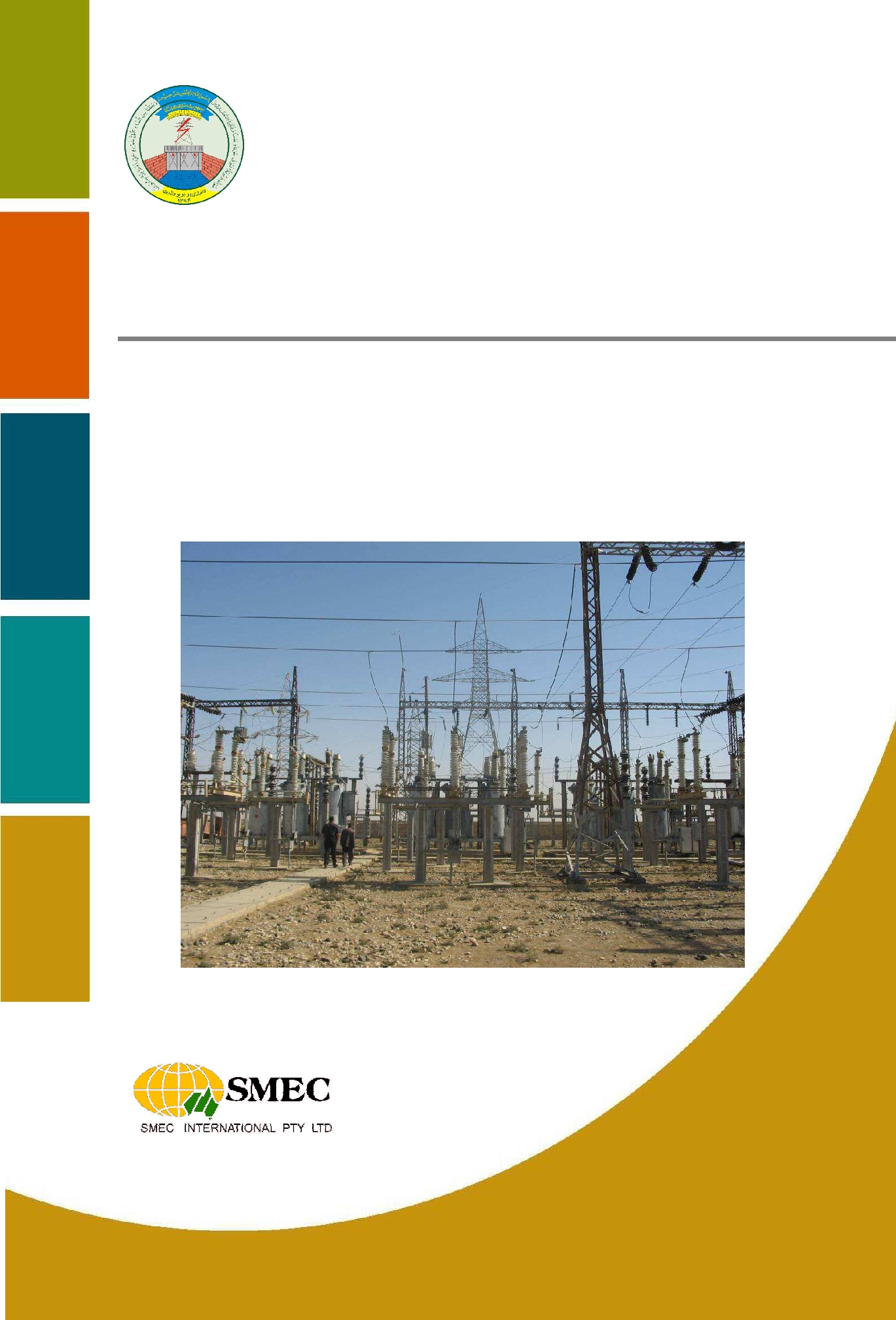


**Naghlu Hydropower Rehabilitation Project (NHRP)**

**Site Specific Environmental & Social Management Plan (ESMP)**

**For Component-1**

**Mechanical, Electrical and Electromechanical Works**

**Da Afghanistan Breshna Sherkat (DABS)**

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# List of Acronyms

AP Affected Person(s)

CCMP Contractor Camp Management Plan

COO Chief Operating Officer

CV Curriculum Vitae

DABS Da Afghanistan Breshna Sherkat

EHS Environmental Health and Safety

ESMF Environmental and Social Management Framework

ESMP Environmental Management Plan

ESIA Environmental and Social Impact Assessment

ESS Environmental and Social Safeguards

GOA Government of (the Islamic Republic of) Afghanistan

IFC International Finance Corporation

IR Involuntary Resettlement

LV Low Voltage

MEW Ministry of Energy and Water

MV Medium Voltage

NDF National Development Framework

NEPA National Environmental Protection Authority (Afghanistan)

NGOs Non-Government Organizations

NHRP Naghlo Hydropower Rehabilitation Project

PAP Project Affected Persons

PCB Poly-chlorinated Biphenyls

QA Quality Assurance

SFO Safeguards Focal Point

STD Sexually Transmitted Disease

ROW Right Of Way

UNMACA United Nations Mine Action Center for Afghanistan

UXOs Unexploded Ordinances

WB World Bank

# 

# NHRP project Background

## 1.1 Project Objective

The Project Development Objective is to improve dam safety and to increase the supply of electricity at the Naghlu Hydropower Plant.

## 

## 1.2 Project Components

1. **Component 1: Mechanical, Electrical, and Electromechanical Work**. This component complements the rehabilitation of the electrical and electromechanical parts of the plant previously undertaken and ensures their sustainable operation. It consists of two subcomponents as follows:

* **Subcomponent 1(a): Rehabilitation of Unit 1 and Balance of Plant**. This includes the completion of electromechanical rehabilitation work focused on Unit 1, particularly (i) testing of the existing bent rotor shaft followed by repair if possible or replacement if not; and (ii) completion of rehabilitation of the existing plant.
* **Subcomponent 1(b): Enhancing Maintenance of the Powerhouse**. Other units of the power house are in need of regular maintenance. This subcomponent will particularly support provision of spare parts and consumables for three to five years to ensure the sustainable operation and normal maintenance of the existing plant.

1. **Component 2: Dam Safety and Power Generation Capacity Improvement** (US$33 million). This component aims to ensure the safe operation of the dam through the two subcomponents as follows:

* **Subcomponent 2(a): Dam Safety Audit and Safety Improvement Measures**. This component will finance technical assistance and studies including (i) audit of the dam’s structural and operational safety; (ii) preparation of plans and bidding documents for works to improve safety to acceptable standards, focused on reactivating the bottom outlet, adequacy of auxiliary power and other systems, improvements to the head gates closing system, installation of instrumentation, and clearance of the UXOS from the dam structure; (iii) studies on structural and operational safety considering updated hydrological and seismic data and following relevant international/national standards/guidelines; and (iv) flood routing through Naghlu Dam to Surobi Dam, including adequacy of its spilling arrangements.
* **Subcomponent 2(b): Optimization of Power Generation**. This component aims to examine the potential for increasing power generation at NHPP. This would identify options for sustainable sediment management and for increasing the amount of electricity produced by the dam. It consists of (a) **Feasibility study** to examine the feasibility of various options to increase power generation and (b), **Detailed design** which supports the preparation of detailed designs should the feasibility study return a positive result, and will be closely guided by the findings of Environmental and Social Impact Assessment (ESIA), resettlement and livelihoods restoration, environment and social management plans, health, and other related action plans.

1. **Component 3: Environmental and Social Sustainability, Project Management Support, and Future Project Preparation** (US$20.0 million). This component includes two subcomponents:

* **Subcomponent 3(a): Environmental and Social Sustainability.** This subcomponent aims to ensure the environmental and social sustainability of the dam through (a) ***Local Development Assistance*** which will promote benefit sharing with local communities and will support electrification in the project area and improved access to skills training for local communities: (b) ***Supporting environmental and social management*** to ensure the effective planning, implementation and monitoring of all safeguards instruments across all project components.
* **Subcomponent 3(b): Project Management Support and Future Project Preparation** aims to ensure that DABS receives advice on good international practices.

# Environmental and Social Management Plan

## 2.1 Introduction

The following site specific Environmental & Social Management Plan (ESMP) is prepared to outline the types of control measures that must be implemented to reduce environmental and social risks during implementation of rehabilitation of the electrical and electromechanical parts of the plant at the Naghlu hydropower plant (component 1). The potential environmental and social risks for component 1 were identified during preparation of the Environmental and Social Safeguards Guidelines for the Emergency Power Rehabilitation Project. The mitigation measures identified during that process are listed as specific commitments to direct performance criteria within the updated sited specific ESMP for component 1.

The updated ESMP complies with the principles and policies of the ESMF for NHRP.

## 2.1 Purpose

The  the primary purpose of an ESMP is to mitigate/reduce potential environmental and social impacts of planned activities and to ensure that all identified environmental and social risks expected to occur during rehabilitation works at Naghlu power plant are reduced to an acceptable level.

This will be achieved through engagement of all relevant parties in environmental and social management. In particular, this will include integrating environmental and social management planning with design, rehabilitation methods and operation planning.

The requirements of this plan are applicable to all on-site work carried out. All contractors and suppliers will be bound to comply with the requirements of this plan, in so far as they are applicable to the nature and scope of their work.

The scope of this plan embraces the risks created by the design of the Project, the short-term risks that will arise during the rehabilitation (the works the project is paying for) and any long-term risks that are influenced by the rehabilitation methods.

The ESMP:

* Draws together the measures proposed to mitigate negative, and to maximize positive, environmental and social impacts, and groups them logically into component-1 with common themes;
* Define a proposed institutional structure to govern the implementation of the ESMP;
* Defines the specific actions required, roles and responsibilities for these actions, timetables for implementation, and associated costs; and
* Describes capacity building and training requirements for the implementation of the ESMP.

## 2.2 Legislative and Policy Considerations

Legislation and policies that are relevant to rehabilitation of the electrical and electromechanical parts of the plant at the Naghlu hydropower plant are summarized in Table 1.1.

Table 1.1: Summary of relevant legislation and policies

|  |  |  |
| --- | --- | --- |
| **Jurisdiction** | **Legislation or Policy** | **Relevance** |
| World Bank | Operational Policy 4.01 | Environmental assessment |
| NHRP ESMF | Environmental and Social Management |
| Govt of Afghanistan | Environmental Law (2006)  IFC EHS guideline | Environmental impact assessment and management  Environmental health and safety |
| NEPA Pollution Control and Management in  Afghanistan | Policy discussion |
| Afghanistan Labor law |  |
| MEW- Energy sector | Environmental and Social Safeguards Guideline (ESS- guideline) | Hygienic & Safety measures |
|  |  |  |

## 2.3 Summary of Environmental and Social Impacts

#### 2.3.1 Potential Negative Environmental impacts

The environmental impacts associated with the electro-mechanical works include managing removal, storage, handling and disposal of used oil’s and lubricants, petroleum products and the removed parts. Other impacts are loud noises and dust. These impacts are low to medium level and thus readily reversed or effectively managed with mitigation measures outlined in the relevant table. DABS has conducted a brief workshop to undertake risk assessment impacts of project activities under component-1 including appropriate mitigation measures. For detailed of risk assessment process refer to Annex 1- Risk Assessment Identification and Mitigation Measures, which also includes the potential social risk assessments.

#### 2.3.2 Potential Negative Social impacts

No social safeguards impacts are predictable under component 1, because the electro-mechanical work will be implemented in the premise of Naghlu power plant. However, there might be workplace complaints arising during rehabilitation activities, for which the GRM procedures as outlined in the approved ESMF will be followed.

# Environmental and Social Management

DABS safeguards team during the process of risk assessment and updating of ESMP identified environmental and social risks arising from all phases of the activities under component 1. The team also recommended adoption of specific mitigation measures to either:

* Reduce risks assessed as high or medium to low, or
* Ensure that risks assessed as low do not increase.

The following sections provides guidance to relevant parties for implementation of the mitigation measures for each project phase:

The risk level associated to component-1 Social and Environmental impact are defined based on the assessment, during updated the Site Specific ESMP, and carried out by DABS team.

## 3.1 ESMP Cost

The ESMP matrix includes estimated cost various activities under component-1. The cost will be based on the assumption of DABS team which could be varied based on the specific mitigation activities and the contractor financial estimate, which will be submitted during bidding process.

## 3.1 Environmental and Social Management Plan

#### 3.1.1 Pre Rehabilitation Phase

Table 1.2a – Implementation of Tendering Phase Mitigation Measures

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Activities/**  **Concerns** | **Potential impacts** | **Assessed Risk level** | **Mitigation measures** | **Monitoring**  **Indicators** | **Institutional Responsibilities** | | **Estimated Cost** |
| **Implementation** | **Supervision** |
| Pre-bidding | -Submission of tenders that fail to address environmental and social issues.  - contractor failure to attend pre bid  meeting and  -contractor failure to understand  all social and environmental  issues relating to bid  preparation | medium | Introduce requirement for mandatory  attendance at pre-bid meetings as a  requirement for submission of a conforming  tender  - Include site inspection on pre-bid meeting  agenda  - Provide details of environmental and social  requirements to Contractors in the bidding  documents | Potential bidders advised in writing of mandatory attendance at pre-bidding meetings as a requirement of tender.  Site inspection included as part of pre-bid meeting  ESMP included in bidding documents | DABS NHRP project Manager and DABS  Procurement Manager | DABS SFO |  |
| Bid evaluation | -Selection of Contractor with little or no understanding of  environmental and social  requirements,  - Selection of Contractor that has made no allowance for  environmental and social  requirements in determining bid  price  - Limited implementation of  environmental and social  requirements  - failure to take environmental  and social requirements into  account during bid evaluation | medium | -Include environmental and social  requirements in BOQ  - Provide recognition of contractor costing of  environmental and social items in bid  evaluation  - Include environmental / social expertise on  the bid evaluation committee. | Modified BOQs include environmental and social mitigation measures  Bid evaluations include assessment of contractors’ costs for implementing environmental and social mitigation measures.  DABS safeguards focal point sits on the bid evaluation panel | DABS NHRP project managers, DABS procurement manager | DABS |  |

Table 1.2b – Implementation of Pre- rehabilitation Phase Mitigation Measures

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Activities** | **Potential impacts** | **Assessed Risk level** | **Mitigation measures** | **Monitoring Indicators** | **Institutional Responsibilities** | | **Estimated costs** |
| Implementation | Supervision |
| Preparation of  Contractor  Camp  Management  Plan (CCMP) | -Land dispute;  - Increased risk of workforce  injury;  - Increased risk of damage to  built environment;  -failure of contractor to prepare  an acceptable CCM | medium | -Include requirement for CCMP in  specifications  - Apply QA principles to CCMP acceptance  -Discuss contractor proposals with DABS | Acceptable CCMP drawing included in specifications  Written confirmation of CCMP acceptance by SFO+ consultant prior to works on site | Contractor  - | DABS SFO |  |
| Erection of  contractor  construction  camp | Location in unsuitable site | low | -Identify suitable camp site in consultation with power plant and Sarobi district official  - Obtain relevant approvals for camp location | Suitable camp site identified  Relevant approvals obtained for camp site. | contractor | DABS Naghlu plant manager? |  |
| Contractor  provide  evidence of key  staff  qualifications | Low quality \ unacceptable  work;  - failure of Contractor to provide  evidence of key staff  qualifications | medium | -Include requirements for key staff  qualifications in bidding documents;  - Non-acceptance of Contractor work plan until  evidence is provided | Bidding documents include requirement for contractors to provide documentary evidence of key staff qualifications | \DABS TEAM | DABS SFO |  |

#### Rehabilitation Phase

Table 1.2c – Implementation of Rehabilitation Phase Mitigation Measures

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Activities** | **Potential impacts** | **Assessed Risk level** | **Mitigation measures** | **Monitoring Indicators** | **Institutional**  **Responsibilities** | | **Estimated costs** |
| **Implementation** | **Supervision** |
| Operation of  contractor  construction  camp | Increased levels of PM10 in the  Power plant site especially  during summer  - Community inconvenience;  From;  - uncontrolled dust generated  from operation of Contractor  camp | medium | Undertake watering of camp site  -Implement approved work plan  -Submit regular monitoring reports | Existing of proper ventilation  Regular measurement of PM10 | -Include requirement for regular watering of  camp site and construction sites during  summer in bidding documents  - During summer Contractor to undertake  water spraying each day before start of work  and regularly throughout the day thereafter  and as otherwise directed by the site  supervisor  - Implement approved work plan  - Monitor and submit monthly reports on  contractor implementation of approved work  plan and mitigation measures | DABS  Contractor  Contractor  Consultant firm |  |
| Operation of  contractor  construction  camp | -Contamination of soil, surface  and groundwater;  From:  - pollution and nuisance to the  community from lack of latrines,  bathrooms, potable water and medical equipment. | medium | Include requirement for implementation of  mitigation measures in the bidding  documents;  - Provide workers with appropriate facilities;  -Undertake regular monitoring;  - Implement QA requirements | Check of data collection and log book for leakage  Number of sanitation facilities in the site  Quality and quantity of water point in the site | Bidding documents to include requirements  for workers to be provided with the following  facilities:  − Adequate numbers of functional  bathrooms and latrines (latrines may  be portable)  − Covered rubbish bins for scraps  − Adequately stocked first aid medical kit  − Trained person to provide first aid  assistance if required  - Bidding documents to include requirement for  provision of facilities for collection and  regular disposal of solid and liquid wastes  - Undertake regular disposal of solid & liquid  wastes  - Undertake regular monitoring to ensure  compliance with requirements  - Issue NCR and CAR for non-compliances  - CAR not to be released until non-compliance  is addressed | DABS  Contractor  Contractor  Contractor  DABS  Contractor  DABS- consultant firm |  |
| Management of  spills and  construction  debris | - Contamination of soil, surface  water and groundwater;  - Increased risk of injury;  From:  - failure to promptly attend to spills;  - failure to appropriately dispose  of construction debris/ spare parts | medium | Include requirements relating to spill  management and debris- old spare parts removal in bidding  documents;  - Include spill and debris/waste removal in Contractor  work plan;  - Promptly attend to oil spill  - Collect and dispose of construction debris in designated locations  - Monitor performance in accordance with QA  provisions | Existing of the primary and secondary collection point  Availability of First Aid kit  Availability of trained First Aid provider in the work force | -Ensure that requirements relating to spill management and debris are included in bidding documents;  - Ensure that the Contractor addresses spill  management and debris removal as  inclusions in acceptable Contractor work  plan;  - Include requirement for Contractor to  promptly attend to oil spills in bidding  documents  -Ensure any oil spills are attended to promptly  - Ensure Contractor collects and disposes of  construction debris in designated locations  - Monitor Contractor performance in  accordance with QA requirements | DABS  Consultant firm with SFO from DABS  DABS  Contractor  Consultant firm with SFO from DABS |  |
| Replacement and installation of new shop for unit one | Risk of injury  -the newly hired workers face a higher injury rate | medium | Contractor to comply with health, safety requirements of GoA and the IFC/WB.  -Contractor to ensure to ensure that All employees practice and demonstrate a high standard of personal safety and hygiene.  -DABS’s SFO with consultant firm to monitor Contractor  performance and implement  - QA provisions as required | Signage and rout definition  EHS guideline are provided and staff are trained | Ensure that requirements of relating to safety and hygienic included in bidding documents.    Ensure that all project staff follow safety measures.  -ensure all newly hired staff received training on safety and health issue.  Monitor contractor performance related to safety and health issue. | DABS  Contractor  contractor  Consultant firm and SFO |  |

#### Operational and Maintenance Phase

Table 1.2d Implementation of operational Phase Mitigation Measures

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Activities** | **Potential impacts** | **Assessed Risk level** | **Mitigation measures** | **Implementation** | **Institutional**  **Responsibilities** | | **Estimated Cost** |
| **Implementation** | **Supervision** |
| Overhauling of unit number one | risk of injury and health issue | medium | Contractor to comply with health and safety duty under IFC EHS guideline.  -contractor to comply with health and safety law of Afghanistan | -Ensure all newly hired staff received training on safety and health issue.  Monitor contractor performance related to safety and health issue | Contractor  Consultant firm | Contractor and DABS SFO |  |
| Storage and stock-pilling | Leakages of chemical.  Risk of injury.  Health and hygienic issue | medium | Contractor to comply with health and safety requirement under IFC EHS guideline.  Failure to comply with GoA law | Ensure reference is made to relevant guideline in the bidding documents.  Ensure all employees received training on handling and storage of equipment and spare parts  Monitor contractor performance related to safety and health issue | DABS  Contractor  Consultant firm + SFO | Contractor and DABS SFO |  |
| Maintenance of the Powerhouse | Contamination of soil, surface  water & groundwater  -Increased risk of injury | medium | Employee (power plant who will be responsible for maintain ace) to promptly attend to  spills  Power plant to appropriately dispose  of construction debris Repair or replacement of spare part | Ensure all staff working in the power plant received training in safety and hygienic issues.  Ensure to follow safety and health requirements outlined in the IFC ESH guideline and Afghanistan safety law.  Monitor contractor performance related to safety and health issue | Contractor  Naghlu power plant  DABS | DABS SFO |  |

# Implementation of the ESMP

DABS- NHRP team will be responsible for ensuring implementation of the ESMP. Other key parties in the ESMP implementation will be Naghlu power plant Manager and the Contractor.

The DABS- safeguards focal officer will be responsible for ensuring appropriate corrective action is taken by the Contractor for any failure to implement required mitigation measures during rehabilitation of the electrical and electromechanical parts of the plant at the Naghlu hydropower plant. Where contractual agreements are entered into for work associated with rehabilitation work under component 1, NHRP will:

* include the ESMP in contract documents for all work to be undertaken by the contractors
* ensure that the contractor comply with the requirements of the ESMP

# 4. Grievance Handling Procedure

All complaints about rehabilitation works under component 1 will be directed to and recorded by the DABS safeguard focal officer and consultant firm. The safeguards focal officer will maintain a complaints register that records details of all complaints received, the action taken in response, where necessary, and any corrective actions or procedural changes implemented to prevent recurrence. The initiator of the complaint will be advised of the results of all investigations and actions taken. The register will be regularly audited by the NHRP Project Manager (PM) to ensure timely response to complaints.

The safeguards focal officer will review the register daily and advise NHRP PM of any relevant complaints. The Project Manager will then investigate the complaint and instigate any corrective action required.

NHRP grievance redress mechanism described in the ESMF will be strengthened by inclusion representatives from the Naghlu power plant officials.

In case of an appeal, the appellant will have the option to approach the DABS CEO.

## 5.1 NHRP Grievance Redress Mechanism GRM)

The approved ESMF for NHRP outlined GRM process, as following

The GRM covers grievances related to both environmental and social concerns, including workplace complaints. The elements of the project’s GRM conducted or accessed at three different levels are:

* Efforts made to resolve issues at community level
* A Grievance Redress Committee at district/project level
* Appeal mechanism to DABS management

Where an individual has a grievance she or he, should, in the first instance, be encouraged to make use of existing local-level structures ( e.g. CDCs/shura and village leaders) to try to resolve quickly any concerns or grievances related to project development and implementation. The GRM structure that outlines the grievance handling process is shown below. It is worth mentioning the activities under component one will be happing within the premise of the Naghlu power plant, where the power plant official will act to address grievances at level 1 (power plant official will be acting in place of community or CDC).

Please refer to annex-2 GRM form, to be used by complainants.

GRM process outlined in Figure 1.1 below

**If NO**

**If NO**

**If NO**

GRM

Local

Resolution Measures

Grievance Redress Committee

(Project Level)

DABS Management /COO

If still unresolved, APs may choose to exercise their right under Afghanistan law to refer the matter to a court of law.

# Monitoring and Auditing

## 6.1 Introduction

Monitoring and auditing will be undertaken to determine the impact as a consequence of the rehabilitation, and maintenance of the electro-electromechanically work. General monitoring and auditing will be conducted weekly throughout the rehabilitation stage and annually during the operation and maintenance phase.

Routine monitoring and reporting will be undertaken by the Contractor and consultation firm. DABS will develop an auditing schedule and undertake audits in accordance with the schedule.

DABS staff will be responsible for undertaking environmental audits. DABS will maintain all audit records and will be responsible for scheduling follow up inspections to ensure that corrective actions are implemented for any identified non-compliances.

DABS will be responsible for determining severity of non-compliance and may instruct works to cease until the non-compliance is rectified. A non-compliance register will be established and maintained by

DABS and all non-compliances recorded there-in.

## 6.2 Reporting Procedure

The Contractor will be required to report any environmental or social incidents to the consultant firm (DABS is in the process to bring consultant firm on board soon).

The consultant firm will report to the DABS Safeguards Focal Officer (SFO) and the NHRP Manager. The DABS Manager will advise the consultant about appropriate mitigation measures and the consultant will direct the Contractor to undertake these mitigation measures.

If there are complaints from the public during the construction phase, the DABS Manager is to be notified immediately. The following information should be recorded by the Consultant.

* Time, date and nature of the incident / report;
* Type of communication (e.g. telephone, personal meeting);
* Contact details with telephone number of person making the complaint. If this person
* wishes to remain anonymous then “not identified” is to be recorded;
* Details of response and investigation undertaken as a result of the incident / complaint;
* Name of person undertaking investigation of the incident / complaint;
* Corrective action taken as a result of the incident / complaint.

The consultant will prepare and submit weekly monitoring reports to the DABS Manager.

# Capacity Building

Capacity building measures will be required to ensure that institutions involved in implementing the various ESMP components have the technical, management and other skills to fulfil their roles. The key focus areas for capacity building will be:

* The DABS Local Safeguards team
* NHRP technical and engineering staff
* Naghlu power plant staff

Other institutions will require more specific and targeted training and awareness raising, e.g. the contractor and workforce,.

# Disclosure

This Environmental and Social Management Plan (ESMP) for component one has been updated by the DABS on the basis of the ESS guideline. The ESS guideline was prepared by SMEC international during 2010 for implementation of EPRP. The site specific ESMP is also in line with the approved ESMF for NHRP project. Prior to approval of the project by the World Bank, the ESMF was disclosed on 19.Feb.2014 by DABS in Afghanistan in both Dari and Pashto in relevant places in the country and the English version of the ESMF at the World Bank’s InfoShop on 4 July, 2013. The Site specific ESMP for component will be disclosed in country in relevant sites.

# Training

The Table 1.3 outlines the proposed training for DABS staff as well as employees of the Contractor. The training is aimed at the practical aspects of environmental monitoring and management.

**Table 1.3- training plan**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Training Recipients** | **Mode of Training** | **Environmental Aspect to be covered** | **Training Conducting Agency** |
| 1 | NHRP Environmental Safeguards Team | Lecture, workshop  Group Discussion  Site Visit | * Environmental Overview * Laws and Regulation/standards and Acts * EMP and ESMF overview * EHS guidelines and pros and cons | Env. and social experts  Consultants |
| 2 | NHRP Operation/Maintenance Staff | Seminar Workshop  Lecture | * Environmental Overview * Laws and Regulation/standards and Acts * EMP and ESMF overview * EHS guidelines and pros and cons | Env. and social experts  Consultants  NHRP Safeguards Team |
| 3 | Contractor staff | Seminar Workshop  Lecture | * Environmental Overview * Laws and Regulation/standards and Acts * EMP and ESMF overview * EHS guidelines and pros and cons * STD and other transmitted disease issue. | Env. and social experts  Consultants  NHRP Safeguards Team |

# Annex 1- Risk assessment identification and mitigation measures

**Introduction**

Risk assessment for rehabilitation of power plant at Naghlu were conducted during 2010 by SMEC international, the consultant firm for EPRP, while preparing ESS guideline.

This risk assessment identification of project impacts and mitigation measures have been updated by DABS, who is now the responsible agency for implementation of component 1.

DABS followed the process outlined in Figure 1.2 below:

**Establish the Context**

**Treat Risks**

**Monitor and Review**

**Communicate and Consult**

**Analyse Risks**

**Evaluate Risks**

**Identify Risks**

**Establish the context**

This component consisted of the following:

* Review environmental and social risk management of activities under the component 1.
* Review findings of ESS guidelines developed during 2010, and
* Review details of Mechanical, Electrical and electro-mechanical works

**3 x 3 Risk assessment matrix and hazard identification word diagram**

The 3 x 3 Risk Assessment Matrix has been used as the tool to evaluate risk level for activates under component 1. The matrix is shown in Table 1.4.

Table 1.4: 3 x 3 Risk assessment matrix

|  |  |  |  |
| --- | --- | --- | --- |
| **Likelihood** | **Severity** | | |
|  | **Low**  No adverse social or environmental impacts. | **Medium**  Measureable adverse environmental or social impact. Will result in  annoyance or nuisance to  the public | **High**  Significant damage or impact on environmental systems & public. Widespread  impact on the public  resulting injury or illness |
| **Low**  Event could occur  occasionally | low | low | medium |
| **Medium**  Event will occur about 50%  of the time | low | Medium | High |
| **High**  Event will almost certainly  Medium High Critical | Medium | high | critical |

The 3 x 3 matrix was used in conjunction with a hazard identification diagram word to identify potential impacts and risk levels and mitigation measures for each activity under component 1. The mitigation measures were adopted to achieve the following:

* In the cases where risk level was assessed as medium or high – reduce risk to low
* In the cases where risk level was assessed as low – ensure risk level does not increase
* In the cases where risk level was assessed as critical – modify the project to avoid critical risk activities

The hazard identification word diagram template is shown in Table 1.4 below.

Table 1.5: Hazard identification word diagram template

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project**  **phase** | **Activity** | **What could go**  **wrong** | **Possible**  **consequences** | **Likelihood** | **Severity** | **Risk**  **Level** | **Mitigation measures** |
|  |  |  |  |  |  |  |  |

**Identification, analysis and evaluation of risks**

These tasks were undertaken in the compilation of the hazard identification word diagram template.

* All activities for each project phase under component 1
* Assessment of what could go wrong
* Determination of possible consequences if something does go wrong
* Assessment of likelihood that something will go wrong
* Determination of severity of impacts if something does go wrong
* Determination of risk level based on 3 x 3 matrix
* Recommendations for mitigation measures to:
* reduce risk levels for medium and high to low level
* prevent low risks from rising

The completed hazard identification word diagram template for activities under component 1 is shown in Table 1.5a

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project**  **phase** | **Activity** | **What could go**  **wrong** | **Possible**  **consequences** | **Likelihood** | **Severity** | **Risk**  **Level** | **Mitigation measures** |
| Design | Preparation of spare parts list with BoQ for power plant (Consultant firm will prepare this list | Nil | Nil |  |  |  | In consultation with Safeguards expert |
| Tendering | Bid  evaluation | Failure to take environmental and social requirements into account  when evaluating bids | -Selection of Contractor with  little or no understanding of  environmental and social  requirements  - Selection of Contractor that  has made no allowance for  environmental and social  requirements in  determining bid price  - Limited implementation of  environmental & social  requirements | Medium | Medium | Medium | DABS to:  -include environmental &  social requirements in BOQ  -provide recognition of  contractor costing of  environmental and social  items in bid evaluation  - include environmental /  social specialist on bid  evaluation panel  -include environmental and  social criteria in weighting for  bid evaluation |
| Pre-rehabilitation | Re-assessment of old shop by consultant firm | Nil | Nil |  |  |  |  |
| Rehabilitation | Operation of  contractor  construction  camp | Dust from camp site | Increased levels of PM10 in  the power plant site  especially during summer  -public inconvenience | Low | Low | Low | Assure procurement and availability of PPE |
| Noise and vibration from camp  site | public inconvenience | Low | Low | Low | Use of PPE |
| Pollution and nuisance to the  public from lack of latrines,  bathrooms, potable water and  medical equipment | public inconvenience  -Contamination of soil,  surface and groundwater | Medium | Medium | Medium | Contractor to provide  workers with:  − adequate numbers of  functional bathrooms  and latrines  – latrines  may be of portable  type  − covered rubbish bins  for scraps  − adequately stocked  first aid medical kit  − trained person to  provide first aid  assistance if required  -Contractor to provide facilities for collection and regular disposal of solid & liquid wastes.  DABS’s Safeguards focal officer to undertake regular  monitoring to ensure  Contractor compliance with requirements.  If Contractor is found not to comply DABS-Safeguards team issue nonconformance report & corrective action request (CAR).  CAR not to be released until implemented by Contractor to satisfaction of DABS Safeguards focal officer. |
| Rehabilitation | Replacement and installation of new shop for unit one | -failure to comply with a health and safety duty under IMF EHS guideline  -failure to comply with workplace health and safety requirements of WB and GoA law.  Failure to provide training for newly hired worker | -Risk of injury  -the newly hired workers face a higher injury rate. | medium | medium | medium | -Contractor to comply with health, safety requirements of GoA and the IFC/WB.  -Contractor to ensure to ensure that All employees practise and demonstrate a high standard of personal safety and hygiene.  -DABS’s SFO with consultant firm to monitor Contractor  performance and implement  QA provisions as required |
| Management  of spills and  waste from power plant | -Failure to promptly attend  to spills  - Failure to appropriately  dispose of waste from power plant | -Contamination of soil,  surface water and  groundwater  - Risk of injury | Medium | medium | medium | -DABS to ensure that  requirements relating to spill  management & debris  removal are included in  bidding documents  -Safeguards Focal Officer (SFO) to ensure that these  issues are addressed as part  of requirement for  acceptable Contractor work plan  - Contractor to promptly  attend to oil spill in  accordance with DABS  directions  - Contractor to collect and  disposed of construction  debris in designated  locations |
|  | Overhauling of unit number 1 | -Failure to comply with health and safety duty under IFC EHS guideline.  -Failure to comply with health and safety law of Afghanistan | - risk of injury  - | Medium | Medium | Medium | -contractor to comply with IFC EHS guideline and GoA law.  -DABS and consultant firm to monitor contractor performance.  -Contractor to provide report. |
|  | Storage and stock-pilling | Failure to comply with health and safety requirement under IFC EHS guideline.  Failure to comply with GoA law | Leakages of chemical.  Risk of injury.  Health and hygienic issue | Medium | Medium | Medium | Contractor to comply with IFC EHS guideline and GoA law.  -DABS and consultant firm to monitor contractor performance.  -Contractor to provide report |
| Maintenance of the Powerhouse | Fixing of moving heavy machinery | Fixing moving parts may have serious body impairment issue | health & Safety hazards | Medium | Medium | Medium | EHS Sensitization to overall workforce a |

**Summary of recommended mitigation measures**

The mitigation measures developed through the risk assessment process are summarized in Table 1.5b:

Table 1.5b: Summary of mitigation measures

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Project**  **Phase** | **Activity** | **Possible Problem** | **Potential Impacts** | **Risk**  **Level** | **Recommended Mitigation Measures** |
| Design | Preparation of spare parts list with BoQ for power plant (Consultant firm will prepare this list | **Nil** | **Nil** | **Low** |  |
| Tendering | Bid  Evaluation | - Contractor failure to attend meeting  -Contractor failure to  understand all issues relating  to bid preparation | -Tenders submitted that fail to address environmental and social issues related to component 1.  - Cost increases | Medium | -DABS to advise potential bidders that attendance at pre-bid meeting is mandatory and failure to attend will result in tender being rated as nonconforming.  DABS to include environmental and social  requirements in writing in the agenda and notes for  pre-bid meeting  - Pre-bid meeting to include site inspection component to ensure understanding of requirements. |
| Pre-rehabilitation | Re-assessment of old shop by consultant firm | **Nil** | **Nil** | **Low** |  |
| Rehabilitation | Prepare  Contractor  Camp  Mangt Plan  (CCMP) | -Contractor failure to prepare an  acceptable CCMP | -Increased risk of workforce  injury  -Increased risk of damage to  built environment  -Delays & cost increases | **Medium** | -DABS to include a requirement in specifications for  Contractor to provide an acceptable CCMP  together with drawings  - DABS to provide for Hold Point for camp  construction until acceptance of CCMP  -Consultant firm+ SFO to provide acceptance of CCMP in writing following consultation with manager of Naghlu power plant.  -Consultant firm + SFO to provide written release of Hold Point  following acceptance of CCMP |
| Erection of  contractor  construction  camp | Location in unsuitable site | Noise generated from camp  site | **low** | -Contractor to identify suitable site in consultation with Naghlu power plant and consultant firm+ SFO.  - Contractor to obtain site approval from Power plant+ Sarobi district manager or Wolaswal. |
| Contractor  provide  evidence of  key staff  qualification | Failure of Contractor to provide  evidence | Low quality / unacceptable  work, | **low** | -DABS to ensure that bidding documents contain  requirements in relation to providing evidence of  key staff qualifications  - Contractor to provide CVs of key staff to DABS  -Consultant firm+ SFO not to accept work plan until evidence is  Provided. |
| Operation of  contractor  construction  camp | Dust from camp site | Increased levels of PM10 in the  Power plant site, especially  during summer | **medium** | -Contractor to undertake water spraying each day  before start of work and regularly throughout the  day thereafter  - Contractor to implement approved work plan  Consultant firm + SFO to monitor and submit monthly reports on  Contractor implementation of approved work plan  and implementation measures |
| Pollution and nuisance to the  public from lack of  latrines, bathrooms, potable  water and medical equipment | Contamination of soil, surface  and groundwater | **medium** | DABS to ensure that bidding documents to include the  following requirements:  - Contractor to provide workers with:  -- adequate numbers of functional bathrooms  and latrines  – latrines may be of portable type  --covered rubbish bins for scraps  -- adequately stocked first aid medical kit  -- trained person to provide first aid assistance  if required |
| Erection of  contractor  construction  camp | Location in unsuitable site or private land  -land dispute issue /community conflict | **low** | Contractor comp shall be located on land to be free of dispute. |
| Pollution and nuisance to the  public from lack of latrines, bathrooms, potable water and medical equipment | Contamination of soil, surface  and groundwater | **medium** | -Contractor to provide facilities for collection and  regular disposal of solid & liquid wastes  - consultant firm + SFO to undertake regular monitoring to ensure  Contractor compliance with requirements.  - If Contractor is found not to comply consultant firm + SFO issue nonconformance report & corrective action request.  Correction Action Request (CAR) not to be released until implemented by  Contractor to satisfaction of consultant firm + SFO/DABS |
| Management  of spills &  waste/  debris | -Failure to promptly attend to  spills  -Failure to appropriately dispose  of construction debris | Contamination of soil, surface  water & groundwater  -Increased risk of injury | **medium** | DABS to ensure that requirements relating to spill  management & debris removal are included in  bidding documents  -Consultant firm + SFO/DABS to ensure that these issues are addressed as  part of requirement for acceptable Contractor work  plan  - Contractor to promptly attend to oil spill in  accordance with consultant firm + SFO directions  - Contractor to collect and disposed of waste/ debris in designated locations  -Consultant firm and SFO of DABS to monitor Contractor performance and  implement QA provisions as required |
| Replacement and installation of new shop for unit one | -failure to comply with a health and safety duty under IMF EHS guideline  -failure to comply with workplace health and safety requirements of WB and GoA law.  Failure to provide training for newly hired worker | -Risk of injury  -the newly hired workers face a higher injury rate. | **medium** | -Contractor to comply with health, safety requirements of GoA and the IFC/WB.  -Contractor to ensure to ensure that All employees practise and demonstrate a high standard of personal safety and hygiene.  -DABS’s SFO with consultant firm to monitor Contractor  performance and implement  QA provisions as required |
| Overhauling of unit number one | -Failure to comply with health and safety duty under IFC EHS guideline.  -Failure to comply with health and safety law of Afghanistan | - risk of injury  - | medium | -contractor to comply with IFC EHS guideline and GoA law.  -DABS and consultant firm to monitor contractor performance.  -Contractor to provide report. |
| Storage and stock-pilling | Failure to comply with health and safety requirement under IFC EHS guideline.  Failure to comply with GoA law | Leakages of chemical.  Risk of injury.  Health and hygienic issue | medium | -Contractor to comply with IFC EHS guideline and GoA law.  -DABS and consultant firm to monitor contractor performance.  -Contractor to provide report |
| Site clearance |  |  |  |  |
| Maintenance of the Powerhouse | Repair or replacement of spare part | -Failure to promptly attend to  spills  -Failure to appropriately dispose  of construction debris | Contamination of soil, surface  water & groundwater  􀂃 Increased risk of injury | medium | DABS to ensure that requirements relating to spill  management & debris removal are included in  bidding documents  -Consultant firm + SFO/DABS to ensure that these issues are addressed as  part of requirement for acceptable Contractor work  plan  - Contractor to promptly attend to oil spill in  accordance with consultant firm + SFO directions  - Contractor to collect and disposed of waste/ debris in designated locations  -Consultant firm and SFO of DABS to monitor Contractor performance and  implement QA provisions as required |

# Annex 2: NHRP Sample Grievance Registration Form

**(Refer** to ESMF)

|  |
| --- |
| Grievance Number: \_\_\_\_\_\_\_\_\_\_\_\_  LOCATION : District: \_\_\_\_\_\_\_\_\_ Village: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  CDC Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  NAME OF COMPLAINANT: \_­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Tazkira number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_  ADDRESS:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Telephone #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  DATE RECEIVED: |
| Classification of the grievance (Check boxes)  □ Water Use □ Dispute with contractors  □CDC formation □ Inter-community dispute  □Land acquisition and Compensation □ Technical/operational coordination  □ Financial □ Process delays  □ Water Quality □ Noise  □ Sanitation □ Water Use  □ Other (specify)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Brief description of the grievance: |
| What is the perceived cause? |
| Suggested action (by complainant) to address grievance: |

# Annex 3: Monitoring Plan

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Environmental Component** | **Parameter** | **Standard** | | **Location** | **Frequency** | **Duration** | **Implementation** | **Supervision** |
| **Pre-Construction** | | | | | | | | |
| Provision of the Safety (EHS) compliances and GRM mechanism | Ensure that all the required provisions are in place | Safety plan, Trainings and awareness raising | | Electromechanical rehabilitation site/s | Number of inspection | For how long | NHRP and Contractor | Relevant DABS and Safety Specialist |
| **Construction/Rehabilitation Phase** | | | | | | | | |
| Noise level | Noise level dB (A) Scale | | Environmental Law (NEPA) | Noise level meter kept at a distance of 15m from the source. | As directed by Expert | Reading should be taken every 15m and then average of an hour | Contractor | Relevant DABS and Safety Specialist |
|  | |  |  |  |  |  |  |
| Accidents | Safety Training | | EMP/Safety Plan | At the work area | Monthly | To be set | Contractor | NHRP |
| Health and safety | Singe, posters displayed, health awareness lectures, are being provided to each worker and health check. | | EMP | At Work Site | Monthly |  | Contractor | NHRP |
| Rout of access | Ample rout signaling has been done? Indication of risks + voltage risk indication | | Safety Guidelines and EMP | At work Sites | Monthly | Daily | Contractor | NHRP |