

**REPORT OF COMMITTEE TO ASCERTAIN THE
STATUS OF ENVIRONMENTAL CLEARANCES
OF LOHARINAG PALA HYDRO POWER
PROJECT ON BHAGIRATHI RIVER**



FEBRUARY 2010

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BACKGROUND

In the first meeting of the National Ganga River Basin Authority (NGRBA) held on 5th October 2009 under the chairmanship of the Prime Minister, it was decided that the issue of Loharinag Pala, Pala Maneri and Bhaironghati hydro electric projects in the upper reaches of Bhagirathi would be studied by the Ministry of Environment & Forests and Ministry of Power and a report submitted to NGRBA.

Earlier, disposing of writ petitions filed on the subject, the Hon'ble High Court of Uttarakhand had directed the NGRBA on 18th May 2009 to decide the entire issue relating to these projects, i.e., whether to continue with them or not. The Court observed that "The Authority (NGRBA) may decide the issue by itself or preferably after taking into account the recommendations of a broad-based expert committee to be constituted by the NGRBA".

The report submitted to NGRBA was based upon an on the spot assessment of the impact of these projects on the flow of the river Bhagirathi, the current status of their implementation and detailed interactions with local people, public representatives, prominent members of social, cultural, environmental and religious organizations, officers of the district administration and the Government of Uttarakhand. Prior to take final decision on report, it was felt that views of the expert members of NGRBA may also ascertained. In this regard, a meeting was taken by Minister of State (Independent Charge), Environment & Forests with the Expert members of NGRBA on 14th January, 2010 to discuss the issues related to proposed hydro power projects in the upper reaches of Bhagirathi River.

Pursuant the discussions, it was decided to constitute a Committee comprising of NGRBA experts and representative of concerned departments to visit the site and ascertain the status of compliance to the conditions of Environmental Clearance issued to this project. The Committee may inter-alia also suggests additional measures/ conditions required if any for the sustainable development of the project. Accordingly, MoEF vide office order dated 18th January, 2010, constituted a Committee consisting of

NGRBA Experts along with representatives from MoEF, MoP and NTPC (Annexure-I).
The Committee was advised to submit its report by 5th February, 2010. The
constitution of the Committee was as follows:-

1. Prof. R H Siddiqui, Expert Member, NGRBA
2. Dr Ravi Chopra, Expert Member, NGRBA
3. Dr R. K Sinha, Expert Member, NGRBA
4. Sh K.K. Garg, Director, MoEF (Regional Office, Lucknow, Special Invitee).
5. Sh R. K. Gupta, Director (Hydro), Director, Ministry of Power,
6. Sh S.C.Garkoti, Additional Director, MoEF
7. Sh M H Rao, General Manager (Engg. Services), Representative of NTPC
8. Sh Lalit Bokolia, Joint Director, MoEF ----- Member Convener

2. Field observations and assessment to compliance of Environmental Clearance conditions

2.1 General Description of Project

The Loharinag Pala Hydroelectric Project (4x150 MW), of M/s National Thermal Power Corporation located in district Uttarkashi of Uttarakhand was given Environmental Clearance by the Ministry on 8th February 2005 as per the provisions of EIA Notification, 1994 (**Annexure-II**). It is a Run of River (RoR) scheme over Bhagirathi River, a tributary of River Ganga. The barrage site is located at Loharinag village and the power house component of the project is at Pala village. The total land requirement for the project is about 197 ha. out of this 168.151 ha is forest land. There are no Sanctuaries, National parks or Archaeological sites in the project area. The total number of project affected persons (PAPs) is 263.

2.2 Field observations and Assessment to Environmental Conditions

The committee visited the site of Loharinag Pala hydro project on 29.01.10. Detailed discussions were held with site officials of NTPC. Prior to site visit a presentation about Loharinag Pala project was also given by NTPC project authorities. It was informed that ~~the~~ out of 3316 sq. Km of catchment area, about 1853 sq. Km is snow bound catchment area above RL 4877 m. Length of HRT is reported to be 13 Km. The other details w.r.t. compliance status of stipulated environment conditions, physical progress achieved and expenditure incurred under the project were presented before the Committee.

The Committee alongwith DFO Uttarkashi visited upto the upstream site of barrage i.e. Harshil forming the catchment of the project and inspected the various environmental measures undertaken / being carried out by project authorities in compliance to the Environmental Clearance granted by MoEF to this project. These measures include the protection works provided for retaining the excavated material (muck) from different project components (Power House, Adits of HRT, and Barrage), labours camps and septic tanks.

In addition, en-route at the request of the affected people of Sanglai village near power house, the committee visited their houses and also the perennial source of water feeding to village. The committee was informed that as a result of blasting the cracks have developed in their houses and the perennial source of water has got dried up. Afterwards, consultations were also held with the villagers.



(Visit of committee to Sanglai village near power house of project)



(Visit of committee to perennial source of water (spring) at sanglai village)



(Minor cracks shown to the committee by villagers in their houses)



(Protection works provided for retaining the excavated material (muck))

2.3 Compliance Status of stipulated Environmental conditions by MoEF & MoP

Part A: Specific Conditions:

S No	Environmental Conditions	Status as on 29.01.2010
i)	Catchments Area Treatment Plan as has been proposed should be completed in three years.	<p>Being complied</p> <p>CAT Plan approved by MoEF was not acceptable to State Forest Department of Uttarakhand. On their demand NTPC deposited Rs. 3 Lakhs for preparation of CAT Plan by them. State Forest Department submitted CAT Plan to NTPC amounting to Rs. 38.72 Cr. The entire amount was deposited by NTPC as follows:</p> <p>[i] Rs. 1.429 Crore on 30.03.2006 by DD.No 209520 dt 21.03.2006 vide Letter LPHPP/EMG/05-06/07 dated 03.04.06</p> <p>[ii] Rs 5.0 Crore on 25.07.2007, DD No.257055dt 25.07.2007</p> <p>[iii] Rs 32.291 Crore on 15.05.2008, DD No 916542 dated 15.05.2008 vide letter: NTPC/LPHPP/EMG/CATPLAN dated 16.05.2008.</p> <p>The implementation of CAT Plan has not started yet as the funds are yet be released from CAMPA.</p> <p>Meanwhile, the CAT plan prepared by State Forests Department was discussed in Forests Advisory Committee of the Ministry and subsequently it was referred ICFRE for their comments. The ICFRE has submitted their report and the recommendations / suggestions are under consideration of State Forests Department.</p> <p>Apart from CAT, the plantation and soil conservation works have been carried out by forests department under compensatory afforestation as per details given below:</p> <p>Amount deposited towards Compensatory Afforestation</p>

		<p>Total :Rs. 1.67 Cr.</p> <p>[DD No. 027060 dt 22-07-05 for Rs. 162 Lacs and DD No 027221 dt 22-07-05 for Rs. 5.00 Lacs]</p> <p>Amount spent upto 30-06-2009: vide Letter No 80/7-1 (II) dt 13-07-09 of DFO Tehri Dam Van Prabhag -2 Uttarkashi: Rs. 181.72 Lacs</p> <p>Land Area :280 ha</p> <p>Plantation done: 4,26,000 Nos</p> <p>District :Tehri &Uttarkashi</p> <p>Survival: Min 71%, Max 80% in different 6 ranges covered.</p> <p>Details of plantation undertaken indicating year, area, percentage of survival including soil conservation majors are given at ANNEXURE-III.</p>
ii)	A study should be initiated on the long-term sustainability of water to be received from the glaciers, as there are several reports on the receding of glaciers. The study should be funded by NTPC and the T.O.R. should be decided in consultation with the MOEF.	<p>Not applicable</p> <p>This condition has been waived off by MoEF Vide letter no J-12011/33/2004-IA.I dated 19.12.2005.(copy enclosed)</p>
iii)	The R&R Plan for the Project Affected Persons (PAPs) should be prepared in consultation with the State Government and submitted within three months from the date of issue of this letter.	<p>Complied</p> <p>Although a Socio-Economic Study (SES) was carried out by G. B. Pant University, Pant Nagar and a copy of the report was submitted by NTPC to MoEF vide Letter No. :CC:ESE:5506:2005:GEN:05C on 28.10.2005.</p> <p>However, while dealing with the issue of land compensation rate, the land owners through VDAC demanded that there should be a lump sum settlement of Rs. 50 Lacs per hectare under R&R package. It was jointly agreed by State Govt. & NTPC.</p> <p>The total number affected family is 263 including 3 families for resettlement purpose. A total compensation of Rs. Rs 10.91 Crores has been paid till date.</p> <p>There is no pending cases / disputes regarding resettlement.</p>
iv)	Forest Clearance may be obtained for acquiring 168.9-hectare forest land and	Being complied

	submitted to this Ministry.	<p>Forest clearance for 139.029 ha has been accorded by MoEF vide letter dated 02.08.05. Subsequently, Forest clearance for 4.652 hectares of forest land has been accorded by MoEF by letter dated 12-11-2008 for muck disposal.</p> <p>Further, it was informed by project authorities that the proposal for 13.085 hectares for construction of underground tunnel has been submitted to State Forest Dept. on 29.04.09. The forests clearance for this proposal is yet to be obtained by them.</p>
v)	Fifteen (15) conditions mentioned in the proceeding of Public Hearing should be followed in toto.	<p>Being complied</p> <p>The compliance status of Public Hearing conditions is given at ANNEXURE-IV</p>
vi)	Minimum water flow in the down stream of barrage should be maintained 3 cusecs during lean season.	<p>Assured to comply</p> <p>This condition has been modified vide MoEF letter No -J-12011/36/2004-IA.I dated 01.04.2005 and now minimum flow specified is increased from 3 cusec to 30 cusecs in the river Bhagirathi. However, in view of the discussions held by the committee during the this visit it was assured by project authorities that minimum flow of 16 cumec shall be maintained at the downstream of barrage.</p>
vii)	Seismic Zoning has been revised in 2002. The design of the main structure should be based on the 2002 guideline. Earthquake resistance design should be followed for all civil structures.	<p>Being complied</p> <p>Loharinag-Pala Project has been considered to be in seismic Zone-V. Accordingly site seismic study report No 2003-10(July2005) was prepared by IIT Roorkee. After the presentation by NTPC the National Committee on Seismic Design Parameter (NCSDP) vide letter no - 2/2/2007/FE&SA/452 dtd April 5,2007 accepted the recommended value of multiplication factor 0.38g for MCE condition & 0.19g of PBE condition in all design calculations by the project consultant Central Water Commission (CWC), New Delhi.</p> <p>It was informed by project authorities that all construction works have been carried out as per the designs and drawings issued by CWC.</p>
Part-B: General Conditions		

i)	<p>Adequate free fuel arrangement should be made for the labor force engaged in the construction work at project cost so that indiscriminate felling of trees is prevented.</p>	<p>Being complied</p> <p>Six labour camps are located at different construction site of the project (Khopa -1 No, Thirang-1 No. , Sanglai – 1 No., Gunga Adit – 1 No. Dabrani Adit – 1 No. and Barrage site – 1 No.).</p> <p>Free fuel - Kerosene / LPG Cylinders are being provided for cooking / heating. The report of LPG consumption in these camps is being submitted to DFO, Uttarkashi on monthly basis. Apart from above 160 cum of the "Jalawani Lakadi" is purchased from nearest Fuel Depot of Van Vikas Nigam, Uttarkashi during 2008-09. There is no indiscriminate felling of trees by labour force in the project area.</p>
ii)	<p>Fuel depot may be opened at the site to provide the fuel (kerosene / wood / LPG).</p> <p>Medical facilities as well as</p> <p>Recreational facilities should also be provided to the laborers.</p>	<p>Being complied</p> <p>There is no dependency on fuel wood. Only LPG & Kerosene is being used.</p> <p>Depot of Indane & HP Gas at Uttarkashi are catering the requirement.</p> <p>Medical/ First Aid facilities along with Ambulance are available for catering any emergency to the labour force near to their work place. The health checks up reports are being furnished to NTPC by contractor.</p> <p>Colour television has been provided in camps for recreation of labour force.</p>
iii)	<p>A Monitoring Committee for R&R should be constituted which must include representatives of project-affected persons from SC / ST category and a woman beneficiary.</p>	<p>Being complied</p> <p>One time settlement with land owners has been done & lump-sum cash compensation paid in consultation with vdac (village development advisory committee – constituted by district magistrate of district Uttarkashi vide letter no. memo / -04 (03-04) dt 18-06-2005 and 24-06-2005) involving representatives from four project affected villages, district administration, public representatives & NTPC.</p> <p>In addition to above community development (CD) works of Rs. 17.42 crores has been jointly finalized by vdac and through the process of consultation.</p> <p>This scheme of CD works proposed by VDAC and recommended by district administration and public representatives is under</p>

		implementation, this implementation is also regularly monitored by DM, Uttarkashi, where VDAC members are also present. the details of CD works including expenditure incurred are given at Annexure –V .
iv)	All the laborers to be engaged for construction works should be thoroughly examined by health personnel and adequately treated before issuing them work permit.	Being complied Medical/ First Aid facilities along with Ambulance are available for catering any emergency to the labour force near to their work place. The health checks up reports are being furnished to NTPC by contractor.
v)	Restoration of construction area including dumping site of excavated materials should be ensured by levelling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation.	Being complied Restoration of construction area, dumping site, quarry site shall be ensured in line to study conducted by Civil Engineering Department of IIT, Roorkee. A reclamation plan against LOA No. 233 dt 05-12-06 has already been prepared by IIT Roorkee as per the MoEF condition. Presently the excavated material is being dumped in designated muck disposal areas only and Gabions walls have been constructed as environmental protection measures. The details of muck disposal areas including capacity, muck generated & quantity of muck disposed are given in ANNEXURE-VI . These areas shall be reclaimed with vegetation after the construction works.
vi)	Financial provision should be made in the total budget of the project for implementation of the above suggested safeguard measures.	Being complied Financial Provision of Rs 5987 Lacs has been earmarked under Budget Head Environment & Ecology in Project cost which includes CAT Plan allocation also. The item wise breakup of the budget provision and expenditure incurred till March 2009 provided by NTPC as given at ANNEXURE-VII .
vii)	A Multidisciplinary committee should be constituted with representatives from various disciplines of forestry, ecology, wildlife, soil conservation, NGO etc. to	Partly complied Project authorities have informed that multidisciplinary committees both at State level and project level have been constituted

	<p>oversee the effective implementation of the suggested safeguard measures.</p>	<p>(composition given below). However, no meeting has been conducted so far by either of the committee.</p> <p>Composition of State Level Committee</p> <ol style="list-style-type: none"> 1. PCCF – Chairman 2. Secy Agriculture or nominated representative – member 3. Secy Animal husbandry or nominated representative – member 4. Chief Project Director Jalagam Prabandh Nidesaiaya – Member 5. Representative of GM Loharinag-Pala – member 6. Conservator of Forest – Member 7. Nodal Officer cum Conservator of Forest - Member / Secretary <p>Composition of Project Level Committee</p> <ol style="list-style-type: none"> 1. Commissioner Garhwal – Chairman 2. District Magistrate – Member 3. Director (CWC- Monitoring & Evaluation) – Member 4. Dy. Conservator of Forest / Conservator of Forest – Member 5. District Social Welfare Officer – Member 6. District Agriculture Officer – Member 7. District Horticulture Officer – Member 8. Engineer In Charge of Irrigation Department – Member 9. Chief Medical Officer – Member 10. Two non-government representatives nominated by Commissioner Garhwal 11. General Manager (NTPC) – Member / Secretary
viii)	<p>Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Lucknow for review.</p>	<p>Being complied.</p>
4	<p>Officials from Regional Office, MOEF, Lucknow 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.</p>	<p>Being complied.</p>

5	The responsibility of implementation of environmental safeguards rests fully with the NTPC & Government of Uttaranchal.	Assured to comply
6	In case of change in the scope of the project, project would require a fresh appraisal.	Assured to comply
7	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary and to take action including revoking of the clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time-bound and satisfactory manner.	Agreed to by project authority
8	This clearance letter is valid for a period of five years from the date of issue of this letter for commencement of construction work.	Agreed to by project authority
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.	Complied
10	State Pollution Control Board / Committee should display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's office / Tehsildar's office for 30 days.	Complied.
11	The project proponent should advertise at least 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 environmental clearance and copies of clearance letters are available with the State Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at http://www.envfor.nic.in .	Complied Published in three local news papers on 15.03.2005. 1.AMARUJALA 2.DAINIK JAGARAN 3. SHAH TIMES

2.4 Observation on status of compliance by non-official members of NGRBA

The non-official expert members of NGRBA have submitted separate report, which is at Annexure-VIII. The compliance status w.r.t. specific conditions is however, reproduced below;

Specific Conditions:

- (i) *Forestation, except compensatory forestation, under CAT Plan which was to be implemented over a three-year period has not been implemented. According to NTPC's Compliance Report presented to the visiting team, the original CAT Plan was rejected by the State Forest Department of Uttarakhand. A new plan was prepared by the latter, which was reviewed by Indian Council of Forestry & Education (ICFRE). Since then there is no progress. The State Forest Department has yet to respond to ICFRE's revisions. In the meantime NTPC has deposited Rs.38.72 cr for the CAT Plan.*
NTPC also gave Rs.1.67 cr for compensatory forestation. Out of this Rs.1.62 cr has been spent on planting about 426,000 saplings in an area of 280 ha with survival rates of 71 to 80 per cent according to NTPC's Report. Due to inadequate time no field verification was done.
The extent of Engineering Treatment under CAT could not be assessed due to lack of time.
- (ii) The condition that a study of long term sustainability of water should be initiated, in view of reports of receding of glaciers, was withdrawn later by MoEF.
It may not be out of place to mention here that the average power production at Maneri Bhali, a HEPP located on Bhagirath downstream of Loharinag Pala, over the last 9 years (1997-98 to 2005-06) was 441.793 MU against the projected capacity of 545 MU. One of the important reasons given by the project authorities for this shortfall was that less water was available in the river Bhagirathi especially during winter months.
- (iii) According to information provided by NTPC no R & R Plan was prepared in consultation with the State Government. Instead a socio-economic study of the area done by G.B. Pant University, Pantnagar, was submitted by NTPC to MoEF well after the stipulated 3 months period. However, NTPC has claimed that there are no pending issues of R & R.
- (iv) Forest clearance was obtained from MoEF and the State Government of Uttarakhand.
- (v) In its Compliance Report NTPC has claimed that all 15 conditions of the Public Hearing have been fulfilled.
Due to inadequate time no field verification was done.

3.0 Suggestive mitigative measures of the Committee

The suggestions of the Committee are as under:

3.1 MoEF & MoP

In addition to existing environmental conditions as stipulated in Environmental Clearance granted by the Ministry of Environment & Forests for Loharinag Paia project, the following suggestions are proposed for incorporation as environmental conditions;

1. It was observed by the committee that the excavated material is being dumped at designated muck disposal sites by providing retaining structures (Gabions). Since these disposal sites are located in close vicinity of the Bhagirathi River, the retaining / protective measures need to be strengthened to mitigate / minimize the spillage / flow of excavated material, in case any eventuality including flash flood / heavy flow.
2. It is suggested that the reclamation work should commence as soon as the dumping of excavated material at these sites is over progressive reclamation of muck disposal sites shall be carried out, wherever feasible. The reclamation should be carried out systematically and scientifically using Geo-textile and plantation of suitable native species to prevent erosion and surface run-off and stabilization of reclaimed area. A detailed time bound reclamation plan in this context should be prepared through reputed institution and implemented.
3. Air emissions from the crusher, DG sets and other sources need to be controlled effectively to meet the prescribed standards.
4. Mitigating measures including regular sprinkling of water needs to be taken to control fugitive emissions from movement of vehicles, road construction and other activities during construction phase.

- (vi) The minimum water flow condition has now been changed. MoEF has expressed a view that the project will function only for six months in a year so that the lean season flow can be released totally to preserve the environment.

It is not sufficient to prescribe environmental flow only for the lean season, but environmental flows should be worked out for the entire regime of flow in a year. An accepted methodology should be used for this purpose. It is suggested that should such a condition be eventually imposed by the Govt, a strong monitoring mechanism in the form of a committee including local organizations must be put in place.

- (vii) NTPC's Compliance Report claims fulfillment of seismic zoning guidelines.

As may be seen at specific condition (ii) above, regarding waiving-off of condition on study on glaciers, the non-official expert members of NGRBA opined that in view of availability of less water in the river Bhagirathi especially during winter months, a study of long term sustainability of water should be initiated, in view of reports of receding of glaciers.

Further, NGRBA members were of the view that the time given for monitoring /assessing the compliance of the stipulated conditions was inadequate.

5. Regular monitoring of both stack and ambient air quality needs to be ensured as per frequency prescribed under Ambient Air Quality Standards (AAQS). A quarterly monitoring report with statistical interpretation should be submitted to the concerned regulatory agencies.
6. As per the commitment given by Ministry of Power, the minimum water flow in the downstream barrage should be maintained to 16 cumec instead of 30 cusec (as stipulated in the environmental clearance).
7. The multi disciplinary committees constituted for Loharinag Pala project should meet on a six monthly basis to monitor the compliance of stipulated environmental conditions. The minutes of the meetings of these committees should be submitted by project authorities alongwith six monthly compliance report to concerned regulatory agencies.
8. It is suggested that a sub group of Expert Appraisal Committee should periodically undertake site visits (six monthly) to see the implementation of the stipulated conditions and environmental safeguards measures during the construction phase of the project, which may besides overseeing the implementation of these conditions may also suggest mid course correction, if any, required in the project.

3.2 Non official NGRBA expert members

The NGBRA experts member have informed that the above points are in conformity with their opinion (**Annexure-IX**); however, they have made following additional suggestions.

- (i) in view of availability of less water in the river Bhagirathi especially during winter months, a study of long term sustainability of water should be initiated, in view of reports of receding of glaciers.
- (ii) Environmental flows be worked out for the entire regime of flow in a year using an appropriate methodology. It is suggested to impose a condition that a strong monitoring mechanism in the form of a committee including local organizations must be put in place.

(iii) To assess the compliance of the conditions as stipulated by Uttarakhand Environment Protection & Pollution Control Board w.r.t. impact of the project on forest, flora and fauna and human beings, the expert members intended to seek more time. .

(iv) Expert member have raised their concern on visual observation with regard to impact of blasting on houses of local people during the implementation stage of project.

Although the mandate of this Committee was to ascertain the compliance of the stipulated environmental safeguard and to suggest additional measures/conditions required, if any for sustainable development of the project; however, the NGRBA expert members concluded the following in their report;

"Visual observations of the state of the river from the Tehri dam reservoir to Harsil made it clear that the Tehri dam and the Maneri-Bhali I & II barrages have destroyed the free-flowing character of the Bhagirathi River in its pristine upper reach and that the Loharinag-Pala project will further extend this destruction into its uppermost reach.

Given that the river has now been designated as India's National River, in view of the unique status that it has in the hearts and the minds of the Indian people, we would recommend that:

- (i) The Loharinag-Pala project be cancelled
- (ii) Steps be taken for the decommissioning of the existing dams and barrages on the river in a reasonable period of time and
- (iii) No new projects are contemplated on the river till Hardwar so that the entire mountainous reach of the river from Gaumukh to Hardwar regains its natural, pristine free-flowing character".

The above suggested measures need to be reviewed / examined by the Expert Appraisal Committee for River Valley Project of the Ministry before taking any final decision.

- (vi) The minimum water flow condition has now been changed. MoEF has expressed a view that the project will function only for six months in a year so that the lean season flow can be released totally to preserve the environment.

It is not sufficient to prescribe environmental flow only for the lean season, but environmental flows should be worked out for the entire regime of flow in a year. An accepted methodology should be used for this purpose. It is suggested that should such a condition be eventually imposed by the Govt, a strong monitoring mechanism in the form of a committee including local organizations must be put in place.

- (vii) NTPC's Compliance Report claims fulfillment of seismic zoning guidelines.

As may be seen at specific condition (ii) above, regarding waiving-off of condition on study on glaciers, the non-official expert members of NGRBA opined that in view of availability of less water in the river Bhagirathi especially during winter months, a study of long term sustainability of water should be initiated, in view of reports of receding of glaciers.

Further, NGRBA members were of the view that the time given for monitoring /assessing the compliance of the stipulated conditions was inadequate.

K-11012/2/2009-NRCD
 Ministry of Environment & Forests
 National River Conservation Directorate

MOST IMMEDIATE
TIME BOUND

Paryavaran Bhawan, CGO Complex,
 Lodi Road, New Delhi

Dated: 18.1.2010

Office Order

Subject: Constitution of a Committee to ascertain compliance to the condition of environmental clearance granted to the Loharinag Pala Project.

A meeting was taken by the Minister for Environment and Forests on 14.01.2010 with the Expert Members of NGRBA to discuss the issues related to the Loharinag Pala Project, under construction in the upper reaches of Bhagirathi River. Pursuant to the discussions, it was decided to constitute a Committee comprising of NGRBA experts and representatives of concerned departments to visit the site and ascertain the status of compliance to the conditions of Environmental Clearance issued to this project. Accordingly, a committee has been constituted with the following composition:-

- (i) Representative of Ministry of Power
- (ii) Representative of NTPC
- (iii) Prof. R.H.Siddiqui
- (iv) Dr. Ravi Chopra
- (v) Dr. R.K.Sinha
- (vi) Shri Bharat Bhushan, Director, IA Division, MoEF
- (vii) Shri L.K.Bokolia Joint Director, NRCD - Convenor

The Committee may inter-alia also suggest additional measures/conditions required if any for the sustainable development of the project. The Committee shall submit its report by 5th February, 2010. The TA/DA to the non-official members will be provided by the MoEF as per extant rules of the Government. The date of the site visit will be communicated separately.

This issues with the approval of Secretary(E&F).


 (Lalit Kapur)
 Director

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, New Delhi with the request to depute a suitable representative to the Committee.

2. The Chairman-cum-Managing Director, NTPC, SCOPE Complex, with the request to depute a suitable representative to the committee and provide necessary assistance and cooperation to the committee members during the site visit.
3. Shri I.C.P.Keshari, Joint Secretary, Ministry of Power, Shram Shakti Bhawan, New Delhi.
4. Shri V.K.Gupta, Executive Director(Hydel), NTPC, NOIDA 2010109 - 0120
5. Prof. R.H.Siddiqi, Dar-e-Hasan, Muzammil Manzil, Dodhpur, Aligarh-202001.
6. Dr. Ravi Chopra, Director, People's Science Institute, 252 Vasant Vihar, Phase-I, Dehradun-248006.
7. Dr. R.K.Sinha, Department of Zoology, Patna University, Patna.
8. Shri Bharat Bhushan, Director IA, MoEF, New Delhi.
9. Shri Lalit Kumar Bokolia, JD, NRCD, New Delhi.
10. Regional Officer, Northern Regional Office, Ministry of Environment and Forests, SCO 132-133, Sector 34-A, Chandigarh-160022 with the request to depute the concerned officer dealing with the subject.

Copy for information to:

1. PPS to MEF
2. PPS to Secretary(E&F)
3. PPS to Special Secretary(RHK)
4. PS to Additional Secretary(JMM)
5. PS to JS(RG)
6. PS to Adviser(NB)

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GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS
पर्यावरण भवन, सी. जी. ओ. कॉम्प्लेक्स
PARYAVARAN BHAVAN, C.G.O. COMPLEX
लोदी रोड, नई दिल्ली-110003
LODHI ROAD, NEW DELHI-110003

No. J-12011/33/2004-IA.I

February 8, 2005.

To,

Shri M.H.Rao
Additional.Gen. Manager (Env. Engineering),
National Thermal Power Corporation Ltd.,
NOIDA -201301
U.P.

Sub: Loharinag Pala Hydroelectric Project (4x150 MW) , in Uttarkashi, Uttaranchal -
Environmental Clearance-regarding.

Sir,

This has reference to your letter No.CC:ESE:9506:2004:GEN:05C dated 17.09.2004,
30.11.2004 & 07.12.2004 on the above subject.

2. The above referred proposal was considered by the Expert Committee for River Valley & Hydroelectric projects at its meeting held on 25.10.2004 & reconsidered on 09.12.2004. The Loharinag Pala Hydroelectric Project (4x150 MW) is a run of the river scheme across river Bhagirathi in district Uttarkashi. The barrage site at Loharinag village & power house is located at village Pala, Uttarkashi. Total land requirement for the project is 197 hectare, out of this 168.9 ha. is forest land. Forest clearance yet to be submitted. There are no archaeological sites/ monuments in the project area. The capital cost of the project is Rs. 2262.40 Crores.

3. The Environmental Management Plan submitted by NTPC has been examined. The Ministry of Environment and Forests hereby accords environmental clearance as per the provisions of Environmental Impact Assessment Notification, 1994, subject to strict compliance of the terms and conditions as follows:

Part A: Specific Conditions

- (i) Catchment Area Treatment Plan as has been proposed should be completed in three years. The plan is given below:

Treatment Measures	Year-I	Year-II	Year-III	Total
(I) Biological Treatment				
Social Forestry	15 ha	15ha	10 ha	40 ha
Fuel wood and fodder grass	15 ha	15 ha	10 ha	40 ha
Nursery development	4 No.	2 No.	-	6 No.
(II) Engineering Treatment				
Barbed wire fencing	3 km	2 km	-	5 km
Watch and ward	120 man months	120 man months	120 man months	360 man months
Contour bunding	41	41	-	82
Step Drain	200 m	200 m	200 m	600m
Stone masonry	40 m ³	30 m ³	30 m ³	100 m ³
Check dams	10	10	10	30

- (ii) A study should be initiated on the long term sustainability of water to be received from the glaciers as there are several report on the receding of glaciers. The study should be funded by NTPC and the T.O.R. should be decided in consultation with the MOEF.
- (iii) The R & R Plan for the Project Affected Persons (PAPs) should be prepared in consultation with the State Government and submitted within three months from the date of issue of this letter.
- (iv) Forest Clearance may be obtained for acquiring 168.9 hectare forest land & submitted to this Ministry.
- (v) Fifteen (15) conditions mentioned in the proceeding of Public Hearing should be followed in toto.
- (vi) Minimum water flow in the down stream of barrage should be maintained 3 cusecs during lean season.

- (vii) Seismic zoning has been revised in 2002. The design of the main structure should be based on the 2002 guideline. Earthquake resistance design should be followed for all civil structures.

Part-B: General Conditions

- (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.
 - (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.
 - (iii) A Monitoring Committee for R & R should be constituted which must include representatives of project-affected persons from SC / ST category and a woman beneficiary.
 - (iv) All the labourers to be engaged for construction works should be thoroughly examined by health personnel and adequately treated before issuing them work permit.
 - (v) 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.
 - (vi) Financial provision should be made in the total budget of the project for implementation of the above suggested safeguard measures.
 - (vii) A Multidisciplinary committee should be constituted with representatives from various disciplines of forestry, ecology, wildlife, soil conservation, NGO etc. to oversee the effective implementation of the suggested safeguard measures.
 - (viii) Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Lucknow for review.
4. Officials from Regional Office MOEF, Lucknow 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.
5. The responsibility of implementation of environmental safeguards rests fully with the NTPC & Government of Uttaranchal.
6. In case of change in the scope of the project, project would require a fresh appraisal.
7. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary and to take action including revoking of the clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time- bound and satisfactory manner.

8. This clearance letter is valid for a period of five years from the date of issue of this letter for commencement of construction work.

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.

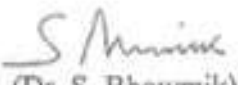
10. State Pollution Control Board / Committee should display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's office/ Tehsildar's office for 30 days.

11. The project proponent should advertise at least 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 environmental clearance and copies of clearance letters are available with the State Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at [http:// www.envfor.nic.in](http://www.envfor.nic.in)


(Dr. S. Bhowmik)
Additional Director

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Adviser (Power), Planning Commission, Yojna Bhawan, New Delhi - 110001.
3. Principal Secretary (Irrigation & Power), Government of Uttaranchal, Dehradun - 248006.
4. The Secretary, Department of Environment, Government of Uttaranchal
5. The Secretary, Ministry of Water Resources, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001
6. The Chief Engineer, Project Appraisal Directorate, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
7. The Regional Office, Ministry of Environment & Forests, Lucknow.
8. Member Secretary, Uttaranchal State Pollution Control Board, Government of Uttaranchal.
9. EI- Division, Ministry of Environment & Forests, New Delhi-110003.
10. Guard file.


(Dr. S. Bhowmik)
Additional Director

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भारत सरकार
पर्यावरण एवं वन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS
पर्यावरण भवन, सी. जी. ओ. कॉम्प्लेक्स
PARYAVARAN BHAVAN, C.G.O. COMPLEX
लोही रोड, नई दिल्ली-110003
LOOHI ROAD, NEW DELHI-110003

No. J-12011/36/2004-IA.1

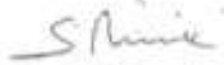
1st April, 2005

CORIGENDUM

Sub: Loharinag Pala Hydroelectric Project (4x150 MW) , in Uttarkashi,
Uttaranchal – Environmental Clearance-regarding.

Attention is invited to this Ministry's letter No. J-12011/36/2004-IA.1, dated 08.02.2005 vide which Environmental Clearance was accorded to above mentioned project and to state that –

i) Specific conditions No: A / (vi) Minimum water flow may be read as 30 cusecs in place of 3 cusecs.


(Dr. S. Bhowmik)
Additional Director

Shri M.H.Rao
Additional Gen. Manager (Env. Engineering),
National Thermal Power Corporation Ltd.,
NOIDA -201301
U.P.

प्रभाग का नाम - टिहरी डैम वन प्रभाग-11, उत्तरकाशी।

सौहार्दी नाम पाला का नाम - कृषिपूरक वृक्षारोपण योजना के अन्तर्गत किये गये वृक्षारोपण की सूचना।

क्र.सं.	वर्ष	प्रत्येक का नाम	राजि का नाम	क्षेत्र का नाम	क्षेत्रफल हे० म०	रोपित पौध प्रजातिवार	रोपित पौधों की सं०	सफलता प्रतिशत (कंपोस-30-6-09) के अनुसार
1	2	3	4	5	6	7	8	9
1	2006-07	उत्तरकाशी	सुरमोला राजि	1) बरसाली सोयम-1	12.00	बाज-	3600	76%
						बांस	5900	
						चीड	900	
						तुंग	1800	
						अंग	2000	
						देवदार	500	
						कचनार	300	
						गुरीवाल	1900	
						अन्य	2200	
						योग	19200	
				2) बरसाली सोयम-11	8.00	बाज	4500	75%
						चीड	700	
						अंग	3000	
						देवदार	200	
						कचनार	2400	
						गुरीवाल	500	
						अन्य	1500	
						योग	12800	
				3) जलारी सोयम	10.00	बांस	4090	73%
						चीड	500	
सौरस	950							
कचनार	1910							
आंवला	1500							
हरडा	3000							
बहेडा	3000							
अन्य	1040							
योग	16000							
4) खट्टू सोयम	10.00	बाज	2000			78%		
		बांस	7370					
		कचनार	1000					
		आंवला	2000					
		हरडा	500					
		बहेडा	2500					
		अन्य	630					
		योग	18000					
5) पैथर सोयम	10.00	बाज	1000	79%				
		बांस	200					
		चीड	3000					
		तन	3500					
		देवदार	130					
		कचनार	800					
		आंवला	3600					
		चिट्टीका	700					
कुल्लू	700							

				अन्य	2400		
				योग	16000		
	(6)	दुष्का सोयम	10.00	बास	500	71%	
				आवला	3500		
				हरका	500		
				बहेडा	500		
				योग	6000		
	(7)	जुगलदी सोयम	10.00	बास	6500	73%	
				बीड	3700		
				रीगाल	2000		
				अमा	3000		
				देवदार	800		
				कचनार	1000		
				योग	18000		
		दशमी गाठ सजि	महेका सोयम	10.00	बास	3500	77%
				बीड	3800		
				रीगाल	600		
				तुल	800		
				अमा	2000		
				देवदार	2500		
				कचनार	1500		
				अन्य	1500		
				योग	16000		
	(8)	ज्येष्ठ दाडी सोयम	10.00	बाज	4500	74%	
				बीड	4000		
				तुल	1400		
				देवदार	1000		
				कचनार	1000		
				पदम	1900		
				मूल्गु	1300		
				अन्य	300		
				योग	16000		
		नमुण गाठ सजि	कासी सोयम- I	10.00	आवला	16000	79%
			(II) कासी सोयम- II	10.00	बाज	2000	80%
				बास	5000		
				तुल	1300		
				देवदार	1800		
				अखरोट	2000		
				सेमला	1800		
				शीशम	1500		
				मूल्गु	2300		
				योग	18000		
		(IV) कासी सोयम- III	10.00	बाज	1000	76%	
				बास	1200		
				रीगाल	2500		
				तुल	3000		
				अमा	2100		
				देवदार	1250		
				अखरोट	1000		
				मूल्गु	1500		

						अन्न	2450	
						योग	16000	
			(13)	काली सोयम-IV	10.00	बाज	300	74%
						सिगास	64	
						गुन	400	
						दोपदार	3308	
						अधरस	2930	
						अन्न	9000	
						योग	16000	
उत्पन्नकाली अन्नपद का कुल योग :-					130.00		197000	

~~उप वर सरभक
सिद्धा उम वम इभा (100)
उत्पन्नकाली~~

प्रभाग का नाम - टिहरी डेम वन प्रभाग-11, उत्तरकाशी।

सोहारी नाग पासा 2006-07, सतिपुरक वृक्षारोपण योजना के अन्तर्गत किये गये वृक्षारोपण की सूचना।

क्र.सं.	वर्ष	जल्पाद का नाम	राजि का नाम	क्षेत्र का नाम	क्षेत्रफल हे० मे	रोपित पौध प्रजातिवार	रोपित पौधों की सं०	सफलता प्रतिशत
1	2	3	4	5	6	7	8	9
1	2006-07	टिहरी	कमाँद	(14) कोटि डोभालों की सोयम	10.00	बाज	4000	73%
						बास	1000	
						सीरस	3500	
						कचनार	5000	
						मूल्जू	2500	
						योग	16000	
				(15) मैसकोटि सोयम	10.00	बाज	4000	80%
						बास	1000	
						सीरस	3500	
						तुन	300	
						कचनार	5000	
						मूल्जू	2200	
				(16) डण्डी सोयम (सिलखोली)	10.00	बास	3000	80%
						बीड	300	
						सीरस	3200	
						तुन	2500	
						कचनार	2000	
						आपला	2500	
						शीशम	500	
						अन्य	2000	
योग	16000							
(17) डण्डी सोयम	10.00	बाज	3000	79%				
		बास	2000					
		बीड	300					
		सीरस	2200					
		तुन	2000					
		कचनार	1000					
		आपला	2500					
		मूल्जू	500					
		अन्य	2500					
		योग	16000					
(18) गैर सोयम	10.00	बाज	10000	78%				
		बास	3500					
		सीरस	500					
		मूल्जू	500					
		अन्य	1500					
		योग	16000					
(19) गैर क्यारी सोयम	10.00	बाज	100	76%				
		बास	6500					
		बीड	400					
		सीरस	1000					
		तुन	2000					
		कचनार	1000					

30.6.07 से
31.07.07 तक


				आवला	2500	
				जैटोका	2000	
				पूरुनु	500	
				योग	16000	
		(22)	उर्ग सोयम	10.00	आवला	18000
						71%
			दरुगी माड सजि (21)	कटखेत सोयम - I	10.00	बाज
						4500
						4000
						2500
						देवदार
						4200
						कचनार
						500
						महल
						300
						योग
						16000
						78%
		(23)	कटखेत सोयम - II	10.00	बाज	5000
						चीड
						4500
						सिंगल
						130
						तुन
						500
						जगा
						2000
						देवदार
						3670
						महल
						200
						योग
						16000
						77%
		(23)	पोजमेर सोयम	10.00	आवला	14000
						हरड
						1000
						बहेडा
						1000
						योग
						16000
						76%
		(24)	कंधोगी सोयम	10.00	बाज	4000
						चीड
						2200
						तुन
						1800
						जगा
						1000
						देवदार
						800
						कचनार
						1400
						पूरुनु
						1000
						नरम
						3000
						शिवाली
						1000
						योग
						16000
						77%
		(25)	दण्णाली सोयम	10.00	बाज	1500
						बास
						500
						सिंगल
						200
						देवदार
						300
						कचनार
						1000
						संभारा
						1500
						योग
						5000
						79%
			नगुण माड सजि (26)	कवारी सोयम - I	10.00	बाज
						200
						बास
						1800
						तुन
						1300
						जगा
						2900
						देवदार
						1500
						जैटोका
						1500
						सीसन
						500
						सिमला
						3000
						अरुणवा
						1500
						73%

-6-

						साधार	500	
						पगार	1500	
						योग	16000	
			(27)	उपारी सोमय -11	10.00	बाज	200	72%
						बांस	2416	
						बीड	1700	
						तुन	1300	
						अन्य	2000	
						देवदार	1600	
						जैटोफा	1000	
						शीशम	674	
						अन्य	5110	
						योग	16000	
			(28)	घोम सोमय	10.00	बाज	300	71%
						बांस	4000	
						बीड	1830	
						तुन	3000	
						देवदार	3700	
						शीशम	1170	
						समला	2000	
						योग	16000	
दिहरी जंगल का कुल योग :-					150.00		229000	

सारांश

जंगल	प्लांटिंग क्षेत्रफल हे० म०	रोपित पौधों की सं०
1 उत्तरकाशी	130	197000
2 दिहरी	150	229000
कुल योग :-	280	426000


 प्रभागीय वनाधिकारी
 दिहरी डेम वन प्रभाग - 11
 उत्तरकाशी

टिहरी डेरा वन प्रभाग, II, उत्तरकाशी। को हरी नागपालक, कृतिपूर्वक प्रशासन
 वर्ष 2005-06 के भूमि संरक्षण कार्यो का सारास

रेज का नाम	नाले / खंड का नाम	भूमि संरक्षण कार्यो का विवरण				
		बुशवूड	गली प्लग	स्टोन वेक डेम	वायर फेंट	लेण्ड स्टेबलाइजेशन
खुरमोला	जुगूल्डी	6	7	-	-	1
	वीवा	6	9	5	-	-
	नाकुरी	3	9	-	5	-
	डुण्डा	12	8	13	10	1
	खटू	6	8	10	5	-
	नालूपानी	7	6	-	5	-
	छमरोल	3	3	-	-	1
	बरसाली	7	-	26	-	1
	योग	50	50	51	25	4
दल्लीगाड	मुयारा	10	12	13	5	-
	दड़माली	20	18	-	10	1
	महेडा	20	18	23	10	1
	योग	50	48	36	25	2
कमान्द राजि	कोटी डोमालोकी	50	48	-	10	-
	बागी खंड	-	-	7	-	-
	साणो खंड	-	-	10	-	-
	रिखेडी खंड	-	-	8	15	-
	वाण्डा खंड	-	-	-	-	1
	भट गांव	-	-	-	-	1
	योग	50	48	25	25	2
नगुण राजि	क्यारी खंड	10	8	5	5	1
	कासी / अखडियाखंड	20	20	8	15	1
	लालरखंड	10	10	7	5	-
	बनाडी खंड	10	10	5	-	-
	योग	50	48	25	25	2
	कुल योग	200	194	146	100	10

उप वन संरक्षक
 टिहरी डेरा वन प्रभाग (डि०)
 उत्तरकाशी

Annexure-IV

Compliance status of recommendations made in minutes of meeting of Public Hearing held on 31.07.04 for Loharinag-Pala project (4x150)MW

S. No.	Recommendation	Action
01	In order to ensure that there is no adverse impact on environment due to the implementation of the project, suitable provisions should be made as per standards and approval should be obtained from the competent authority.	An Environmental Management Plan (EMP) covering Air Quality, Water Quality, Solid Waste Management, Sewage Disposal in labour camps, Traffic Management and Management of muck disposal area has been prepared and incorporated in the EIA report. The plan has been approved by MOEF while granting Environmental Clearance.
02	In order to ensure that there is no effect on the sub-surface geological structures of the nearby area, a detailed investigation should be made approval should be obtained from competent department and it should be ensured that all the recommendations are implemented.	Central Water Commission which is apex body of Govt. of India responsible for management of water resources of India has been appointed as prime design consultant for all project components including underground structures. M/s Geological Survey of India under ministry of mines Govt. of India are providing consultancy & supervision during the construction of the project. All blasting works are designed as per the norms fixed by Director General Mine Safety by Central Mining Research Institute, Roorkee / Nagpur. All the recommendations regarding measurement of subsidence / ground movement by latest / advanced geotechnical monitoring instruments are being installed to monitor the ground.
03	The minimum flow in Bhagirathi river should be regulated in such a way that there is no adverse impact on aquatic life and the water quality of the river is also not affected adversely.	The minimum flow at downstream of the barrage specified by MoEF in their Environment Clearance Order and its Amendment shall be ensured at the operation stage.

04	In order to ensure that the forest resources, flora and fauna and public life of the area is not affected adversely due to completion of the project, suitable management plan should be made and approval be obtained from competent department.	CAT Plan prepared by State Forest Department covers all these activities. Full amount of Rs. 38.72 Crores has been deposited by NTPC. Forest Department is the implementing agency. It is informed by Forest Department that implementation shall start after release of funds deposited by NTPC in CAMPA.
05	During all stages of the project, the local people should be given jobs on priority.	It is being complied as per the Project implementation agreement signed between NTPC & Govt. of Uttarakhand.
06	The rehabilitation of the affected people would be ensured as per the standards and compensation for the land acquired should be paid to the affected persons in time.	Complied and there is no pending issue related with rehabilitation.
07	During construction, explosives should be used only under inevitable conditions and in minimum quantity.	Being complied.
08	The facilities developed for project should also be made available to the local people and community development activities should be undertaken in the nearby villages.	The facilities developed for project is being made available to local people. Also a comprehensive community development scheme has been prepared through participative mechanism involving VDAC, District Authorities, Public Representatives & NTPC. A CD Works of Rs. 17.09 Cr. has been approved and is under implementation. Monitoring is being done under the Chairmanship of District Magistrate in a open forum in the presence of VDAC members, local people and Public Representatives.
09	A detailed Disaster Management Plan (DMP) should be prepared for the Project and its recommendations should be implemented.	Disaster Management Plan has been prepared by National Safety Council, Mumbai and project authorities have assured to implement the recommendations of the DMP.
10	NTPC should ensure that development of villages and rehabilitation plan as per the guidelines of Uttaranchal Government and cooperation form	A community development plan of Rs. 17.09 crore is under execution with the help of district administration. No rehabilitation work is pending.

	local people.	
11	During construction period, the laborers and their families should be suitably vaccinated .	The regular health check up is being carried out for the labor force.
12	The religious places and crematoriums should be suitably developed on the banks of the river.	Project authorities assured that facilities in consultation with village Panchayat shall be taken up as and when need arises.
13	During the construction of the project, the sewage from labour colonies should be disposed off through septic tanks and soak pits.	Being complied.
14	Information centers should be established to provide all information related to project to the local people and the people should be provided complete information.	A public information center (PIC) has already been established at NTPC office located at Bhatwari. All the data regarding land acquisition & CD Works are made available on demand.
15	Full details of the project should be published in the press and response/grievances of the general public should be suitably redressed.	<p>The executive summary of the project was kept at DM's Office, SDMs Office, Tehsil HQ, Jila Panchayat Office, Office of UPCL, PWD, Forest Office for the view of general public.</p> <p>Project details are available in Public Information Center for reference and information sharing. PAPs also approach the PIC for all type of grievance redresses. Further, NTPC officials at site can also be approached anytime for redressal of grievance, if any.</p>

COMMUNITY DEVELOPMENT / CSR WORKS UNDERTAKEN BY LHPP

Community development / CSR activities have been undertaken by Loharinagpala Hydro-electric Power project in the following areas;

- 1. Socio-Economic development**
- 2. Approach Roads to Project Affected village**
- 3. Infrastructure Development**
- 4. Education**
- 5. Health**
- 6. Training**
- 7. Afforestation**
- 8. Natural Calamity**

1. Socio-Economic development

- Award of petty contracts by NTPC of Value up to Rs.15 Lacs to Land oustees / local people through co-operative societies
- Engagement of Ex-Servicemen in security services through "Uttarakhand Poorve Sainik Nigam".
- Engagement of Land oustees / local people in the area of Computer Operation / Office Assistance / Horticulture works.
- Engagement of local vehicles / drivers for site movement.
- Engagement of staff bus & driver through local people.

2. Approach Roads to Project Affected village

- 6.0 km approach road constructed from NH-108 to top of Surge Shaft (Bhukki Kujjan road) by BRO
- 6.0 km approach road constructed from Surge shaft to Village Tihar by PWD (LMV)
- 4.0 km approach road constructed from NH-108 to Gunga Adit by PWD, UK
- 3.0 km approach road from Gunga Adit to Village Bhangeli by PWD (LMV)
- Pathway to cremation area of project affected villages
- 4 km approach road to Project affected village "Bhangeli"
- 5 km approach road to Project affected village "Tihar"

3. Infrastructure Development

- All directly affected villages (*i.e;* Tihar, Kujjan, Bhangeli, Jhala) / partially affected villages (*i.e;* Hurri Salang, Bhukki, Sunagar) electrified with Solar Lights. (10 Nos. Solar lights installed in each village)
- 15 km Road length electrified.

- 10 Nos. High Lighting Mast installed at various locations including at Gangotri & Vishwanath Temple, Uttarkashi
- Back up power provided to Gangotri through 63 kVA DG Set.
- Rs. 78 Lakhs towards road light from Gauri Kund to Kedarnath.
- Out of four project affected villages, every house of Jhala village has been provided Toilet. The amount has been released for construction of toilets in other three villages also.

4. Education

- Assistance for Coaching Institute of Uttarkashi.
- Provision of 5 Computers & peripherals to Inter College, Maneri.
- Grant of Rs. 300 Lakhs for creating a chair in Doon University, Uttarakhand

5. Health

- Grant of Rs. 800 Lakhs for medical equipment to Forest Hospital, Haidwani
- Medical check up & Health Camps in all project affected village.
- Augmentation of Drinking Water supply system in all project affected villages on deposit work basis through "Uttarakhand Pey Jal Nigam"

6. Training

- Sewing machines given & Stitching Training being provided in all project affected villages

7. Afforestation

- Tree plantation in Village Sunagar & Bhatwari
- Development of grasslands in all four project affected villages

8. Natural Calamity

Financial Commitment of Rs. 35.09 Lakhs has been granted for mitigation of natural calamity by;

- Extension of Disaster Management Centre building at Collectorate, Uttarkashi
- Help at the time of landslides, natural calamities

Annexure-VI**Muck Disposal Area & Capacity Details**

Date: - 02.02.2010

S. No.	Name of Package	Designated Muck Disposal Area as approved by MoEF	Capacity of Muck Disposal Area	Muck generated and filled in Muck Disposal area till 29.01.2010	Excavated Muck utilized till 29.01.2010	Balance Capacity of Muck disposal area	Expected Muck to be generated for balance works	Expected utilization of muck	Quantity of Muck expected for filling
	a	b	c	d	e	f=(c-d)	g	h	i=(g-h)
1.	Head Race Tunnel	11.875 Ha	13,57,000 Cum	1,12,000 Cum	50,000 Cum	12,45,000 Cum	5,89,215 Cum	1,76,000 Cum	4,13,215 Cum
2.	Power House & Penstock	17.119 Ha	10,80,000 Cum	2,05,000 Cum	Nil	8,75,000 Cum	7,50,000 Cum	Nil	7,50,000 Cum
3.	Barrage & Desilting Chamber	7.289 Ha	5,87,500 Cum	2,37,500 Cum	1,38,991 Cum	3,50,000 Cum	1,75,000 Cum	1,35,000 Cum	40000 Cum

Remarks: It is expected that because of actual drawings the quantities of muck may enhance. However the same is expected to be accommodated within the acquired area for the project. In such case, we may require additional designation of muck disposal areas from MoEF.

Financial provisions and expenditure for implementation of environmental conditions

Figures in Lacs

Si. No.	Description	Budget provision	Expenditure till March 09.
1.	Catchment Area Treatment Plan	3872.00	3872.00
2.	Compensatory Afforestation	167.00	167.00
3.	Environment monitoring studies programmes	192.95	3.37
4.	Establishing Environment Monitoring Lab / eqpt- Rain Gauge	45.40	3.99
5.	Stabilization of quarry sites	56.75	0.00
6.	Other Environment Management activities	1653.81	0.00
7.		5987.91	4046.36

Report of Non-official Expert Members of National Ganga River Basin Authority

Field Tour to the 600 MW Loharinag-Pala Hydro-Electrica Power Project and Surrounding Areas, Jan 28-30, 2010

R. Chopra, S. K. Sinha & R. H. Siddiqi

In a meeting taken by the Minister for Environment and Forests on 14. 01. 10, a committee was constituted to visit the site of the above Project to ascertain the status of compliance to the conditions of Environmental Clearance given to NTPC, the proponent of the project. At the out set, it is regretted that the field visit was ill-conceived in terms of time and its stated function of compliance monitoring. The study team had practically just one day, January 29, in the field.

The study team was received by NTPC officials at Uttarkashi when it arrived from Dehra Dun on January 28 evening. It was decided that the next day, first the visiting team would proceed to the Project office at Bhatwari, where NTPC would present the status of compliance. From there the team would go to the barrage site at Loharinag and return to Uttarkashi by the evening.

In the evening of the 28th, three local residents, Shri Prakash Singh Bhundari, Shri Madan Singh Rawat, both of Sainj village and Smt. Maheshwari Devi of Netala village also contacted us. They had come to appraise us with the difficulties and hardships that residents of some villages were facing due to the construction of Loharinag Pala project. It was decided that on the return journey from Loharinag, expert members would also visit a few villages, namely, Gungnani, Bhukki, Kujjan, Salang, Pala and nearby hamlets where drying up of springs and appearance of cracks in building were reported. However, due to paucity of time only Salang village was visited.

This report includes observations with reference to (i) The Specific Conditions and (ii) General Conditions identified in the letter No. J-12011/33/2004-1A.1 of February 8, 2005, granting Environmental Clearance to the above mentioned project and some related general comments.

Status of Compliance

Specific Conditions:

- (i) *Forestation, except compensatory forestation, under CAT Plan which was to be implemented over a three-year period has not been implemented.* According to NTPC's Compliance Report presented to the visiting team, the original CAT Plan was rejected by the State Forest Department of Uttarakhand. A new plan was prepared by the latter, which was reviewed by Indian Council of Forestry & Education (ICFRE). Since then there is no progress. The State Forest Department has yet to respond to ICFRE's revisions. In the meantime NTPC has deposited Rs.38.72 cr for the CAT Plan.

NTPC also gave Rs.1.67 cr for compensatory forestation. Out of this Rs.1.62 cr has been spent on planting about 426,000 saplings in an area of 280 ha with survival rates of 71 to 80 per cent according to NTPC's Report. *Due to inadequate time no field verification was done.*

The extent of Engineering Treatment under CAT could not be assessed due to lack of time.

- (ii) The condition that a study of long term sustainability of water should be initiated, in view of reports of receding of glaciers, was withdrawn later by MoEF.

It may not be out of place to mention here that the average power production at Maneri Bhali, a HEPP located on Bhagirath downstream of Loharinag Pala, over the last 9 years(1997-98 to 2005-06) was 441.793 MU against the projected capacity of 545 MU. One of the important reasons given by the project authorities for this shortfall was that less water was available in the river Bhagirathi especially during winter months.

- (iii) According to information provided by NTPC no R & R Plan was prepared in consultation with the State Government. Instead a socio-economic study of the area done by G.B. Pant University, Pantnagar, was submitted by NTPC to MoEF well after the stipulated 3 months period. However, NTPC has claimed that there are no pending issues of R & R.
- (iv) Forest clearance was obtained from MoEF and the State Government of Uttarakhand.
- (v) In its Compliance Report NTPC has claimed that all 15 conditions of the Public Hearing have been fulfilled.

Due to inadequate time no field verification was done.

- (vi) The minimum water flow condition has now been changed. MoEF has expressed a view that the project will function only for six months in a year so that the lean season flow can be released totally to preserve the environment.

It is not sufficient to prescribe environmental flow only for the lean season, but environmental flows should be worked out for the entire regime of flow in a year. An accepted methodology should be used for this purpose. It is suggested that should such a condition be eventually imposed by the GoI, a strong monitoring mechanism in the form of a committee including local organizations must be put in place.

- (vii) NTPC's Compliance Report claims fulfillment of seismic zoning guidelines.

General Conditions:

- (i & ii) *No field verification of fuel supply and medical facilities at the sight was possible since the project work has been temporarily suspended.*
- (iii) NTPC was asked to constitute a Monitoring Committee for R&R which was to include representatives of project-affected persons from SC/ST category and a woman beneficiary. Instead a Village Development Advisory Committee (VDAC) constituted by the DM Uttarkashi has been formed.

This is unacceptable. There is a difference between monitoring and advising. Further, NTPC has failed to realize that resettlement and rehabilitation are two different issues. Damage to private property and common property resources during the construction and operating periods must be addressed on a continuing basis. The VDAC should be abandoned and a proper monitoring committee for R&R should be formed, chosen by the affected villages and including an adequate number of SC/ST and women representatives. This Committee should be empowered to enforce its recommendations.

In the course of construction of hydro projects and even after their commissioning problems can arise that affect the lives and livelihoods of the local population. During a short tour of Salang hamlet of Tihar village we visited several houses where families showed cracks that they said had developed due to blasting by NTPC (See Pictures 1 to 4 below). The affected households claimed that they had drawn the attention of the NTPC officials to this problem but the company was not redressing their concern.

Smt. Gilasi Devi also of Salang hamlet and a former Kshetra Panchayat member complained that during construction a lot of dust was generated, creating health problems for the local people especially the young and the old. She pointed out that blasting had

affected the flow of a local spring which was used by the villagers and their animals for obtaining drinking water (Picture 5). Despite several complaints by her to the concerned Community Development officials of NTPC, no satisfactory alternate arrangements had been provided. Mr. A.K. Chaudhary of NTPC pointed to a miserable water container that had been provided for the animals (Picture 6). It only indicates the callous attitude of NTPC personnel towards the local people.

Hence there is a clear need for an empowered grievance redressal mechanism.

- (iv) *No verification was possible since there were no labourers at the site.*
- (v) *No restoration work of the construction area, dumping site, quarries, etc. has been undertaken yet.*

A plan has been prepared by IIT-Roorkee. At present there is only an arrangement to dump the excavated material at dump sites. Some of the retaining walls still need to be completed. Some sites are along very steep gradient of the river channel sides extending all the way down to the river. There may be a possibility of the toe of the retaining structure getting eroded during high flow season, which would cause an avalanche of the muck. Closure of Pala Maneri HEPP in the past due to excessive silt in the water has been reported in the press. There is a need to investigate this thoroughly. A material balance of the muck generated from all excavations and that stored in the storage sites may give a clue.

- (vi) *Not verified by the team.*
- (vii) *No Multi-disciplinary Committee of subject experts has been constituted by NTPC to oversee the effective implementation of the suggested environmental and social safeguard measures. Instead NTPC has sought to pass on the responsibility to a state level committee of officials, hardly any of whom may be an expert. Such a state level committee overseeing scores of projects is unlikely to be effective.*
- (viii) *MoEF may verify from its Regional Office in Lucknow whether this condition has been complied with or not.*

Some General Observations

The No Objection Certificate issued by the UECPCB (No. U.E.P.P.CB./H.O./NOC-139/04/2039 of 02.09.04) clearly states that "implementation of project shall not adversely affect the forest, flora & fauna and human beings in the area." A study team would require a few days and not a few hours, to verify this and other conditions mentioned in the NOC. Also, since the work is presently suspended, physical verification of issues like effectiveness of soil erosion and dust control measures was not possible. It was mentioned by the NTPC personnel that the crushers did not have cyclones to trap fugitive emissions as envisaged in the EIA report; instead spraying of water was adopted to control such emissions.

Listening to the presentation by NTPC of the safeguard measures implemented, our personal reaction was that at best the compliance is more in form than in content. It was an attempt to show that various formalities had been complied with, without concern for what the outcomes were.

We were told that all Project structures are underground and once they are completed they would not be any adverse effect on the environment. The EIA report mentions that there have been a number of avalanches in the Bhagirathi valley in the past and it is in a geologically unstable zone. The ecosystem is fragile and can be easily destroyed. During the 1991 Uttarkashi earthquake, the maximum number of deaths occurred in Jamak village. It lies just above the entrance to the tunnel of the Maneri-Bhali I HEP. It is quite conceivable that frequent blasting during excavation of the

tunnel had weakened the houses in the village leading to their catastrophic collapse. The epicentre of that earthquake was in the vicinity of the same barrage.

Only a small part of HRT has been excavated so far. Damage to water sources and dwellings in the villages will increase as the work progresses as in many other locations in the Himalayas where such projects have been constructed.

Visual observations of the state of the river from the Tehri dam reservoir to Harsil made it clear that the Tehri dam and the Maneri-Bhali I & II barrages have destroyed the free-flowing character of the Bhagirathi River in its pristine upper reach and that the Loharinag-Pala project will further extend this destruction into its uppermost reach.

Given that the river has now been designated as India's National River, in view of the unique status that it has in the hearts and the minds of the Indian people, we would recommend that:

- (i) The Loharinag-Pala project be cancelled*
- (ii) Steps be taken for the decommissioning of the existing dams and barrages on the river in a reasonable period of time and*
- (iii) No new projects are contemplated on the river till Hardwar so that the entire mountainous reach of the river from Gaumukh to Hardwar regains its natural, pristine free-flowing character.*

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RE: Report on Loharinag Pala

Sunday, 7 February, 2010 1:09 AM

From: "Rashid Siddiqi" <rashidsiddiqi202@hotmail.com>

To: bokolia@yahoo.com

Folders

- Inbox (349)
- Drafts (4)
- Sent
- Spam (161) [Empty]
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Dear Shri Bokolia,

I was finally able to open your mail. Your comments are in conformity with our report, which you have probably received by now. You may have noted that our report contains some additional comments. We look forward to your support for these also.

With regards,

Sincerely,

R. H. Siddiqi

> Date: Fri, 5 Feb 2010 12:55:40 +0530

> From: bokolia@yahoo.com

> Subject: Report on Loharinag Pala

> To: rashidsiddiqi202@hotmail.com

> Sir

> Please see the attachment as draft of suggestive measures of Report on Loharinag Pala project. Please send your comments at the earliest.

> (Lalit Bokolia)

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