

Ref.No.SEPL/F-5/14-15/4/38

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To,
The Joint Director,
North-Eastern Regional office,
Ministry of Environment & Forest,
Government of India.
Shillong-793021

Dated: 18/11/2014

# <u>Subject: Six Monthly compliance Report on status of Environmental Safeguards of 97MWTashiding Hydro Electric Project.</u>

Dear Sir,

With reference to Environmental Clearance of 97MW Tashiding hydro Hydro Electric Project vide MoEF letter No.J-12011/66/2006-IA-I dated 29.07.2010 following are the clarifications.

1. As per the Stage I Clearance the following amounts have been deposited through RTGS in favour of Forest Env. & Wildlife management Deptt. Government of Sikkim, Gangtok.

i) Compensatory afforestation: Rs, 28,43,900=00 Dated: 13/4/2011

ii) Net Present Value: Rs, 32,18,774=00 dated:13/4/2011

iii) CAT Plan: Rs 63,48,000=00 dated;13/4/2011

iv) Biodiversity Conservation & Management Plan: Rs,88,40,000=00 dated:13/4/2011

2. Public Notification Published as per the Para 12 of the Environmental Clearance. We had advertised in two Local Newspaper namely "Himali Bela" in Nepali, "Sikkim Express" in English and Sikkim Herald classified the Government of Sikkim paper dated;11<sup>th</sup> August 2010 and 12<sup>th</sup> August 2010, for wide circulation in the regions around the project area informing that Project has been accorded environmental clearance.

3. Six Monthly compliance Report on the status of the 97 MW Tashiding Hydro Electric Project is enclosed as Annexure-A, Environmental activities and Corporate Social Responsibilities as Annexure B and Progress report of the project as Annexure C.

This is for your kind information.

Thanking You,

Yours faithfully,

-Sd-

(C.L Thakur)

Sr. Vice president

Shiga Energy Pvt. Ltd.

Email.id:cl.thakur@dansenergy.com

Copy to: 1) Additional Director, MoEF New Delhi, for kind information.

2) Central Pollution Control Board, Govt. of India, for kind information.

3) CCF-cum -Nodal Officer (FCA) Gangtok, for kind information.

4) Member Secretary, State pollution Control Board Gangtok, for kind information.

5) Office file.

Sr. Vice President

For Shiga Energy Pvt.Ltd



# 97MW TASHIDING HYDRO ELECTRIC PROJECT DATA SHEET

Sl.No.	Particulars	Details
1	Project Type	Run- of- River Scheme
2.	Name of the Project	97MW Tashiding Hydro Electric Project
3.	Clearance Letter  i) Environmental Clearance ii) Forest Clearance.	No.J-12011/66/2006-IA-I dated 29.7.2010 MoEF GOI vide letter No.3-SKB 007/2010-SHI/1693-94 dated 16 <sup>th</sup> Sept.2011. Forest Env.& wildlife Management Deptt GOS vide Letter No.1368/FCA/FEWMD 955-57 Dated 24/9/2011
4.	LOCATION:	,
	District	West District
	State	Sikkim
	Latitude	27°20'28"N
	Longitude	88°13'59"E
5.	Address for Correspondence	
	a) Addresss of concerned Project Head(with pin code, Telephone/Fax)  b) Address of Project Incharge site office (With Pin code, Telephone/Fax)	Shri. P.B.Praveen Kumar, Director Shiga Energy Pvt.Ltd. Rabdenling, Annex-II, Adjoining Hotel Royal Plaza Upper Shyari, Gangtok,East Sikkim. e-mail:praveenpb@yahoo.com Telephone:03592-280709 Fax:03592-280703 Mr.C.L.Thakur Sr.Vice-President, Shiga Energy Pvt.Ltd. Yangtey, Gyalshing, West Sikkim, Contact no;8348691932 e-mail:cl.thakur@dansenergy.com
6.	Break up of the Project Area	
	a) Forest Land Total	4.3492Ha(Surface 2.7840Ha+Underground :1.5652Ha) in West Sikkim,
7.	Break-up of the Project affected Population.	Project affected families:30 Landless affected families: Nil
8.	Financial Details  a) Project cost as originally planned.	494.44Crores.
9.	Forest Land requirement	
	a.The Status of approval for diversion of forest land for non forestry use,	The Ministry of Environment & Forest Government of India vides its letter No.3-SKB 007/2010-SHI/1693-94 dated 2 <sup>nd</sup> May 2008 Forest Env.& wildlife Management Deptt GOS vide Letter No.1368/FCA/FEWMD 955-57 Dated 24/9/2011

# ANNEXURE-A Compliance Status on Environmental Clearance.

Sl.No.	Stipulated Conditions	Compliance Status
Part –	A: Specific Conditions	
(i)	Catchment area treatment plans as has been proposed should be completed in 3 years.	We have already deposited the CAT amount of Rs. 63, 48, 000=00 in the CAMPA fund and work will be carried out by the State Forest Department.
(ii)	Five dumping site have been identified for dumping 380858m³ of excavated material. For retaining the dumped /unused material for subsequent stabilization along the hill slopes and along the stretch of the road sausage-cumretaining walls shall be developed. These need to be built prior to the dumping of muck at these sites. These walls would range from 70 to 290m length at the proposed dumping site.	Muck dumping is being carried out in approved muck dumping sites. Sausage cum retaining walls has been developed as proposed to ensure that the unused material does not spillover. It has been seen that the excavated muck can be used for preparation of aggregate and boulder can be used for constructing of sausage wall.
(iii)	It should be ensured that the dumping yards blend with the natural landscape by developing the sites with gentle slopes, bunds, terraced and water ponds, patches of greenery in and around them.	After the completion of the construction work we will convert the dumping sites into natural vegetation parks and recreational centre by consulting experts in this field.
(iv)	For maintaining environmental flow in the river two cumec water should be released during lean season.	
(v)	The scheme of disposal of solid waste should cover the integrated project area including from labour colony during construction Phase. Solid waste from the labour camps shall be collected in beans/Masonry Vats and the same shall be dumped or disposed to nearby municipal landfills/authorized dump sites. No dumping of solid waste is allowed near any water body or a stream to exclude any health hazard problems to the society.	dumped into Municipal approved dumping area. Strictly being complied as these causes health hazardous to staffs and labourers.

(vi)	Jobs should be provided to atleast 1 member of all the 30 affected families as per their skills.  Fishery Management Plan as proposed in the EMP should be implemented in totality.	We have already provided jobs to atleast one member of all the affected families as per their skills and also contract works are being allocated to the affected families and we are further encouraging them to produce organic vegetables and developed poultry/dairy farming to be supplied to the Company.  We will implement the Fishery Management plan as proposed in the EMP together with the Fisheries Department, Govt. of Sikkim and we are in touch with the Fishery Department Government of Sikkim for implementation.
(viii)	The Proposed site is about 5Km away from the buffer Zone of Khangchendzonga Biosphere Reserve as per Supreme Court order clearance from NBWL may be obtained (If required)	As per Gazette Notification issued by MoEF Sl.No. 1688 dated 27 <sup>th</sup> August 2014 the project is well outside the ESZ of KNP. Thus NBWL clearance is not required.
(ix)	The Proponent should carry out a study on post construction period during O&M stage in between 3 to 5 years after commissioning of the project to examine the actual environmental impact of the project on its surrounding compare to what was planned initially. The study should be conducted by a reputed institute/consultant.	The construction of the project is under progress. After the commissioning of the project we will carry out a study on post construction period during O&M stage to examine the actual environmental impact of the project on its surrounding compared to what was planned initially by a reputed institute/consultant.

#### Part-B: General Conditions

Sl. No.	Stipulated Conditions	Compliance status
(i)	Adequate free fuel arrangement should be made for the labour force engaged in the construction work at project cost so that indiscriminate felling of trees is prevented.	Sufficient free fuel (only LPG) has been provided by the company for labourers engaged in the project. As such food is provided to the most employees at the Company's mess where LPG is used as fuel.
(ii)	Fuel depot may be opened at the site to provide the fuel (kerosene/wood/LPG). Medical facilities as well as recreational facilities should also be provided to the labourers.	The fuel Depot (LPG) has been established at site. We have employed two nurses and an ambulance has been provided to meet the emergency needs for project employees and also the public residing within the project site. Routine health checkup is conducted at project sites. We are also taking help from State Health Department. We have provided

		Table Tennis, Carom Board, chess, Volley ball
		Television, Screening Films etc.
(iii)	All the labourers to be engaged for construction works should be thoroughly examined by health personal and adequately treated before issuing them work permit.	Labourers engaged at construction work are examined by MBBS Doctor and treated before issuing the work permit. Regular health checkup is carried out at Project sites.
(iv)	Restoration of Construction area including dumping site of excavated materials should be ensured by leveling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation.	As and when the construction is complete the guidelines laid down will be followed. We have already started the plantation around the dumping areas.
(v)	Financial provision should be made in the total budget of the project for implementation of the above suggested safeguard measures.	Yes, the financial provision for implementation of environmental safeguards has been kept.
(vii )	Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Shillong for review.	Proposal for constituting monitoring committee is already submitted to Additional Director, MoEF, New Delhi for confirmation.
5.	Officials from Regional Office MoEF, Shillong who would be monitoring the implementation of environmental safeguards should be given full co-operation, facilities and documents/data by project proponents during their inspection.	We have been providing full co-operation, facilities and documents/ data by project proponents during the inspection of the officials from MoEF, Shillong.
6.	The responsibility of implementation of environmental safeguards rests fully with the M/s Shiga Energy Pvt.Ltd. & Govt. of Sikkim.	We are strictly complying with all the conditions set for the safeguards of environment with the cooperation of Forest Env. & Wildlife management Department, Government of Sikkim.
7.	The total amount of Rs.466.76 lakh kept in the budgetary provision for implementation of environmental management plan should be strictly adhered and not to be diverted for any other purpose.	We are committed to implement the said budget for Environmental Management programme.
8.	In case of change in the scope of the project, project would require a fresh appraisal.	There is no change in scope of the project. However, in case of any changes we will inform the concern department and take the fresh appraisal.
9,	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary and take action including revoking of the clearance under the provision of the Environment (protection) Act,1986 to ensure effective implementation of the safeguard measures in a time bound and satisfisfactory manner.	Agreed.
10.	This clearance letter is valid for a period of 10 years from the date of issue of this for	The construction work began since December, 2011.

	commencement of construction work	
		•
11.	A copy of the clearance letter will be marked to concerned Panchayat / local NGO, if any .from whom any suggestion / representation has been received while processing the proposal. The Clearance letter shall also be put on the website of the Company by the proponent.	Till date we had not received the suggestion /representation while processing the proposal. The Clearance letter already been uploaded in the company's website.
12.	The proponent should advertise in atleast two local newspaper widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen in the Website of the ministery of environment and Forests at http://www.envfor.nic.in.	We have advertised in Two local Newspaper widely circulated in the region around the project "Himali Bela" in Nepali and "Sikkim Express" in English and Sikkim Herald Classified the Government of Sikkim Paper dated :11 <sup>th</sup> August 2010 and 12 <sup>th</sup> August 2010, informing that project has been accorded environmental clearance. The clearance letter is available with SPCB and at MoEF website.
13.	The project proponent shall also submit Six monthly reports on the status of compliance of the stipulated EC conditions including result of monitored data ( both in Hard copies as well as by e-mail) to the representative Regional office of MoEF, the respective Office of CPCB and the SPCB.	We are submitting six monthly compliance report as stipulated in Hard and soft copy to the concerned officials.
14.	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act.1997.	Agreed

# ANNEXUR- B ENVIRONMENTAL ACTIVITIES AND CORPORATE SOCIAL RESPONSIBILITY

World Environment Day 5th June 2014

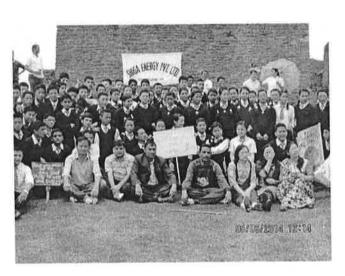
World Environment Day June 2014 was observed at Pelling Senior Secondary School, West Sikkim. The programmee was organized by West District Forest Department. On the event Shri L.P. Kafley (Zilla Upadkshaya) was consented as Chief Guest of the programme. Meanwhile, M/S Shiga Energy Pvt. Ltd. West, Sikkim also participated the programmee actively with school children and District Administration.

The "Green Run" Event was also witnessed and for the said event M/s. Shiga Energy Pvt. Ltd. sponsored token prize to 150 nos. of School children of Pelling Senior Secondary School. The event came to an end with cleanness drive at heritage site "RABDENTSEE RUINS".







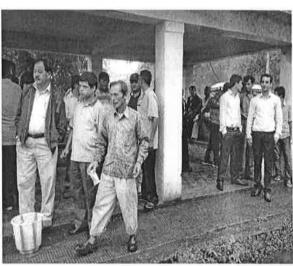


#### PARYAVARAN MOTSHAV 15th-30th JUNE 2014

On the Occasion of Paryavaran Motshav a massive Plantation drive programme has been conducted by M/S Shiga Energy Pvt. Ltd. in co-ordination with the State Forest Department and District Administration Geyzing West Sikkim. The Paryavaran Motshav plantation Programme was attended by the District Collector West, Addl. District Collector, SDM, Divisional Forest Officer (T), ACF (T), Superintendent of Police, SDPO, and all the Staffs member of the District administrative. More than 500 Sapling were planted .On this event the Company had also distributed the refreshment. The company had provided the four labours to District Administrative office for the cleanness drive surrounding to the Office.

The cleanliness drive is also conducted at Geyzing Project Site, and Colonies. The company had also planted the sapling of trees at the project sites.









#### **Independence Day Celebrations**

On the occasion of the 68<sup>th</sup> Independence Day, celebrations were held at Pelling Senior Secondary School. Key highlight of the celebrations was the kick off football tournament. Shiga Energy Pvt. Ltd actively supported the District Independence day celebration committee, West Sikkim to organize the same. Shiga Energy Pvt. Ltd also sponsored token prizes distributed during the celebrations.



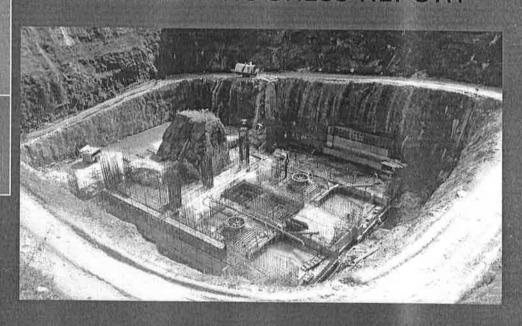


ANNEXURE-C Progress Report

SEPTEMBER 2014

# 97 MW TASHIDING HEP SIKKIM

MONTHLY PROGRESS REPORT



SHIGA ENERGY PVT LTD

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#### **EXECUTIVE SUMMARY**

Owner

: Shiga Energy Pvt. Ltd

Civil and HM Works Contractor

: Bumi Geo Engineering Ltd

**Electro-Mechanical Contractor** 

: Alstom India Ltd

Design Consultant

: Energy Infratech Pvt. Ltd

Under Ground excavation of HRT-Face-2 and Face-3 was completed in the month of Nov.2013

Under Ground excavation of HRT-Face-1 of 53.3m length is completed during the month making total progress of excavation to 1343.40m.

Under Ground excavation of HRT-Face-5 of 64.5m length is completed during the month making total progress of excavation to 634.95m.

Under Ground excavation of HRT-Face-6 of 12.14m length is completed during the month making total progress of excavation to 243.34m.HRT Face-6 excavation was completed on 9<sup>th</sup> Sep214.

Under Ground excavation of Pressure Tunnel started on 9<sup>th</sup> Sep2014 and 39.5m length was completed during the month making total progress of excavation to 39.50m.

Power House open excavation along with slope protection was completed in the month of Feb.2014. Thereafter, 1<sup>st</sup> Stage concreting of both the Units completed up to El.682.50m.2<sup>nd</sup> Stage concreting of both the units completed up to El.682.50m.Raft of Concrete Draft tube of both the units completed (El.681.091 to El.681.573m in slope).

#### 1. PROJECT STATUS

#### 1.1 Clearances

SEPL has obtained all clearances which are required for construction of the Tashiding HEP.

#### 1.2 Financial Closure

The financial closure for the Project was achieved in the month of July 2011.

#### 2. Infrastructure Works at Project Site

#### 2.1 Infrastructure Works

Infrastructure works are almost completed, the detail of which is given below:

#### i. Land Acquisition:

The total land required for the project has been acquired.

#### ii. Construction of Roads:

The work for construction of access road is completed and regular maintenance is under progress.

#### iii. Construction of Bridge near Adit-1:

Bridge erection work completed and is under operation.

#### iv. Construction of Bridge near Barrage:

Bridge erection work completed and is under operation.

#### v. Construction of Magazine house:

Construction of Magazine House is completed.

#### vi. Construction Power:

Transmission line network for Construction power has been charged and is under operation.

#### vii. Miscellaneous:

- Setting up SEPL's administrative and technical office at Project Site has been done.
- Works of labour quarters for the Civil Contractor is completed.

#### 3. Progress of Works

#### 3.1 Head Race Tunnel

Excavation of all the three Adits is completed.

#### 3.1.1 HRT-Face-1:

Under Ground excavation of HRT-Face-1 of 53.3m length is completed during the month making total progress of excavation to 1343.40m.

#### 3.1.2 HRT-Face-2:

Under Ground excavation of HRT-Face-2 was completed in the month of Nov.2013 making total progress of excavation to 765.00m.

#### 3.1.3 HRT-Face-3:

Under Ground excavation of HRT-Face-3 was completed in the month of Nov.2013 making total progress of excavation to 1181.48m.

Mud mat concreting of HRT-Face-3 completed for a length of 110m.

#### 3.1.4 HRT-Face-4:

Under Ground excavation of HRT-Face-4 total progress 1119.10m.

#### 3.1.5 HRT-Face-5:

Under Ground excavation of HRT-Face-5 of 64.5m length is completed during the month making total progress of excavation to 634.95m.

#### 3.1.6 HRT-Face-6:

Under Ground excavation of HRT-Face-6 of 12.14m length is completed during the month making total progress of excavation to 243.34m.**HRT Face-6 excavation was completed on 9<sup>th</sup> Sep214**.

#### 3.2 Penstock Tunnel:

Under Ground excavation of Pressure Tunnel started on 9<sup>th</sup> Sep2014 and making progress of 39.5m during the month making total progress of excavation to 39.50m.

#### 3.3 Intake Site:

Surface excavation and Portal development of Diversion Tunnel (DT) Inlet and Outlet portal is completed.

Under Ground excavation of Diversion Tunnel completed. (DT Length=262m includes 90.60m length of HRT).

#### 3.4 Surge Shaft

Surface preparation for Adit to Surge shaft has been completed.

#### 3.5 Power House area:

#### Excavation and Slope protection works

Power House open excavation along with slope protection was completed in the month of Feb.2014. Earth mat laying and Mud mat concrete at various Elevations El.676.00, El.680.25, El.681.60, El.682.50, El.683.00and El.684.10 (175.5cum) in the Power House Pit was completed in the month of April2014.

#### Concreting

**Dewatering Sump:**1<sup>st</sup> stage concreting from El.676.00m to El.682.50m completed.

Unit-1:Steel lined draft tube lowering, positioning, alignment and second stage concreting completed up to El.682.50m.ln Concrete Lined Draft Tube raft completed (El.681.091 to El.681.573m in slope).

Unit-2:Steel lined draft tube lowering, positioning, alignment and second stage concreting completed up to El.682.50m.In Concrete Lined Draft Tube raft completed (El.681.091 to El.681.573m in slope).

Hill Side Wall: Concrete pouring from El.687.50 to El.688.70m completed.

River Side Wall:-Concrete pouring from El.684.50to El.687.30m completed.

#### Protection works along river side

Wire crate fixing work has been completed and Back filling with due compaction has been completed to El 707.00m.

Due to heavy rain during the month connectivity with site cut off frequently during the month.

#### 4. Electro-mechanical Work:

The contract for entire Electro Mechanical works was awarded to M/s ALSTOM Projects India Ltd on turnkey basis. Advance payment has been released to Alstom Projects India Ltd as per contract.

M/s ALSTOM Projects India Ltd has submitted the model test report and same has been accepted.

#### The following drawings/documents have been approved:

- 1. Francis turbine Material & Material Equivalence datasheet
- 2. Generator Material Equivalence datasheet
- 3. Design Memorandum of Grounding System
- 4. Inspection & Test Plan Turbine & Accessories
- 5. Francis Turbine Draft Tube Elbow & Liner Hydraulic Design
- 6. Francis turbine Draft Tube General Arrangement Drawing
- 7. Inspection and Testing plan of MIV -Spherical valve and Accessories
- 8. Inspection and Test Plan of governing system and OPU
- 9. Inspection and Test Plan of Generator package
- 10. Painting specification
- 11. MIV Spherical Valve material equivalence sheet
- 12. Powerhouse balancing pipe and turbine drainage embedded pipes General Arrangement drawings
- 13. Powerhouse cooling water, drainage and dewatering and fire protection water embedded pipes General Arrangement drawings
- 14. Buried main earth mat and electrodes drawings of Power House, Tail race channel and switchyard area
- 15. Francis turbine, embedded pipes, pressure taps and field efficiency pipes general arrangement
- 16. Francis turbine inlet spiral case and stay ring foundation and anchorage general arrangement.
- 17. Francis turbine inlet spiral case and stay ring and extension piece general arrangement.
- 18. Francis turbine tools SA88 rail track leveling general arrangement.
- 19. Draft tube field quality working plan.

#### **Drawings/ Documents under review:**

- MIV Design Memorandum has been reviewed and our observations have been sent to Alstom.
- Generator Design Memorandum has been reviewed and our observations have been sent to Alstom.
- Francis Turbine Design Memorandum has been reviewed and our observations have been sent to Alstom.
- Inspection and test plan of EOT crane has been reviewed and our observations have been sent to Alstom.
- GSU Transformer Design Memorandum has been reviewed and our observations have been sent to Alstom.
- PH Elevator Design Memorandum has been reviewed and our observations have been sent to Alstom.
- Turbine runner removal gallery civil work general layout has been reviewed and our observations have been sent to Alstom.
- Turbine Spiral case test GA & BOM has been reviewed and our observations have been sent to Alstom.

## Following Material Dispatch Clearance Certificate (MDCC) has been released:

- 1. Grounding System (Lot-1)
- 2. Draft Tube Elbow & Liner for Unit -1 and unit -2
- 3. MDCC request for Draft tube embedded parts lot 1 (first part) Unit-1 and Unit-2
- 4. MDCC request for Draft tube embedded parts lot 1 (second part) Unit-1 and Unit-2
- 5. MDCC request for Draft tube embedded parts lot 1 (third part) Unit-1 and Unit-2

#### Inspection carried out

1. Draft tube Elbow & Liner (Part 1&2) of Unit 1 & Unit 2.

## Status of Erection, Testing and Commissioning at Site

o Initial stage embedment in first stage concreting has been started.

o Draft tube liner of both Unit 1 and Unit 2 has been placed in position and its alignment and concreting completed.

### Status of E&M equipment at Alstom works:

- 1. Basic Design and Detailed design in respect of turbine, generator, MIV, governing equipment is under progress.
- 2. Draft Tube elbow /liner for unit 1 and Unit 2 and grounding system material (Lot-1) have been manufactured, Inspected and reached project site.
- 3. Review of manufacturing drawings for Lower Pit Liner, Upstream Sleeve, Spiral Case, Stay Ring, MIV Body, Downstream Sleeve, Upper Bracket sole plate, Generator Stator layout, Generator rotor Layout, Stator Sole plate, Francis Turbine Cross Section General layout, Grounding System Connection details and Generator lower guide bearing are under progress.

4. Design and Engineering of BOP items such as cooling water system ,drainage & dewatering System, 11 KV isolated phase bus duct, EOT crane, Fire-fighting system, Ultrasonic flow-meter, Cable & Cable Trays, Power house elevator, MIV Governing System Operating Sequence, Inspection and test plan of GSU Transformer and Governing system – Governor Panel, 240V AC UPS system, HVAC system is under progress.

#### 5. Transmission System:

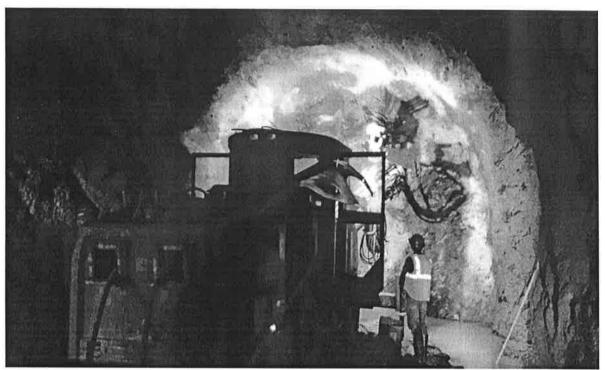
SEPL has signed the Long Term Access Agreement (LTAA) with Power Grid Corporation of India Limited (PGCIL) on 19th October, 2011 for evacuation of power. Transmission service agreement (TSA) has been signed with Power Grid CorporationLimited (PGCIL)on 30<sup>th</sup> January, 2014. Switchyard and Transmission line works will start at a later stage.

#### 6. PROGRESS PHOTOGRAPHS:





Penstock Tunnel-Mucking under progress



HRT-Face-5-Drilling under progress

