

Semi Annual Environmental Monitoring Report

Loan Number: 2528 IND

Reporting Period: (July – December 2013)

IND: North Eastern Region Capital Cities Development Investment Program – Tranche 1

Project City: Gangtok, Sikkim State

Implementing Agency: State Investment Program Management and Implementation Unit

Executing Agency: Urban Development & Housing Department, Government of Sikkim

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February 2014
Gangtok

ABBREVIATIONS

ADB	- Asian Development Bank
BTA	- Bridging Technical Assistance
CC	- Construction Contractor
DOC	- Date of Completion
DOS	- Date of Start
DSMC	- Design, Supervision and Management Consultant
EA	- Executing Agency
EARP	- Environmental Assessment & Review Procedure
EHS	- Environmental Health and Safety
EIA	- Environmental Impact Assessment
EO	- Environmental Officer
GLSR	- Ground Level Service Reservoir
Gol	- Government of India
GRC	- Grievance Redress Committee
IA	- Implementing Agency
IEE	- Initial Environmental Examination
IPCC	- Investment Program Coordination Cell
IPEC	- Investment Program Empowered Committee
MoUD	- Ministry of Urban Development
MFF	- Multi-tranche Financing Facility
MLD	- Million Liters per Day
Mn	- Million
NEA	- National Executing Agency
NERCCDIP	- North Eastern Region Capital Cities Development Investment Program
NSC	- National level steering committee
PAP	- Project Affected Person
PD	- Project Director
PMMC	- Program Management & Monitoring Consultants
PPTA	- Project Preparatory Technical Assistance
SEA	- State level Executing Agency
SR	- Service Reservoir
UD&HD	- Urban Development and Housing Department

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I. INTRODUCTION

A. Background

1. North Eastern Region Capital Cities Development Investment Program (NERCCDIP) is being undertaken for improvement of existing infrastructure, environmental quality and access to basic urban services of Gangtok Municipal Corporation area. The NERCCDIP's objective is to improve the urban environment and promote reforms for sustainable, efficient, and responsive urban service delivery. The various Program components are Water supply, Sewerage and Sanitation, and Municipal Solid Waste Management infrastructure.

2. With an overall objective of sustainable urban development, the NERCCDIP is being implemented in the five capital cities - Gangtok, Aizawl, Kohima, Gangtok and Shillong. NERCCDIP will be implemented over a six year period beginning in 2009, and is funded by a loan via the Multitranchise Financing Facility (MFF) of the Asian Development Bank (ADB).

3. In Gangtok, capital city of Sikkim, the Executing Agency (EA) for the program is the Urban Development and Housing Department (UD&HD) of the Government of Sikkim (GoS); and the Implementing Agency (IA) is the State-level Investment Program Management and Implementation Unit (SIPMIU), created within the UD&HD, specifically for the Investment Program implementation. At central level Investment Program Coordination Cell (IPCC) is established in MOUD. IPCC is responsible for overall management of the Investment Program and is supported by Program Management & Monitoring Consultants (PMMC).

4. The Water Supply subproject of Gangtok under Tranche-1 (Loan No. 2528 IND) has been classified as Category B as per the ADB Environmental Policy, and accordingly IEE report was prepared during PPTA/BTA and was approved by the ADB. During this implementation stage, the IEE was updated and reapproved by the ADB.

5. Environmental Management Plan: An EMP which addresses the potential impacts and risks identified by the environmental assessment has been included in the IEE report. The level of details and complexity of the EMP and the priority of the identified measures and actions are commensurate with the Project's impact and risks. The EMP is part of bidding and contract documents. The IEE has been disclosed in the ADB and SIPMIU websites.

B. Project Profile

6. At present, Tranche-1 of the project is under implementation in Gangtok and focuses on water supply improvements. This subproject covers:

- (i) Construction of Distribution Network of 17.75 km length for Burtuk Zone-1, 10.57km length for Burtuk Zone-2 and 15.87km length for Chandmari Zone
- (ii) Construction of Pump House and installation of pumps of capacity 1930 lpm for a head of 101m, at Selep Water Treatment Plant
- (iii) Construction of New R.C.C Reservoir of 11.50 LL capacity located at All India Radio (AIR) Transmission Station Road for Burtuk Zone-1 and Chandmari Zone,
- (iv) Supply and Installation of Electromagnetic Flow meters at outlet of Pump house at Selep, outlet of storage reservoir for Burtuk Zone-1 and at outlet of storage reservoir for Chandmari Zone.

7. Details of the project activities under Tranche-1 (Loan No. 2528 IND) as of December 2013 are presented in the following Table.

Table 1: Sub Project Details under Tranche-1 (Loan No. 2528 IND)

Sl. No	Name of Work	Location	Description	Changes if any from approved scope
1.	ADB/SIPMIU/01 of 2011: Supplying and Laying distribution system in Burtuk and Chandmari, construction of pump house, installing pump sets and allied works in Gangtok, Sikkim	Burtuk Zone 1 Burtuk Zone 2 Chandmari Zone GLSR at Bulbuley Pump house at Selep	<p>(i) Distribution system for Burtuk Zone 1:</p> <ul style="list-style-type: none"> • 63mm -3.52 km (HDPE) • 90mm– 2.16 km (HDPE) • 110mm: 0.19 km (HDPE) • 80mm: 0.94 m (DI) • 100mm: 0.61 km (DI) • 150mm: 3.31 km 200mm: 4.55 km <p>(ii) Distribution system for Burtuk Zone 2:</p> <ul style="list-style-type: none"> • 63mm -3.26 km (HDPE) • 90mm– 0.63 km (HDPE) • 80mm: 0.89 m (DI) • 100mm: 1.65 km (DI) • 150mm: 1.14 km (DI) • 200mm: 1.38 km (DI) <p>(iii) Distribution system for Chandmari Zone:</p> <ul style="list-style-type: none"> • 63mm -3.50 km (HDPE) • 90mm– 0.76 km (HDPE) • 80mm: 0.62 m (DI) • 100mm: 1.9 km (DI) • 150mm: 3.86 km (DI) • 200mm: 0.39 km (DI) • 250mm: 2.15 km (DI) <p>(iv) Pumping main for Burtuk Zone I and Chandmari Area</p> <ul style="list-style-type: none"> • 200mm: 1.18 km (DI) <p>(v) Ground level service reservoir (1,150 KL RCC Tank)</p> <p>(v) Pump house</p> <ul style="list-style-type: none"> • Centrifugal pumps (50 HP) <p>(vi) Electromagnetic full bore meters</p>	Nil

DI- Ductile Iron; HDPE – High Density Poly Ethylene; GLSR - Ground Level Service Reservoir; HP – Horse Power; KL – Kiloliter; km – kilometer; RCC – Reinforced Cement Concrete

8. Civil works under Tranche-1 commenced on December 6, 2011 and the estimated duration of works is 18 months. Physical progress as of December 2013 is 100 %. All civil works have been completed and testing of GLSR and pipelines is under progress. Installation of UPS for the electromagnetic flow meters is also pending.

9. The Semi Annual Environmental Monitoring Report presents the status of sub project implementation, details of compliance with environmental regulations of the Government and policies of ADB, details of compliance with environmental loan covenants, details of complaints received and their redress and the status of compliance with various aspects of EMP as stated in the IEE reports.

10. Monitoring of compliance with EMP is a continuous activity carried out by the DSMC and SIPMIU. Guidelines on general construction EHS measures to be followed / implemented by the Contractor have been issued to the Contractor. A reporting format to be filled by the Supervisory staff of DSMC on a monthly basis on compliance with EMP by the Contractor has been implemented. This is the consolidated report on implementation of Environmental Management Plan (EMP) from July to December 2013, and is prepared in compliance with the ADB Policies.

II. ENVIRONMENTAL ASSESSMENT AND REVIEW PROCEDURE

A. Environmental Legal Requirements

11. Following Regulations are currently in force in India that deals with environmental issues that could apply to infrastructure development. Acts and Rules related to monuments and archeological sites are also listed herein.

- (i) The Water (Prevention and Control of Pollution) Act, 1974, amended 1988
 - The Water (Prevention and Control of Pollution) Rules, 1975
 - The Water (Prevention and Control of Pollution) Cess Rules, 1971
- (ii) The Air (Prevention and Control of Pollution) Act 1981, amended 1987
 - The Air (Prevention and Control of Pollution) Rules, 1982
- (iii) The Environment (Protection) Act, 1986, amended in 1991 and including the following Rules/Notification issued under this Act
 - The Environment (Protection) Rules, 1986, including amendments
 - The Municipal Solid Wastes (Management and Handling) Rules, 2000
 - The Hazardous Wastes (Management and Handling) Rules, 1989
 - Eco Sensitive Zone Notification, Doon Valley, 1989
 - The Bio-Medical Waste (Management and Handling) Rules, 1998
 - Noise Pollution (Regulation and Control) Rules, 2000,
 - Wild Life (Protection) Amendment Act, 2002
 - Environmental Impact Assessment Notification, 2006
 - Environmental Standards of Central Pollution Control Board (CPCB)
- (iv) The Indian Wildlife (Protection) Act, 1972, amended 1993
 - The Wildlife (Protection) Rules, 1995
- (v) The Indian Forest Act, 1927
- (vi) Forest (Conservation) Act, 1980, amended 1988
 - Forest (Conservation) Rules, 1981 amended 1992 and 2003
 - Guidelines for Diversion of Forest Lands for Non-Forest Purpose under the Forest (Conservation) Act, 1980

- (vii) Ancient Monuments and Archaeological Sites and Remains Act 1958
- Ancient Monuments and Archaeological Sites and Remains Rules 1959
- Government of India Notification of 1992 under the above-stated Rules

B. Compliance with Environmental Regulations

12. The GoI, EIA Notification of 2006 sets out the requirement for Environmental Assessment in India. The water supply improvement subproject under Tranche-1 and does not fall under the ambit of the EIA Notification, and therefore does not require environmental clearance.

13. Since the Ground Level Service Reservoir (GLSR) at Bulbuley is constructed in forest land, forest clearance under the Forest (Conservation) Act, 1980 is applicable to the water supply subproject under Tranche-1. Tree cutting permission from the State Forest department is also required for this sub project. These clearances have already been obtained.

14. Following Table shows the regulatory requirements of subprojects/components under Tranche-1 and the present status of compliance. Copy of Forest Clearance for GLSR construction is presented as **Appendix 1**. Copy of Tree Cutting Permission for GLSR construction is presented as **Appendix 2**.

Table 2: Present Status of Environment & Forest and Other Clearances

Town	Work (Package No.)	Applicable Legislation / Type of Clearance	Clearance given by and date	Conditions	Remarks / Action needed
Gangtok	Storage reservoir (GLSR) for Burtuk and Chandmari wards (ADB/ SIPMIU/01 of 2011)	The GLSR site is located on a forest land; transfer of land from Forest Department to Implementing Agency and permission to construct GLSR is required under the Forest (Conservation) Act, 1980	Director of Forests – Himalayan Zoological Park vide letter dated 30.01.12	Sixteen Conditions are given in Appendix 3 to this report	All the conditions have been complied and the details are given in Appendix 3 .
		Tree cutting permission from the Forest Department is required under the Sikkim Private and other Non Forest land Tree Felling Rules, 2006	Divisional Forest Officer, East Territorial Division vide letter dated 14.03.12	Nil	Nil

GLSR – Ground Level Service Reservoir

C. Compliance of Environmental Loan Covenants

15. Table 3 shows the environmental safeguard related loan covenants and their compliance status in implementation. All the covenants are being complied in implementation.

16. Tranche-1 subproject has been classified as Category B as per the ADB Environmental Policy, and accordingly IEE report was prepared during PPTA/BTA and was approved by the ADB. During this implementation stage, the IEE was updated and reapproved by the ADB.

Table 3: Compliance of Environmental Loan Covenants

S. No	Project Specific Covenants (Environmental)	Status / Issues
1	<p>GOI and the States will ensure that the design, construction, operation and implementation of all sub-project facilities is carried out in accordance with the environmental assessment and review procedures and Initial Environmental Examinations (IEEs) for core sub-components agreed upon between the Government and ADB, and complies with the Government's environmental laws and regulations and ADB's Environment Policy (2002).</p> <p>Any adverse environmental impacts arising from the construction, operation and implementation of sub-component facilities will be minimized by implementing the environmental mitigation and management measures, and other recommendations specified in environmental assessment reports (e.g., IEEs). The Government will ensure environmental requirements will be incorporated in bidding documents and civil works contracts. . Issuance of bid documents will be made after review and clearance of IEE/EIA by ADB and SEIAA or MOEF.</p> <p>GOI will prepare and submit annually to ADB an environmental monitoring report that describes progress in implementation of the EMP and EARP and issues encountered and measures adopted; and compliance with the relevant assurances and loan covenants</p>	<p>IEE approved by ADB, disclosed in public, and included in bid document and contract.</p> <p>Clearances obtained as per applicable regulations.</p> <p>Semi-annual environmental monitoring report is being submitted to ADB</p>

ADB – Asian Development Bank; EARP – Environmental Assessment & Review Procedures; EIA – Environmental Impact Assessment; IEE – Initial Environmental Examination; MOEF – Ministry of Environment and Forest; SEIAA – State Environmental Impact Assessment Authority

D. Environmental Organization and Management

17. The main agencies involved in managing and implementing the subproject are:

- (i) **Ministry of Urban Development (MOUD)** - The national-level Executing Agency (NEA) for the Investment Program;
- (ii) **Investment Program Coordination Cell (IPCC)** – It is established in MOUD. IPCC is responsible for overall management of the Investment Program in the city and they include social/environmental safeguard specialists whose tasks include monitoring Program implementation and reviewing and screening the subprojects submitted by State in accordance with subproject selection criteria, including the environmental provisions;
- (iii) **State Investment Program Management and Implementation Unit (SIPMIU)** – It was established in SEA and headed by a Program Director (PD). SIPMIU will oversee the Program's environment and resettlement planning. This includes the preparation of all documentation needed for decision-making, contracting, and supervision of work and providing progress-monitoring information to the PD;

The SIPMIU shall comprise of a Safeguards and Social Cell staffed with an Environmental Officer (EO). The EO shall be responsible for implementing the environmental safeguard provisions in the project including (i) ensuring environmental criteria for subproject selection in the EARP are followed, (ii) ensuring mitigation requirements are in contractor bidding documents, and (iii) liaising with various Central and State government agencies on compliance matters. The SIPMIU will appoint and manage Construction Contractors (CC) to build elements of the infrastructure who are required to submit Environmental Implementation Plans (EIPs) for SIPMIU approval

- (iv) **Design, Supervision and Management Consultant (DSMC)** - The SIPMIU is assisted by the DSMC, who is responsible for design the infrastructure, manage tendering of contracts, and supervise the construction process;

An Environmental Specialist (ES) in the DSMC is responsible for addressing the environmental issues in the project components during design and implementation. The ES will ensure all mitigation requirements are in contractor bidding documents and EIPs, and will supervise the effective implementation of environmental provisions during construction. In addition, the ES will assist the SIPMIU on the procurement needs and other project implementation aspects and shall play a central role in ensuring capacity building on environmental management of the SIPMIU, Contractor and Line Departments through capacity development support and training.

18. A grievance redress mechanism has been established in SIPMIU. Minor grievances of affected persons (APs) will first be brought to the attention of the implementing NGO / Resettlement Officer (RO) of SIPMIU. Grievances not redressed within 30 days by the NGO or RO will be brought to the grievance redress committee (GRC), established in SIPMIU. Major grievances will be directly brought to the GRC. The GRC was constituted vide UD&HD notification dated 25.01.2012. Details of grievance redress mechanism and the GRC notification for Gangtok is presented as **Appendix 4**. The GRC comprise the Investment Program Director, Officer of Land Revenue Department, Project Manager – SIPMIU, Resettlement Officer of Social / Resettlement Unit – SIPMIU, Representative of Implementing NGO, and representative (male / female) from APs. The GRCs will continue to function throughout the project duration. The GRC will meet every month, determine the merit of each grievance, and resolve grievances within a month of receiving the complaint; failing which the grievance will be addressed by the Investment Program Empowered Committee (IPEC). The IPEC would meet as often as necessary at the request of the Project Director. Grievance not redressed by the IPEC will be referred to the appropriate courts of law. All costs involved in resolving grievances will be borne by the SIPMIU. The SIPMIU through the DSMC will keep records of all grievances received including: contact details of complainant, date that the complaint was received, nature of grievance, agreed corrective actions and the date these were effected, and final outcome. No grievances were received during the reporting period.

III. EMP COMPLIANCE STATUS

19. This section presents the compliance status of Environmental Management and Monitoring Plans of tranche-1 subproject under implementation.

20. Under this subproject, all civil works have been completed. No environmental quality monitoring was conducted during the reporting period. The Contractor has not prepared any Environmental Implementation Plan. He is following the EMP, which is part of the IEE and Contract document. In addition to that, guidelines on general construction EHS measures to be followed / implemented by the Contractor have been issued to the Contractor.

A reporting format to be filled by the Supervisory staff of DSMC on a monthly basis on compliance with EMP by the Contractor has been implemented. Monthly EMP Implementation Monitoring Reports from July to December 2013 have been attached to this report as **Appendix 5**. Details of compliance of EMP and OH&S norms by the Contractor are presented in Table 4. Health and safety training was given to the Contractor's Supervisors by the Environmental Expert of ADB on 13.11.2013. Instruction was given to the Contractor to conduct training to all his personnel. Photographs of various civil works carried out during the reporting period are presented as **Appendix 6**.

Table 4: Compliance of EMP and OH&S Norms

Mitigation Measures and Location	Compliance	Remarks	Follow Up Actions Proposed
Pre Construction Phase			
Location of GLSR in Zoological Park Area. <ul style="list-style-type: none"> • Obtain permission from forest department for SR site • Sensitive site layout design: develop the layout design such that minimum trees are cut • Include in the design/construction any conditions/suggestions by Zoo Authority • Provide proper fencing of the site before start of excavation work; this will avoid any entry of animals into the site • Inform Zoo Authorities before start of construction work and require contractors to store materials required for the work outside the zoo area and limit construction work to day-light hours, and, • Plant two trees for each tree removed 	Satisfactory	<ul style="list-style-type: none"> • Permission obtained from Forest Department • Minimum trees were cut • Retaining wall has been constructed on the hill side to resist land sliding/soil erosion as suggested by the forest department. • Fencing has been provided around the site • Zoo authorities were informed before start of construction and construction materials were stored out side the zoo area limit. Construction was limited to day light hours. • Tree plantation done within the GLSR site 	Construction work of GLSR has been completed
Construction Phase			
Sources of Materials. <ul style="list-style-type: none"> • Use quarry sites and sources permitted by government;; • Verify suitability of all material sources and obtain approval of State Investment Program Management & Implementation Unit (SIPMIU); and • Submit to DSMC on a monthly basis documentation of sources of materials. 	Satisfactory	<ul style="list-style-type: none"> • Construction material is being procured from government approved mining/quarry site with the approval of SIPMIU 	All civil works have been completed
Air Quality. <ul style="list-style-type: none"> • Consult with SIPMIU/DSMC on the designated areas for stockpiling of clay, soils, gravel, and other construction materials; • Excavate the Storage Reservoirs (SR) foundations at the same time as the access roads (if needed) are built so that dug material is used immediately, avoiding the need to stockpile on site; • Damp down exposed soil and any stockpiled on site by spraying with water when necessary during dry weather; • Bring materials (aggregates) as and when required; • Use tarpaulins to cover sand and other loose material when transported by 	Satisfactory	<ul style="list-style-type: none"> • Excavated material is being mostly used in the construction. Surplus earth is transported to far away areas and disposed off safely. • Others being done • Materials transported from source to site through the city should be covered properly. 	All civil works have been completed

Mitigation Measures and Location	Compliance	Remarks	Follow Up Actions Proposed
vehicles; • Fit all heavy equipment and machinery with air pollution control devices which are operating correctly; and • Clean wheels and undercarriage of vehicles prior to leaving construction site.			
Surface water quality. • Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets; • Prioritize re-use of excess spoils and materials in the construction works. If spoils will be disposed, consult with SIPMIU/DSMC on designated disposal areas; • Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies; • Place storage areas for fuels and lubricants away from any drainage leading to water bodies; • Dispose any wastes generated by construction activities in designated sites; and • Conduct surface quality inspection according to the Environmental Management Plan (EMP).	Partially satisfactory	• Excess spoils were disposed in designated areas. • Entry of runoff into the GLSR site was diverted by forming drains. Retaining wall constructed on the hill side has prevented the entry of storm water in to the GLSR site. • Fuels and lubricants are stored away from drainages. • Surface water quality monitoring was not conducted.	All civil works have been completed
Noise levels. • Plan activities in consultation with SIPMIU/DSMC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance; • Provide prior information to the local public about the work schedule; • Require horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach; • Ensure that there are no old and sensitive buildings that may come under risk due to the use of pneumatic drills; if there is risk, cut the rocks manually by chiseling; • Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor; and • Maintain maximum sound levels not exceeding 80 decibels (dB) when measured at a distance of 10 m or more from the vehicle/s.	Satisfactory	• No noise generating works are being conducted at present	All civil works have been completed
Landscape and Aesthetics. • Avoid stockpiling of excess excavated soils; • Avoid disposal of any debris and waste soils in the forest areas and in or near water bodies/rivers; • Coordinate with GMC for beneficial uses of excess excavated soils or immediately	Satisfactory	• Excess material and solid waste were disposed in designated areas only	All civil works have been completed

Mitigation Measures and Location	Compliance	Remarks	Follow Up Actions Proposed
<p>dispose to designated areas;</p> <ul style="list-style-type: none"> • Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; and • Request SIPMIU/DSMC to report in writing that the necessary environmental restoration work has been adequately performed before acceptance of work. 			
<p>Accessibility & Traffic.</p> <ul style="list-style-type: none"> • Plan pipeline work in consultation with the traffic police; • Conduct work during light traffic; • Plan work such that trench excavation, pipe laying, and refilling including compacting, at a stretch is completed in a minimum possible time; • Provide for immediate consolidation of backfilling material to desired compaction to avoid future settlement risk - this will allow immediate road restoration and therefore will minimise disturbance to the traffic movement; • Do not close the road completely, ensure that work is conducted onto edge of the road; allow traffic to move on one line; • In unavoidable circumstances of road closure, provide alternative routes, and ensure that public is informed about such traffic diversions; • In case of closure of main roads, provide information to the public through media – daily news papers and local cable television (TV) services, about the need and schedule of road closure, and alternative routes; • At all work sites public information/caution boards shall be provided – information shall inter-alia include: project name, cost and schedule; executing agency and contractor details; nature and schedule of work at that road/locality; traffic diversion details, if any; entry restriction information; competent official's name and contact for public complaints. 	Satisfactory	<ul style="list-style-type: none"> • Pipeline work was planned in consultation with traffic police. • All the works were completed within a minimum possible time. • Backfilling and road restoration were completed as required. • Work is being conducted at the edge of road without disturbing the traffic. • Project information boards were provided. But caution boards were not provided even though the Contractor was instructed for the same. 	All civil works have been completed
<p>Socio-Economic – Income.</p> <ul style="list-style-type: none"> • Leave space for access between mounds of excavated soil; • Provide wooden planks/footbridges for pedestrians and metal sheets for vehicles to allow access across trenches to premises where required; • Consult affected businesspeople to inform them in advance when work will occur; • Provide prior public information about the work schedule in particular locality and the traffic diversions/changes in any – information shall disseminated through local papers and cable television services; • Provide sign/caution/warning boards at work site indicating work schedule and traffic information; prevent public entry into work sites through barricading and 	Satisfactory	<ul style="list-style-type: none"> • Work was conducted mainly in the outer areas where there are no commercial areas/ habitation. • Adequate access provisions were provided where ever required. • Caution boards and barricades were not provided as required even though the Contractor was instructed for the same. 	All civil works have been completed

Mitigation Measures and Location	Compliance	Remarks	Follow Up Actions Proposed
security; and • Provide sign boards for pedestrians to inform nature and duration of construction works and contact numbers for concerns/complaints.			
Socio-Economic – Employment. • Employ at least 50% of the labour force, or to the maximum extent, local persons if manpower is available; and • Secure construction materials from local market.	Satisfactory	• Local unskilled labour has been employed	All civil works have been completed
Occupational Health and Safety. • Implement measures such as: (a) excluding public from the site; (b) ensuring all workers are provided with and use Personal Protective Equipment; (c) Health and Safety Training (H and S) for all site personnel; (d) documented procedures to be followed for all site activities; and (e) documentation of work-related accidents; • Ensure that qualified first-aid can be provided at all times. Equipped first-aid stations shall be easily accessible throughout the site; • Secure all installations from unauthorized intrusion and accident risks; • Provide supplies of potable drinking water; • Provide clean eating areas where workers are not exposed to hazardous or noxious substances; • Provide H and S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers; • Provide visitor orientation if visitors to the site can gain access to areas where hazardous conditions or substances may be present. Ensure also that visitor/s do not enter hazard areas unescorted; • Ensure the visibility of workers through their use of high visibility vests when working in or walking through heavy equipment operating areas; • Ensure moving equipment is outfitted with audible back-up alarms; • Mark and provide sign boards for hazardous areas such as energized electrical devices and lines, service rooms housing high voltage equipment, and areas for storage and disposal. Signage shall be in accordance with international standards and be well known to, and easily understood by workers, visitors, and the general public as appropriate; and • Disallow worker exposure to noise level greater than 85 dBA for a duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	Not Satisfactory	• Contractor was only partially following the health & safety measures even after repeated instructions	All civil works have been completed

Mitigation Measures and Location	Compliance	Remarks	Follow Up Actions Proposed
Community Health and Safety. <ul style="list-style-type: none"> • The construction contractor will be required to: • Plan routes to avoid times of peak-pedestrian activities. • Liaise with SIPMIU/DSMC in identifying risk areas on route cards/maps. • Maintain regularly the vehicles and use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction or premature failure. • Provide road signs and flag persons to warn of dangerous conditions, in case of location near the road. 	Not Satisfactory	Contractor was only partially following the health & safety measures even after repeated instructions	All civil works have been completed
Work Camps. <ul style="list-style-type: none"> • Consult with SIPMIU/DSMC before locating project offices, sheds, and construction plants; • Minimize removal of vegetation and disallow cutting of trees; • Provide water and sanitation facilities for employees; • Prohibit employees from poaching wildlife and cutting of trees for firewood; • Train employees in the storage and handling of materials which can potentially cause soil contamination; • Recover used oil and lubricants and reuse or remove from the site; • Manage solid waste according to the following preference hierarchy: reuse, recycling and disposal to designated areas; • Remove all wreckage, rubbish, or temporary structures which are no longer required; and • Request SIPMIU/DSMC to report in writing that the camp has been vacated and restored to pre-project conditions before acceptance of work. 	Satisfactory	Most of the workers are drawn from local communities; outside workers are provided with rented accommodation in the city with all basic facilities	All civil works have been completed
Social and Cultural resources. <ul style="list-style-type: none"> • Consult the city authorities to identify any buildings at risk from vibration damage and avoiding any use of pneumatic drills or heavy vehicles in the vicinity; • Complete work in these areas quickly; • Consult municipal authorities, custodians of important buildings, cultural and tourism authorities and local communities in advance of the work to identify and address key issues, and avoid working at sensitive times, such as religious and cultural festivals. 	Satisfactory	Proper care was taken during construction near buildings at risk or important buildings and during religious and cultural festivals.	All civil works have been completed

DSMC – Design, Supervision and Management Consultant; GMC – Gangtok Municipal Corporation; SIPMIU – State Investment Program Management and Implementation Unit; SR – service reservoir

IV. OBSERVATIONS, RECOMMENDATIONS AND ACTIONS TAKEN

21. As presented in this report, tranche-1 of this Investment Program is being implemented in compliance with the loan covenants, subproject selection criteria and overall EARF. However, the Contractor was not complying with most of the occupational health and safety measures and community health and safety measures suggested in the EMP. Strict instructions were given to the Contractor to comply with the mitigation measures suggested in the EMP. Training on health, safety and environment was given to the Contractor by the Environmental Expert of ADB on 13.11.2013. The Contractor has completed all the civil works. No ambient air quality monitoring and water quality monitoring was conducted by the contractor during the construction period.

Appendices

Appendix 1: Forest Clearance for GLSR Construction



GOVERNMENT OF SIKKIM
OFFICE OF THE DIRECTOR
HIMALAYAN ZOOLOGICAL PARK
FOREST, ENVIRONMENT & WILDLIFE MANAGEMENT DEPARTMENT
BULBULAY - 737 103 (SIKKIM)


Ref. No. 6 /HZP/FEWM

Dated 30.01.12

Permission for Starting work by UD&HD at HZP

This is to certify that SIPMIU, UD&HD may start their work at the HZP premises within the stipulated 0.09 Ha area subject to fulfilling all the criteria's laid down according to the user rights agreement and the approval accorded as per Forest Conservation Act (1980), Approval No. 1367/FCA/FEWMD, 439-41 dated 20.06.2011.

Notwithstanding any contravention to the above and at all times maintaining the *sanctum sanctorum* of the Zoo and its boundaries the permission is hereby granted to the UD&HD under the ADB funded NERCCDIP (North Eastern Capital Cities Development Investment Program Project).


Director of Forests,
Himalayan Zoological Park,
Bulbulay.



GOVERNMENT OF SIKKIM
FOREST, ENVIRONMENT & WILDLIFE MANAGEMENT DEPARTMENT
DEORALI - 737 103 (SIKKIM)

F.No.58/HZP/FEWM/15

Dated. 30.01.2011

**HANDING AND TAKING OVER 0.09 HAC (30M X 40M) OF FOREST LAND FOR
CONSTRUCTION OF DRINKING WATER TANK AT BULBULAY R.F FOR CHANDMARI
AND BURTUK UNDER ADB SCHEME BY THE UD & HD)**

With reference to the letter No. 553/DE/T dated 27-06-2011 and approval for diversion of Forest land accorded by State Government on behalf of Central Government vide Letter No. 1367.FCA/FEWMD/441 date 20-06-2011. In this connection I am handing over 0.09 Ha (30m x 40m) of forest land for the purpose of above mentioned work with the following conditions stipulated in the approval letter.

Description of the land:

- | | | |
|----------|---|-----------------------------------|
| a. North | - | Land of Himalayan Zoological Park |
| b. East | - | Land of Himalayan Zoological Park |
| c. South | - | Land of Himalayan Zoological Park |
| d. West | - | Land of Himalayan Zoological Park |

Conditions stipulated in the approval letter:

1. The legal status of forest shall remain unchanged.
2. The trees inside the diverted forest land shall be felled with prior approval of the forest department.
3. The State Forest Department shall undertake the compensatory Afforestation and other green initiatives with fund received from the user agency in fulfillment of the condition stipulated under the in-principal as referred to above.
4. No labour camps are allowed to be made inside the forest area.
5. Beforehand the User Agency have to construct 10 ft RCC boundary fencing of HZP just behind the proposed water reservoir tank.
6. The diverted land shall not be for any purpose other than that specified in the proposal. Any change in the land use without prior permission of the competent authority shall amount of the violation of Forest (Conservation) Act, 1980.
7. The user Agency shall ensure that drainage lines are not choked and the road surface is not damaged due to the project activity. The debris shall not be rolled down or thrown in any forest area outside the diverted area.
8. No firewood shall be used by the labourers. The user agency shall provide kerosene/LPG for cooking purposes to the labourers.
9. During project execution every care should be taken so that the excavated loose soil and stone/boulders should not roll down the forest land. Cut and fill method to be strictly adopted.

10. No quarry shall be allowed inside the forest land. User agency shall make payment for all building materials like sand, stone chips and stones etc.
11. Any damage of forest crops/ wildlife in the non diverted land shall be compensated by the user agency.
12. The user agency shall comply any other condition that may be required to be imposed by the State Forest Department from time to time in the interest of Conservation, Protection and Development of forests.
13. User agency shall not be allowed to use more than 30m x 40m land for construction of water reservoir tank.
14. The zoo management shall be allowed to tap/ adequate amount of water from the water reservoir as and when required and user agency have to provide equipments & GI pipes for tapping/ pumping of water from reservoir tank to a sintex tank located within zoo premises.
15. While constructing the proposed water reservoir tank unwanted noise pollution and other unhygienic dumping of mug and garbage is not allowed near zoo complex.
16. The proposed construction work for one reservoir is limited to 40m x 30m area and hence the retaining wall shall be constructed on the front side (along the road side) and rear side of the proposed water tank for a length of 40m each.


Handed Over 30/01/2012

DFO
Forest, Env. and Wildlife Management Deptt
Govt. of Sikkim


Taken Over 30/01/12

Project Director
(SIPMIU) NERCCDIP
UD&HD, Govt. of Sikkim

Handed over in presence of:


1. ACF (Zoo)
2. RO (Zoo)
3. Contractor: AK Engineers B.M. Engineering and Constructions JV
4. Engineers: AK Engineers B.M. Engineering and Constructions JV

Venue: Bulbulay Area, Gangtok
Dated: 30-01-2012

Copy to:

1. CWLW for his kind information, please.
2. CCF-cum-Nodal Officer (FCA)
3. DFO (T), East

Appendix 2: Tree Cutting Permission for GLSR Construction


GOVERNMENT OF SIKKIM
OFFICE OF THE DIVISIONAL FOREST OFFICER
EAST TERRITORIAL DIVISION
FORESTS, ENVIRONMENT AND WILD LIFE MANAGEMENT DEPARTMENT

No. 716/ED/T Date: 14/07/2012

To,
The Range Officer,
Gangtok Range (T).


Sub:- Removal of trees.


The Government has accorded approval vide letter no.1058/FTC dated 2/3/12 for removal of 24nos of trees/poles from the construction site of G.I.S.R Reservoir at Bulbulay by Urban Development and Housing Department Under the provision of Sikkim Private & Other Non Forest Land Tree Felling Rules, 2006, ₹. 2,100/- (Rupees two thousand one hundred) only been deposited vide challan no.33302 dated 3/2/12.

Hence, you may take steps to get remove the trees/poles, please.

Details of trees/poles are:-

Sl.No.	Name of Species	Girth	Number
1	Cupressus Kashmeriania	2'0"	02nos.
2	Cupressus Kashmeriania	2'5"	01nos.
3	Cupressus Kashmeriania	3'0"	03nos.
4	Criptomeria japonica	5'0"	01nos.
5	Pinus excelsa	3'5"	01nos.
6	Pinus excelsa	3'11"	01nos.
7	Cupressus spp (Poles)	1'0" to 2'0"	14nos.
	TOTAL		24nos.




Divisional Forest Officer
East Territorial Division

B.O (T) Gangtok

Please mark the approved trees and return the same to the stipulating circle and return a copy to the undersigned office for office record -


 Deputy Officer
 Gangtok Territorial Range
 Forest Department


Marked at spot on 16/3/12

- ① *Cupressus kashmiriana* 2'0" - 2 nos
- ② " " 2'5" - 1 no
- ③ " " 3'0" - 3 nos
- ④ *Cryptomeria* 5'0" - 1 no.
- ⑤ *Pinus excelsa* 3'5" - 1 no

MARKED

- ⑥ *Pinus excelsa*
- ⑦ *Picea (cupressus)*

3'11" - 1 no.
 1'0" to 2'0" - 14 nos
Total - 24 nos


 16/3/12
 B.O (T) GGG.



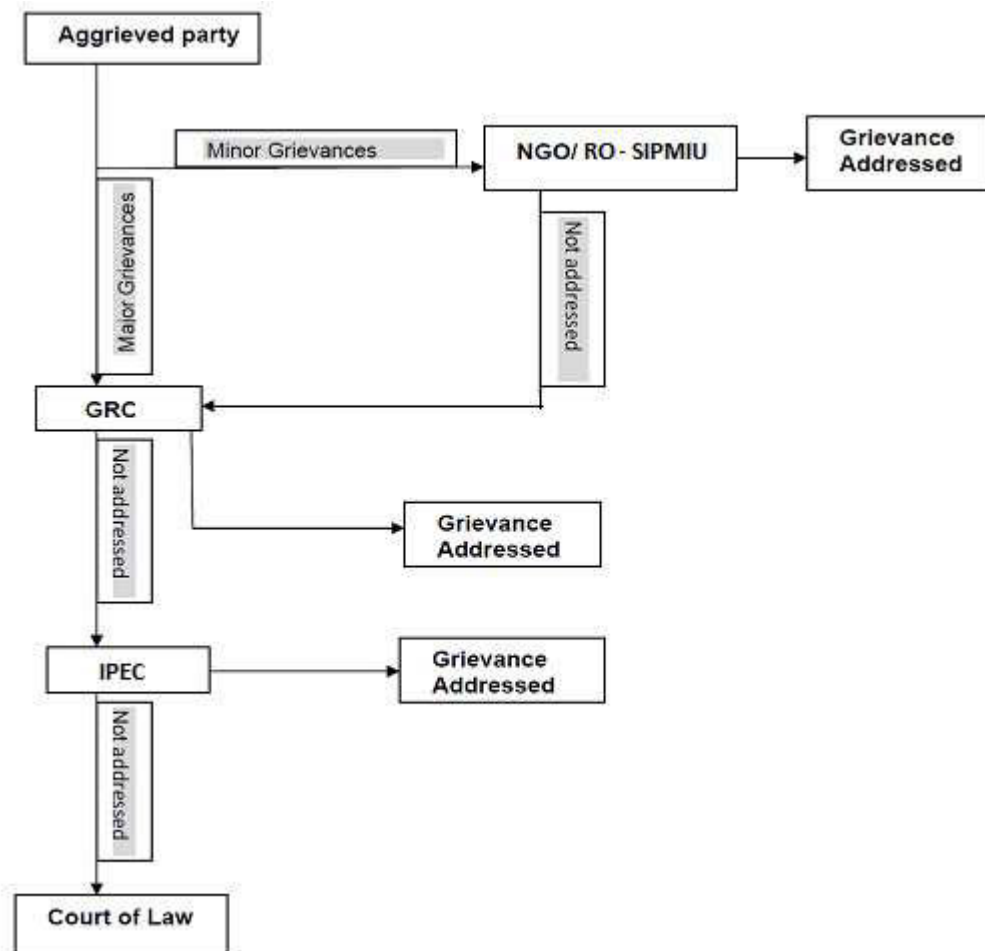
Appendix 3: Details of Compliance to Forest Clearance Conditions

Sl No.	Conditions	Status of Compliance
1.	The legal status of forest shall remain unchanged.	Complied.
2.	The trees inside the diverted forest land shall be felled with prior approval of the forest department.	Tree cutting permission was obtained from forest dept.
3.	The State Forest department shall undertake the compensatory afforestation and other green initiatives with fund received from the user agency in fulfillment of the condition stipulated under the in principal clearance.	The forest dept has not yet demanded the compensatory afforestation charges. SIPMIU has already planted trees in the diverted land.
4.	No labour camps are allowed to be made inside the forest area	No labour camps were made inside forest.
5.	Beforehand the user agency have to construct 10 feet RCC boundary fencing of Himalayan Zoological Park just behind the proposed water reservoir tank	RCC wall has been constructed behind the reservoir.
6.	The diverted land shall not be for any purpose other than that specified in the proposal. Any change in the land use without the prior permission of the competent authority shall amount of the violation of Forest (Conservation) Act, 1980	The diverted land has been used only for the construction of GLSR.
7.	The user agency shall ensure that drainage lines are not choked and the road surface is not damaged due to the project activity. The debris shall not be rolled down or thrown in any forest area outside the diverted area	No drainage lines were choked and road surface was not damaged. Debris was disposed in designated areas only.
8.	No firewood shall be used by the labourers. The user agency shall provide kerosene/LPG for cooking purposes to the labourers	Labourers have not used firewood.
9.	During project execution every care should be taken so that the excavated loose soil and stone / boulders should not roll down the forest land. Cut and fill method to be strictly followed.	Cut and fill method was followed.
10.	No quarry shall be allowed inside the forest land. User agency shall make payment for all building materials like sand, stone chips and stones etc.	No quarry was made inside the forest land.
11.	Any damage of forest crops / wildlife in the non diverted land shall be compensated by the user agency	No damage was made to the forest crops / wildlife.
12.	The user agency shall comply any other condition that may be required to be imposed by the state forest department from time to time in the interest of conservation, protection and development of forests.	No other conditions were given by the forest department
13.	User agency shall not be allowed to use more than 30 m x 40 m land for construction of water reservoir tank	No additional land was used.
14.	The Zoo management shall be allowed to tap adequate amount of water from the water reservoir as and when required and the user agency have to provide equipments and GI pipes for tapping / pumping of water from reservoir tank to a sintex tank located within zoo premises	Provision has been made to provide water to the Zoo.
15.	While constructing the proposed water reservoir tank unwanted noise pollution and other unhygienic dumping of mud and garbage is not allowed near zoo complex	No noise pollution was generated and dumping of garbage was done at

SI No.	Conditions	Status of Compliance
		designated areas only.
16.	The proposed construction work for one reservoir is limited to 30 m x 40 m area and hence the retaining wall shall be constructed on the front side (along the road side) and rear side of the proposed water tank for a length of 40 m each.	RCC retaining wall has been constructed on the front side and rear side of the reservoir.

Appendix 4: Details of Grievance Redress Mechanism and Notification on GRC

A. Details of Grievance Redress Mechanism



GRC: Grievance Redress Committee, IPEC: Investment Program Empowered Committee, NGO: Non- Government Organisation, RO: Resettlement Officer, SIPMIU: State Investment Program Management and Implementation Unit

B. Notification on Grievance Redress Committee (GRC)



**GOVERNMENT OF SIKKIM
URBAN DEVELOPMENT & HOUSING DEPARTMENT
GANGTOK, SIKKIM**

Memo No: 52/GOS/UD&HD/106

Dated: 25th January 2012

In pursuance to North Eastern Region Capital Cities Development Investment Program (NERCCDIP) a committee is hereby constituted to address the Grievances regarding various issues that would emerge during the course of project implementation. The committee shall be named the Grievance Redressal Committee (GRC) and the scope of the committee shall extend to the entire period of the project.

The Grievance redressal mechanism that has been suggested for the programme will be outlined and detailed in each RP. The NGO implementing the RP with support from the Resettlement officer of the SIPMIU will, through continuous interactions with APs, resolve queries and grievances regarding various issues including land acquisition, structures acquisition, livelihood, entitlements, and other assistances. Towards addressing the unresolved grievances of the APs, the programme will have a Grievance Redress Committee (GRC).

The GRC will be integrated with the SIPMIU. The committee will comprise of the following members which shall be integrated with the SIPMIU:

1. Chairperson- Project Director
2. Member- Officer of Land revenue Department.
3. Member – Project Manager SIPMIU
4. Member- Resettlement Officer of Social/Resettlement Unit (SIPMIU).
5. Member- Representative of Implementing NGO.
6. Member- Representative (male/ female) from APs.

The functions of the GRC are as follows:

1. To provide support to APs on problems arising from land acquisition (temporary or permanent) property acquisition, and eligibility for entitlements provided, compensation and assistance.
2. To record the grievances of the APs, categorize and prioritize them and provide solutions within a month.
3. To report to the aggrieved parties about the developments regarding their grievances and decisions of the GRC.

The GRC will meet every month during the implementation of resettlement Plans and attempt to find solution acceptable at all levels. The committee will

prioritize grievances and resolve them at the earliest and will suggest corrective measures at the field level and fixed responsibilities for implementation of its decisions. The Committee will deliver their decisions within a month from the registration of the case.

In the event of the grievance not being resolved by the GRC, the PD will refer the grievance to the Investment Program Empowered Committee (IPEC). The IPEC would meet as often as necessary, at the request of the Project Director, who will be responsible for processing and placing all papers before the committee, recording decisions, issuing minutes of the meeting and taking follow up action to see that formal orders are issued and the decisions carried out. In the event of the grievance not being resolved by the IPEC, the APs could proceed towards a legal redress of the grievance in the court. The GRCs will continue to function throughout the project duration and the cost of discharging their functions shall be borne by SIPMIU.

By Order

Additional Secretary
UD&HD
Government of Sikkim

Copy to: for information to:

- (1) All Members
- (2) Commissioner cum Secretary UD&HD
- (3) Secretary Land Revenue Department.
- (4) District Collector (East)
- (5) Guard File


Additional Secretary
UD & HD
Govt. of Sikkim, Gangtok

Additional Secretary
UD&HD
Government of Sikkim

Appendix 5: Monthly EMP Implementation Monitoring Reports (July – December 2013)



NORTH EASTERN REGION CAPITAL CITIES DEVELOPMENT INVESTMENT PROGRAM (NERCCDIP)	
State Investment Program Management and Implementation Unit, Gangtok	
Tranche-1 : Supplying and Laying of Distribution System in Burtuk & Chandmari zone, Construction of GLSR, Pump House, Installing Pumpsets and Allied Works in Gangtok, Sikkim	
Contractor : M/s A K Engineers, Kolkata	Package No. : GTK-WA-1/TR-1
Date of Agreement : 20-9-2011	Contract Period : 18 Months
Target Date for Completion : 19-3-2013	Extended up to: 31-08-2013

MONTHLY EMP IMPLEMENTATION REVIEW REPORT 01-31-July 2013

Sl	Mitigation measures to be implemented	Status	Remarks
1	Sources of materials		
	- Use quarry sites and sources permitted by govt	Y	
	- Verify suitability and approval by SIPMIU	Y	
	- Submission of monthly documentation of all material sources.	N	Contractor has been asked for this.
2	Air Quality		
	- Consult SIPMIU/DSMC for stockpiling (clay, soils, gravel etc.,) in designated areas	Y	
	- Excavate SRs foundation at the same time as the access roads	N.A	No access roads were constructed.
	- Damp down exposed soil and stockpile on site by spraying with water when necessary during dry weather.	Y	
	- Use tarpaulins to cover sand and other loose material when transported by vehicles.	Y	
	- Fit air pollution control device for all Heavy equipment and machinery	Y	
	- Clean wheels and undercarriage of vehicles while leaving the site	Y	
3	Surface water quality		
	- Avoid stockpiling of earth fill, especially during the monsoon season unless covered by tarpaulins or plastic sheets.	Y	
	- Reuse of excess spoils and material in construction work, consult SIPMIU/DSMC for disposal of spoils in designated areas.	Y	
	- Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.	N	Trenches were filled immediately after laying.
	- Store Fuel and Lubricants away from any drains	Y	

SI	Mitigation measures to be implemented	Status	Remarks
	- Dispose the waste generated by construction activities in designated disposal areas.	Y	
	- Conduct surface water quality inspection acc to Environmental Management Plan(EMP)	N	Contractor has been insisted to conduct air quality management
4	Noise levels		
	- Plan activities in consultation with SIPMIU/DSMC to reduce noise levels	Y	
	- Provide information to public about work schedule	Y	
	- Require horns not to be used unnecessarily	Y	
	- Ensure no old and sensitive buildings come under risk due to use of Pneumatic drills, if necessary go for chiselling	Y	
	- Minimize the noise by silencers, fitting jack hammers, mufflers or portable street barriers	Y	
	- Maintain max sound < 80dB at 10m distance from equipment	Y	
5	Landscape and Aesthetics		
	- Avoid stockpiling of excess excavated soils	Y	
	- Avoid disposal of any debris and waste soils in the forest or nearby water bodies, co-ordinate with GMC for disposal	Y	
	- Managing the Solid waste by reuse, recycling and disposal	Y	
	- Report SIPMIU/DSMC in writing that the necessary restoration work has been adequately performed before acceptance of work.	N	Contractor has been asked to provide same.
6	Accessibility		
	- Plan pipeline work in consultation with traffic police	Y	
	- Conduct work during light traffic	Y	
	- Plan minimum possible time at stretch for trench excavation, pipe laying, refilling and compacting.	Y	
	- Provide for immediate consolidation of backfilling material to desired compaction to avoid future settlement risks.	Y	
	- Do not close the road completely, ensure that work is conducted onto edge of the road, allow traffic to move on one line.	Y	
	- Provide information in media (TV, Newspaper) in case of closure of main road, provide alternative routes	Y	

SI	Mitigation measures to be implemented	Status	Remarks
	- At worksites provide public information/caution board ,information include project name, cost and schedule, executing agency and contractor details.	Y	
7	Socio-Economic-Income		
	- Leave space for access between mounds of excavated soils (to avoid impede)	Y	
	- Provide wooden planks/footbridges for pedestrians and metalsheets for vehicles to allow access across trenches to premises when required.	Y	
	- Consult affected business in advance, about work schedule	N	Contractor has been insisted to do the same
	- Provide sign/ Caution/warning board at work site indicating work schedule nature of work and contact number for complaints	N	
	- Prevent public entry at the site through barricading .	Y	
8	Socio-Economic Employment		
	- Employ atleast 50% or more of local labours, if manpower is available (employment record)	Y	
	- Ensure equal wages for the same level of work.	Y	
	- Secure construction materials form local market (records of sources of materials)	Y	
9	Occupational Health and Safety		
	- Prevent entry of public at sites.	Y	
	- Ensure all workers are provided with and use of suitable Personal Protective Equipment.	Y	
	- Documented procedures to be followed for all sites activities.	N	Contractor has been asked to prepare do correct
	- Ensure the "qualified" First Aid is provided all time, with easy access	Y	
	- Secure all installations from unauthorised intrusion and accident risks	Y	
	- Provide Potable drinking water for workers	Y	
	- Provide clean eating areas for workers	Y	
	- Provide OH& S training for all workers.	N	Contractor has been asked organise training
	- Ensure the High visibility vests when working with heavy equipment and heavy traffic roads.	N.	Contractor has been asked provide same
	- Ensure moving equipment is fitted with audible back up alarms	Y	
	- Provide sign boards for hazardous areas. The sign should be easily understood by workers and general public	N.	Contractor has been asked same

SI	Mitigation measures to be implemented	Status	Remarks
	- Disallow worker exposure to noise level greater than 80 dBA for duration of more than 8 hrs (or use earing protection)	Y	
10	Community Health and Safety		
	- Plan routes to avoid times of peak -pedestrian activities.	Y	
	- Liase with SIPMIU/DSMC in identifying risk areas on route.	Y	
	- Maintain regularly the manufacture approved parts to minimize failure and accidents	Y	
11	Work camps		
	- Consult DSMC/SIPMIU for locating office, sheds, camps and plants	Y	
	- Minimize the removal of vegetation and disallow cutting of trees.	Y	
	- Provide water and sanitation facilities for employees	Y	
	- Remove all rubbish, solid waste and temporary structures from site which are no longer required	Y	
	- Report SIPMIU/DSMC in writing that camp has been vacated and restored before acceptance of work	N	Contractor has been asked to prepare same
12	Social and Cultural resources		
	- Consult the authorities to identify any buildings at risk from vibration damage & avoiding use of pneumatic drills / heavy vehicles in the vicinity.	Y	
	- Consult municipal authorities, cultural and tourism authorities and local communities in advance to identify and address key issues at sensitive times such as religious and cultural festivals	Y	
13	Display Material		
	- Signs Like "Only Staff" / "Restricted area" are displayed in relevant areas.	N	Contractor has been asked to provide same
	- Safety (Including traffic signs) noticeboard is available and up to date	Y	
Additional comments or actions required:			
Signature of Site Engineer of DSMC: 		Date: 30/07/13	
Verification by SIPMIU: 		Date: 30/07/13	

NORTH EASTERN REGION CAPITAL CITIES DEVELOPMENT INVESTMENT PROGRAM (NERCCDIP)	
State Investment Program Management and Implementation Unit, Gangtok	
Tranche-1 : Supplying and Laying of Distribution System in Burtuk & Chandmari zone, Construction of GLSR, Pump House, Installing Pumpsets and Allied Works in Gangtok, Sikkim	
Contractor : M/s A K Engineers, Kolkata	Package No. : GTK-WA-1/TR-1
Date of Agreement : 20-9-2011	Contract Period : 18 Months
Target Date for Completion : 19-3-2013	Extended up to: 31-08-2013



MONTHLY EMP IMPLEMENTATION REVIEW REPORT 01-31 Aug 2013

SI	Mitigation measures to be implemented	Status	Remarks
1	Sources of materials		
	- Use quarry sites and sources permitted by govt	Y	
	- Verify suitability and approval by SIPMIU	Y	
	- Submission of monthly documentation of all material sources.	N	Contractor has been asked to provide same
2	Air Quality		
	- Consult SIPMIU/DSMC for stockpiling (clay, soils, gravel etc.,) in designated areas	Y	
	- Excavate SRs foundation at the same time as the access roads	NA	No access roads were constructed.
	- Damp down exposed soil and stockpile on site by spraying with water when necessary during dry weather.	Y	
	- Use tarpaulins to cover sand and other loose material when transported by vehicles.	Y	
	- Fit air pollution control device for all Heavy equipment and machinery	Y	
	- Clean wheels and undercarriage of vehicles while leaving the site	Y	
3	Surface water quality		
	- Avoid stockpiling of earth fill, especially during the monsoon season unless covered by tarpaulins or plastic sheets.	Y	
	- Reuse of excess spoils and material in construction work, consult SIPMIU/DSMC for disposal of spoils in designated areas.	Y	
	- Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.	N	Trenches were filled immediately after laying pipe
	- Store Fuel and Lubricants away from any drains		

1 of 4

SI	Mitigation measures to be implemented	Status	Remarks
	- Dispose the waste generated by construction activities in designated disposal areas.	Y	
	- Conduct surface water quality inspection acc to Environmental Management Plan(EMP)	N	Contractor has been insisted to do air quality management
4	Noise levels		
	- Plan activities in consultation with SIPMIU/DSMC to reduce noise levels	Y	
	- Provide information to public about work schedule	Y	
	- Require horns not to be used unnecessarily	Y	
	- Ensure no old and sensitive buildings come under risk due to use of Pneumatic drills, if necessary go for chiselling	Y	
	- Minimize the noise by silencers, fitting jack hammers, mufflers or portable street barriers	Y	
	- Maintain max sound < 80dB at 10m distance from equipment	Y	
5	Landscape and Aesthetics		
	- Avoid stockpiling of excess excavated soils	Y	
	- Avoid disposal of any debris and waste soils in the forest or nearby water bodies, co-ordinate with GMC for disposal	Y	
	- Managing the Solid waste by reuse, recycling and disposal	Y	
	- Report SIPMIU/DSMC in writing that the necessary restoration work has been adequately performed before acceptance of work.	N	Contractor has been asked to provide same
6	Accessibility		
	- Plan pipeline work in consultation with traffic police	Y	
	- Conduct work during light traffic	Y	
	- Plan minimum possible time at stretch for trench excavation, pipe laying, refilling and compacting.	Y	
	- Provide for immediate consolidation of backfilling material to desired compaction to avoid future settlement risks.	Y	
	- Do not close the road completely, ensure that work is conducted onto edge of the road, allow traffic to move on one line.	Y	
	- Provide information in media (TV, Newspaper) in case of closure of main road, provide alternative routes	Y	

SI	Mitigation measures to be implemented	Status	Remarks
	- At worksites provide public information/caution board ,information include project name, cost and schedule, executing agency and contractor details.	✓	
7	Socio-Economic-Income		
	- Leave space for access between mounds of excavated soils (to avoid impede)	✓	
	- Provide wooden planks/footbridges for pedestrians and metalsheets for vehicles to allow access across trenches to premises when required.	✓	
	- Consult affected business in advance, about work schedule	✓	Contractor has been insisted to do the same.
	- Provide sign/ Caution/warning board at work site indicating work schedule nature of work and contact number for complaints	✓	
	- Prevent public entry at the site through barricading .	✓	
8	Socio-Economic Employment		
	- Employ atleast 50% or more of local labours, if manpower is available (employment record)	✓	
	- Ensure equal wages for the same level of work.	✓	
	- Secure construction materials from local market (records of sources of materials)	✓	
9	Occupational Health and Safety		
	- Prevent entry of public at sites.	✓	
	- Ensure all workers are provided with and use of suitable Personal Protective Equipment.	✓	
	- Documented procedures to be followed for all sites activities.	✓	Contractor has been asked to prepare document
	- Ensure the "qualified" First Aid is provided all time, with easy access	✓	
	- Secure all installations from unauthorised intrusion and accident risks	✓	
	- Provide Potable drinking water for workers	✓	
	- Provide clean eating areas for workers	✓	
	- Provide OH& S training for all workers.	✓	Contractor has been asked to organise safety training
	- Ensure the High visibility vests when working with heavy equipment and heavy traffic roads.	✓	
	- Ensure moving equipment is fitted with audible back up alarms	✓	Contractor has been asked to provide same
	- Provide sign boards for hazardous areas. The sign should be easily understood by workers and general public	✓	
		✓	Contractor has been asked same

Sl	Mitigation measures to be implemented	Status	Remarks
	- Disallow worker exposure to noise level greater than 80 dBA for duration of more than 8 hrs (or use earing protection)	Y	
10	Community Health and Safety		
	- Plan routes to avoid times of peak -pedestrian activities.	Y	
	- Liase with SIPMIU/DSMC in identifying risk areas on route.	Y	
	- Maintain regularly the manufacture approved parts to minimize failure and accidents	Y	
11	Work camps		
	- Consult DSMC/SIPMIU for locating office, sheds, camps and plants	Y	
	- Minimize the removal of vegetation and disallow cutting of trees.	Y	
	- Provide water and sanitation facilities for employees	Y	
	- Remove all rubbish, solid waste and temporary structures from site which are no longer required	Y	
	- Report SIPMIU/DSMC in writing that camp has been vacated and restored before acceptance of work	N	Contractor has been asked to prepare same
12	Social and Cultural resources		
	- Consult the authorities to identify any buildings at risk from vibration damage & avoiding use of pneumatic drills / heavy vehicles in the vicinity.	Y	
	- Consult municipal authorities, cultural and tourism authorities and local communities in advance to identify and address key issues at sensitive times such as religious and cultural festivals	Y	
13	Display Material		
	- Signs Like "Only Staff" / "Restricted area" are displayed in relevant areas.	N	Contractor has been asked to provide same
	- Safety (Including traffic signs) noticeboard is available and up to date	Y	
Additional comments or actions required:			
<div style="display: flex; justify-content: space-between;"> <div> Signature of Site Engineer of DSMC:  </div> <div> Date: 30/08/13 </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> Verification by SIPMIU:  </div> <div> Date: 30/08/13 </div> </div>			

NORTH EASTERN REGION CAPITAL CITIES DEVELOPMENT INVESTMENT PROGRAM (NERCCDIP)	
State Investment Program Management and Implementation Unit, Gangtok	
Tranche-1 : Supplying and Laying of Distribution System in Burtuk & Chandmari zone, Construction of GLSR, Pump House, Installing Pumpsets and Allied Works in Gangtok, Sikkim	
Contractor : M/s A K Engineers, Kolkata	Package No. : GTK-WA-1/TR-1
Date of Agreement : 20-9-2011	Contract Period : 18 Months
Target Date for Completion : 19-3-2013	Extended up to: 31-08-2013



MONTHLY EMP IMPLEMENTATION REVIEW REPORT 01-30-Sep-2013

SI	Mitigation measures to be implemented	Status	Remarks
1	Sources of materials		
	- Use quarry sites and sources permitted by govt	Y	
	- Verify suitability and approval by SIPMIU	Y	
	- Submission of monthly documentation of all material sources.	N	Contractor has been asked to provide same.
2	Air Quality		
	- Consult SIPMIU/DSMC for stockpiling (clay, soils, gravel etc.) in designated areas	Y	
	- Excavate SRs foundation at the same time as the access roads	N/A	No access roads were constructed
	- Damp down exposed soil and stockpile on site by spraying with water when necessary during dry weather.	Y	
	- Use tarpaulins to cover sand and other loose material when transported by vehicles.	Y	
	- Fit air pollution control device for all Heavy equipment and machinery	Y	
	- Clean wheels and undercarriage of vehicles while leaving the site	Y	
3	Surface water quality		
	- Avoid stockpiling of earth fill, especially during the monsoon season unless covered by tarpaulins or plastic sheets.	Y	
	- Reuse of excess spoils and material in construction work, consult SIPMIU/DSMC for disposal of spoils in designated areas.	Y	
	- Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.	N	Trenches were filled immediately after laying pipes
	- Store Fuel and Lubricants away from any drains	Y	

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SI	Mitigation measures to be implemented	Status	Remarks
	- Dispose the waste generated by construction activities in designated disposal areas.	✓	
	- Conduct surface water quality inspection acc to Environmental Management Plan(EMP)	N	Contractor has been insisted to do air quality management
4	Noise levels		
	- Plan activities in consultation with SIPMIU/DSMC to reduce noise levels	✓	
	- Provide information to public about work schedule	✓	
	- Require horns not to be used unnecessarily	✓	
	- Ensure no old and sensitive buildings come under risk due to use of Pneumatic drills, if necessary go for chiselling	✓	
	- Minimize the noise by silencers, fitting jack hammers, mufflers or portable street barriers	✓	
	- Maintain max sound < 80dB at 10m distance from equipment	✓	
5	Landscape and Aesthetics		
	- Avoid stockpiling of excess excavated soils	✓	
	- Avoid disposal of any debris and waste soils in the forest or nearby water bodies, co-ordinate with GMC for disposal	✓	
	- Managing the Solid waste by reuse, recycling and disposal	✓	
	- Report SIPMIU/DSMC in writing that the necessary restoration work has been adequately performed before acceptance of work.	N	Contractor has been insisted to provide same
6	Accessibility		
	- Plan pipeline work in consultation with traffic police	✓	
	- Conduct work during light traffic	✓	
	- Plan minimum possible time at stretch for trench excavation, pipe laying, refilling and compacting.	✓	
	- Provide for immediate consolidation of backfilling material to desired compaction to avoid future settlement risks.	✓	
	- Do not close the road completely, ensure that work is conducted onto edge of the road, allow traffic to move on one line.	✓	
	- Provide information in media (TV, Newspaper) in case of closure of main road, provide alternative routes	✓	

SI	Mitigation measures to be implemented	Status	Remarks
	- At worksites provide public information/caution board ,information include project name, cost and schedule,executing agency and contractor details.	✓	
7	Socio-Economic-Income		
	- Leave space for access between mounds of excavated soils (to avoid impede)	Y	
	- Provide wooden planks/footbridges for pedestrians and metaisheets for vehicles to allow access across trenches to premises when required.	Y	
	- Consult affected business in advance, about work schedule	N	} Contractor has been insisted to do provide same
	- Provide sign/ Caution/warning board at work site indicating work schedule nature of work and contact number for complaints	N	
	- Prevent public entry at the site through barricading .	Y	
8	Socio-Economic Employment		
	- Employ atleast 50% or more of local labours,if manpower is available (employment record)	Y	
	-Ensure equal wages for the same level of work.	Y	
	- Secure construction materials form local market (records of sources of materials)	Y	
9	Occupational Health and Safety		
	- Prevent entry of public at sites.	Y	
	- Ensure all workers are provided with and use of suitable Personal Protective Equipment.	Y	
	- Documented procedures to be followed for all sites activities.	N	} Contractor has been asked to prepare document
	- Ensure the "qualified" First Aid is provided all time, with easy access	Y	
	- Secure all installations from unauthorised intrusion and accident risks	Y	
	- Provide Potable drinking water for workers	Y	
	- Provide clean eating areas for workers	Y	
	- Provide OH& S training for all workers.	N	} Contractor has been asked to organise training
	- Ensure the High visibility vests when working with heavy equipment and heavy traffic roads.	N	
	- Ensure moving equipment is fitted with audible back up alarms	Y	} Contractor has been asked to provide same
	- Provide sign boards for hazardous areas.The sign should be easily understood by workers and general public	N	

SI	Mitigation measures to be implemented	Status	Remarks
	- Disallow worker exposure to noise level greater than 80 dBA for duration of more than 8 hrs (or use earing protection)	Y	
10	Community Health and Safety		
	- Plan routes to avoid times of peak -pedestrian activities.	Y	
	- Liaise with SIPMIU/DSMC in identifying risk areas on route.	Y	
	- Maintain regularly the manufacture approved parts to minimize failure and accidents	Y	
11	Work camps		
	- Consult DSMC/SIPMIU for locating office, sheds, camps and plants	Y	
	- Minimize the removal of vegetation and disallow cutting of trees.	Y	
	- Provide water and sanitation facilities for employees	Y	
	- Remove all rubbish, solid waste and temporary structures from site which are no longer required	Y	
	- Report SIPMIU/DSMC in writing that camp has been vacated and restored before acceptance of work	N	Contractor has been asked to prepare same
12	Social and Cultural resources		
	- Consult the authorities to identify any buildings at risk from vibration damage & avoiding use of pneumatic drills / heavy vehicles in the vicinity.	Y	
	- Consult municipal authorities, cultural and tourism authorities and local communities in advance to identify and address key issues at sensitive times such as religious and cultural festivals	Y	
13	Display Material		
	- Signs Like "Only Staff" / "Restricted area" are displayed in relevant areas.	N	Contractor has been asked to provide same
	- Safety (Including traffic signs) noticeboard is available and up to date	Y	
Additional comments or actions required:			
Signature of Site Engineer of DSMC:  Date: 28/09/13			
Verification by SIPMIU:  Date: 28/09/13			

NORTH EASTERN REGION CAPITAL CITIES DEVELOPMENT INVESTMENT PROGRAM (NERCCDIP)	
State Investment Program Management and Implementation Unit, Gangtok	
Tranche-1 : Supplying and Laying of Distribution System in Burtuk & Chandmari zone, Construction of GLSR, Pump House, Installing Pumpsets and Allied Works in Gangtok, Sikkim	
Contractor : M/s A K Engineers, Kolkata	Package No. : GTK-WA-1/TR-1
Date of Agreement : 20-9-2011	Contract Period : 18 Months
Target Date for Completion : 19-3-2013	Extended up to: 31-08-2013



MONTHLY EMP IMPLEMENTATION REVIEW REPORT 01-31-09-2013

Sl	Mitigation measures to be implented	Status	Remarks
1	Sources of materials		
	- Use quarry sites and sources permitted by govt	Y	
	- Verify suitability and approval by SIPMIU	Y	
	- Submission of monthly documentation of all material sources.	N	Contractor has been asked to provide same.
2	Air Quality		
	- Consult SIPMIU/DSMC for stockpiling (clay,soils,gravel etc.,) in designated areas	Y	
	- Excavate SRs foundation at the same time as the access roads	N.A	No access roads were constructed.
	- Damp down exposed soil and stockpile on site by spraying with water when necessary during dry weather.	Y	
	- Use tarpaulins to cover sand and other loose material when transported by vehicles.	Y	
	- Fit air pollution control device for all Heavy equipment and machinery	Y	
	- Clean wheels and undercarriage of vehicles while leaving the site	Y	
3	Surface water quality		
	- Avoid stockpiling of earth fill, especially during the monsoon season unless covered by tarpaulins or plastic sheets.	Y	
	- Reuse of excess spoils and material in construction work, consult SIPMIU/DSMC for disposal of spoils in designated areas.	Y	
	- Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.	N	Trenches were filled immediately after laying pipes
	- Store Fuel and Lubricants away from any drains	Y	

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SI	Mitigation measures to be implemented	Status	Remarks
	- Dispose the waste generated by construction activities in designated disposal areas.	Y	
	- Conduct surface water quality inspection acc to Environmental Management Plan(EMP)	N	Contractor has been asked to provide the report.
4	Noise levels		
	- Plan activities in consultation with SIPMIU/DSMC to reduce noise levels	Y	
	- Provide information to public about work schedule	Y	
	- Require horns not to be used unnecessarily	Y	
	- Ensure no old and sensitive buildings come under risk due to use of Pneumatic drills, if necessary go for chiselling	Y	
	- Minimize the noise by silencers, fitting jack hammers, mufflers or portable street barriers	Y	
	- Maintain max sound < 80dB at 10m distance from equipment	Y	
5	Landscape and Aesthetics		
	- Avoid stockpiling of excess excavated soils	Y	
	- Avoid disposal of any debris and waste soils in the forest or nearby water bodies, co-ordinate with GMC for disposal	Y	
	- Managing the Solid waste by reuse, recycling and disposal	Y	
	- Report SIPMIU/DSMC in writing that the necessary restoration work has been adequately performed before acceptance of work.	N	Contractor has been asked to Report.
6	Accessibility		
	- Plan pipeline work in consultation with traffic police	Y	
	- Conduct work during light traffic	Y	
	- Plan minimum possible time at stretch for trench excavation, pipe laying, refilling and compacting.	Y	
	- Provide for immediate consolidation of backfilling material to desired compaction to avoid future settlement risks.	Y	
	- Do not close the road completely, ensure that work is conducted onto edge of the road, allow traffic to move on one line.	Y	
	- Provide information in media (TV, Newspaper) in case of closure of main road, provide alternative routes	Y	

SI	Mitigation measures to be implemented	Status	Remarks
	- At worksites provide public information/caution board ,information include project name, cost and schedule, executing agency and contractor details.	Y	
7	Socio-Economic-Income		
	- Leave space for access between mounds of excavated soils (to avoid impede)	Y	
	- Provide wooden planks/footbridges for pedestrians and metalsheets for vehicles to allow access across trenches to premises when required.	Y	
	- Consult affected business in advance, about work schedule	N	contractor has been asked to provide.
	- Provide sign/ Caution/warning board at work site indicating work schedule nature of work and contact number for complaints	N	IN Contractor has been asked to provide.
	- Prevent public entry at the site through barricading .	Y	
8	Socio-Economic Employment		
	- Employ atleast 50% or more of local labours, if manpower is available (employment record)	Y	
	- Ensure equal wages for the same level of work.	Y	
	- Secure construction materials from local market (records of sources of materials)	Y	
9	Occupational Health and Safety		
	- Prevent entry of public at sites.	Y	
	- Ensure all workers are provided with and use of suitable Personal Protective Equipment.	Y	
	- Documented procedures to be followed for all sites activities.	N	Instructed to contractor to provide.
	- Ensure the "qualified" First Aid is provided all time, with easy access	Y	
	- Secure all installations from unauthorised intrusion and accident risks	Y	
	- Provide Potable drinking water for workers	Y	
	- Provide clean eating areas for workers	N	
	- Provide OH& S training for all workers.	N	Instructed to provide.
	- Ensure the High visibility vests when working with heavy equipment and heavy traffic roads.	N	Asked to provide the same.
	- Ensure moving equipment is fitted with audible back up alarms	Y	
	- Provide sign boards for hazardous areas. The sign should be easily understood by workers and general public	N	Contractor has been asked to provide.

SI	Mitigation measures to be implemented	Status	Remarks
	- Disallow worker exposure to noise level greater than 80 dBA for duration of more than 8 hrs (or use earing protection)	Y	
10	Community Health and Safety		
	- Plan routes to avoid times of peak -pedestrian activities.	Y	
	- Liase with SIPMIU/DSMC in identifying risk areas on route.	Y	
	- Maintain regularly the manufacture approved parts to minimize failure and accidents	Y	
11	Work camps		
	- Consult DSMC/SIPMIU for locating office, sheds, camps and plants	Y	
	- Minimize the removal of vegetation and disallow cutting of trees.	Y	
	- Provide water and sanitation facilities for employees	Y	
	- Remove all rubbish, solid waste and temporary structures from site which are no longer required	Y	
	- Report SIPMIU/DSMC in writing that camp has been vacated and restored before acceptance of work	N	Contractor has been asked to contractors
12	Social and Cultural resources		
	- Consult the authorities to identify any buildings at risk from vibration damage & avoiding use of pneumatic drills / heavy vehicles in the vicinity.	Y	
	- Consult municipal authorities, cultural and tourism authorities and local communities in advance to identify and address key issues at sensitive times such as religious and cultural festivals	Y	
13	Display Material		
	- Signs Like "Only Staff" / "Restricted area" are displayed in relevant areas.	N	Contractor has been asked to provide.
	- Safety (Including traffic signs) noticeboard is available and up to date	Y	
Additional comments or actions required:			
Signature of Site Engineer of DSMC:  Date: 31/10/2013			
Verification by SIPMIU:  Date: 31/10/2013			



NORTH EASTERN REGION CAPITAL CITIES DEVELOPMENT INVESTMENT PROGRAM (NERCCDIP)	
State Investment Program Management and Implementation Unit, Gangtok	
Tranche-1 : Supplying and Laying of Distribution System in Burtuk & Chandmari zone, Construction of GLSR, Pump House, Installing Pumpsets and Allied Works in Gangtok, Sikkim	
Contractor : M/s A K Engineers, Kolkata	Package No. : GTK-WA-1/TR-1
Date of Agreement : 20-9-2011	Contract Period : 18 Months
Target Date for Completion : 19-3-2013	Extended up to: 31-08-2013

MONTHLY EMP IMPLEMENTATION REVIEW REPORT *Month of Nov'2013*

SI	Mitigation measures to be implemented	Status	Remarks
1	Sources of materials		
	- Use quarry sites and sources permitted by govt	YES	
	- Verify suitability and approval by SIPMIU	YES	
	- Submission of monthly documentation of all material sources.	No	<i>contractor has asked to submit all the documents</i>
2	Air Quality		
	- Consult SIPMIU/DSMC for stockpiling (clay,soils,gravel etc.,) in designated areas	Yes	
	- Excavate SRs foundation at the same time as the access roads	No	
	- Damp down exposed soil and stockpile on site by spraying with water when necessary during dry weather.	Yes	
	- Use tarpaulins to cover sand and other loose material when transported by vehicles.	Yes	
	- Fit air pollution control device for all Heavy equipment and machinery	Yes	
	- Clean wheels and undercarriage of vehicles while leaving the site	Yes	
3	Surface water quality		
	- Avoid stockpiling of earth fill, especially during the monsoon season unless covered by tarpaulins or plastic sheets.	Yes	
	- Reuse of excess spoils and material in construction work, consult SIPMIU/DSMC for disposal of spoils in designated areas.	Yes	
	- Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.	Not required	<i>The trenches are immediately restored after laying pipes and surplus earth is disposed immediately</i>
	- Store Fuel and Lubricants away from any drains	Yes	

SI	Mitigation measures to be implemented	Status	Remarks
	- Dispose the waste generated by construction activities in designated disposal areas.	Yes	
	- Conduct surface water quality inspection acc to Environmental Management Plan(EMP)	No	contractor has asked to conduct the required test
4	Noise levels		
	- Plan activities in consultation with SIPMIU/DSMC to reduce noise levels	Yes	
	- Provide information to public about work schedule	Yes	
	- Require horns not to be used unnecessarily	Yes	
	- Ensure no old and sensitive buildings come under risk due to use of Pneumatic drills, if necessary go for chiselling	Yes	
	- Minimize the noise by silencers, fitting jack hammers, mufflers or portable street barriers	Yes	
	- Maintain max sound < 80dB at 10m distance from equipment	Yes	
5	Landscape and Aesthetics		
	- Avoid stockpiling of excess excavated soils	Yes	
	- Avoid disposal of any debris and waste soils in the forest or nearby water bodies, co-ordinate with GMC for disposal	Yes	
	- Managing the Solid waste by reuse, recycling and disposal	Yes	
	- Report SIPMIU/DSMC in writing that the necessary restoration work has been adequately performed before acceptance of work.	Yes	
6	Accessibility		
	- Plan pipeline work in consultation with traffic police	Yes	
	- Conduct work during light traffic	Yes	
	- Plan minimum possible time at stretch for trench excavation, pipe laying, refilling and compacting.	Yes	
	- Provide for immediate consolidation of backfilling material to desired compaction to avoid future settlement risks.	Yes	
	- Do not close the road completely, ensure that work is conducted onto edge of the road, allow traffic to move on one line.	Yes	
	- Provide information in media (TV, Newspaper) in case of closure of main road, provide alternative routes	Yes	

Sl	Mitigation measures to be implemented	Status	Remarks
	- At worksites provide public information/caution board ,information include project name, cost and schedule, executing agency and contractor details.	Yes	
7	Socio-Economic-Income		
	- Leave space for access between mounds of excavated soils (to avoid impede)	Yes	
	- Provide wooden planks/footbridges for pedestrians and metalsheets for vehicles to allow access across trenches to premises when required.	Yes	
	- Consult affected business in advance, about work schedule	N	contractor has asked to propose
	- Provide sign/ Caution/warning board at work site indicating work schedule nature of work and contact number for complaints	Yes	
	- Prevent public entry at the site through barricading .	Yes	
8	Socio-Economic Employment		
	- Employ atleast 50% or more of local labours, if manpower is available (employment record)	Yes	
	- Ensure equal wages for the same level of work.	Yes	
	- Secure construction materials from local market (records of sources of materials)	Yes	
9	Occupational Health and Safety		
	- Prevent entry of public at sites.	Yes	
	- Ensure all workers are provided with and use of suitable Personal Protective Equipment.	Yes	
	- Documented procedures to be followed for all sites activities.	N	contractor has asked to do the same
	- Ensure the "qualified" First Aid is provided all time, with easy access	Yes	
	- Secure all installations from unauthorised intrusion and accident risks	Yes	
	- Provide Potable drinking water for workers	Yes	
	- Provide clean eating areas for workers	Yes	
	- Provide OH& S training for all workers.	Yes	
	- Ensure the High visibility vests when working with heavy equipment and heavy traffic roads.	Yes	
	- Ensure moving equipment is fitted with audible back up alarms	Yes	
	- Provide sign boards for hazardous areas. The sign should be easily understood by workers and general public	N	Contractor has asked to provide Such Sign boards

SI	Mitigation measures to be implemented	Status	Remarks
	- Disallow worker exposure to noise level greater than 80 dBA for duration of more than 8 hrs (or use earing protection)	Yes	
10	Community Health and Safety		
	- Plan routes to avoid times of peak -pedestrian activities.	Yes	
	- Liaise with SIPMIU/DSMC in identifying risk areas on route.	Yes	
	- Maintain regularly the manufacture approved parts to minimize failure and accidents.	Yes	
11	Work camps		
	- Consult DSMC/SIPMIU for locating office, sheds, camps and plants	Yes	
	- Minimize the removal of vegetation and disallow cutting of trees.	Yes	
	- Provide water and sanitation facilities for employees	Yes	
	- Remove all rubbish, solid waste and temporary structures from site which are no longer required	Yes	
	- Report SIPMIU/DSMC in writing that camp has been vacated and restored before acceptance of work	N	Contractor has been asked to provide the same
12	Social and Cultural resources		
	- Consult the authorities to identify any buildings at risk from vibration damage & avoiding use of pneumatic drills / heavy vehicles in the vicinity.	Yes	
	- Consult municipal authorities, cultural and tourism authorities and local communities in advance to identify and address key issues at sensitive times such as religious and cultural festivals	Yes	
13	Display Material		
	- Signs Like "Only Staff" / "Restricted area" are displayed in relevant areas.	N	Contractor has asked to provide
	- Safety (Including traffic signs) noticeboard is available and up to date	Yes	
Additional comments or actions required:			
Signature of Site Engineer of DSMC:  Date: 30-11-2013			
Verification by SIPMIU:  Date: 30-11-2013			


NORTH EASTERN REGION CAPITAL CITIES DEVELOPMENT INVESTMENT PROGRAM (NERCCDIP)	
State Investment Program Management and Implementation Unit, Gangtok	
Tranche-1 : Supplying and Laying of Distribution System in Burtuk & Chandmari zone, Construction of GLSR, Pump House, Installing Pumpsets and Allied Works in Gangtok, Sikkim	
Contractor : M/s A K Engineers, Kolkata	Package No. : GTK-WA-1/TR-1
Date of Agreement : 20-9-2011	Contract Period : 18 Months
Target Date for Completion : 19-3-2013	Extended up to: 31-08-2013

MONTHLY EMP IMPLEMENTATION REVIEW REPORT *Month of Dec" 2013*

Sl	Mitigation measures to be implented	Status	Remarks
1	Sources of materials		
	- Use quarry sites and sources permitted by govt	Yes	
	- Verify suitability and approval by SIPMIU	Yes	
	- Submission of monthly documentation of all material sources.	No	<i>Contractor has been asked to provide all docu</i>
2	Air Quality		
	- Consult SIPMIU/DSMC for stockpiling (clay,soils,gravel etc..) in designated areas	Yes	
	- Excavate SRs foundation at the same time as the access roads	No	
	- Damp down exposed soil and stockedpile on site by spraying with water when necessary during dry weather.	Yes	
	- Use tarpaulins to cover sand and other loose material when transported by vehicles.	Yes	
	- Fit air pollution control device for all Heavy equipment and machinery	Yes	
	- Clean wheels and undercarriage of vehicles while leaving the site	Yes	
3	Surface water quality		
	- Avoid stockpiling of earth fill, especially during the monsoon season unless covered by tarpaulins or plastic sheets.	Yes	
	- Reuse of excess spoils and material in construction work, consult SIPMIU/DSMC for disposal of spoils in designated areas.	Yes	
	- Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies.	N/R	<i>Trench are immediately restored after laying of Pipe and Surface Soil disposal.</i>
	- Store Fuel and Lubricants away from any drains		

SI	Mitigation measures to be implemented	Status	Remarks
	- Dispose the waste generated by construction activities in designated disposal areas.	Yes	
	- Conduct surface water quality inspection acc to Environmental Management Plan(EMP)	No	Contractor has asked to conduct the required test.
4	Noise levels		
	- Plan activities in consultation with SIPMIU/DSMC to reduce noise levels	Yes	
	- Provide information to public about work schedule	Yes	
	- Require homes not to be used unnecessarily	Yes	
	- Ensure no old and sensitive buildings come under risk due to use of Pneumatic drills, if necessary go for chiselling	Yes	
	- Minimize the noise by silencers, fitting jack hammers, mufflers or portable street barriers	Yes	
	- Maintain max sound < 80dB at 10m distance from equipment	Yes	
5	Landscape and Aesthetics		
	- Avoid stockpiling of excess excavated soils	Yes	
	- Avoid disposal of any debris and waste soils in the forest or nearby water bodies, co-ordinate with GMC for disposal	Yes	
	- Managing the Solid waste by reuse, recycling and disposal	Yes	
	- Report SIPMIU/DSMC in writing that the necessary restoration work has been adequately performed before acceptance of work.	Yes	
6	Accessibility		
	- Plan pipeline work in consultation with traffic police	Yes	
	- Conduct work during light traffic	Yes	
	- Plan minimum possible time at stretch for trench excavation, pipe laying, refilling and compacting.	Yes	
	- Provide for immediate consolidation of backfilling material to desired compaction to avoid future settlement risks.	Yes	
	- Do not close the road completely, ensure that work is conducted onto edge of the road, allow traffic to move on one line.	Yes	
	- Provide information in media (TV, Newspaper) in case of closure of main road, provide alternative routes	Yes	

SI	Mitigation measures to be implemented	Status	Remarks
	- At worksites provide public information/caution board ,information include project name, cost and schedule, executing agency and contractor details.	Yes	
7	Socio-Economic-Income		
	- Leave space for access between mounds of excavated soils (to avoid impede)	Yes	
	- Provide wooden planks/footbridges for pedestrians and metalsheets for vehicles to allow access across trenches to premises when required.	Yes	
	- Consult affected business in advance, about work schedule	N	Contractor has asked to prepare.
	- Provide sign/ Caution/warning board at work site indicating work schedule nature of work and contact number for complaints	Yes	
	- Prevent public entry at the site through barricading .	Yes	
8	Socio-Economic Employment		
	- Employ atleast 50% or more of local labours, if manpower is available (employment record)	Yes	
	- Ensure equal wages for the same level of work.	Yes	
	- Secure construction materials from local market (records of sources of materials)	Yes	
9	Occupational Health and Safety		
	- Prevent entry of public at sites.	Yes	
	- Ensure all workers are provided with and use of suitable Personal Protective Equipment.	Yes	
	- Documented procedures to be followed for all sites activities.	N	Contractor has asked to do the same.
	- Ensure the "qualified" First Aid is provided all time, with easy access	Yes	
	- Secure all installations from unauthorised intrusion and accident risks	Yes	
	- Provide Potable drinking water for workers	Yes	
	- Provide clean eating areas for workers	Yes	
	- Provide OH& S training for all workers.	Yes	
	- Ensure the High visibility vests when working with heavy equipment and heavy traffic roads.	Yes	
	- Ensure moving equipment is fitted with audible back up alarms	Yes	
	- Provide sign boards for hazardous areas. The sign should be easily understood by workers and general public	N	Contractor has asked the provide Sign Boards

Sl	Mitigation measures to be implemented	Status	Remarks
	- Disallow worker exposure to noise level greater than 80 dBA for duration of more than 8 hrs (or use earing protection)	Yes	
10	Community Health and Safety		
	- Plan routes to avoid times of peak -pedestrian activities.	Yes	
	- Liase with SIPMIU/DSMC in identifying risk areas on route.	Yes	
	- Maintain regularly the manufacture approved parts to minimize failure and accidents	Yes	
11	Work camps		
	- Consult DSMC/SIPMIU for locating office, sheds, camps and plants	Yes	
	- Minimize the removal of vegetation and disallow cutting of trees.	Yes	
	- Provide water and sanitation facilities for employees	Yes	
	- Remove all rubbish, solid waste and temporary structures from site which are no longer required	Yes	
	- Report SIPMIU/DSMC in writing that camp has been vacated and restored before acceptance of work	N	Contractor has asked to provide the same.
12	Social and Cultural resources		
	- Consult the authorities to identify any buildings at risk from vibration damage & avoiding use of pneumatic drills / heavy vehicles in the vicinity.	Yes	
	- Consult municipal authorities, cultural and tourism authorities and local communities in advance to identify and address key issues at sensitive times such as religious and cultural festivals	Yes	
13	Display Material		
	- Signs Like "Only Staff" / "Restricted area" are displayed in relevant areas.	N.	Contractor has asked to provide.
	- Safety (Including traffic signs) noticeboard is available and up to date	Yes	
Additional comments or actions required:			
<div> <div>Signature of Site Engineer of DSMC:</div> <div>  Manish Kumar Singh </div> </div> <div> <div>Verification by SIPMIU:</div> <div></div> </div>			
Date: 28-12-2013			
Date: 28-12-2013			

Appendix 6: Site Photographs



GLSR and Retaining wall with fencing along the road completed at Bulbuley



Retaining wall with Fencing Provided behind the GLSR at Bulbule



Pump House completed at Selep



Pump House completed at Selep



Road Restoration completed at Chandmari Ward



Health, Safety & Environment training given to Contractors by ADB Environmental Expert on 13.11.2013