

Ref.No:JLHEP/F-5/13-14/709

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

Dated: 17/5/2013

**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; followings 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 as Annexure-B, Corporate Social Responsibilities as Annexure-C and Monthly Progress report of the project as Annexure-D.

This is for your kind information.

Thanking You.

Yours faithfully,


(Krishna Gurung)

Sr.A.G.M

For, DANS Energy Pvt. Ltd.

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.



Site Office

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Tel: +91-9233503372 Fax : +91-3595-276408

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

DATA SHEET

<i>Sl. No.</i>	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. 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 Fax-03595-276408, 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. Till now we have received an investment plan of Rs 60 lakhs from the Forest Deptt. Govt. of Sikkim.

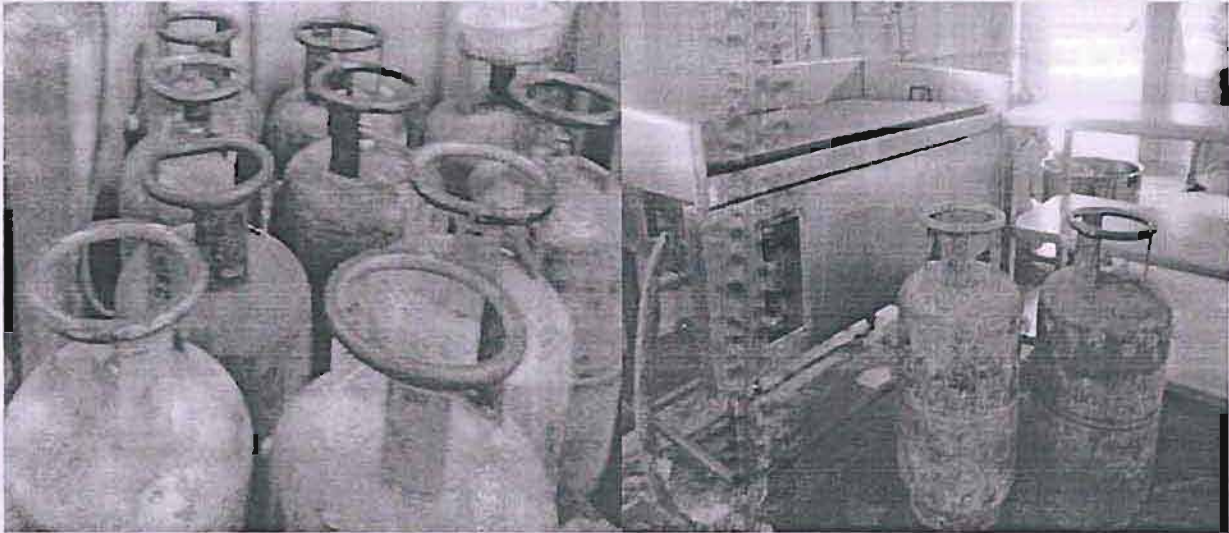
Part-B: General Conditions

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. (Photo attached)
(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 two doctors and a nurse to provide medical facilities to the labourers. (Photo attached)
(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 were examined by MBBS Doctors and treated before issuing the work permit. Thereafter, the regular checkup is a continued at site. We have also started a quarterly HIV Test program at site for the labourers.
(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 dumping area at barrage area has been cleaned up by using the material to fill "cut n cover" portion and right bank of barrage and remaining points are being taken care at appropriate time.

(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 have already started the implementation of Environmental activities.
(vi)	A Multidisciplinary committee should be constituted with representative from various disciplines of forestry, ecology, wildlife, soil conservation, NGO etc, to oversee the effective implementation of the safeguard measures.	We had constituted the Multidisciplinary Committee with approval letter from MoEF, New Delhi vide letter No.J-12011/19/2006-IA-A dated 12.7.2010 and latest site visit and meeting of the Multidisciplinary Committee took place in January'2013.
(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, and uploading the report at company website: www.dansenergy.com
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.	No change in the scope of the project has been made till date.
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.	We agree.
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 in time.
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.



LPG DEPOT FOR THE LABOURERS



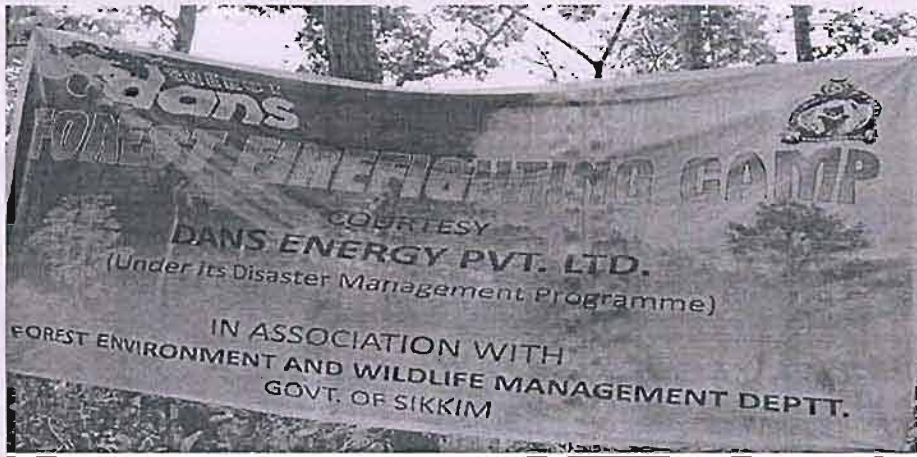
DISPENSARY FOR THE LABOURERS

Annexure- B

ENVIRONMENTAL ACTIVITIES

FOREST FIRE-FIGHTING CAMP:

DANS Energy Pvt Ltd as part of its Disaster Management Programme initiated a Forest Fire-fighting Camp on the Jorethang-Melli Road in March 2013. Four trained security personnel were deputed to handle any kind of emergencies. The camp continued in April 2013 in coordination with Forest Environment and Wildlife Management Department.



ANNEXURE-C

CORPORATE SOCIAL RESPONSIBILITY



Guru Quiz 2012

DANS Energy Pvt. Ltd, as a part of its educational CSR initiatives, took the idea of presenting Guru Quiz 2012 on 17th November 2012 at Gangtok with a strong belief that in order to make education inclusive; teachers also should be provided an exposure to positive competition. Guru Quiz 2012 was one such initiative to involve teachers directly in the process of active learning and fun.

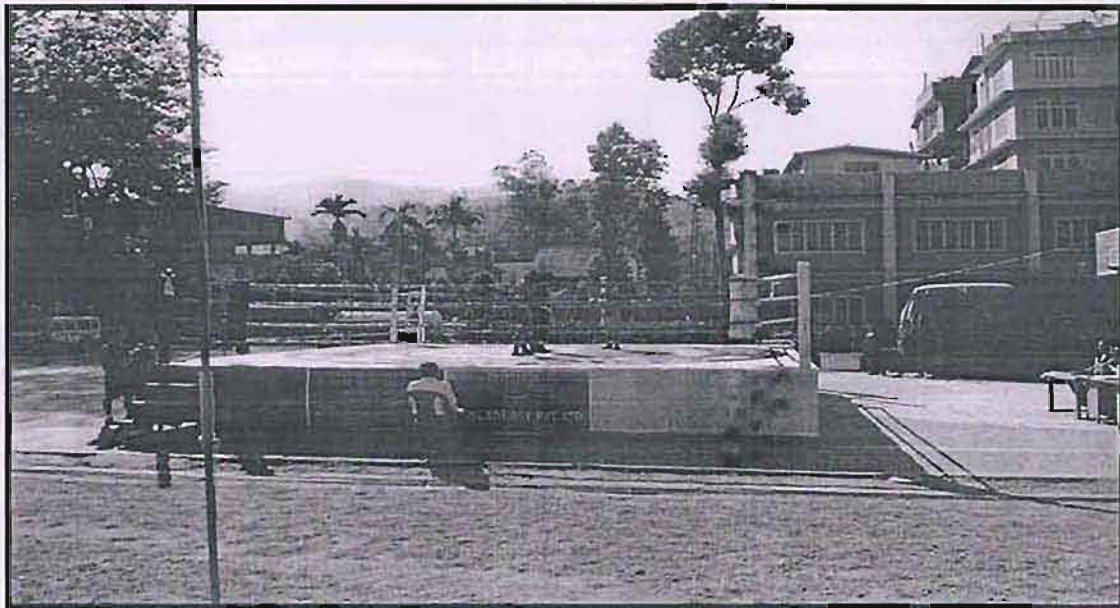
Guru Quiz 2012 started with a mission. The mission to thank teachers for their contribution in helping create the future of the state, the mission to inspire teachers to continue their quest for learning and the mission to bring them to a platform where they could positively compete with each other through a platform of quizzing.

For the first time, teachers were on the dock and the students sat on the gallery cheering for the teachers who battled their quizzing wits at Guru Quiz 2012, a first of its kind competition for school teachers.

The Chief Guest of Guru Quiz was Mr. Anil Raj Rai, Commissioner, Gangtok Municipal Corporation, one of the bright minds of the state. The Guest of Honor was Mr. Sony Viridi, the dynamic Chairman of Mt. Zion School, Gangtok who is an ardent supporter of educational initiatives and passionate about encouraging teachers to refine and polish their skills.

The winner of the competition was Temi Senior Secondary School, Jorethang Senior Secondary School and Naya Bazaar Secondary School. The winner received a cash prize of Rs. 15,000, Rs. 10,000 and Rs. 5,000 respectively, sponsored by DANS Energy Pvt Ltd.

State level Muay Thai Tournament at Jorethang, South Sikkim



DANS Energy Pvt. Ltd. in its effort to encourage participation of youths in sports solely sponsored a three day State level Muay Thai tournament at Jorethang, South Sikkim. The event, which was organised by Muay Thai Association of India, was held from 28th to 30th December 2012.

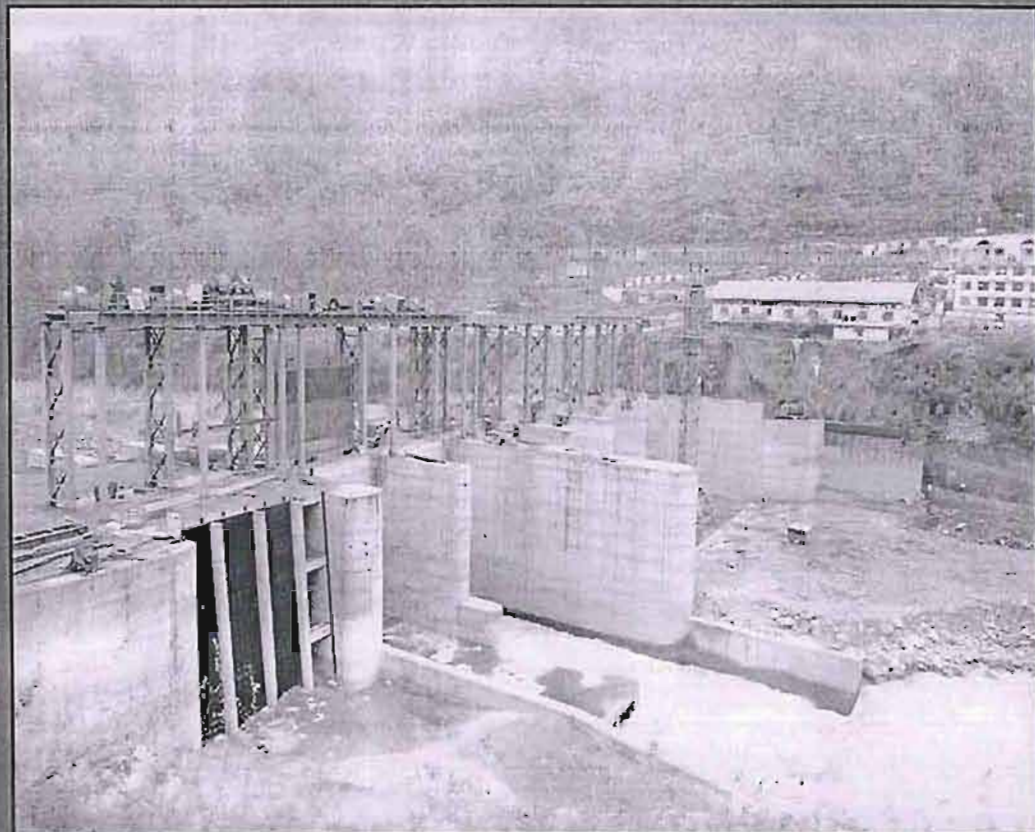
Annexure-D

APRIL 2013

JORETHANG LOOP HEP (96 MW), SIKKIM

MONTHLY PROGRESS REPORT

(Annexure-D)



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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

In HRT, 80.20m of tunnel was excavated at Face-1 during this month making a total progress of 1585.00m at this face.

3.50m of tunnel was excavated at Face-2 during this month making a total progress of 1582.50m. Most of the month was used to replace deformed ribs with new one. Disturbed and crushed rock mass with no inherent strength is encountered at this face.

53.50m of tunnel was excavated at Face-3 during this month making a total progress of 1435.50m.

49.60m of tunnel was excavated at Face-4 during this month making a total progress of 808.60m. A niche of 5.6m was also excavated in this face.

In Barrage, the river was diverted through the under sluice bays on 19th of March 2012.

The following is the status of barrage phase II work:

- Right side U/S training wall block – I is completed up to final El- 345.00 and block-II is completed up to El- 343.20.
- Backfilling is being done to close the gap between the training wall and right bank.
- Erection of second stage embedment parts are in progress in vent #5 and second stage concreting are in progress in vents #3 and #4.

In Surge Shaft, lining up to El. 366.00 (55m) was completed in July 2012. Chipping of gate grooves was also completed.

In Power House, concreting of slab at Elevation 266.20 was completed between "D" and "E" lines. Reinforcement work is in progress for the "E" line columns.

All the columns along "B", "B' ", "C' "and "D" lines were concreted up to elevation 272.00 along with the flood protection wall along "09", "04" & "A" line.

Formwork and reinforcement works are in progress for the elevator shaft and concreting of the outer walls is completed up to El. 272.00 and the inner structure up to El. 257.50.

All six sets of the roof trusses are being erected and positioned. Brick wall erection and plastering are in progress in the Service Bay.

The EM Contractor has lifted the EOT crane girders on the EOT beam (El. 285.50).

Removal of Draft Tube (DT) forms and cleaning activities in the DT gate area was completed and the seal beams installed and embedded in concrete in both draft tubes. The side guides of second stage embedment are erected in both openings as well and their embedment in concrete is in progress.

To avoid possible flooding of the powerhouse by high water levels in the TRC, the bulkheads over the draft tube gates were installed as well as the valve in the dewatering system.

In Pressure Shaft, the bottom horizontal tunnel (80.10m) excavation was completed on February 2013. The installation of the rails inside the tunnel is completed for the erection of the ferrules.

The erection of the workshop for fabrication of the ferrules is in progress along with mobilization of manpower and equipment. Bending of steel plates are in progress.

Alignment works of 3rd branch ferrule (4.25m dia.) towards Unit-2 is completed and that of the 1st bottom horizontal ferrule (6m. dia.) in the bottom horizontal tunnel is also completed.

Preparation for installation of erection rail in top horizontal tunnel is under progress.

For Vertical Shaft, the open excavation was started during this month of April 2013 and it is completed up to El 296.741. The erection of reinforcement and formwork for retaining walls are in progress with concrete being placed in the riverside platform up to El. 300.00.

In Tail Race Channel, excavation is completed including placing of leveling concrete and bottom invert concreting using slip forms, except the right most strip of an approximate 4m width.

All the six strips of 5.5m width were concreted using slip form technology from El. 258.00 to El. 272.00 on the right side of the TRC.

Stabilization of the slope below El. 258.00 including placing of cladding walls is in advanced stage of completion.

The right bank downstream face of the TRC from El. 272.00 to El. 258.00 was excavated and a massive concrete block was concreted at the bottom to avoid underscoring of the structure during high water levels. Concreting of this sloped termination structure in steps is presently in progress, with four steps being completed during this month.

The concreting of the gravity wall for the closure between '09' line of the powerhouse and the coffer dam is completed up to El 261.00.

Concreting of the piers adjacent to powerhouse at the start of the TRC is 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 ON SITE

3.1 Infrastructure Works.

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

3.2 Contractor's Mobilization and Facilities

Construction of camp facilities were finalized both in the barrage and powerhouse area. The Contractor has mobilized all the equipment as planned.

3.3 Planning

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

a) HRT Face 1

80.20m of HRT was excavated at this face during the month making a total progress of 1585.00m.

b) HRT Face 2

3.50m of HRT was excavated at this face during the month making a total progress of 1582.50m. Disturbed and crushed rock mass with no inherent strength is encountered during this month at this face.

c) HRT Face 3

53.50m of HRT was excavated at this face during the month making a total progress of 1435.50m.

d) HRT Face 4

49.60m of HRT was excavated at this face during the month making a total progress of 808.60m. A niche of 5.6m was also excavated in this face.

4.2 Power Intake and Cut & Cover Conduit:

The Power Intake and Cut & Cover 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.

4.3 Barrage phase I:

Completion of all main critical works in the left bank structure of the barrage – phase I has allowed the diversion of the river through the sluice bays by construction of the upstream wing of phase II cofferdam on 19th of March 2012.

The following works are the only remaining to be completed in barrage phase I structure:

- Installation of trash racks panels is completed in three openings of the Power Intake with one more opening to be completed.
- Some repair and finishing of concrete is still to be finalized.

Flows on the river are passing so far through the under sluice bays without creating any damages to the structures.

4.4 Barrage phase II:

The status of Barrage Phase II is as given below:

- Right side U/S training wall block-I is completed up to final EI- 345.00 and block-II is completed up to EI- 343.20.
- Right side abutment U/S, middle wall & D/S training walls are concreted up to final elevation.
- Backfilling is being done to close the gap between the training wall and right bank.
- Abrasion resistant concrete is completed in the entire spillway portion.
- Concreting of all 5 sill beams is completed.
- All the 5 no's permanent RCC bridges were concreted in the spillway bays. Foundation works for under sluice bay steel bridge is under progress.
- All 10no's baffle piers and 12 no's baffle walls are completed.
- Erection of second stage embedment parts is completed in all the five vents. The second stage concreting is also completed in 4 vents out of 5 vents of spillway.

4.5 Surge Shaft:

Last lift of lining was concreted on July 2012 in Surge Shaft completing lining up to EI. 366.00 (55m). Chipping of gate grooves was completed.

4.6 Power House:

Concreting of slab at EI 266.20 was completed downstream of "E" line.

All the columns along "B", "B' ", "C' "and "D" lines were concreted up to elevation 272.0 along with the flood protection wall along "09", "04" & "A" line.

Formwork and reinforcement works are in progress for the elevator shaft and concreting of the outer walls is completed up to Elevation 272.00 and the inner structure up to Elevation 257.50.

The slab at Elevation 266.00 was concreted between "D" and "E" line. Reinforcement work is in progress for the "E" line columns.

All six sets of the roof trusses over the Service Bay were erected and positioned.

The EM Contractor has started the erection of the EOT crane and the rails have been fixed.

Removal of DT forms and cleaning activities in the DT gate area was completed and sill beams in DT 1 and DT 2 are embedded in concrete. The side guides of second stage embedment are erected in DT1 and DT2 as well. Second stage concreting is in progress.

Brick wall construction is in progress in Service Bay.

4.7 Pressure Shaft:

The bottom horizontal tunnel (80.10m) excavation was completed on February 2013. The installation of the rails inside the tunnel is completed for the erection of the ferrules.

4.8 Vertical Shaft:

The open excavation for the vertical shaft was started during this month and completed up to EI-296.741m. The erection of reinforcement and formwork for the collar beam concreting around the shaft and retaining wall raft on the right side is in progress.

4.9 Tail Race Channel:

Excavation of the tail race channel is completed including placing of leveling concrete and bottom invert concreting using slip forms, except the right most strip of an approximate 4m width.

All the six strips of 5.5m width were concreted using slip form technology from elevation 258.00 to elevation 272.00 on the right side of the TRC. Stabilization of the slope below elevation 258.00 by cladding walls is in advanced stage of completion.

The right bank downstream face of the TRC from elevation 272.00 to 258.00 was excavated and a massive concrete block was concreted at the bottom to avoid underscoring of the structure during high water levels. Concreting of this sloped termination structure in steps is presently in progress with four steps completed by the end of the month.

Concreting of the gravity wall for the closure between '09' line of the powerhouse and the coffer dam is completed up to EI 261.00. The filling and compaction of the fill behind the gravity wall is in progress.

5. PROGRESS OF HYDROMECHANICAL WORKS

5.1 Fabrication

- **Barrage**

- Fabrication of 3rd spillway service gates has been completed.
- Fabrication of 3 nos. hoist bridges and 3 nos. rail girder for spillway service gate and stoplog has been completed.
- Sand blasting and painting (primer coat) of spillway service gate elements is going on.
- Sand blasting and painting of draft tube gates has been completed.
- Sand blasting & painting (primer coat & one coat micocious iron oxide) of 5 nos. rail girder and hoist bridges has been completed.

- **Penstock**

- Fit-up of 5 nos. branch ferrules, 4 nos. bottom horizontal ferrules and 3 nos. top horizontal ferrules has been completed.
- Welding of 4 nos. branch ferrules, 3 nos. bottom horizontal ferrules and 3 nos. top horizontal ferrules has been completed.

5.2 Erection

- **Barrage**

- a) **Under Sluice Gates / Stoplogs**

- i) **Under Sluice:**

- Erection of the service gate elements has been done. All the gate elements are made connected and dogged on dogging beam.

- ii) **Under Sluice with Stoplogs:**

- All three stoplog elements have been taken out of the stoplog gate groove.

- b) **Spillway Gates**

- Erection of 2nd stage embedded parts (vertical guides) in the stoplog gate groove in spillway bay #5 has been completed while the same in service gate groove is in progress.
- Alignment of the spillway columns has been done. Bracing of the same has been completed.
- Erection of 5 nos. hoist bridges has been completed. Alignment of the same is in progress.
- Erection of 5 nos. rail girder has been completed. Alignment of the same is in progress.

- **Power House**

- a) **Roof Truss**

- Erection of all 6 no's of roof trusses in power house, service bay has been completed.

b) Draft Tube Gate

- Erection of 2nd stage embedded parts (up to 10 m.) for draft tube gate #1 has been completed.
- Erection of 2nd stage embedded parts (up to 10 m.) for draft tube gate #2 has also been completed.

- **Penstock**
- Erection of shed trusses (5 nos.) for workshop has been completed. Erection of rail girder of the EOT is in progress.
- Erection, alignment of 3 nos. branch ferrules (4.25 m. dia) in unit #2 has been done. Welding of the same is in progress.
- Erection of the 1st ferrule (6 m. dia) in bottom horizontal tunnel has been done. Alignment of the same is in progress.
- Installation of rail for ferrule erection is under progress.

6. PROGRESS OF ELECTRO-MECHANICAL WORK

The E&M works are progressing well. Detailed engineering of the Turbine, Generator, MIV and Governing system are completed and that of BOP packages under final stage. All the raw materials for the Turbine, Generator and MIV like plates, castings, forgings, laminations and copper have been procured and manufacturing is completed or is in advanced stage. The detailed status of E&M works is given below:

1. **Turbine, Governor and MIV:** Manufacturing of almost 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.
2. **Generator and Excitation system:** Almost 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. Stator segment-5 No. has been received at site.
3. **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 and HVAC system material have been received at site. GSU Transformer, Cooling Water and Drainage & Dewatering valves, pumps, GSU transformer material and 220 kv switchyard part (except intermediate tower) have been dispatched. Manufacturing of remaining BOP items is completed or nearing completion.
4. **Erection, Testing & Commissioning:** Earth mat and embedded pipes in 1st stage concrete has been completed. Erection and concrete of Draft tube for U-1 and U-2 is completed. Installation of Anchor pins & Base plates of Spiral case for U-1 & U-2 has been completed. Erection of Stayring, Spiral case segment of U-1 and U-2 has been completed. Hydraulic pressure testing of Spiral case of U-1 and U-2 was completed

successfully and its concreting has been completed. Spiral case bulkhead for U-1 and U-2 has been dismantled from its position. Concreting of slab for U-1 and U-2 is completed up to El 266.20m and preparation of raising main columns in Power House area is in progress. Lower bracket foundation embedment sleeves and rotor foundation have been completed for both U-1 and U-2. EOT crane rails have been installed in service bay and other erection activities of EOT crane are in progress. The raising of columns above EOT crane beam level of El-285.50 is completed and roof truss installation at service bay area is in progress. Draft tube bulk head for U-1 and U-2 has been installed. Continuous support is being provided to the civil contractor in various fronts.

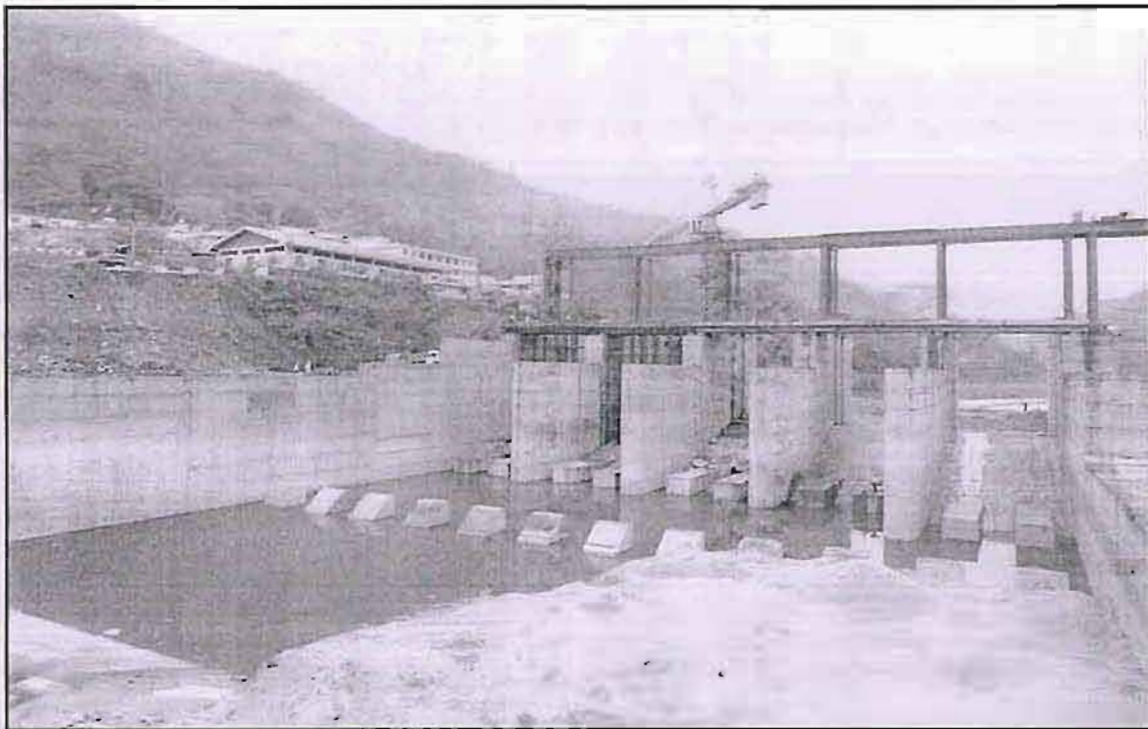
7. TRANSMISSION SYSTEM

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

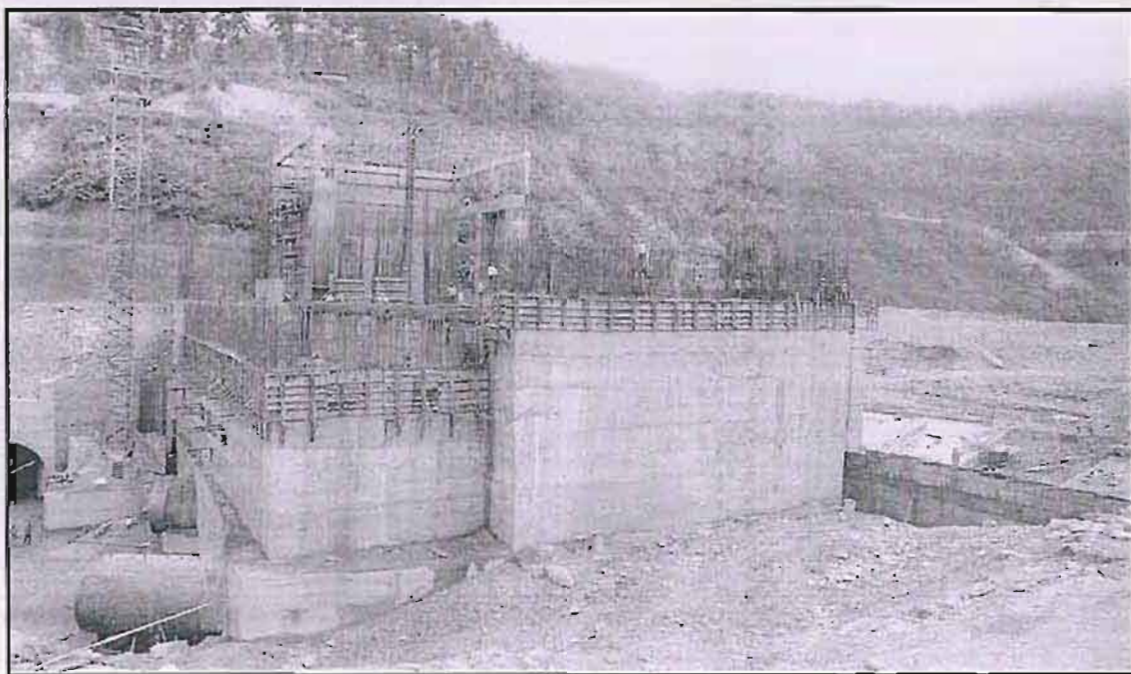
For the 220 kV Line from JLHEP switch yard to PGCIL substation at New Melli (Tokal), preliminary Survey & detailed Survey including preparation of profile drawings is completed. Total Length of the proposed line is 10 km. Joint inspection along the proposed route of the line with the representatives of Land & Revenue Dept., Forest Dept. and Project engineers is completed. Necessary clearance from the Forest Department for 4.6 hectares of forest land for the proposed transmission line has been received.

The Contract has been signed for both Supply and Service works to M/s Hythro Power Corporation Limited on 24th December 2012. Initial activities like approval of drawings, vendor list, etc. are in progress. The schedule period for completion of the work is eight months.

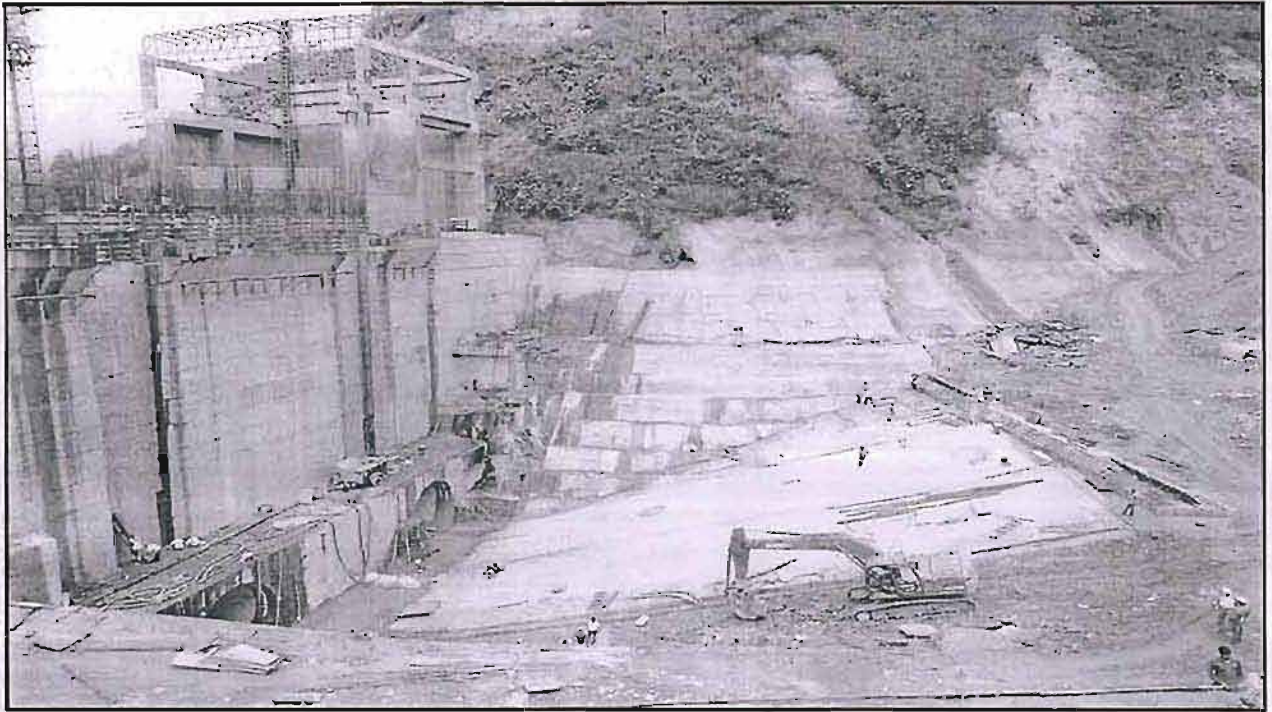
8. PROGRESS PICTURES FOR THE MONTH



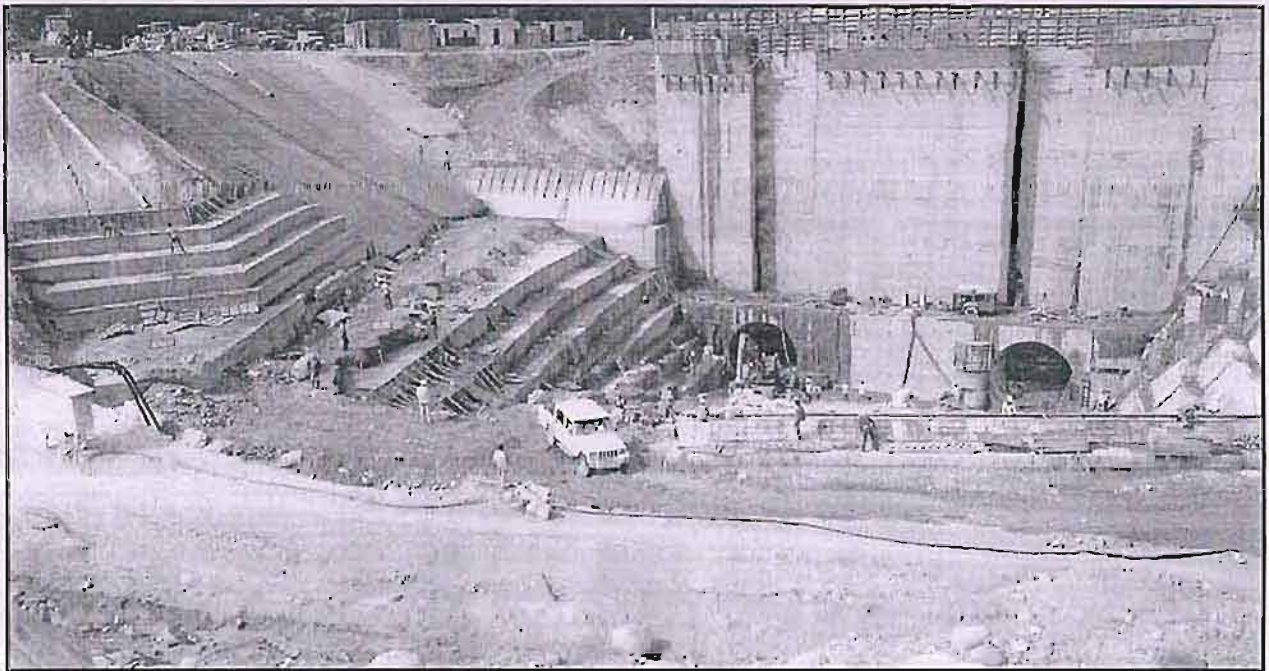
Barrage Phase-II Downstream view



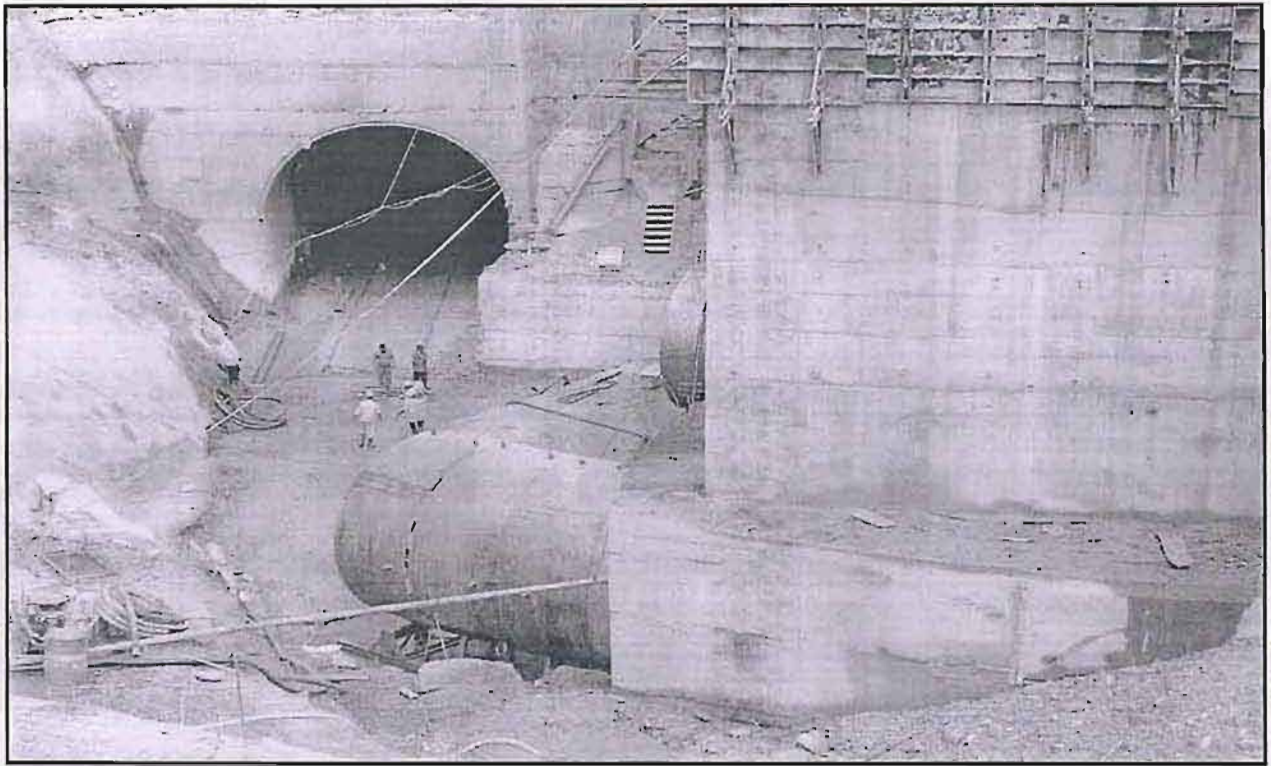
Power House



Power House – TRC Concrete at Bottom



Power House - TRC Downstream view



Power House - Erection of 4.25m dia. Ferrule for Curve portion



Drop Shaft – Top view