

Ref.No:JLHEP/F-5/15-16/ 852.

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

Dated: 28 /05/2015

Subject: Six Monthly compliance Report on status of Environmental Safeguards of 96MW Jorethang Loop Hydro Electric Project.

Dear Sir,

~~This has reference to Environmental Clearance to 96MW Jorethang Loop Hydro Electric Project vide MoEF letter No.J-12011/19/2006-IA-I dated 26.07.2006;~~ The following are clarified for your kind perusal.

1. As per the Stage I Clearance the following amount is deposited to the Forest Env. & Wildlife management Deptt. Government of Sikkim, Gangtok.
 - i) **Compensatory afforestation:** Rs 60, 67,914=00 vide cheque No.000052 HDFC Bank dated 13/03/2008
 - ii) **Net Present Value:** Rs 2, 24, 35,420=00 vide cheque No.000053 HDFC Bank dated 13/03/2008
 - iii) **Crop Compensation:** Rs 53, 94,370=00 vide cheque No.000054 HDFC Bank dated 13/03/2008
 - iv) **CAT Plan:** Rs 1, 36, 96,000=00 vide cheque No.000055 HDFC Bank dated 13/03/2008.
 - v) **Biodiversity Conservation & Management Plan:** Rs 50, 48,000=00 vide cheque No.000056 HDFC Bank dated 13/03/2008.
2. Six Monthly compliance on the status of the Jorethang Loop Hydro Electric Project to the stipulated environmental conditions is enclosed as Annexure-A, Environmental activities and Corporate Social Responsibilities as Annexure-B and Monthly Progress report of the project as Annexure-C.

This is for your kind information.

Thanking You.

Yours faithfully,



(Krishna Gurung)

Sr.A.G.M

For DANS Energy Pvt. Ltd.

Email.id: krishna.gurung@dansenergy.com

Copy to:

1. Additional Director, MoEF New Delhi, for kind information.
2. CCF-cum -Nodal Officer (FCA) Gangtok, for kind information.
3. Central Pollution Control Board, Govt. of India, for kind information.
4. Member Secretary, State pollution Control Board Gangtok, for kind information.

**96MW JORETHANG LOOP HYDRO ELECTRIC PROJECT
DANS ENERGY Pvt. Ltd.**

DATA SHEET

Sl. No.	Particulars	Details
1.	Project Type	Run- of- River Scheme
2.	Name of the Project	Jorethang Loop Hydro Electric Project
3.	Clearance Letter i) Environmental Clearance ii) Forest Clearance	No.J-12011/19/2006-IA-I dated 26.7.2006 MoEF GOI vide letter No.3-SK-C047/2006-SHI/496-97 dated 02.05.2008 Forest Env.& wildlife Management Deptt . GOS vide Letter No.281(986)/FCA/FEWMD Dated 12.5.2008
4.	LOCATION:	
	District	South & West District
	State	Sikkim
	Latitude	27°09'37"N
	Longitude	88°17'47"E
5.	Address for Correspondence	
	a)Address of concerned Project Head(with pin code, Telephone/Fax)	Shri. P.B.Praveen Kumar (Director), Dans Energy Pvt.Ltd 1 st Floor. Rabdenling, annex-II, adjoining Royal Plaza, Upper Shyari, Gangtok. Telefax: 03592-280703 e-mail: praveenpb@dansenergy.com
	b)Address of Project Incharge site office (With Pin code, Telephone/Fax)	Mr. C.L. Thakur (Vice President), Housing Colony, Jorethang, South Sikkim, Telephone:03595-276658, (M) 8348691932 e-mail: cl.thakur@dansenergy.com

6	Breakup of the Project Area	
	a) Forest Land Total	32.0506Ha (Surface:29.5433Ha+Underground:2.5073 Ha)
	South District	25.7406 Ha in South Sikkim
	West District	6.3100Ha in West Sikkim
7.	Break-up of the Project affected Population.	Project affected families: 7 Landless affected families: Nil
8.	Financial Details	
	a) Project cost as originally planned.	475.00 Crores.
9.	Forest Land Requirement	
	The Status of approval diversion of forest land for non forestry use.	The Ministry of Environment & Forest Government of India vides its letter No.3-SK-C047/2006-SHI/496-97 dated 2nd May 2008 Forest Management Deptt. Government of Sikkim vide letter No.281 (986)/FCA/FEWMD dated 12/5/2008 has approved diversion of 32.0506Ha (Surface:29.5433Ha+Underground:2.5073Ha)

Annexure-A

Compliance Status on Environmental Clearance.

Part –A: Specific Conditions

Sl.No.	Stipulated Conditions	Compliance Status
(i)	Controlled blasting with very low charge and mild explosives should be used under close supervision. The quantity of explosive per delay to be used should be informed within one month from the date of issue of this letter.	Blasting is carried out under the supervision of Sikkim police. A fortnightly blasting report is also submitted to the District Collector & Superintendent of Police.
(ii)	Catchment Area Treatment Plan as has been proposed should be completed in Five Years.	We have deposited Rs. 1, 36, 96,000/- with State Forest Department Govt. of Sikkim Gangtok, for implementation of Catchment Area Treatment Plan.

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 (kerosene Oil & LPG) has been arranged for the labour forces engaged in the construction work. A mess has been set up to cut down the usage of fuel. Also, the fuel used in the mess is LPG.
(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 has been opened at Chisopani, Jorethang. We have established a medical clinic at the barrage site with one doctor and two nurses to provide medical facilities to the labourers.
(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 Doctors. Thereafter, the regular checkup is a carried out at site.
(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.	The project is in completion stage, we will take care the dumping Area
(v)	Financial provision should be made in the total budget of the project for implementation of the above suggested safeguard measures.	Yes, we have kept aside a financial provision to implement the above mentioned safeguard measures and the implementation of Environmental activities is under process.
(vi)	A Multidisciplinary committee should be constituted with representative from various disciplines of	A Multidisciplinary Committee is already constituted with approval letter from MoEF, New Delhi vide letter

	forestry, ecology, wildlife, soil conservation, NGO etc, to oversee the effective implementation of the safeguard measures.	No.J-12011/19/2006-IA-A dated 12.7.2010 and site visit and meeting of the Multidisciplinary Committee took place in January'2013.The next meeting is awaited due to non available of Chairman SEIAA, who is the chairman of the Committee.
(vii)	Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Shillong for review.	We have been submitting the Six monthly monitoring reports to the Ministry and its Regional Office, Shillong for review.
4.	Officials from Regional Office MoEF, Shillong who would be monitoring the implementation of environmental safeguards should be given full Cooperation facilities and documents/Data by the project proponents during their inspection.	We have given full cooperation and will continue to do so by providing facilities and documents/data during the inspection by the officials from Regional Office MOEF, Shillong.
5.	The responsibility of implementation of environmental safeguards rests fully with the DANS Energy Pvt.Ltd. & Govt. of Sikkim.	We have been strictly complying with all the conditions set for the safeguards of the environment with the cooperation of Forest Env. & Wildlife Management Department, Government of Sikkim.
6.	In case of change in the Scope of the Project, Project would require a fresh appraisal.	There is no change in scope of project. However, in case of any change we will inform the concern department and take the fresh appraisal.
7.	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 suggested safeguard measures in a time bound and satisfactory manner.	Agreed.
8.	This clearance letter is valid for a period of five years from the date of issue of this for commencement of construction work.	Construction work was duly started within the said period.
9.	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.	Till date we have not received the suggestion / representation while processing the proposal. However, we will mark the concerned authorities a copy if the need arises.
10.	State Pollution Control Board / Committee should display a copy of the clearance letter at the Regional Officer, District Industries Center and Collector's office / Tehsildar's office for 30 days.	State Pollution Control Board has already displayed a copy of the clearance letter at the SPCB Office, District Industries Center, and Collector's Office for 30 days.
11.	The project proponent should advertise within seven days atleast in two local newspapers 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 environment clearance.	We have advertised in two Local Newspapers widely circulated in the region around the Project "Hamro Prajashakti" in Nepali and "NOW" in English dated: 2nd August 2006, informing that Project has been accorded environmental clearance.

ANNEXURE-B

Environmental Activities and Corporate Social Responsibilities

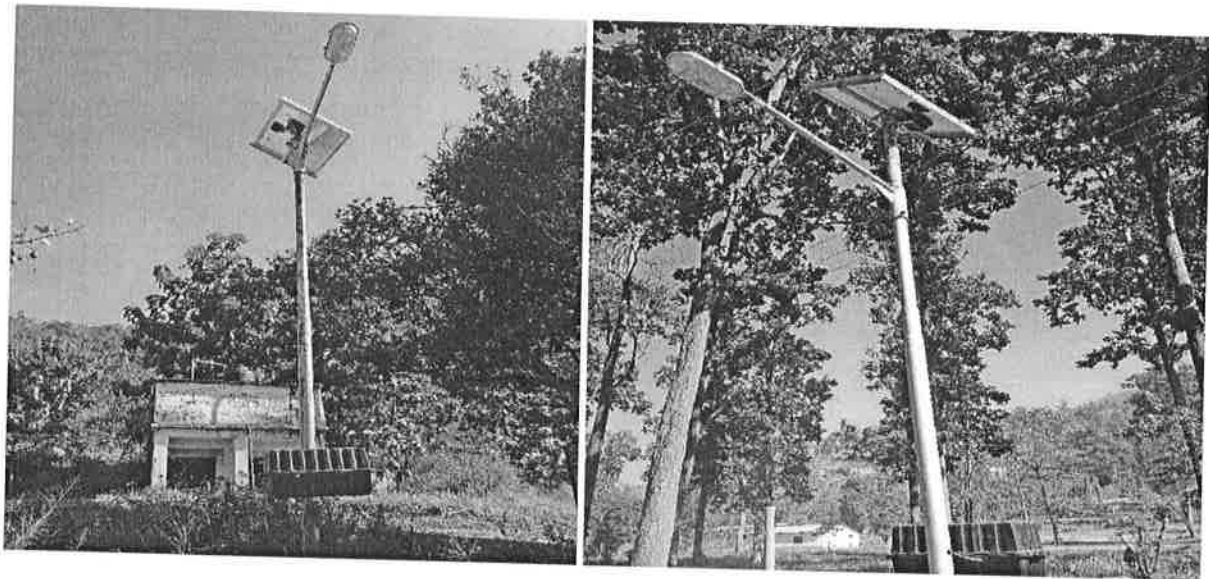
Medical Equipment being provided to Namchi District Hospital

DANS Energy Pvt. Ltd. in its effort to improve medical facilities in the area provided Namchi District Hospital with medical equipment in the presence of the Chief Medical Officer (CMO). Several sets of Stethoscope, Drip stand, X-ray view box, BP instruments, Oxygen flow meter etc. were provided.



SOLAR STREET LIGHT AT KARFECTAR

To supplement night Security measures DANS Energy Pvt.Ltd has provided 6 Nos. of Solar Panel Street lights at critical portion in the Animal Husbandry and Veterinary Services compound at Karfectar, Jorethang, South Sikkim.



Sponsored the Sikkim Women's football team

The DANS Energy Pvt.Limited had sponsored the Maghey Mela Celebration at Jorethang south Sikkim. The Maghey Mela was inaugurated by Hon'ble Chief Minister of Sikkim Shri. Pawan Chamling. And a Football exhibition match was played between Nepal Women's National Team and Sikkim Women's National Team. The Sikkim Women's National Team was also sponsored by DANS Energy Pvt.Ltd and wore the Dans Energy Jersey. The match was won by the Sikkim women's Team.



MAGEY MELA, JORETHANG 2015

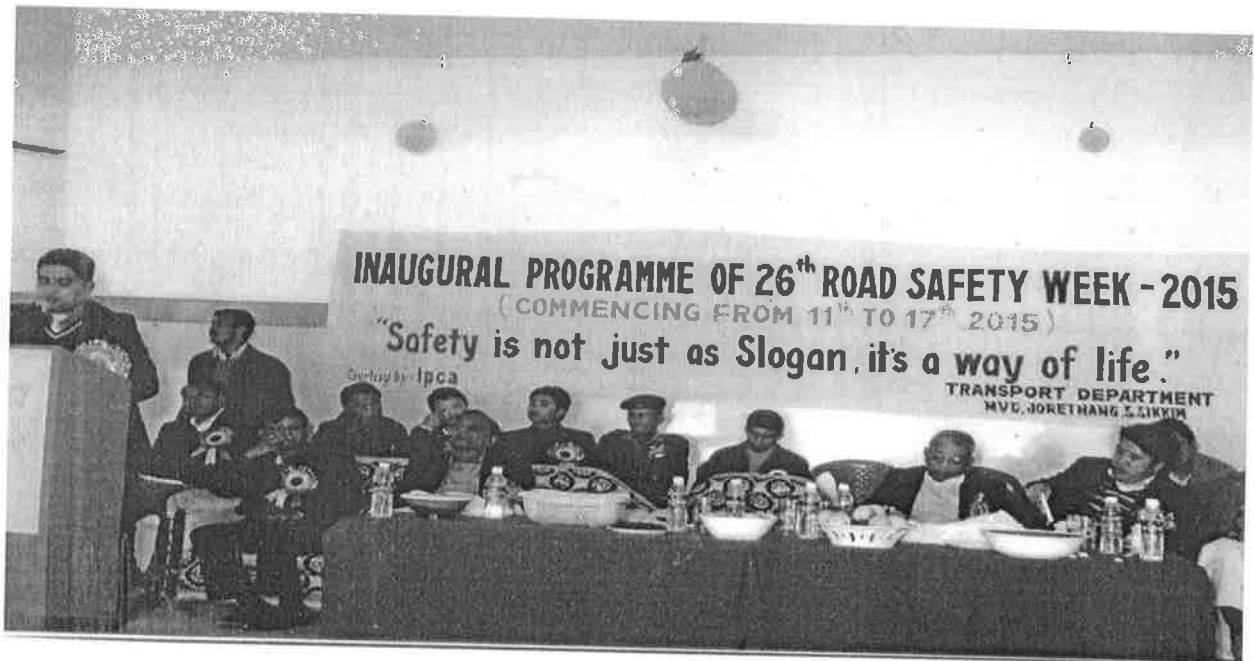
Jorethang Magey Mela was celebrated in a grand manner at Jorethang south Sikkim. The Magey Mela was inaugurated by Hon'ble Chief Minister of Sikkim. The Mela was well attended by Political dignitaries and General public. DANS Energy Pvt.Ltd, also participated in the Mela a stall was allotted to DANS Energy, where the company officials given the project presentation to the general public and information. The company also provided monitory support to make the Mela a grand success. The Main theme of the Mela was to encourage the farmers and the general public about the organic farming and its advantages.



Opening ceremony of Jorethang Magey Mela 2015, being inaugurated by Hon'ble Chief Minister of Sikkim

Road Safety Week from 11th to 17th January 2015

Motor Vehicle Department Jorethang organised a programme on Road Safety week 11th January to 17th January 2015 at Jorethang, south Sikkim. A programme was attended by Hon'ble Health Minister Cum Area MLA, Mr .A.K.Ghatani, SDM Jorethang, Nagar Panchayats & General Public. DANS Energy Pvt.Ltd and SEW also took active part in the programme and also provided the refreshments & lunch during the Programme.



Traffic Sign Board Provided to Jorethang Traffic Police

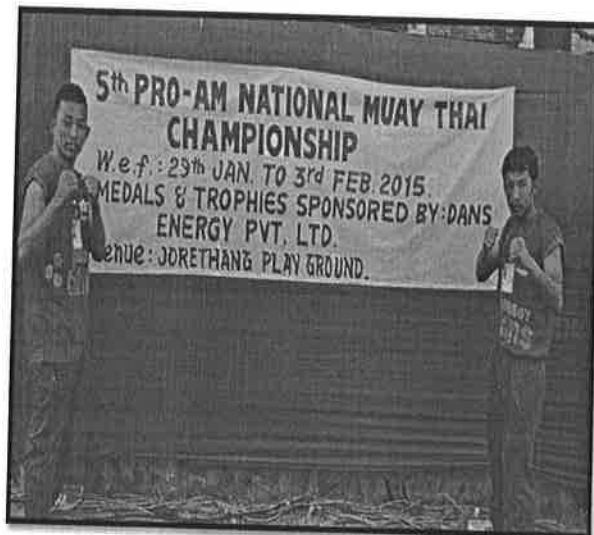
Under the Corporate Social Responsibility DANS Energy Pvt.Ltd. provided 15 Nos. Of fixed type Angle iron sign board & 5 Nos. of movable angle iron sign board to Jorethang Traffic Police.



5th Pro-Am National Muay Thai Championship 29th January 2015 to 3rd February -2015 held at Jorethang.

Contestant from DANS Energy Pvt. Ltd. Participated in 5th Pro-Am National Muay Thai Championship-2015. They did the company proud by bagging Gold in 63-66kg category which was won by Mr. Sangam Rai and Mr. Bhagirathi Rai Bagged a Bronze medal in 55-57Kg weight category. The prestigious trophy of “The Best Fighter” of the tournament was also bagged by Mr. Sangam Rai, who now will be participating in the International level championship in Thailand later this year. Both the participants are working in DANS Energy Pvt. Ltd. under sports quota since 2012 and have won several medals since then in both the state level and the national level tournaments.

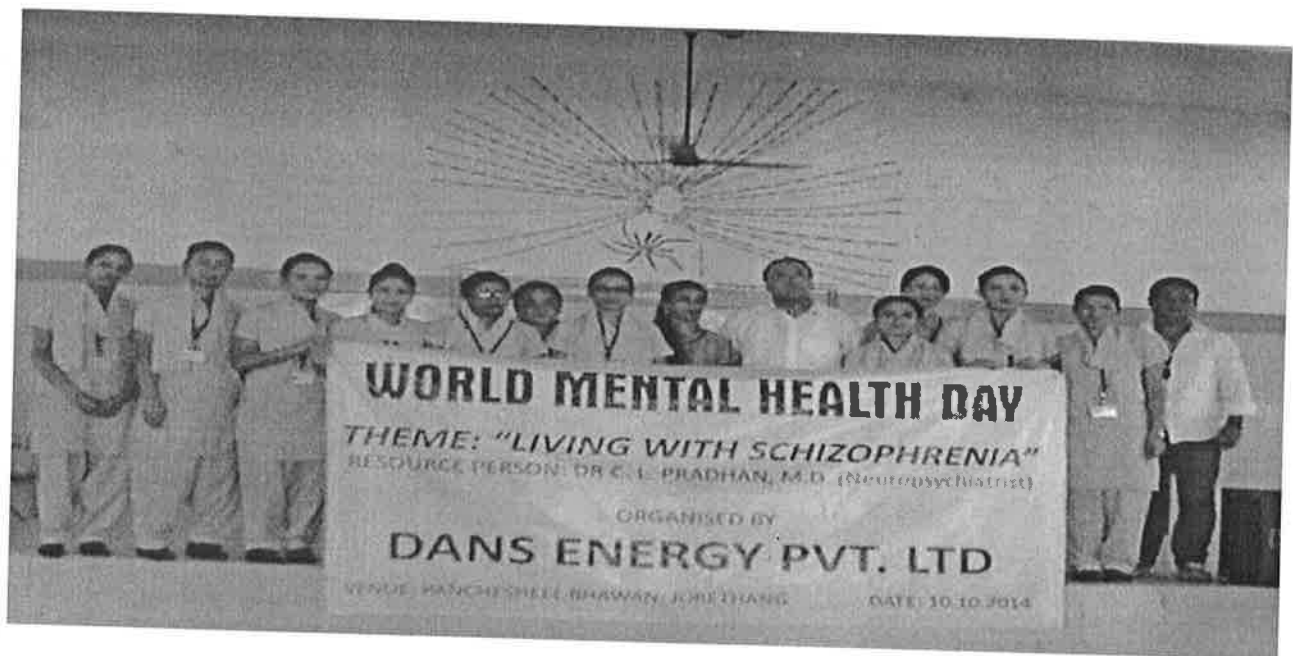
The 5th Pro-Am National Muay Thai Championship 2015 also co- sponsored by DANS Energy Pvt.Ltd.

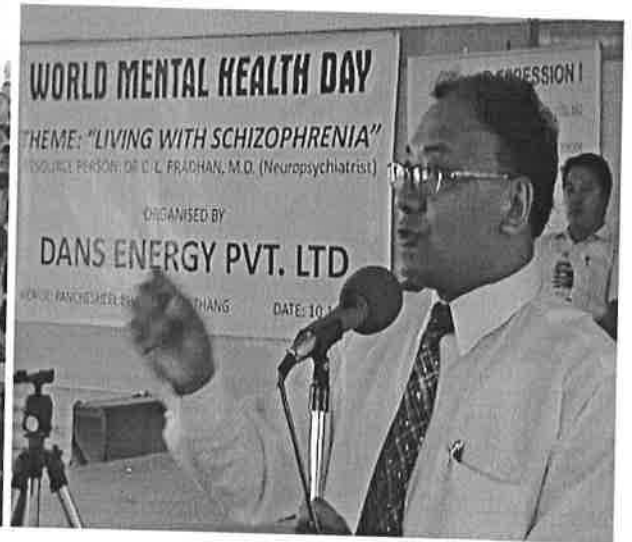


WORLD MENTAL HEALTH DAY

On the occasion of World Mental health day: DANS Energy Pvt. Ltd conducted World Mental Health Programme at Jorethang, Panchasheel Bhawan on 10.10.2014, under its corporate Social responsibilities Programme. The Chief Guest of the Programme was Shri. Tenzing Bhutia (SDM) Jorethang, resource persons of the Day was Dr.C.L.Pradhan M.D (*Neuropsychiatrist*) STNM Hospital Gangtok. Other participants of the programme were Manipal Higher Nursing Student, and Teachers and Student of Jorethang senior Secondary School and Shri. Raja Naresh, Vice President DANS Energy Pvt.Ltd.. A total of 300 students and teachers took part in the programme.

The resource Person of the Day Dr. C.L. Pradhan had highlighted the Mental illness, Suicide, Depression, and drug addiction in the programme. He laid emphasis on the subject that parents/Teachers on their part will have to take care of the psychological aspect of their children right from their tender age. Proper care and upbringing by the parents will improve the children's psychological problems and if there is any problem the same can be corrected on time. He also informed that stress is harmful for an individual's mental health, so one needs to ensure, understand and control his/her psychological problems. A child needs a loving / peaceful home environment to have a stable mental health. The student of Manipal higher Nursing students staged a drama based on Drug addiction and Alcoholic consumption which was well appreciated Shri. Tenzing Bhutia SDM Jorethang (Chief Guest) also addressed the programme and highlighted the facts that discipline at home and outside is key to better mental development of children's were one respects the right and responsibilities of fellow citizens. The programme was summed up by Shri. Krishna Gurung representative of DANS Energy Pvt.Ltd



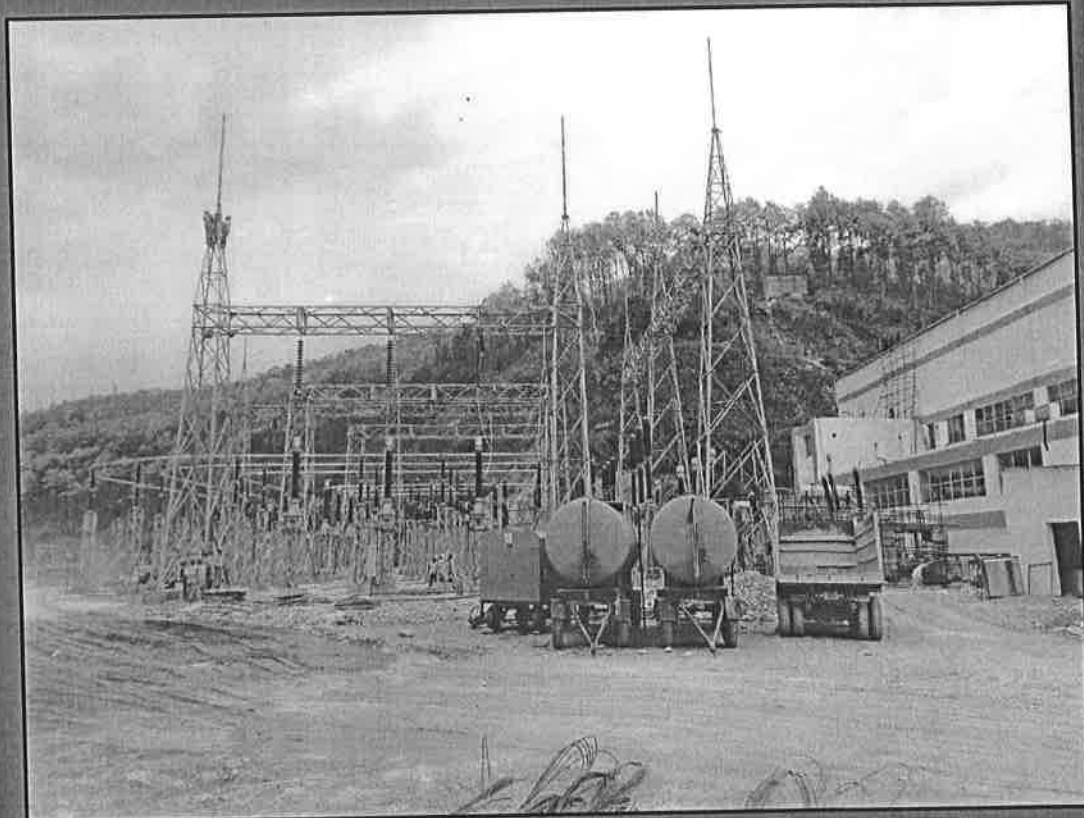


Monthly Progress Report Annex-C MPR APRIL

APRIL 2015

JORETHANG LOOP HEP (96 MW), SIKKIM

MONTHLY PROGRESS REPORT



DANS ENERGY PVT LTD

Content

1.	Executive Summary	2
2.	Project Status.....	3
3.	Progress of Work on Site.....	3
3.1.	Infrastructure Works.....	3
3.2.	Contractor's Mobilization and Facilities.....	3
3.3.	Planning	3
4.	Progress of Civil works during the month.....	3
4.1.	Head Race Tunnel.....	3
4.2.	Power Intake and Cut & Cover.....	4
4.3.	Barrage	4
4.4.	Surge Shaft	4
4.5.	Powerhouse	4
4.6.	Pressure Shaft	4
4.7.	Tail Race Channel.....	5
5.	Progress of Hydro-Mechanical Work.....	5
6.	Progress of Electro-Mechanical Work.....	6
7.	Transmission System.....	8
8.	Progress Pictures for the Month.....	9

1. EXECUTIVE SUMMARY

Owner	: DANS Energy Pvt. Ltd
Civil and HM Works Contractor	: SEW Infrastructure Ltd
Electro-Mechanical Contractor	: Alstom India Ltd
Design Consultant	: SMEC India Pvt. Ltd
Owner's Engineer	: Energy Infratech Pvt. Ltd

The project construction was taken up in the month of March/ April 2010 and since then all civil works of Barrage & Power Intake including installation and wet testing of gates and hoists; Cut & Cover Conduit except last 12 m portion at the HRT end; excavation of entire 6,868 m length of HRT; Surge Shaft excavation and concrete lining; Pressure Shaft excavation, ferrule erection work and concrete backfilling; Power House construction including installation of draft tube gates & hoists; tail race channel, transformer & switch yard have been completed. All Electro-Mechanical erection works including dry commissioning of major equipment in Power House have also been completed. Remaining works mainly include concrete lining work in the HRT and transmission line works which are under progress and advanced stages of completion.

On 20th of April 2014 breakthrough between Face 1 and Face 2 was achieved and with this, the daylight of entire HRT was achieved. Invert excavation and levelling concrete work has been completed for the whole of HRT for facilitating the concrete lining works. 177m of kicker walls, over which the concrete lining gantry moves and is part of concrete lining, were concreted during the month making a total progress of 6712 m out of 6876m. During the month of April 2015 a total of 19 no's overt equivalent to 291.0 m length was concreted making a total progress of 6165.0 m. Further, simultaneously, contact grouting is in progress and 3654 m was completed. Further invert lining which was started in April 2015, 1566 m is complete.

In Barrage, civil works are completed. Both Under Sluice service gates are erected and dogged on the dogging beam. Erection of all five service spillway gates has been completed. The reservoir was filled in May 2014 up to final FRL EI-344.00. Wet testing of all spillways and under sluice gates was performed at FRL.

Power Intake service gates were erected and tested and are in closed position.

In Surge Shaft, excavation and lining up to EI-366.00 (55m) was completed. Installation of surge shaft gate is complete.

The structural civil works in Powerhouse are completed inclusive of roof installation. Finishing works such as flooring, painting etc. are in progress.

In Pressure Shaft, erection, alignment, welding and concreting of all bottom horizontal, top horizontal and drop shaft ferrules is completed.

Switchyard erection works are under progress.

In Tail Race Channel, all works were completed.

All Electromechanical works in the power house has been completed and boxing up of both Unit-1 and Unit-2 done. Also, dry commissioning tests for all major components have been completed.

For transmission line, the required tower material is available at site. Foundation excavation, concreting and stub setting of all towers were completed. Erection crews have been mobilized at site and tower erection at 9 locations is completed and the remaining in progress.

2. Project Status

2.1. Clearances

DEPL has obtained all clearances, which are required for construction of the Jorethang Loop HEP.

2.2. Financial Closure

The financial closure for the Project was achieved in the month of March 2010.

3. PROGRESS OF WORK AT SITE

3.1. Infrastructure Works

Maintenance of access roads to barrage, powerhouse and Adit 2 is continuing and all the access roads are operational.

3.2. Contractor's Mobilization and Facilities

All equipment required for construction is available at site.

3.3. Planning

All Civil Construction Drawings were released for construction to the Civil Contractor.

All shop drawings for the hydro mechanical works at Barrage and Powerhouse were approved and released for fabrication to the HM Contractor.

4. PROGRESS OF CIVIL WORKS DURING THE MONTH

4.1. Head Race Tunnel

On 25th of December 2013, breakthrough between Face 3 and Face 4 and on 20th of April 2014 breakthrough between Face 1 and Face 2 was achieved leading to achieving day-lighting of the entire HRT.

a) Invert Excavation, Levelling Concrete and Kicker Wall

Invert excavation and leveling concrete has been completed. 177 m of kicker walls were concreted during the month making a total progress of 6712 m out of 6876 m.

b) HRT Overt Concreting

During the month of April 2015 a total of 19 no's overt equivalent to 291.0 m length was concreted making a total length of 6165.0 m.

c) HRT Grouting

Four grouting pumps are working in HRT for contact grouting and around 3654 m contact grouting is completed.

d) HRT Invert Concreting

Four screeds are operational for invert lining during the month. Invert lining was started on 1st April 2015 and 1566 m was completed during the month.

4.2. Power Intake and Cut & Cover Conduit:

The Power Intake and Cut & Cover Conduit structures are completed, with the exception of the connection block at the portal of the Inlet Tunnel. This block will be concreted after all excavation and concreting activities of the HRT from this face are completed.

Erection of the trashrack cleaning machine is also completed. Construction of the control room for remote control of the gates was completed.

4.3. Barrage

The reservoir was filled in the month of May 2014 up to final FRL EI-344.00.

Wet testing of all spillways and under sluice gates was performed at FRL 344.00 m during the month of May 2014.

4.4. Surge Shaft:

Concrete lining was completed up to EI. 366.00 (55m) in July 2012. Chipping of gate grooves was completed. Side guides and roller tracks are erected up to final height and second stage concreting was completed up to the final height.

Erection of orifice ring of the surge shaft bottom slab, the slab concreting and installation of Surge Shaft gate has already been completed.

4.5. Power House Complex:

The structural Civil Works in powerhouse, switchyard, transformer foundations etc. are completed. The brickwork and outside plastering are also completed.

4.6. Pressure Shaft:

The excavation of the total pressure shaft is completed. Status of ferrule erection is as given below:

a) Bottom horizontal Shaft

The erection, alignment, welding and concreting of all 40 no's bottom horizontal ferrules (6m. dia.) is completed.

Erection, alignment, welding & NDT of all branch ferrules has been completed. Erection, alignment and NDT of the closure ferrules after removal of the bulkhead have also been done.

b) Top horizontal Shaft

The erection, alignment, welding and concreting of all 58 no's top horizontal ferrules (6m. dia.) is completed.

c) Drop Shaft:

Erection, alignment and welding of all 42 nos. ferrules have been completed.

4.7. Tail Race Channel:

Tail Race channel works are completed. Draft tube gates for both units were lowered, installed and erection of the hoisting arrangement is also completed.

5. PROGRESS OF HYDROMECHANICAL WORKS**5.1 Fabrication****• Barrage Area**

- Fabrication of all gates and associated components is completed.

• Power House Area

- Fabrication of all the penstock ferrules for Top, Bottom, Vertical and Branch portion has been completed.
- Fabrication of Transition at the bottom of surge shaft has been completed.
- Fabrication of orifice is completed.

5.2 Erection**• Barrage Area**

- Wet testing of all the spillways and under sluice gates was performed in May'14 at FRL EI 344 m.
- Erection of Trash rack cleaning machine is already completed.

• Power House Area**Penstock:**

- **Branch Ferrules (4.25 m dia.):** Erection, alignment, welding & NDT of all branch ferrules has been completed.
- **Bottom Horizontal Ferrules (6 m dia.):** Erection, alignment, welding & NDT of all 40 nos. ferrules have been completed.
- **Top Horizontal Ferrules (6 m dia.):** Erection, alignment, welding and NDT of all 58 nos. ferrules have been completed.
- **Vertical Shaft (6 m dia.):** Erection, alignment and welding of all 42 nos. ferrules have been completed.

- **Transition:** Erection of the transition at the downstream of the surge shaft gate has been completed.
- **Bifurcation:** NDT after welding of the bifurcation ferrules has been completed. Hydrostatic test of the Y-piece has been completed. Erection, alignment and NDT of the closure ferrule have been completed.
- **Draft Tube Gate:** Dry testing of the gates for both the units has been completed.

Surge Shaft:

- Installation of 2nd stage embedded parts, erection of orifice plate and surge shaft gate is completed.

6. PROGRESS OF ELECTRO-MECHANICAL WORK

The E&M works are progressing well. The detailed status of E&M works is given below:

6.1 Supply

- **Turbine, Governor and MIV:** Manufacturing of all the components of Turbine, Governor and MIV like DT liner, DT cone, Stay Ring, Spiral Case, Distributor, Runner, Shaft, Bearings, etc. is completed and these have been received at site.
- **Generator and Excitation system:** All generator components like Stator, Rotor spider, Rotor laminations, Rotor poles, Shafts and lower and upper brackets, bearings, Excitation system etc. for both Unit I and II have been received at site.
- **Balance of Plant (BOP):** 11KV switchgear panels, UAT & SST, 800KVA DG set, 220KV Circuit Breakers, Isolators, LA, Wave trap, CVT, Control & relay panels, Condition monitoring system, Protection system, Power & control cables, Cable trays, PLCC equipment, Inverter, LP compressor, Oil handling system, 163/30 T EOT crane, HVAC system material, GSU transformers, Cooling Water, Drainage & Dewatering valves, pumps, Bus Ducts, NG Cubicle, 220 kv switchyard material, control room furniture, DE & NDE fans, Piping support material, Fire-fighting system pumps, Duplex filter, Illumination system and communication system material have been received at site.

6.2 Erection

- **Turbine and Generator:** Erection and concrete of Draft tubes, installation of Anchor pins & Base plates of Spiral case, erection of Stayring, Spiral case segment, hydraulic pressure testing of Spiral case and its concreting, Turbine system HP oil injection system stator box, temperature gauge panel, breaking and jacking installation; Generator stator winding and core junction box and space heater terminal box for both units U-1 and U-2 have been completed.

Unit-1: Lower bracket foundation embedment sleeves, Bottom ring, wicket gates, Runner, Bearing oil sump, Head Cover, Operating Ring, Turbine Shaft installation have been completed. Turbine shaft main assembly completed and declared "shaft free" for generator assembly. Lower bracket installation and Turbine guide bearing installation has been completed. Machine run out has also been completed. MIV upstream and downstream erection is completed. Stator HV test has been successfully completed. Stator lowered in the

pit successfully. Generator lower shaft installation has been completed. Rotor has been placed in position. Generator thrust bearing, upper shaft, upper bracket, braking and jacking has been completed. With all the above activities, **Unit-1 has been boxed up.** Instrumentation with cabling and final pipeline connection with components has also been completed.

Unit-2: Lower bracket foundation embedment sleeves, Bottom ring, wicket gates, Runner, Bearing oil sump, head cover, Operating Ring, Turbine Shaft installation have been completed. Turbine shaft main assembly completed and declared "shaft free" for generator assembly. Lower bracket and turbine guide bearing installation has been completed. Machine run out has been completed. MIV upstream and downstream erection is completed. Stator HV test has been successfully completed. Stator lowered in the pit successfully. Generator lower shaft, thrust bearing installation has been completed. Rotor has been placed in position. Generator thrust bearing, braking and jacking, upper shaft, upper bracket has been completed. **Unit-2 has been boxed up.** Instrumentation with cabling and final pipeline connection with components has also been completed.

BOP Electrical: Installation of UAT U-1 and U-2, LAVT U-1 and U-2, 220V and 48V battery charger, DC distribution board at Machine hall floor has been completed. Service station transformer, panel installation in LT room, machine hall floor, MIV floor and generator floor has been completed. Cable tray installation at MIV floor, Turbine floor and Generator floor has been completed. Excitation transformer U-1 and U-2 installation has been completed. Battery bank installation is completed. Panel erection at various floors has been completed. Bus ducts erection for U-1 and U-2 is completed. Switchyard Earth-mat laying and foundation work is completed. Switchyard erection of isolators, overhead stringing, current transformers, lightning arrester, cable laying and illumination is in progress. Erection of Transformers U#1 and U#2 completed. Switchyard erection of power transformers, bus support structures, circuit breakers, IMT is completed.

BOP Mechanical: The erection, testing and commissioning of Power House EOT Crane area has been completed. LP compressed air system piping in turbine and MIV floor, cooling water system pumps, Cooling water duplex filters and cyclone separators, Shaft seal pumps and filters, firefighting pumps, OPU governing system and duplex filters installation has been completed. Installation of LP compressed air system, oil handling system, cooling water system, fire-fighting system, drainage and dewatering piping has been completed. Installation of HVAC is in progress.

6.3 Testing and Commissioning

Dry Commissioning of Turbine, Generator and their associated Panels, all BOPs have been completed for all equipment other than operation of HVAC system. Testing and setting of control and protection relays are in progress.

Dry commissioning tests for all major components have been completed.

Preservation activities of Unit-1 & 2 and BOP items are in progress.

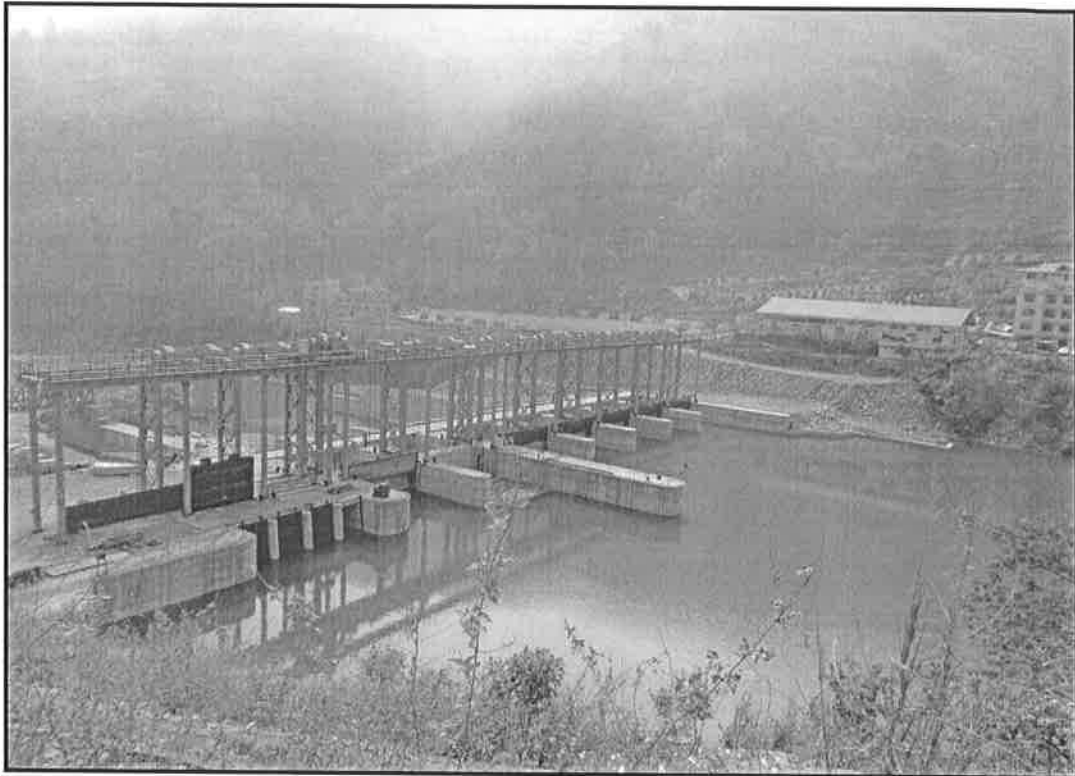
7. TRANSMISSION SYSTEM

DEPL has signed the Bulk Power Transmission Agreement (BPTA) with Powergrid Corporation of India Ltd (PGCIL) on 24th Feb 2010 for transmission of power.

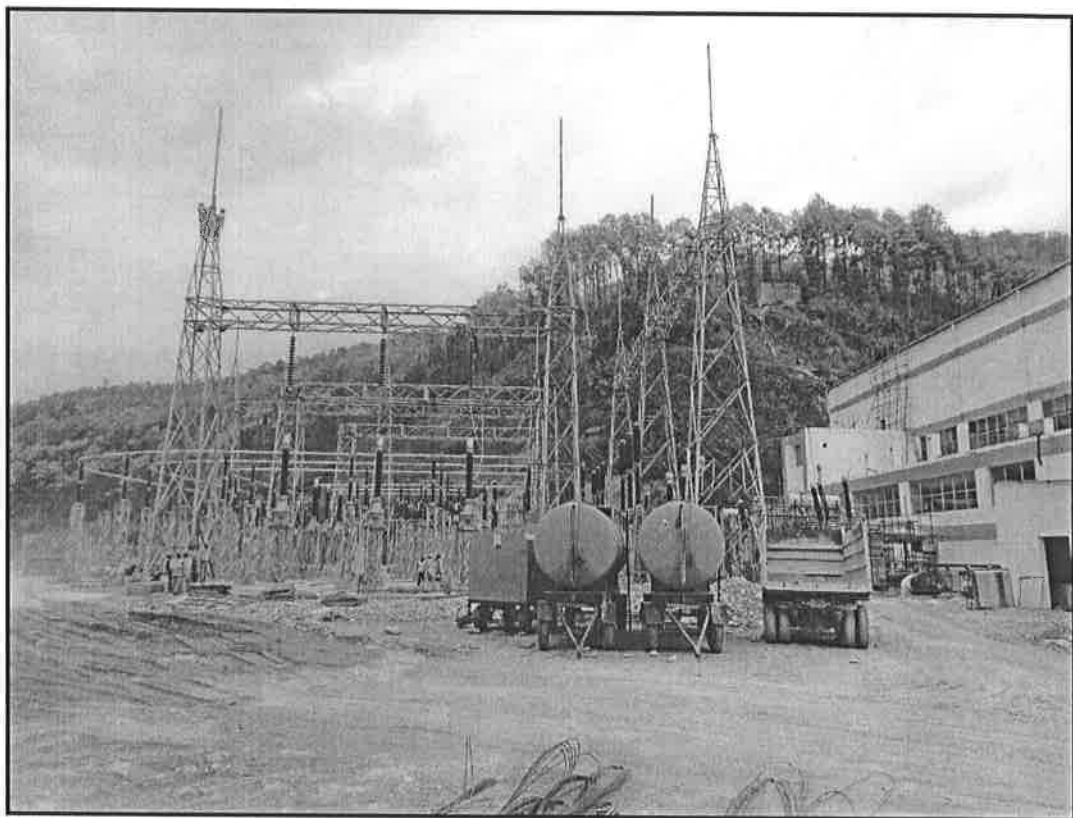
For the 220 kV Line from JLHEP switch yard to PGCIL substation at New Melli (Tokal), the Contract has been signed for both Supply and Services works and for Civil Foundations of the towers. The required tower material is available at site. The status of line construction is as below:-

- Foundation concreting and stub setting in location No. 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13 and 14 including IMT-1 has been completed.
- Erection of tower at IMT1, location 2, location 6, location 7, location 8, location 9, location 12, location 13, location 14 are completed. Balanced tower erection is in progress.

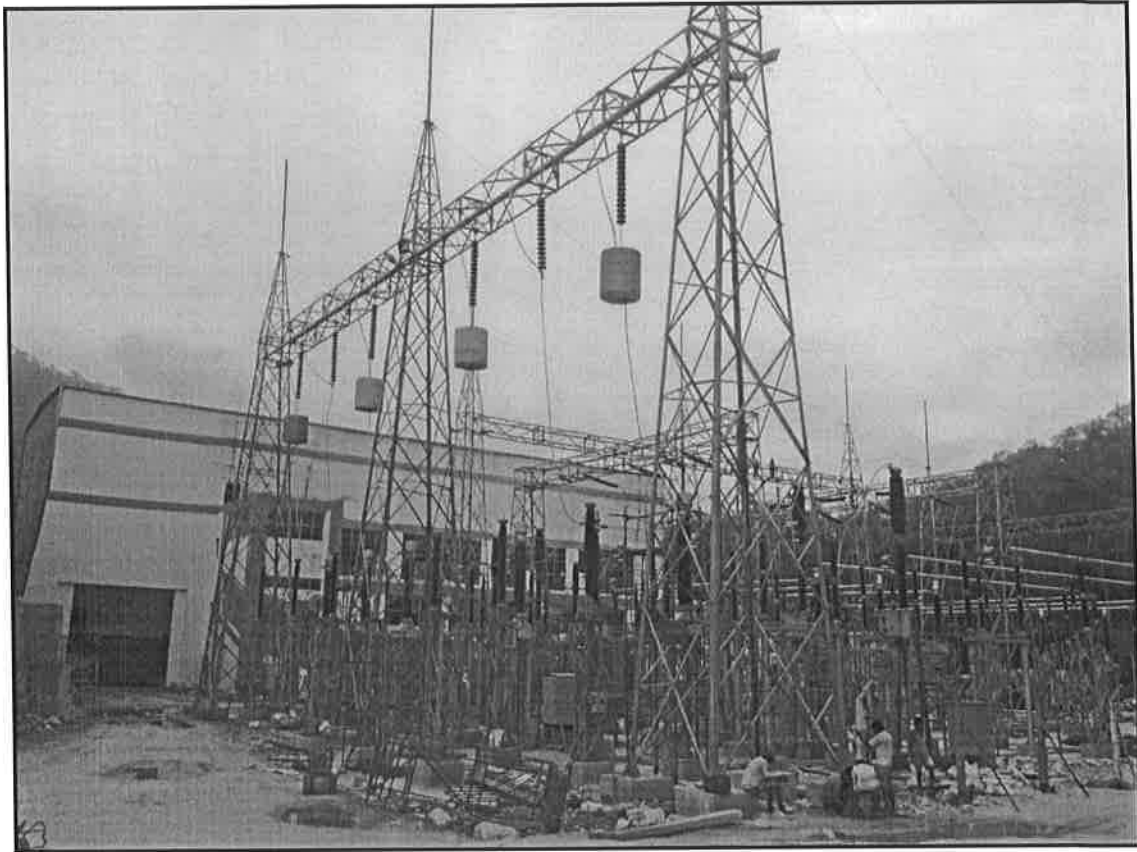
8. PROGRESS PICTURES FOR THE MONTH



Barrage Upstream view



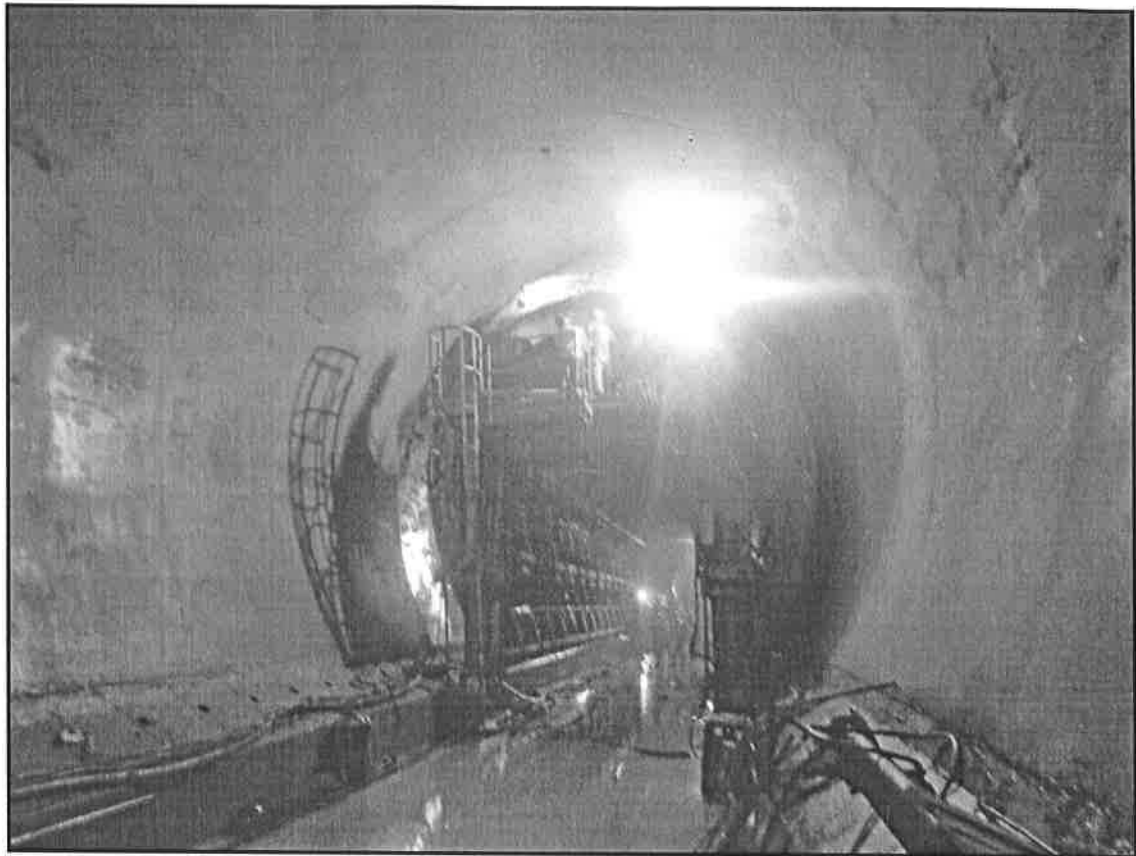
Switchyard



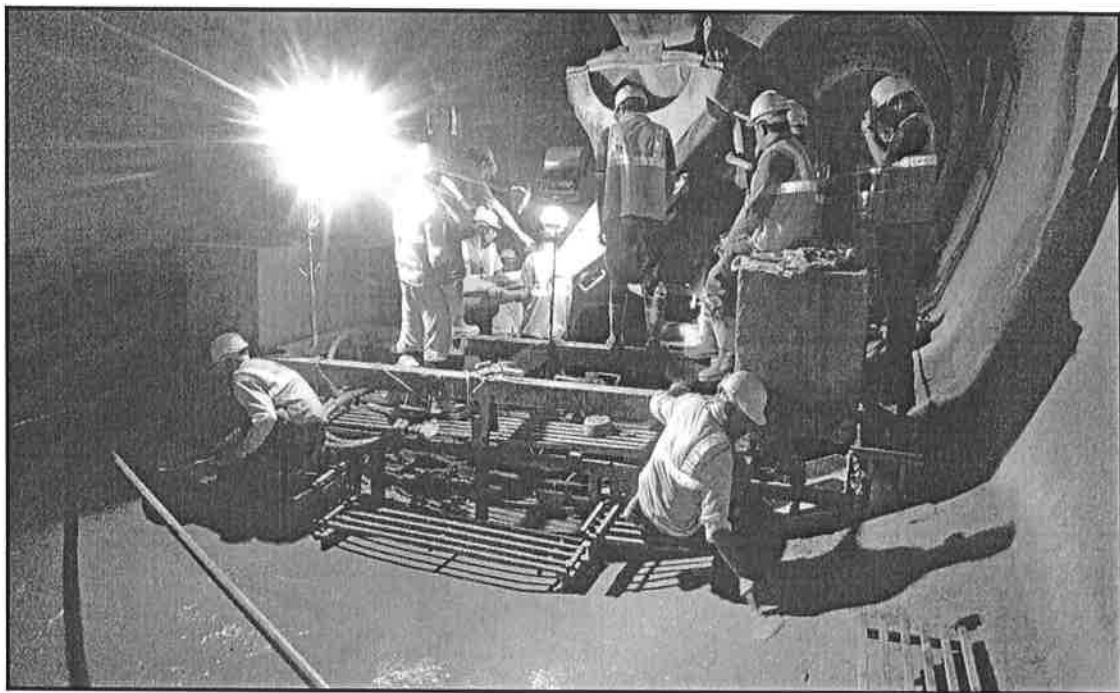
Power House U/S View



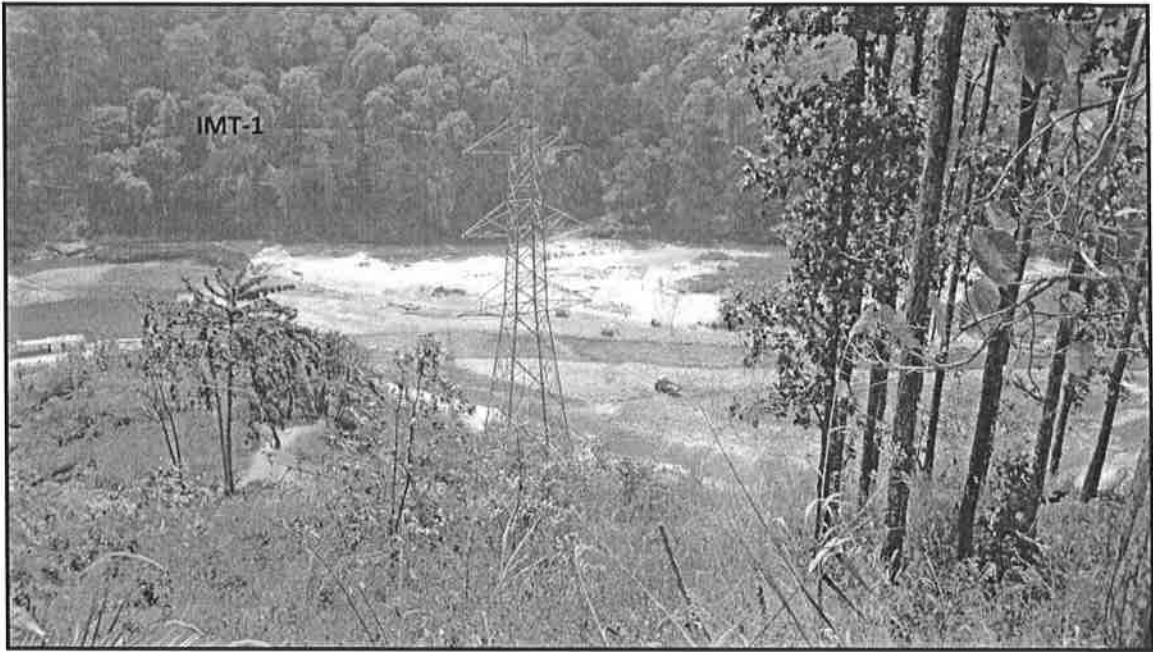
Power House Control Room



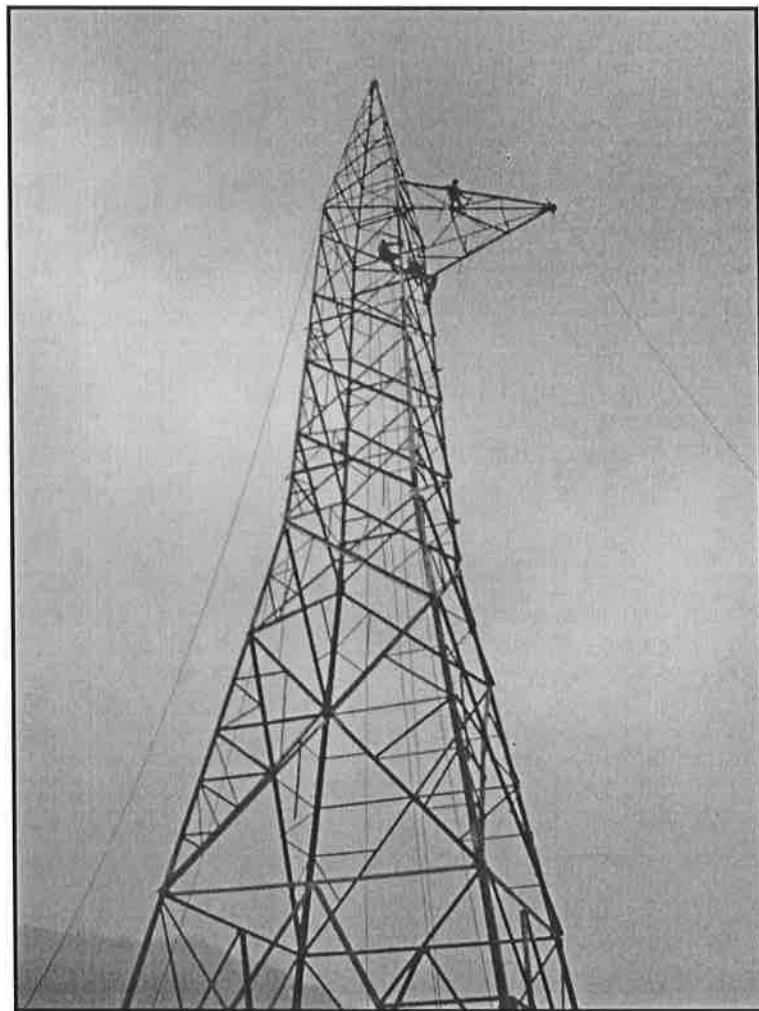
Overt Lining in progress



Invert Lining of HRT started



IMT-1 tower erection complete



Tower erection in progress