



REPORT

Khorezm Solar Project

Noise Management Plan (NoiseMP) - Construction Phase

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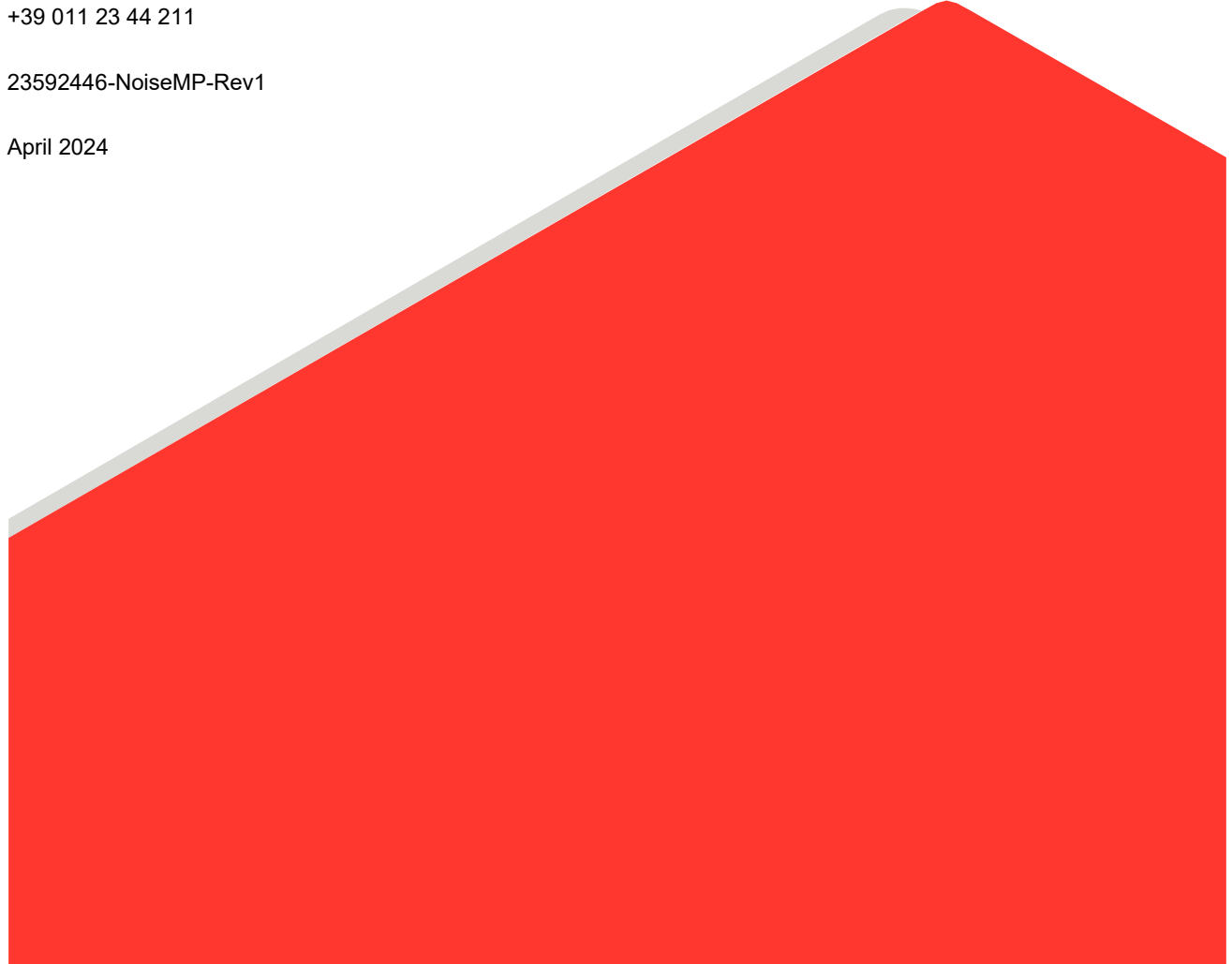
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Acronyms and Abbreviations

CSSMP	Community Health, Safety and Security Management Plan
CPE	Collective Protective Equipment
EBRD	European Bank for Reconstruction and Development
EHS	Environmental, Health and Safety
EPC	Engineering, Procurement and Construction
EPRP	Emergency, Preparedness & Response Plan
E&S	Environmental and Social
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management System
GIIP	Good International Industry Practice
HSESMP	Voltalia HSES Management Plan
H&S	Health and Safety
ID	Identification code
IFC	International Finance Corporation
KPI	Key Performance Indicator
MP	Management Plan
MW	Megawatt
NoiseMP	Noise Management Plan
Obs.	Observed
OHSMP	Occupational, Health and Safety Management Plan
OTL	Overhead Transmission Line
PPA	Power Purchase Agreement
PPE	Protective Personal Equipment
PPP	Public-Private Partnership
PR	EBRD Performance Requirements
Project	Khorezm Solar Project
PS	IFC Performance Standards
PV	Photovoltaic
Ruz	Republic of Uzbekistan

SPPP	Solar Photovoltaic Power Plant
TrafficMP	Traffic Management Plan
WBG	World Bank Group

1.0 INTRODUCTION

This document is the Noise Management Plan (NoiseMP) for the Khorezm Solar PV Project (the Project) – construction phase and it identifies and presents the framework and the strategy for managing Project’s E&S impacts and risks associated to the aspects related to noise and vibrations. This Plan sets the principles according to which noise and vibrations management will be performed for the Project and presents a plan of activities to be carried out throughout the Project’s construction phase. This Plan has been developed in accordance with the applicable requirements, including the Uzbek regulatory framework, International Finance Corporation (IFC) Performance Standards (PSs), EBRD Performance Requirements (PRs) and World Bank Group (WBG) General Environmental, Health and Safety (EHS) Guidelines.

1.1 Purpose, Scope and Applicability

The main objective of this document is to develop and implement plans and procedures to integrate environmental, health, safety and social aspects related to noise and vibrations management within the overall Project management framework throughout the Project construction phase.

This document also provides guidelines to the Engineering Procurement and Construction (EPC) Contractor and also sub-contractors to address noise management according to the standards mentioned above (Uzbek regulatory framework, IFC PSs, EBRD PRs and WBG General EHS Guidelines).

The Scope of this Plan includes:

- The definition of Project standards related to noise and vibrations management during the construction phase;
- The definition of responsibilities, commitments, operating procedures and instructions for the implementation of this Plan;
- The identification of adequate mitigation measures applicable to the Project in relation to noise and vibrations management. A mitigation hierarchy will be adopted to anticipate and avoid, or where avoidance is not possible, minimize and restore impacts on the environment;
- The establishment of a monitoring program to assess the effects of residual impacts on the environment;
- The identification of actions to measure the performance of monitoring activities;
- The establishment of a guideline to report the results of monitoring and periodic audits and provide for corrective actions as necessary, in order to achieve the planned objectives.

This Plan applies to all Voltalia normal and expected construction activities related to the Project and does not specifically address any emergency situations. Emergencies, their procedures, their reporting, and the coordination with local emergency services are addressed in the Emergency Preparedness & Response Plan (EPRP).

This Plan provides requirements and guidance for Contractors and Sub-Contractors involved in the construction activities of the Project, including all secondary and associated facilities, whether temporary or permanent, including the workers camp, if applicable. No construction activities shall commence until approval of this Plan.

This section shall be read in conjunction with the management plans identified below.

1.2 Relationship with other Management Plans

The NoiseMP is to be read in conjunction with the following management plans:

- Traffic Management Plan (TMP);

- Occupational, Health and Safety Management Plan (OHSMP);
- Community Health, Safety and Security Management Plan (CSSMP);
- Workers' Accommodation Management Plan (WAMP);
- Emergency, Preparedness & Response Plan (EPRP);
- Voltalia HSES Management Plan (HSESMP).

1.3 Project Overview

The Khorezm Solar PV Project (the Project) consists in the development of:

- A 100 MW solar photovoltaic power plant (SPPP) and a step-up 35/220 kV substation. Approximately 200.000 pieces of solar panels will be installed, with an average power of 675 watts per panel.
- An associated 3.2 km overhead 220kV transmission line that will connect the SPPP to the existing Sarimay substation location north-west of the project; and
- the construction of two additional extension bays for the existing Sarimay substation to allow for the additional incoming capacity to be generated by the SPPP.

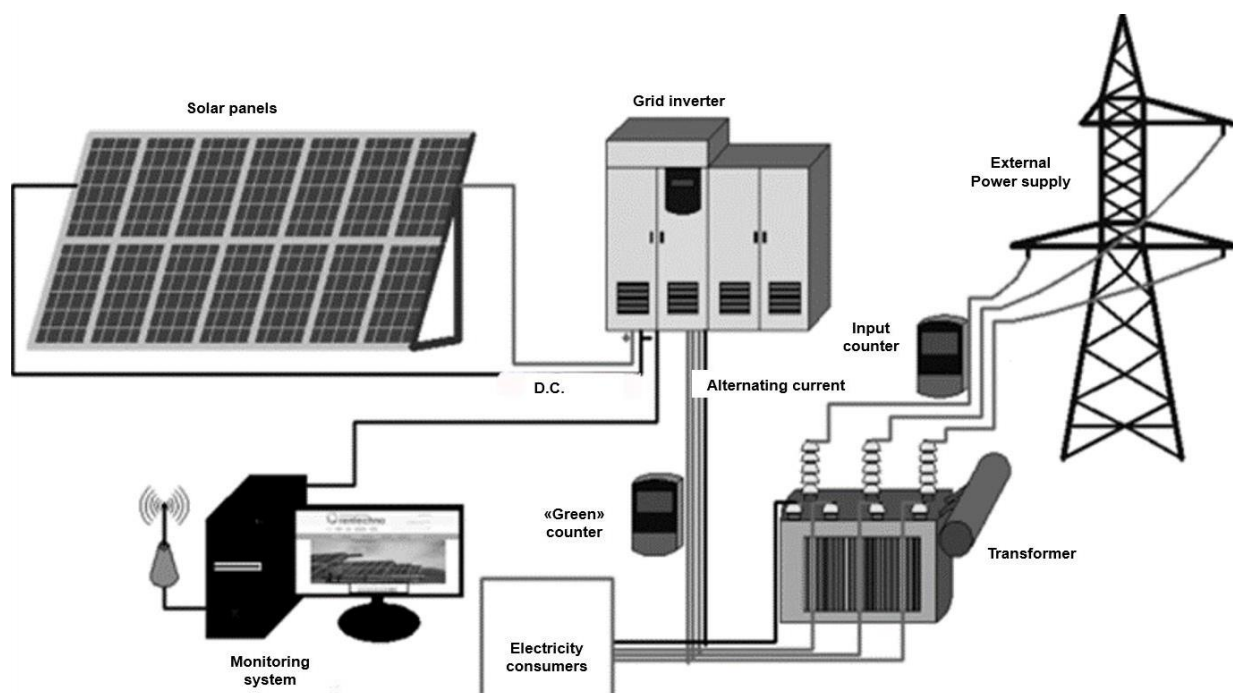


Figure 1: Schematic diagram of a solar photovoltaic power plant operation.

The Project will be carried out in the Tuprokkala district in the Khorezm region of Uzbekistan, located 120 km south-east of Urgench city, close to the border with Turkmenistan and near the Amu-Darya River. The limits of the Khorezm region and the approximate location of the Project are observed in Figure 2.

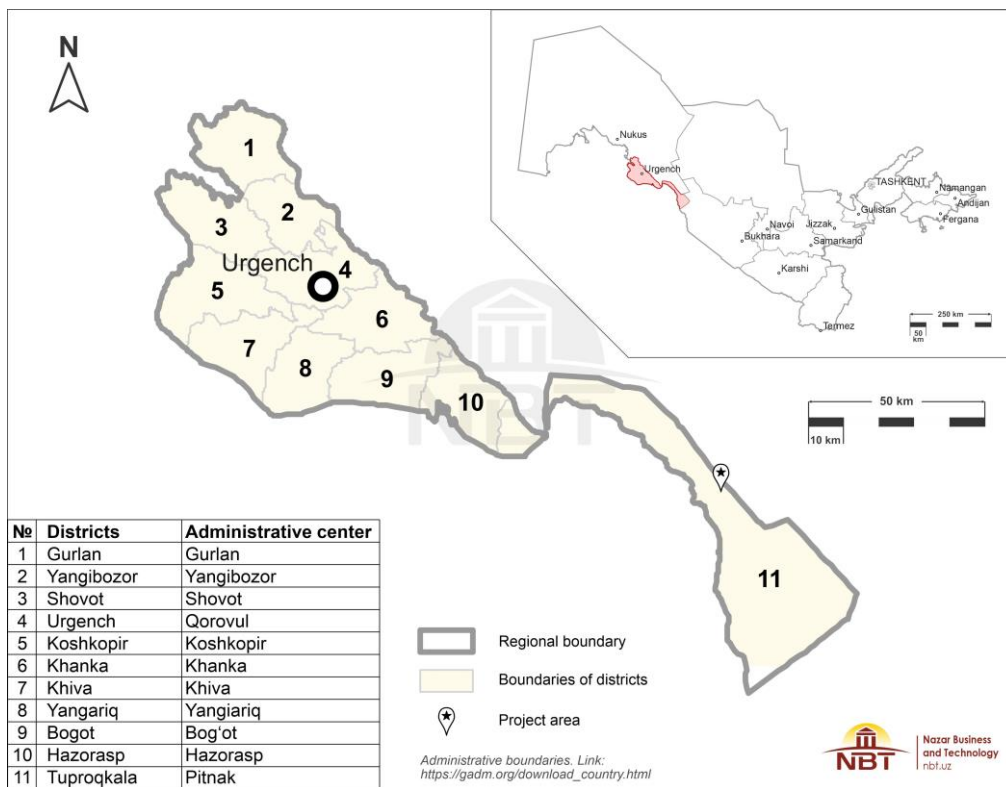


Figure 2: Project Region. Source: NBT, 2023.

The Project is being implemented as part of a Public-Private Partnership (PPP) between the Government of the Republic of Uzbekistan represented by the Ministry of Energy (the Project Proponent), and FE LLC Sarimay Solar, an entity created in Uzbekistan by Voltalia S.A. (the Project Developer) for the purpose of this Project. The selection process for the EPC Contractor is currently ongoing (as per the release date of this document).

The Project covers approximately 177 hectares which will be utilized entirely for the construction and installation the solar photovoltaic power plant. The Sarimay Switching Station (SS) can be found at 3 km north-east of the Project site, which will receive the Project’s produced energy. The two nearest settlements are the two villages of Sarimay and Nukus. The Project layout and some characteristics of its surroundings, such as communities and infrastructure are shown in Figure 3 below.

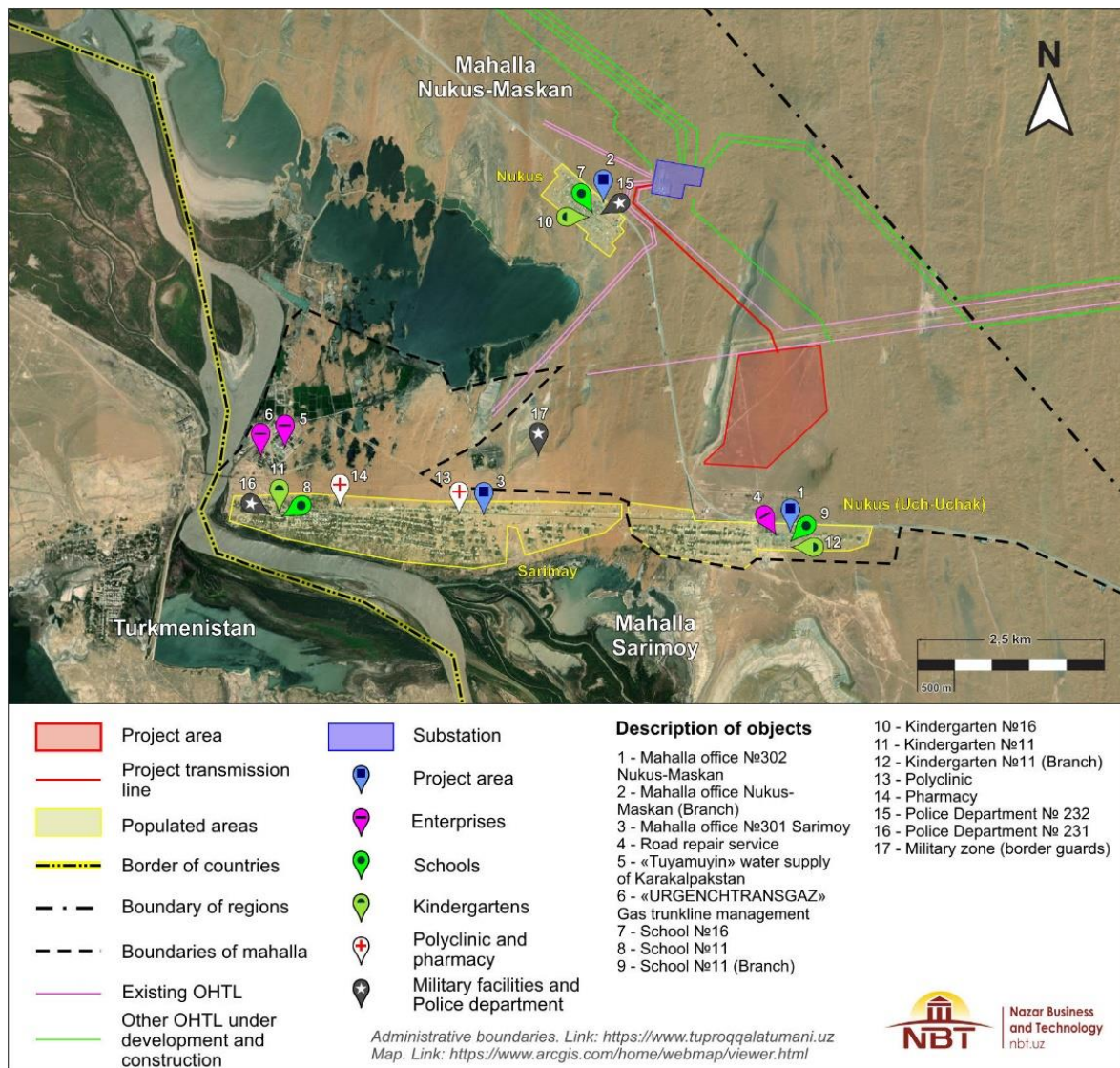


Figure 3: Project area and surroundings. Source: NBT, 2023.

The estimated construction time of the Project will be 1 year and the estimated total workforce required during the peak construction period is estimated to be between 200-250 workers, including technician and low-skilled personnel.

Initial activities, including site preparation, will entail several activities, which can occur simultaneously in different areas. Some examples include:

- Site works preparation and accommodation;
- Unloading/loading equipment;
- Mobilization of vehicles, workers and equipment, materials transportation;
- Vegetation clearing and land stripping;
- Earthworks (excavations, landfill, surface levelling/grading);
- Adaptation of existing roads and implementation of temporary construction roads;

- Installation of lifting cranes and warehouses for storage of delivered power equipment and building materials;
- Concrete pouring under the foundation of buildings and structures;
- Buildings and structures mounting;
- Mechanical and electrical works;
- Performance tests;
- Building of sewage septic tank and firefighting water tank;
- Site clean-up and demobilization activities, among others.

The operation lifecycle is considered to be approximately 25 years. The workforce during operation is expected to be around 20 and will include skilled technician, security guards, and support staff.

During the operation these modules will need to be cleaned periodically depending on soiling and sand/silt accumulation. A preventative maintenance program will be established for maintenance of the inverters, mounting structures, surge arresters, cables and PV junction boxes, meteorological station, security, fencing and gates, ditches and drainage culverts as well as all sub-station components including services and septic tank. Scheduled regular maintenance will be carried out by the National Electric Grid of Uzbekistan (NEGU).

On the other hand, the OTL will be designed for continued operability (24 hours per day, 7 days per week) depending on the regime and parameters of the national and regional power transmission grid. From the beginning of the operations, the transmission line will work without the continuous presence of personnel.

1.3.1 Project Noise and Vibration Effects

During the construction phase there are impacts associated with the emission of noise and vibrations such as earthworks, mobilization of vehicles, workers and equipment, transport of materials and waste, road works, buildings' construction and infrastructure construction and with the increase of traffic in the Project area.

The emission of noise can have direct effects on the health of people, especially affecting sleep and concentration. It is foreseen that some construction activities will be performed at nighttime, which is period when noise emissions should be avoided; nighttime activities need to be carefully planned to avoid them to the extent possible and also to avoid performing noisy activities during that period.

Vibrations from construction sites can negatively impact the health of the workers operating machines and equipment, and it is not uncommon that workers whose hands are regularly exposed to vibration often suffer from short and long-term injuries. In addition, vibration can affect surrounding communities and buildings.

2.0 REFERENCE & LEGAL REQUIREMENTS

This section includes the policies, standards, and requirements of reference for this Plan that are applicable for the construction phase of the Project.

Project standards are described in detail the Project ESIA Section 02 – Regulatory Framework and are listed below:

- Relevant national legislative requirements;
- IFC Performance Standards;
- EBRD Performance Requirements;

- World Bank Group EHS Guidelines;
- Good International Industry Practices; and
- Voltalia's policies, related practices, and procedures.

The Project is expected to achieve whichever is more stringent amongst these. The relevant international standards shall be also directly applicable in the absence of applicable Uzbek standards.

2.1 National Requirements

In Uzbekistan, noise and vibrations are regulated through sanitary norms and standards:

- SanPiN No. 0267-09 "Sanitary norms and rules to ensure acceptable noise levels inside residential and public buildings and in residential areas". Noise standards established by this sanitary norm set the rules for ensuring acceptable noise levels in residential/public areas in Uzbekistan. This standard indicates a table of noise levels for a variety of internal and external applications. The permissible noise levels for the Project are found in Section 02 of the ESIA (Regulatory Framework).
- SanPiN No. 0325-16 on "Sanitary norms and rules to ensure acceptable noise levels in the workplace" and on "Sanitary Standards for general and local vibration at workplace".
- SanR&N No. 0331-16 on "Residential house design in climatic conditions of Uzbekistan", which defines the national standards for noise and vibrations levels in residential houses.
- BR&N No 2.01.08-96 – Noise protection.

2.2 International Standards

The Project is required to meet requirements of international lending financing institutions, specifically:

- i) The International Finance Corporation (IFC) Performance Standards (PS) 2012 and relevant Guidance Notes (GN), in particular:
 - a. IFC PS3 and IFC GN3 – Resource Efficiency and Pollution Prevention, which includes noise pollution prevention;
- ii) EBRD Performance Standards (PR) (2019), in particular:
 - b. EBRD PR 3 and Guidance Note on Resource Efficiency and Pollution Prevention and Control, which establishes general requirements with regards to noise management;
- iii) World Bank IFC General and Sector-Specific EHS Guidelines, more specifically:
 - c. Section 1.7 – Noise, which provides a series of noise reduction options that could be applied to prevent and control noise sources emissions;
 - d. Section 4.0 – Construction and Decommissioning, which provides mitigation measures for the reduction and control of noise emissions in areas close to communities;

2.3 Necessary Permits and Approvals

The Project must comply with the applicable laws and regulations explained in the above-mentioned sections, aiming to achieve whichever is more stringent.

3.0 ROLES AND RESPONSIBILITIES

Voltalia is responsible for ensuring that the measures set out in this Plan are implemented in full and this will be achieved by verifying the compliance of the EPC contractor and subcontractors.

General roles and responsibilities for the implementation of this Plan are provided in Table 1. The roles and responsibilities for the implementation of this management plan will be revised according to the any changes in Voltalia’s organisational structure.

The EPC Contractor is not yet defined. Their specific responsibilities described in the table will be properly distributed once their organisational structure is known.

Table 1: Roles and Responsibilities.

Role	Responsibilities
Voltalia SPV	
Project Director	<ul style="list-style-type: none"> ■ Ensure the Voltalia’s HSES Policy and HSES Management System Requirements are in line with EBRD performance requirements, and IFC Performance standards, and ESAP requirements and are communicated and implemented effectively and consistently to the Project’s relevant stakeholders; ■ Ensure the HR policy includes a code of conduct, provisions regarding forced labour and illegal employment, and must explicitly require that all construction staff and workers receive a written contract with the HR policy prior to starting work and in its own language; ■ Allow sufficient time and adequate resources for the implementation of this Plans requirements; ■ Foster HSES leadership culture within the Project: and ■ Assign an ESAP owner conversant with EBRD Performance Requirements and Uzbek legislation.
Health & Safety Site Supervisor	<ul style="list-style-type: none"> ■ Supervise workers within their area of supervision, take corrective action when HSES issues are noted and report these issues to the Site Management Team; ■ Participate in internal audits and investigation of incidents to determine root cause and corrective actions; ■ Supervise close out H&S incident reports and record, monitor and follow up close out of action items in the Action Tracking System. ■ Liaise with Site Managers on relevant H&S issues and organize H&S meetings; ■ Perform regular site and work front visits and inspections and monitor High Risk Activities; ■ Develop, review, and approve risk assessments, RAMS and PTW’s. Ensure liaison with other relevant HSES Site Management Team members in this process to collect their feedback concerning their respective fields of actuation;

Role	Responsibilities
	<ul style="list-style-type: none"> ■ Liaise with the Lenders on Project E&S performance, to seek alignment between their expectations; ■ Review and approve site access HSE documentation; ■ Overseeing, managing, and allocating adequate resources for the implementation of the HSES Management System.
E&S advisor	<ul style="list-style-type: none"> ■ Oversee this Plan; ■ Ensure that all the environmental authorizations and permits have been obtained in a timely manner; ■ Monitor close out of environmental action items in the Action Tracking System; ■ Review the Environmental management documents; ■ Ensure all corrective/preventive actions related to environmental risks and incidents are implemented; ■ Liaise with Site Managers on relevant Environmental issues and plan environmental performance monitoring meetings; ■ Supervise and manage the work of the Environmental specialists; ■ Review Environmental incident reports; ■ Perform regular site and work front visits and inspections and monitor high environmental risk activities and the commencement of activities in new areas or areas with significant environmental sensitivities; ■ Ensure implementation of the Project’s Management Plans in accordance with environmental permit requirements and ESIA requirements if different; ■ Ensure the social components of the Project are compliant with this Plan, permit requirements, local legislation, and Lenders’ requirements; ■ Ensure that stakeholder engagement during construction is in line with Lender’s requirements and national regulations; ■ Supervise the work of the Community Liaison Officer and ensure the correct implementation of the stakeholder engagement plan and grievance mechanism; ■ Ensure the implementation of the community health and safety management measures; ■ In coordination with HR Coordinator, verify that all social measures from LMP are implemented on site; ■ Report to the Lenders on (i) Implementation status of the ESAP and of the Register of commitments, with success/fail indicators (see ESAP action 1.4) and (ii) the Environmental and social performance of the project activities, and (iii) the management of non-compliances and corrective actions; and Final

Role	Responsibilities
	<p>approval of this Plan and subcontractors' plans/procedures prior to their implementation.</p>
<p>Voltalia - Site Manager</p>	<ul style="list-style-type: none"> ■ Day to day supervision of the site; ■ Supervision of Project execution timeline and its disclosure to the Site Management Team; ■ Ensure compliance of requirements by Contractor at the different phases of the Project (pre-qualification reports, kick off meetings, periodic performance evaluations...); ■ Supervise dissemination of the updated version of this Plan to all Site workers, including the EPC Contractor and Subcontractors; ■ Supervision of this Plan's requirements implementation through regular site monitoring visits and EPC Contractor and Subcontractors documentation/reports review; ■ Supervision of adoption and implementation of disciplinary actions upon failure to comply with requirements; ■ Supervision that all workers have proper training to implement the requirements of this Plan; ■ Participation and supervision in the worksite Risk Management process (risk assessment, RAMS, PTW, interface management, definition of control measures, and change management); and ■ Ensure contractors and service providers compliance with EBRD 2019 PRs and IFC 2012 PSs by including them in the list of applicable E&S requirements to be complied with. Require them, in a legally binding manner, to cascade the requirement down their subcontractors' chain.
<p>HSE Coordinator</p>	<ul style="list-style-type: none"> ■ Implementation of the HSE Policies, Sustainability principles, procedures and best practices, transversely to Voltalia region; ■ Keeping up-to-date with any changes in safety regulations and standards; ■ Monitor and ensure that the Projects' E&S objectives are achieved; ■ Ensure the Projects' E&S requirements and this Plan are communicated to, and implemented by the Projects' personnel, including the Site Management Team and Contractors; ■ Prepare a register of all E&S commitments from the permitted EIA, ESIA and ESAP actions;
<p>EPC Contractor - Site Management Team</p>	

Role	Responsibilities
Project Manager	<ul style="list-style-type: none"> ■ Overall delivery of the Project and HSES performance, and assurance of compliance with budget, schedule, project policies, plans and procedures; ■ Ensure that the necessary resources, authority, information, are provided to enable the execution of Project’s HSES management activities and HSES procedures; ■ Ensure that HSES management issues are included in periodic reports to be sent to Site Management Team, and also in reports prepared by Site Management Team to be sent to the Project Owner; ■ Submit periodic reports to the Project Owner. ■ Cooperate with Project Owner to obtain necessary permits and/or legal documents for the Project, if necessary. Hold a dedicated register of these permits and authorizations, indicating their scope and validity date if any.; ■ Supervision of the proper implementation of this Plan by the Site Management Team and subcontractors’ plans/procedures prior to their implementation through regular meetings and review of reports; ■ Designating specific personnel on site or at the administrative level for the implementation of the E&S Management System; ■ Present monitoring data to Voltalia’s Corporate Level and to the Lender; ■ Liaise with the Project Owner, corporate level HSES team, for implementation of this Plan; and ■ Follow-up on any grievances and non-Conformities, non-compliance or deviation from the requirements of this Plan.
Site Manager	<ul style="list-style-type: none"> ■ Ensure that all the activities of the Project are carried out in accordance with this Plan and implement control measures and procedures that have been issued by Site HSES Management Team and the Project Owner as per the HSES Management Plan; ■ Ensure that the international E&S requirements applicable to the Project are included - as conditions - in contracts with Subcontractors and suppliers; ■ Instruct and/or train workers on the requirements of this Plan; ■ Ensure that Personal Protective Equipment is always available on site and is used whenever required; ■ Deliver all the documents required for contractors' validation as per the requirements of this Plan and the Voltalia HSES Management Plan; ■ Provide to Voltalia’s Health and Safety Site Supervisor, before the start of any hazardous work, the Environmental Risk Assessment and Method Statement – RAMS;

Role	Responsibilities
	<ul style="list-style-type: none"> ■ Identify the need for specialized Subcontractors to carry out specific tasks on site in compliance with this Plan provisions; ■ Coordinate with Voltalia’s HSE Manager, organize and participate in the auditing activities organization, maintain a program of audits and inspections at the Construction Site; ■ Ensure that the raised non-conformities based of this Plan are addressed and resolved as quickly as possible; ■ Ensure the planning, preparation and provision of the trainings in order to enable the full implementation of the Plan; ■ Check the E&S performance of all Subcontractors in relation to this Plan implementation; ■ Verify the compliance with the contractual arrangements and with the Project standards and requirements; ■ Provide the monitoring reports to Voltalia’s Site Management Team through the monthly report; ■ Liaise with Voltalia’s HSE Manager for proposing and discussing – where necessary – potential changes and integrations of the monitoring activities of this Plan; ■ Report and resolve the non-conformities raised; ■ Notify and report to the Site Manager any Near Misses, hazardous conditions and incidents during construction activities; ■ Perform the Contractor Management process (pre-qualification reports, kick off meetings, periodic performance evaluations...); and ■ Ensure that all plant machinery and equipment are suitable for the use allocated to them and maintained in good working order, and record related maintenance activities.
<p>HSES Manager</p>	<ul style="list-style-type: none"> ■ Organizing and delivering the implementation of all the Health, Safety and Environment obligations, also for subcontractors, as per the EPC contract, the ESAP, the Environmental Permit and the Uzbek Environmental, Social, Health and Safety legislation; ■ Be conversant with EBRD PRs, IFC PSs and the Uzbek E&S legislation; ■ Oversee performance and ensure compliance of the Project with requirements of this Plan through regular meetings with the E&S Site Management Team and review of E&S reports; ■ Ensure that sufficient and qualified resources are allocated on an ongoing basis to achieve effective implementation of actions, measures and monitoring activities;

Role	Responsibilities
	<ul style="list-style-type: none"> ■ Ensure ESMS is in-line with the Project ESMS; ■ Collecting, organizing and reviewing monitoring data and performance monitoring reports provided by the HSE specialist(s) and providing summary results of such reports to the Project Manager; ■ Bringing Non-Conformities immediately to the attention of the Project Manager and ensuring that action/measures and monitoring activities are carried out timely and adequately according to this Plan requirements; ■ Programming inspections and audit activities to monitor the correct implementation of this Plan and of HSE specialist(s) tasks; ■ Monitor the compliance of the activities by Site Team, and subcontractors, with the time schedule and conducting regular inspections and audits of the noise and vibrations management activities to identify any non-conformances; ■ Addressing Non-Conformities through the definition of Preventive/Corrective actions proposing to the Project Manager, if necessary, amendments and/or updates to this Plan and issuing Plan revisions; ■ Search for continuous improvement through audits and monitoring of the HSE KPIs and internal processes; ■ Advise and support the Project Manager and Site Manager on matters related to HSES; ■ Develop HSES training and induction schedules and content and deliver the training and induction material such as site induction and toolbox talks; and ■ Review and approve H&S Management documents delivered by the Health & Safety Site Supervisor.
<p>Health & Safety Site Supervisor</p>	<ul style="list-style-type: none"> ■ Communicate and instruct workers in proper work practices and update instructions as needed, make records of this instruction; ■ Supervise workers within their area, take corrective action when HSES issues are noted and report these issues to the Site Management Team; ■ Participate in internal audits and investigation of incidents to determine root cause and corrective actions; ■ Develop and update the Project specific H&S management documents; ■ Communicate the Health and Safety (H&S) requirements to Project personnel including Site Manager; ■ Develop, review, investigate and close out H&S incident reports and record, monitor and follow up close out of action items in the Action Tracking System.

Role	Responsibilities
	<ul style="list-style-type: none"> ■ Contact point for reporting H&S Near Misses, hazardous conditions, and incidents onsite and takes care of reporting to the Project Manager and the HSE Manager; ■ Liaise with Site Managers on relevant H&S issues and organize H&S meetings; ■ Deliver the H&S component of training and induction such as site induction and toolbox talks; ■ Perform regular site and work front visits and inspections and monitor High Risk Activities; ■ Develop, review, and approve risk assessments, RAMS and PTW’s. Ensure liaison with other relevant HSES Site Management Team members in this process to collect their feedback concerning their respective fields of actuation; and ■ Review and approve site access HSE documentation.
E&S specialist	<ul style="list-style-type: none"> ■ Obtain all E&S authorizations and permits in a timely manner; ■ Record and follow up close out of E&S action items in the Action Tracking System; ■ Develop and update E&S management documents; ■ Report and investigate all E&S risks and incidents to the HSES Manager and Site Manager, and ensure all corrective/preventive actions related to environmental management are implemented; ■ Liaise with Site Managers on relevant Environmental issues and plan environmental performance monitoring meetings; ■ Develop Environmental incident reports; ■ Communicate the E&S requirements to Project personnel and perform necessary training; ■ Ensure that stakeholder engagement during construction is in line with Lender’s requirements and national regulations; ■ In coordination with the HSE site supervisor, ensure the implementation of the community health and safety management measures; ■ Address external grievances through the Community Grievance Mechanism and ensure corrective action as per the mechanism; ■ Provide regular feedback in the form of progress report(s) (as needed) to the local authorities, specifically as it relates to local employment and economic development investment.

Role	Responsibilities
<p>HR Coordinator</p>	<ul style="list-style-type: none"> ■ Conduct due diligence to assess and manage labour-related risks associated with the project; ■ Ensure compliance with the Project Labor Management Plan through audits, also for subcontractors; ■ Coordinate with the E&S Specialist and relevant governmental authorities to ensure legal compliance of subcontractors work conditions; ■ Conduct and analyse the workforce surveys as a monitoring tool; ■ Oversee that the recruitment processes are fair and transparent; ■ Ensure that workers are provided with clear and accurate information about their terms of employment, including wages, working hours, and benefits; ■ Oversee the implementation of policies to prevent discrimination in the workplace based on gender, ethnicity, nationality, or other factors, and to prevent and address child labour and forced labour; ■ Ensure that workers are paid fair wages in accordance with applicable laws and industry standards; ■ Monitor and enforce compliance with working hour limits to prevent excessive overtime; ■ Address internal grievances through the Community Grievance Mechanism and ensure corrective action as per the mechanism; ■ Ensure that workers have adequate rest periods and time off; ■ Oversee the communication and implementation of grievance mechanisms; ■ Build the capacity of Subcontractors to ensure effective labour management; ■ Collaborate with relevant stakeholders to promote positive impacts on local communities; ■ Put in place monthly random HR audits of its direct sub-contractors to verify the absence of illegal or non-compliant forms of employment. The results of audits shall be reported to Voltalia through quarterly E&S reports during construction; and ■ Ensure that all the staff employed on the construction site through his subcontractors chain is formally employed and declared, as required by the Uzbek legislation. Undertake during construction monthly random audits throughout his sub-contractors chain to verify compliance of the employment conditions with the provisions of the Uzbek labour legislation, EBRD PR2/IFC PS2 and the present ESAP. The results of these audits must be provided in the monthly E&S reports to Voltalia.
<p>All workers</p>	

Role	Responsibilities
All construction site workers	<ul style="list-style-type: none"> ■ Comply with all HSE requirements; ■ Understand their responsibilities and implement the requirements of this Plan; ■ Participate in site induction training and other relevant HSES related training if required; ■ Report on any activities which demonstrate deviations from – or non-compliance with – this Plan requirements; and ■ Report any incidents, unsafe situation, or issues to their supervisors and stop work on the grounds of danger to life or the environment and report this immediately to the Site Manager.

For the complete list of HSES roles and responsibilities at a general project level, refer to the Voltalia HSES Plan.

4.0 MITIGATION MEASURES/ACTIONS AND MONITORING ACTIVITIES

The following table (Table 2) details the environmental management and mitigation measures/actions identified for noise and vibrations management related activities during construction phase. For each measure/action identified, the table shows:

- **Item:** identification code of the mitigation measure/actions (ID);
- **Measure/Actions:** description of the mitigation measure/actions;
- **Timeline and frequency:** frequency/timing of the measure/action;
- **KPI (Key Performance Indicator):** quantitative compliance indicator or qualitative acceptance criteria to be used to confirm the actual effectiveness of the mitigation measure/actions. KPIs are established to measure the effectiveness of the noise and vibrations management taking into consideration the local conditions and objectives. KPIs provide valuable feedback on implemented measures, helps to motivate managers and workers to undertake appropriate actions and are valuable for external communication purposes.
- **Target:** final qualitative or quantitative objective to comply with;
- **Verification Method:** internal audit or specific monitoring activity to verify the measure application; and
- **Responsibility:** responsible party in the organization for implementing both the mitigation measures/actions and monitoring activities;

Mitigation measures are defined and are presented in the table according to the “mitigation hierarchy” requiring that priority and preference are given to avoidance measures, while minimization and rehabilitation/restoration measures should be used only if avoidance is not possible, and offsets for impacts, only as the last resort. Moreover, the mitigations included in the table have been designed to be adaptive in response to the results of monitoring actions described in the last part of the table.

The aim of monitoring is to verify whether the residual impacts are under control and mitigation measures/actions are effective.

In case monitoring will demonstrate non-conformities or unexpected residual impacts, the HSE manager will evaluate the situation and, if needed, propose changes and integrations to the mitigation and monitoring activities included in the present NoiseMP. The proposed changes will be evaluated and approved by the Voltalia's Project Manager who will also ensure that action/measures and monitoring activities are carried out timely and adequately.

Table 2: Mitigation measures/actions for construction phase.

Mitigation measure						Monitoring activities		
Item	Mitigation Measures/Actions	Timeline and frequency	KPI	Target	Responsibility	Verification method	Frequency	Responsibility
Noise-01	<p><u>Minimization: MP dissemination and awareness</u></p> <ul style="list-style-type: none"> The NoiseMP will be disseminated to all staff and to all sub-contractors working on the Project that are responsible for noise-generating activities. 	Pre-construction and during all period of construction phase	<p>Records of NoiseMP dissemination activities</p> <p>Percentage of NoiseMP dissemination among relevant staff/workers</p>	<p>Full availability of records available for all dissemination activities carried out</p> <p>100% dissemination among workers and staff involved in noise and vibrations management</p>	EPC Contractor HSES Manager	<p><u>Monitoring activities:</u></p> <ul style="list-style-type: none"> Conduct periodical internal audits, to ensure that the plan is known at all levels of the organization and implemented; Keep the records of the internal audits. 	Quarterly during the entire construction phase and upon the hiring of any worker that will participate in noise management activities.	EPC Contractor E&S Specialist
Noise-02	<p><u>Minimization: employees' training</u></p> <ul style="list-style-type: none"> All personnel will be trained in proper noise and vibrations management, taking into consideration their level of responsibility and 	Pre-construction and during all period of construction phase	Percentage of relevant workers trained in proper noise and vibrations management practices	100%	EPC Contractor HSES Manager	<p><u>Monitoring activities:</u></p> <ul style="list-style-type: none"> Verify that workers have effectively been trained on noise and vibration management and on PPEs use, and receive refresher 	Quarterly during the entire construction phase and upon the hiring of any worker that will participate in	EPC Contractor E&S Specialist

Mitigation measure						Monitoring activities		
Item	Mitigation Measures/Actions	Timeline and frequency	KPI	Target	Responsibility	Verification method	Frequency	Responsibility
	duties, and in the use of the collective (CPE) and personal protective equipment (PPE); <ul style="list-style-type: none"> Personnel at an appropriate level of seniority will be nominated to be responsible for good site practices and arrangements regarding noise and vibrations management. 		Percentage of PPE delivery to relevant workers.			courses when necessary; <ul style="list-style-type: none"> Keep on-site a detailed training register; Keep the records of employees trained and make them available for review. 	noise management activities.	
Noise-03	<u>Minimization: noise and vibrations emissions</u> <ul style="list-style-type: none"> Equipment with lower sound power levels will be selected; Silencing appliances such as silencers for fans and mufflers for engine exhausts and compressor components will be installed when risks 	Pre-construction and during all period of construction phase	Records of equipment & machinery maintenance and control operations % of PPE delivery to relevant personnel.	N/A 100%	EPC Contractor HSES Manager	<u>Monitoring activities:</u> <ul style="list-style-type: none"> Carry out visual inspections at the construction site for assessing the proper management of noise and vibrations control methods; Carry out equipment maintenance used at the site to verify that the noise 	Monthly during the entire construction phase In case grievances are received	EPC Contractor E&S Specialist

Mitigation measure						Monitoring activities		
Item	Mitigation Measures/Actions	Timeline and frequency	KPI	Target	Responsibility	Verification method	Frequency	Responsibility
	<p>of exceeding applicable noise thresholds are presented;</p> <ul style="list-style-type: none"> ▪ Whenever required, acoustic barriers for equipment casing radiating noise will be installed and will be located as close as possible to the source. These will be kept closed whenever the machines are in use; ▪ Vibration isolation for mechanical equipment will be installed; ▪ Activities with the greatest potential to generate noise and/or vibrations will be planned during the less disturbing hours of the day; ▪ Noise related to traffic during construction will be 					<p>emission, expressed in terms of sound power level (LwA), comply with the noise limits according to the power (kW) of the equipment;</p> <ul style="list-style-type: none"> ▪ Periodically ensure that all workers are provided with proper PPE (compliant and functioning); ▪ Periodically ensure that Collective Protective Equipment are in place, where needed; ▪ Complete noise and vibration measurements at receptors, if any grievance is received. Fill-in a monitoring register/log and keep it onsite; 		

Mitigation measure						Monitoring activities		
Item	Mitigation Measures/Actions	Timeline and frequency	KPI	Target	Responsibility	Verification method	Frequency	Responsibility
	<p>properly managed through implementation of the Traffic Management Plan;</p> <ul style="list-style-type: none"> In case nighttime activities are performed, the necessary permits will be previously obtained, and the potentially affected communities will be informed. 					<ul style="list-style-type: none"> Complete further noise and vibration measurements on-site, if any grievance is received. Fill-in a monitoring register/log and keep it onsite; Perform internal audits to ensure that mitigation measures foreseen in the planning phase are being identified, implemented and monitored; Keep on site the records of the audits and the delivery forms of the PPE. 		

5.0 RISK MANAGEMENT

To safeguard the well-being of employees, protection of the environment, and overall business sustainability, the Site Management Team or Contractor shall be required to adopt a risk management approach. This approach involves identifying potential hazards, conducting risk assessments for work activities, implementing suitable control measures, monitoring, and overseeing the risks, and effectively communicating these risks to all stakeholders involved.

5.1.1 Risk Assessment

Both the Site Management Team and Contractors are responsible for conducting risk assessments for all their respective activities that have the potential to cause harm. These risk assessments must be performed at the following stages, as a minimum:

- i) Before the commencement of activities;
- ii) Prior to introducing new equipment, procedures, or processes; and
- iii) When there are modifications made to existing equipment, procedures, or processes.

These assessments will be continually updated and accomplished by completing the following two documents:

- Risk Assessment Map (refer to **Appendix G – Risk Assessment Matrix– H&S** of the Voltalia’s HSES Management Plan);
- Direct and Indirect Environmental Aspects Matrix (refer to **Appendix H – Risk Assessment Matrix – Environmental Aspects** of the Voltalia’s HSES Management Plan).

The preparation of the Risk Assessment documents will follow the methodology specified in the Voltalia Occupational Risk Evaluation and Environmental Aspects Evaluation Procedures.

5.1.2 Risk Assessment and Method Statement (RAMS)

In addition, for any Project related works involving high-risk activities, a Risk Assessment and Method Statement (RAMS) shall be prepared by following the template provided in Appendix I – Risk_Assessment_&_Method_Statement_Template of the Voltalia’s HSES Management Plan.

The Site Management Team is responsible for preparing the RAMS for the work they undertake, as well as reviewing and approving RAMS submitted by Contractors for their tasks.

Both Risk Assessment and RAMS shall be considered living documents and will be updated when required due to changes to the work.

5.1.3 High Risk Work Permits

All the identified High-Risk activities of the Project will be subject to the rules defined in Section 5.4.3 of the Voltalia’s HSES Management Plan. These high-risk activities shall be subject to a specific Permit-To-Work (PTW) procedure, identifying the interveners, their competences and authorizations. The list of considered activities that are deemed High-Risk are found in Section 7.1 of the Voltalia’s HSES Management Plan. This list is not exhaustive, and any other high-risk activity identified should be subject to a PTW. The requestor shall apply for a PTW of any High-Risk Activities undertaken within their area of supervision (refer to Appendix J – Permit to Work Request of the Voltalia’s HSES Management Plan).

5.1.4 Interface Management and Management of Change

Considering that the simultaneous execution of two or more tasks in a shared space may have varying impacts on each other and potentially lead to unsafe conditions, an interface management process shall be implemented to prevent the accumulation of hazards within the same area or system. The interface management process will

be of responsibility of the Site Management Team. For the implementation of this process, Section 5.4.4 of the Voltalia's HSES Management Plan shall be referred to.

In addition, Voltalia will have a management of change process in place during the construction phase to ensure that all permanent and temporary changes to Project design, systems, processes, procedures, equipment, organization, personnel, products, materials, and work methods are correctly understood and implemented, without introducing any significant hazard or risk to people and the environment. The management of change process will be responsibility of the Site Management Team / HSES Manager. For the implementation of this procedure, Section 5.4.5 of the Voltalia's HSES Management Plan shall be referred to.

6.0 INCIDENT MANAGEMENT

All good catches and incidents that cause or have the potential to cause personal injury or damage to property or the environment shall be reported and investigated to prevent re-occurrence (refer to the Voltalia Incident Management Procedure). This procedure provides information on how to achieve the minimum standards to ensure HSE Incidents are identified, reported, and investigated in a consistent and effective manner. Its purpose is to ensure all Incidents, including near misses and HSE Good Catches are reported, investigated, and analyzed to identify where management controls failed and recommendations to identify new or restore controls are implemented. Early sharing of lessons learned to facilitate prompt corrective and preventive actions where similar situations are found shall be applied to prevent a recurrence both locally and at other locations.

The main protocols to be followed by the Site Management Team and Contractors regarding incident management are found in Section 5.6 of the Voltalia's HSES Management Plan.

7.0 AUDIT AND REVIEW

The correct implementation of this Plan is verified through internal inspections. The schedule, the frequency, the scope and objectives of the inspections as well as the responsible internal auditors shall be selected on the basis of Section 10 of the Voltalia's HSES Management Plan (Performance Measurement and Monitoring).

Internal auditing shall address:

- the correct implementation of all applicable standards (Uzbek regulatory framework, IFC PSs, EBRD PRs and WBG General EHS Guidelines);
- the correct implementation of this Management Plan;
- the correct implementation of Contractors' Plan to reflect the requirements of this Plan;
- the development and timely implementation of an auditing and review system by Contractors; and
- the implementation of the points indicated in the table in section 4.0 (mitigation measures/actions and monitoring activities) of this Plan;

Evidence and results of the inspection activities shall be formally recorded in the Voltalia dedicated inspection tool. Any Non-Conformity and Preventive/Corrective actions identified during the inspections must be tracked to ensure suitable close out. Voltalia's HSES Manager will review results of inspections and the progress of the implementation of any Preventive/Corrective actions.

A sample of inspection checklist that can be used by the Site Management Team is accessible on the Voltalia Intranet through the HSE HUB and also attached for reference in **Appendix M – HSE Inspection Checklist Form** of the Voltalia's HSES Management Plan, likewise an online inspection tool is available for the performance of HSE Inspections by non-HSE functions Voltalia personnel.

Additional details related to the construction phase of the Project are expected in due course; this Plan shall therefore be subject to a systematic review process during the construction phase in order to encompass and consider any information relevant to noise and vibrations matters. This Plan will be reviewed either once a year or based upon need on the basis of the occurrence of significant changes in the noise and vibrations-related activities (whichever happens sooner). Revision of this Management Plan will be the responsibility of the Project Manager, in collaboration with the HSE Manager, who is in charge of this Plan's implementation.

8.0 TRAINING REQUIREMENTS

This Section provides the training requirements and guidance for Contractors and Sub-Contractors to ensure that their training activities are carried out in compliance with this Plan.

8.1 HSE Induction

The EPC Contractor and Voltalia's Site Management Team will be responsible for providing to all workers involved in the construction activities, including staff and workforce of Sub-Contractors, a Site Induction Training (presentation or video, to be defined by the Site Management Team) before the commencement of any activity at the working site, as well as a copy of the Voltalia HSES Management Plan. Attendance at HSE Induction should be mandatory and include all staff and workforce. Any new employee, contractor, visitor or other individual visiting the site during the Project shall receive the same induction information. Visitors will always be escorted in the Project site. The individual should be taken through the induction by an experienced person. The HSE induction will be aimed at providing workers with basic information about Project-related HSE risks and impacts and the prevention, mitigation measures in place in order to ensure personal protection and prevention of any injury.

HSE Induction shall be organized in the languages understood by all personnel (if necessary, the Contractor shall provide a translator).

No person will be permitted to work on site until specific site induction has been completed and records of such training maintained.

The HSE induction will include (not limited to) the following key messages:

- HSES Policy and Golden Rules of Voltalia Group;
- The roles and responsibilities for HSES in relation to the implementation of this Plan;
- Standard site rules;
- Arrangements for first aid, welfare facilities, fire and evacuation, accident, and incident (near-misses and good-catches) reporting;
- Gate security and the need for HSE cards to access;
- Access to toilets, water, clinic, ambulance and emergency meeting point;
- Dedicated grievance mechanisms for workers or community, accessible by phone, mail or walk in;
- Key safety signs: live electricity, no access, first aid, speed reduction, maximum speed, etc;
- Use, storage, and maintenance of the PPEs to be used: helmet, mask, vest, safety shoes, etc;
- Emergency procedures and contacts;
- Project specific HSES requirements / mitigation / control measures;

- Projects abide by international HSE best practice; violating staff shall be subject to disciplinary actions according to the Voltalia disciplinary action matrix;
- Mitigation measures for the risks and impacts including those applicable to noise and vibrations management, such as:
 - Noise emissions from the construction site must be properly managed to protect the environment, workers and communities from noise pollution;
 - Construction site vibration can have a negative impact on workers, surrounding communities and buildings, therefore mitigation measures must be properly applied.

At the end of the HSE induction, an easy and visual means of identification on site must be put in place to verify that personnel on site are authorized to work and have followed the induction (stickers, badges or cards). The visual identification shall be returned at the end of the work/visit.

Should there be any substantial changes in the Project activities related to noise and vibrations management, then the workers shall receive additional training on the basis of the new information.

8.2 Specific Training

HSE training shall be provided to ensure that all workers involved in the construction activities, including staff and workforce, are prepared for the specific hazards of individual work assignments.

All Contractors will be responsible for carrying out specific training for their operatives covering all items pertinent to their work (in this case, noise and vibrations management), and providing evidence of the training (refer to section 6.1 – Access Requirements of the Voltalia’s HSES plan).

The responsible for noise and vibrations inspections and monitoring campaigns shall receive adequate training to their specific activities in order to ensure they work in compliance with the ESHS requirements of the Project.

Specific training related to noise and vibrations use and management shall be provided to all relevant staff and workforce. The key elements of the training shall include:

- Known hazards in working operations related to noise and vibrations and how they are controlled;
- Potential risks generated from noise and vibrations to health and safety;
- Precautions to prevent exposure to risks;
- Workers behaviours that can lead to noise and vibrations reduction;
- Traffic related measures to reduce noise and vibrations;
- Vehicles and machineries inspections;
- Noise and vibrations restrictions and mitigations;
- Correct use and application of PPEs;
- Noise and Vibrations signage;

Should the HSE performance monitoring results (such as recurrent incidents or near misses related to noise and vibrations management) demonstrate that a reinforcement is required, further site awareness on noise and vibrations management shall be provided to all workers and customized on the basis of the types of incidents /near misses or KPIs recorded.

8.3 Risk Assessment and Method Statement (RAMS) Training

A training in RAMS will be provided to all workers involved in the works within the RAMS scope, prior to the start of these works. The content of the training will be specified in the specific RAMS.

8.4 Toolbox Talks

Toolbox talks will be carried out at regular intervals prior the initiation of the days works or upon need throughout the day. These shall be brief meetings or training sessions facilitated by Voltalia or Contractors aim to address specific and pertinent HSES topics with workers. The objective is to enhance awareness, disseminate crucial information, and strengthen adherence to HSES work practices. The Site Management Team may mandate these sessions for Contractors, focusing on specific topics in response to identified needs or observed shortcomings on the site. The frequency of these meetings shall be commensurate to the risks and impacts associated with the ongoing phase of the project at the time.

9.0 REPORTING

This section provides instructions and requirements for the reporting on the implementation of mitigation measures/actions, monitoring activities and internal auditing.

9.1 Reporting of the monitoring activities

Evidence and results of the monitoring activities (detailed in Table 2) must be described in detail in appropriate monitoring reports to be prepared as frequent as indicated in the table. These monitoring reports must include the following minimum information/data (where relevant):

- Scope and Purpose of the monitoring activity;
- Reference to the approved NoiseMP;
- Description of the monitoring effort and applied methodology, including start and end dates of the monitoring period covered by the report, location of monitoring activities (geographical coordinates in WGS84 system and elevation) and map of surveyed areas;
- Timing of data collection (start date and end date);
- Applicable KPI according to Table 2.
- Conclusions on compliance vs. KPI, and eventual observations including the reasons for the deviations, if applicable;
- Name and personal data of staff responsible for implementing the specific monitoring activities (including reference to this Management Plan and reference to the appointment of third parties eventually contracted to perform part of the activity, e.g. external laboratories and consultants);
- Implications, modifications, adjustments and/or recommendations that could be adopted in response to observed results from the monitoring activities and any other recommendations for improvements to the NoiseMP;
- Suggestions for future projects based on lessons learned;
- Quality control procedures applied to ensure consistency and reliability of the analyses or results;
- Analytical certificates from the laboratory/ies (where applicable);
- Summary of any incidents or accidents, analysis of the root causes and lessons learned and documentation of any corrective actions taken.

9.2 Reporting of the auditing activities

The implementation of this Management Plan must be audited according to the requirements included in Voltalia's E&S Management System and section **Error! Reference source not found.** "Audit and Review" of this Management Plan.

Evidence of the implementation of the mitigation measures/actions, of the timely deployment of monitoring activities (detailed in section 4.0) and of related results are described in the audit reports. These audit reports must include the following minimum information/data:

- List of the items audited (detailed in section 4.0)
- Information whether the items have been implemented within the indicated timeline and frequency;
- Achievement (or not) of the KPIs;
- Description of non-compliances eventually identified; and
- Description of correction measures to be applied.

Signature Page

Table 3: Details of the Undersigned

Name (position)	Entity	Date	Signature



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