution of work activities in this phase.

Efforts will be undertaken to address potential issues before commencing work or mobilizing to the site. This underscores the importance of determining risk levels for all activities and implementing suitable management controls.

The Contractor is required to continue the development of these assessments to ensure that risks are mitigated prior to execution of the work. The Contractor shall develop a comprehensive training program that will be in compliance with Turkish H&S Legislation and the requirements of DGII.

4.2 Hazard Identification

The identification of hazards is the responsibility of all personnel who access all project areas. Contractor must ensure that hazards with potential to harm personnel are identified, risk assessed and controlled to reduce the risk.

Contractor will provide a range of tools to assist in the identification, assessment and control of hazards and risks pertaining to activities within the project area.

Risk assessment framework is in place to provide for the efficient assessment of risks, and allow for the implementation of controls commensurate with the level of risk identified.

Hazards and risks identified through other means such as:

- throughout the course of a work activity;
- during workplace inspections;
- during pre-start inspections of equipment;
- through Incident Analyses;
- during auditing activities; and
- via a range of other methods.

4.3 Procedures and Measures for Relevant Hazards and Dangerous Works

In this Section, measures, instructions, and outlines of managerial actions and implementations in general are presented in Table 2:

Table 2. Occupational Health and Safety related Measures, Managerial Actions, Instructions, and Implementations

Hazards / Works	Measures, Managerial Actions and Implementations
Machine Use (construction phase)	<ul style="list-style-type: none"> ▪ Not using unprotected machinery and equipment ▪ Audit ▪ Trainings ▪ Performing personnel rotations in a planned and controlled manner, providing prior orientation training for the machine to be worked on ▪ Improving working conditions ▪ Acting according to the operating instructions of the machine to be used ▪ Introducing a key lock system against uncontrolled use.
Maintenance and repair operations on machines (construction phase)	<ul style="list-style-type: none"> ▪ Using a warning sign indicating that work is being done in the relevant section, ▪ Taking safety precautions by closing the switch ▪ Using a dangerous energy lock system ▪ Training ▪ Audit and control ▪ Training not to interfere with moving parts and apparatus, ▪ Warning the personnel not to do the job for which they are not trained ▪ General OHS training ▪ Warning signs ▪ Monitoring and periodic controls of used pressure tubes, hoses, spacers ▪ Using PPE (Mask, glasses, etc.) ▪ Taking a fire extinguisher with the personnel while taking samples from the rolled sheets ▪ Using the right tool for the right job ▪ Using hand tools in accordance with the instructions and with correct methods
Working at height	<ul style="list-style-type: none"> ▪ Personal protective (Seat belt) use and follow-up ▪ Controlling these works by filling in the "safe work permit" form ▪ Allowing and controlling only trained personnel to work at height ▪ Making handrails to prevent falling on the sides of walkways
Electrical maintenance and repair operations (construction and operation phase)	<ul style="list-style-type: none"> ▪ Using a warning sign indicating that work is being done in the relevant section ▪ Taking safety precautions by closing the switch
Infectious Diseases and Outbreak Management (Covid-19)	<ul style="list-style-type: none"> ▪ Risks related to the Covid-19 outbreak have been determined for all departments through risk assessment studies. ▪ Details of managerial actions and mitigation measures related to Covid-19 are presented in Section 4.12. It should be noted here that national regulatory requirements under Covid-19 risk detection and emergency management are in line with IFC's Interim Recommendations. In addition, the Covid-19 workplace guidelines of the Ministry of Health, which must be followed at the Facilities, are in line with the WHO guidelines and recommendations. Therefore, national regulatory requirements, WHO guidelines and other applicable international standards will be continually monitored to update this OHSMP and other relevant procedures, plans and checklists as needed.

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4.4 Incident Management

Contractor must ensure immediate response to and timely reporting, analysis and communication of all incidents to DGII.

All personnel have a responsibility to report all incidents regardless of severity, to their supervisor as soon as practicable.

All incidents shall be recorded in the approved incident reporting system, and be analyzed to a level commensurate with the actual consequence or potential risk rating, whichever is higher.

The general flow and steps to be followed in case of an accident / incident and near miss investigation and aftermath are presented below:

4.4.1 Accident Investigation and Reporting

Investigation is necessary to prevent the accident from reoccurring. The aim of the process is to identify the main and administrative consequences of the accident by evaluating the relevant factors and evidence by the investigation team. The process consists of the following steps:

- In case of an occupational accident, "Work Accident Report Form" is filled by the first supervisor of the casualty in line with the statements of the witnesses and their respective supervisors and the EHS Specialist is informed.
- In case the accident occurs during night shifts, the relevant form will be filled by the Shift Supervisor and the EHS Specialist will be informed in the morning of the same day.
- If the casualty first goes to the health unit for first aid, the necessary information will be given to the first supervisor by the Health Officer. In cases where the casualty's supervisor cannot be reached and urgent referral is required, the health unit will inform the security personnel to inform the relevant supervisor.
- First of all, information about the casualty (name, surname, age, duty, working time until the accident) and information about the accident (place, date, shift, accident machine / department) are written in the form.
- The formation of the cauldron is explained in detail.
- The form is signed by the casualty's relevant superiors and the witness(s).
- The completed form is sent to the EHS Specialist.
- One copy of the EHS Specialist "Work Accident Report Form"; It forwards it to the personnel unit/administrative affairs.
- The way the accident occurred, and the place of the accident are examined, and the causes of the accident are determined by the accident investigation team (consisting of the EHS Specialist, Related Department Supervisor and Maintenance Officer) and recorded in the "Occupational Accident Investigation Form".
- On the day the casualty returns to work, the EHS Specialist fills in the "Occupational Accident Declaration Form" to obtain detailed information about the occurrence of the accident.
- Occurring accidents are reported to the Regional Labor Directorate by the Personnel and Administrative Affairs Chief within 3 working days at the latest, with the "Workplace Accident Notification Form".
- Persons responsible for the measures and actions to be taken in relation to the Accident are followed up by the EHS Specialist by writing to the "Improvement Form".
- The results of the opened improvement forms are reviewed and followed up at the Weekly meetings and OHS&E board meetings.
- All these forms are archived by the EHS Specialist in the victim's file.

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- Following the completion of all reports regarding the accident, a final report is prepared by the EHS Specialist and the relevant units are informed.

4.4.2 Near Miss Reporting

- After an incident, when no injuries or environmental pollution has occurred, but if no precautionary or corrective action is taken, situations/incidents that may cause an accident or cause environmental pollution that may require medical attention are reported with the "Near Miss Form".
- Persons and/or persons who have witnessed or experienced any of the above-mentioned situations fill out the form and hand it over to the EHS Specialist or put it in the "Near Miss" boxes.
- These filled forms are examined by the EHS Specialist and the necessary improvement works are determined.
- In case the improvement activities are of project size, they are brought to the OHS&E committee and discussed.

4.4.3 Assessment

All these Accident and Near Loss reports will form one of the agenda items of the OHS&E Board. In addition, the causes and results of accidents will be shared with the employees by reporting monthly and annual periods.

Events encountered during an accident or near loss will be evaluated, and if necessary, the effectiveness of risk assessments and environmental impact assessments will be discussed and revisions will be made.

4.5 Injury Management

Contractor is committed to return workers to meaningful and productive employment at the earliest possible time.

4.6 Fitness for Duty

Contractor employees will undergo a medical assessment to ensure they are medically fit to perform their roles before commencing work, and these assessments will be conducted annually thereafter.

Employees are required to inform their supervisor of any pre-existing injuries or illnesses that could influence their performance or have the potential to affect safety and health in the workplace. A medical assessment might also be necessary to assess related risks or limitations.

The Contractor will take steps to ensure that work activities do not exacerbate disclosed injuries or illnesses or jeopardize the safety and health of the workplace.

4.6.1 Health Surveillance

The Contractor is required to ensure that health assessments are conducted for all personnel involved in specific tasks with the potential for occupational exposure if the following conditions are met:

- There is a possibility of an identifiable disease or other adverse health impact linked to the employee's exposure.
- There is a reasonable likelihood that the disease or adverse effect could manifest under the specific work conditions.

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- Established techniques exist for detecting signs of the disease or adverse effect.

Health Surveillance is implemented to monitor potential health effects that could arise due to occupational exposures exceeding accepted exposure standards. If a risk assessment indicates that there is a reasonable likelihood of employees being exposed to an occupational hazard at levels surpassing accepted thresholds, management must initiate targeted health monitoring to evaluate actual exposures and their impact on personnel.

4.6.2 Fatigue Management

Fatigue is characterized as a compromised physical and/or mental state resulting from an individual's exposure to physical and mental exertion, along with insufficient or disrupted sleep.

The Contractor acknowledges that fatigue can emerge due to the duration and arrangement of work, activities, and travel/commute time. Since it is additionally impacted by factors beyond the workplace, such as familial obligations, stress, lifestyle, personal health, etc., managing fatigue is a joint responsibility shared between management and the individual.

4.6.3 General Hazard Prevention

The Contractor recognizes the risks linked to project area operations and establishes measures for reporting and addressing hazards.

4.6.4 Working Alone

In instances where individuals are tasked to work alone, the tasks and circumstances will be subjected to a risk assessment, and a secure work protocol will be devised.

4.6.5 Manual Handling

For tasks involving manual handling, a comprehensive risk assessment will be conducted to pinpoint hazards. Each hazard will be evaluated for its potential to cause injury, and suitable controls, including relevant manual handling training, will be implemented.

The Contractor is obligated to ensure the availability of appropriate powered mechanical equipment, machinery, and lifting aids, enabling personnel to circumvent strenuous manual tasks.

4.6.6 Hygiene and Sanitation

The Contractor is obligated to provide appropriate facilities for personnel, encompassing:

- Toilet facilities situated within a reasonable proximity to each workspace.
- Sanitation and hygiene amenities those are well-maintained.
- Eating areas characterized by dryness, cleanliness, good ventilation, and equipped with sufficient seating, tables, hand washing, and waste disposal amenities.
- Accessible potable water supplies for all personnel.

Personnel are strictly prohibited from deliberately polluting work areas or misusing/damaging any provided sanitation or hygiene facilities.

4.6.7 Occupational Hygiene

The Contractor is obligated to ensure a dedicated commitment to the monitoring and reporting of occupational health hazards and hazardous occupational environments. They

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must also enact controls to mitigate risks, aligning with all relevant regulations and, wherever feasible, accepted best practices.

Specific assessments for occupational hygiene will adhere to approved methodologies and relevant standards. Continual assessments will be carried out, and necessary controls will be instituted for the subsequent occupational health hazards:

- Airborne contaminants, such as metal dusts, respirable silica, and asbestos fibers.
- Occupational noise exposure.

The process of risk assessment, evaluation, and control for occupational hazards can encompass the following overarching hazard categories:

- Chemical hazards, encompassing fumes and vapors.
- Physical hazards, including those tied to heat, cold, noise, vibration, ionizing radiation, ultraviolet light, and workplace lighting.
- Biological hazards, encompassing mosquito-borne viruses, potable water contaminants, and other waterborne risks, such as legionella.
- Ergonomic hazards, incorporating manual handling risks.

4.6.8 Hazardous Substances

The Contractor is required to guarantee the safe management of hazardous substances and minimize the level of exposure to personnel, property, and the environment in alignment with ESIA requirements.

A risk assessment will be carried out to evaluate the health risks for personnel. Health Surveillance may be necessary to monitor the health of personnel exposed to significant risks from hazardous substances. Material Safety Data Sheet forms will be located near each chemical and hazardous substance.

4.6.9 Personal Protective Equipment (PPE)

The Contractor must ensure that all personnel and visitors wear or utilize provided personal protective equipment when it's necessary for their safety. Personal protective equipment will be properly fitted, and users will receive instructions on its proper use. All provided personal protective equipment must conform to relevant standards and be adequately maintained; if it becomes defective, it must be replaced.

4.6.10 Safety Signs

The Contractor must ensure the adequate posting of safety signs in workspaces and pathways to prevent incidents, indicate hazards, mark the location of safety and fire protection equipment, and provide guidance and instructions for emergency procedures.

4.6.11 Fall Prevention

The Contractor must ensure that all personnel engaged in activities with a potential for falling from one level to another do so under controlled conditions to minimize the risk of personal injury.

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4.7 Task Specific Hazard Prevention

4.7.1 High Risk Work

The Contractor is required to identify tasks categorized as High Risk Work, as specified in the Danger Classes List Communique Related to Occupational Health and Safety (O.G. 25.11.2009/ 27417). For such tasks, the Contractor must develop specific procedures or undertake a risk assessment to ensure the implementation of adequate controls that eliminate, prevent, or manage potential risks effectively.

Personnel performing High Risk Work should possess appropriate training in line with the provisions outlined in the Regulation on the Procedures and Principles of Employee Health and Safety Trainings (O.G. 15.03.2013 / 28648).

4.7.2 Electrical Work

An electrical logbook will be maintained at each operational site to document plans, executed work, and other pertinent information. Electrical equipment will be equipped with fully functional current isolating devices that can be securely positioned in the isolating mode whenever possible. In situations where these features are not feasible, a risk assessment shall be conducted to determine suitable alternative controls, and the findings will be communicated to affected personnel.

4.7.3 Scaffolding

Scaffolding may be employed to support access platforms, working platforms, personnel, machinery, or other materials. Individuals erecting scaffolding are responsible for ensuring that the designated scaffold area is clear of debris, materials, or equipment not immediately required.

The Contractor will ensure that personnel do not utilize incomplete scaffolding. In instances where incomplete scaffold structures are left unattended, danger tags, warning signs, or other suitable measures will be employed to caution personnel and discourage unauthorized entry.

4.7.4 Driving Safety

The Contractor will guarantee that personnel authorized to drive within Contractor-controlled areas or operate Contractor vehicles on public roads possess valid driver's licenses and adhere to relevant road regulations corresponding to the particular vehicle class.

All personnel operating vehicles on Contractor premises are required to adhere to all traffic directives, adapt their driving to conditions, and comply with the applicable Traffic (Transportation) Management Plan.

4.8 Access and Site Security

Access to the project area will be restricted by the Contractor, and necessary precautions will be taken, such as fencing the area and installing relevant signs.

The Contractor holds the responsibility to ensure the full implementation of all site security requirements identified in the Risk Assessment for this activity.

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4.9 Site Induction and Site Safety Rules

Site inductions will be conducted by the contractor. The arrangements for site inductions for this project will include:

- New workers arriving at the work site will receive a briefing on the site safety rules, encompassing the site logistics plan, potential hazards, evacuation procedures, emergency and first aid protocols, and the roles and responsibilities of all individuals on-site.
- A Site Induction Briefing and Site Safety Rules will be formulated in both Turkish and English.
- A record will be maintained of all individuals attending the Site Induction briefing.
- Visitors will receive a concise site induction, either verbally or through written means, and will be accompanied throughout their visit to the site.

4.10 Workplace Inspections

Weekly inspections of the project site are essential. The Contractor will conduct weekly inspections of the entire work site, with particular focus on:

- Equipment
- Scaffolds
- Small tools
- Lifting devices
- Electrical cables
- Fire extinguishers
- First aid kits

Records of these inspections will be maintained by the H&S Expert.

4.11 Railway Operation

It's crucial to recognize that health and safety concerns in railway operations are closely linked to the measures undertaken for Community Health and Safety, as well as Emergency Preparedness and Response. Establishing a safety management system supported by a genuine safety culture within a railway undertaking is pivotal for driving future safety enhancements.

The sufficiency of railway safety can be monitored by assessing:

- Train collisions
- Train derailments
- Level-crossing accidents
- Accidents involving individuals
- Fires in rolling stock
- Other accidents

To prevent incidents of this nature, significant occupational health and safety measures need to be implemented, including:

- Major railway failures that could lead to accidents, such as broken wheels or axles, and broken rails or track buckling, will be overseen through the monthly control of trains and OHS Personnel of TCDD.
- The adequacy of the signaling system will be assessed daily.
- No personnel will engage in work without completing the necessary training.
- Daily inspections will be conducted for Level Crossings.

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- Operations will be immediately halted upon the reporting of any factors that could potentially lead to accidents.

4.12 Covid-19 Related Measures and Outbreak Management

The steps to be followed for Covid-19 are given below:

- In case of detection of a person or persons showing some or most of the Covid-19 symptoms, the Health Unit is immediately informed of the situation,
- Every place that the personnel use and come into contact with in the workplace is disinfected at the frequency determined by the incumbent Sterilization Team.
- All employees are provided to use masks. People are prevented from following social distance and contacting each other.
- The First Supervisor/Shift Supervisor informs the Health Unit Personnel, takes precautions on the issues specified in the Emergency Plan, and acts on the specified issues in case of an epidemic.
- Health Unit Personnel follows the test results by referring the person suspected of epidemic disease to the determined pandemic hospital.
- In case the test is positive, it identifies the people who are thought to be in contact with the patient, informs them and ensures that they are guaranteed.
- The Emergency Supervisor contacts the Provincial/District Health Directorate and acts according to the instructions given.
- In the Occupational Physician, the people contacted by the case and the suspects are asked to quarantine themselves at home as a precaution until the test result is clear. Those who do not show symptoms for 14 days return to work. People aged 50 and over and people with chronic diseases are sent to their homes after being on leave.

5 TRAINING, REPORTING AND MONITORING

5.1 Training

Contractor will be committed to providing employees with the necessary training to perform their work safely and effectively.

All personnel are required to complete the induction training. This induction informs participants of the minimum safety, environmental and security requirements to gain access to project area.

On completion of the Induction Training, personnel shall be suitably inducted to their work area. They shall be informed of the hazards and controls, the location of firefighting and first aid equipment, and emergency response and evacuation procedures as a minimum.

It will be the responsibility of the H&S Expert to control and determine the training needs of the personnel, prepare the training program and have it approved by the project manager. Trainings may be renewed or additional trainings may be provided if it is seen necessary by H&S expert or Project Manager in case of a significant incident etc.

Details of the trainings within the scope of requirements of the OHS Management and specifically of this OHSMP are presented in Table 3:

Table 3. Occupational Health and Safety Trainings

Training Topic	Trainer	Participants	Period	Content
Induction Training	OHS Team	Newly-recruited Personnel of Project Owner Personnel of newly-contracted subcontractor-service provider.	Whenever needed	General safety orientation and an overview of Facility safety rules including the requirements of this OHSMP
Toolbox Talks	OHS Team and representatives from technical / manufacturing departments.	All employees	At least once in a week.	Safe work instructions related to the upcoming works to be performed by the employees.
Covid-19	OHS team and Occupational Physician	All employees	At least annually or whenever a new development occurs related with the outbreak or whenever refreshing needed	Rules to be obeyed regarding the outbreak, new developments, health issues, community health and safety etc.
OHSMP and ISO:45001 General Information Training	OHS Team	All personnel	Once in a year	General implementation process and relevant responsibilities regarding OHSMP and ISO:45001
OHSMP and ISO:45001 Internal Auditor Training	OHS Team	Internal Auditors	Once in a year and/or when a new participant hired	Provision of details of responsibilities of internal auditors who shall continuously audit / control OHS aspects during manufacturing
Covid-19 Inspection	OHS team and	Covid-19 Inspection	Once in a year	Provision of details

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Training Topic	Trainer	Participants	Period	Content
Team Training	Occupational Physician	Team members	and/or when a new participant hired	of responsibilities of Covid-19 Inspection Team members who shall continuously inspect Covid-19 aspects of all Facility operations.
Risk Assessment Training	OHS Team	Risk Assessment Team	In accordance with the risk assessment update and review period requirements.	Risk assessment methodologies and general terms of the risk assessment process
Job Specific Trainings (e.g., forklift usage)	Relevant accredited training/certification companies via direction of OHS Team	Relevant personnel	Whenever refreshing needed and whenever new personnel recruited	Safe usage of the specific equipment
Hazard Awareness Trainings	OHS Team and manufacturing supervisors	Relevant personnel	Whenever refreshing needed	Safety rules regarding hazards and dangerous tasks such as works at height, works with chemicals, workplace noise, ergonomic hazards etc.
OHS Board Training	OHS Team and Occupational Physician	OHS Board Members	Once in two years	Details on responsibilities and authorities of the OHS Board.
Vocational Competence Certificate Training	Relevant accredited training/certification companies via direction of OHS Team	Relevant personnel	Whenever refreshing needed and whenever new personnel recruited	In addition to competency, details of safety issues of the relevant work.
Other legally obliged periodical OHS Trainings	OHS Team & Occupational Physician	All employees	At least once in two years	General Issues, Health Issues, Technical Issues.

5.2 Reporting and Monitoring

Daily inspections will be conducted under the coordination of the H&S Expert. All serious incidents including near misses will be reported, investigated, and documented immediately to DGII and WB. In this scope, WB and DGII will be promptly notified of any incident or accident related to the Project which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers including but not limited to; incidents and accidents encountered during construction works, environmental spills, etc.

Sufficient detail will be provided regarding the incident or accident, findings of the Root Cause Analysis (RCA), indicating immediate measures or corrective actions taken or that are planned to be taken to address it, compensation paid, and any information provided by any contractor and supervision consultant, as appropriate. It will be ensured that the incident report is in line with the WB Environment and Social Incidence Response Toolkit (ESIRT). Subsequently, as per the Bank's request, a report on the incident or accident and propose any measures to prevent its recurrence will be prepared.

All contact and reporting to government officials is to be done by the H&S Expert in consultation with Project Manager. In regards to injuries, all compensation carriers have

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specific legislative reporting requirements for the employer, worker, and attending physician(s).

All incidents will be reported to the H&S Expert immediately. All incidents that require medical attention or have the potential for medical attention require the immediate notification of the Project Manager. All serious incidents will be reported to the Project Manager immediately – the notification of any government agencies will be coordinated by Project Manager.

The H&S Expert and Project Manager will be promptly notified of equipment or property damage. The Incident Report Form will be completed for all incidents and forwarded to the district office for administrative processing.

The main monitoring activities as set forth in Chapter 7: Monitoring Plan of the ESMP will focus on ensuring compliance with the mitigation measures and management controls described within the scope of this OHSMP, using the main performance indicators determined in Chapter 1.

Monitoring activities for each Occupational Health and Safety issue will be detailed in management/implementation plans and procedures to be prepared by the Contractor prior to the onset of the land preparation and construction phase. Monitoring activities will be designed to target specific topics to meet site-specific requirements in line with the Monitoring Plan framework provided in the ESMP and considering the key performance indicators.

The Table 4 details the monitoring activities identified for OHS management issues of the facility.

Performance on the topics and issues identified in Table 4 together with the relevant records and results shall be provided to the General Manager and as well as to the WB annually.

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Table 4. Occupational Health and Safety Plan Monitoring Table

ID	Topic	Measure / Monitoring Parameter / Target	Performance Indicator / Target	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring Responsibility
OHSMP-1	Accident Frequency Rate ("AFR")	Taking corrective and preventative measures through investigation and root cause analysis of accidents / incidents	AFR: 2.5	All sections / departments / production lines	<ul style="list-style-type: none"> Records of investigation and root cause analysis AFR Calculation via 	Once a month	OHS Team
OHSMP-2	Accident Severity Rate ("ASR")	Taking corrective and preventative measures through investigation and root cause analysis of accidents / incidents	ASR: 0.025	All sections / departments / production lines	<ul style="list-style-type: none"> Records of investigation and root cause analysis ASR calculation 	Once a month	OHS Team
OHSMP-3	Trainings	Provision of OHS related trainings	100 % completion of each OHS training within their respective period	Project Site	Records of trainings and certificates	Once in two months	OHS Team
OHSMP-4	Meetings	Conducting OHS related meetings	Performing 100 % of each OHS meeting within their respective period	Project Site	Minutes of meetings	Quarterly	OHS Team
OHSMP-5	Risk Analysis	Performing risk analysis and evaluation for identification of hazards and elimination of risks.	Performing risk analysis and evaluation for all departments annually.	All sections / departments / production lines.	Risk Analysis Reports	Annually or whenever needed	Risk Assessment Team
OHSMP-6	Emergencies	Conducting emergency drills.	Completion of 4 drills in a year.	Project Site	Drill records	Quarterly	OHS Team
OHSMP-7	Near miss	Increasing OHS awareness by encouraging more near miss notification.	Increasing monthly number of near miss notifications month by month.	Project Site	Near miss records	Once a month	OHS Team
OHSMP-8	Corrective and Preventative Actions	Implementation of corrective and preventative actions identified through; <ul style="list-style-type: none"> near miss investigation & root cause analysis, accident / incident investigation & root cause analysis, risk analysis and evaluation, emergency drills, audits and inspection. 	Closing 100 % within each quarter	Project Site	Relevant records	Quarterly	OHS Team

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ID	Topic	Measure / Monitoring Parameter / Target	Performance Indicator / Target	Monitoring Location	Monitoring Method	Monitoring Frequency	Monitoring Responsibility
OHSMP-9	Corrective and Preventative Actions regarding Covid-19	Implementation of corrective and preventative actions identified through Routine Covid-19 Inspections	Closing 100% within each week	Project Site	Relevant records	Quarterly	OHS Team
OHSMP-10	Workplace environment and personal exposure.	Performing workplace environment and personal exposure measurements for identification of impacts and ensuring a safe and healthy workplace.	Performing measurements for all departments annually or whenever needed.	All sections / departments / production lines.	Workplace environment and personal exposure measurement records.	Annually or whenever needed	OHS Team

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6 REFERENCES

- Employment and Training Plan (CNR-ADN-ETP-002)
- Traffic (Transportation) Management Plan (CNR-ADN-TTMP-002)
- Emergency Preparedness and Response Plan (CNR-ADN-EPRP-002)
- Legal and Institutional Framework (CNR-ADN-ESIA-002, Chapter 2)

