

FROM:

H.O. J-13011/30/87-1A-III

H.C. I

Telegram : PARYAVARAN,  
NEW DELHI

Telex :

Telephone :

Fax :

Telex : W-08183 DUE IN  
FAX : 300070

भारत सरकार

पर्यावरण एवं वन मंत्रालय

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT &amp; FORESTS

पर्यावरण भवन, पी. जी. ओ. कॉम्प्लेक्स

PARYAVARAN BHAVAN, P.G.O. COMPLEX

लोदी रोड, नई दिल्ली-110003

LODI ROAD, NEW DELHI-11

Dated: 12.5.92

OFFICE MEMORANDUM

Subject: Rihand STPP-Stage-II, 2x500 MW - Environmental clearance regarding.

NTPC may refer to their letter No. CEV-91-Rihand dated 7.10.91 and 20.2.92 on the above subject.

2. The above proposal has been examined and the undersigned is directed to convey environmental approval subject to the implementation of the following conditions and safeguards -

- 1) A single stack having bi-flues of height not less than 275 meters should be provided for both the units.
- 11) Electrostatic precipitators (ESPs) with operational efficiency of not less than 99.5% should be provided. The particulate emissions from the stacks should not exceed the prescribed standard of 150 mg/Nm<sup>3</sup>. In the event of the emissions exceeding the prescribed limit the plant will have to be shut down.

111) Provision for dry collection of fly ash must be made. A plan for full utilisation of fly ash should be prepared as given below and submitted to this Ministry within three months:

- 20% of the fly ash should be put into use within one year of commission.
- There after 10% progressively for next 8 years and 100% within 9 years.

1iv) The requirement of land for ash disposal should be based on ash utilisation plan. The ash pond should be lined to avoid any ground water contamination. Recycling and reuse of ash pond effluent and other

K. S. MURTHY  
संसाधन



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effluents from the power station should be done so as to ensure 'Zero discharge'. No discharge of liquid effluents in the Rohand reservoir will be permitted.

- v) Space provision for installation of FGD plant should be provided, so that the same could be installed, if considered necessary on the basis of one year ambient air quality data feedback after operation of the plant.
- vi) Affected families should be properly rehabilitated in consultation with the State Government.
- vii) The WTPC should prepare a plan for the green belt and submit for approval within a period of 3 months.
- viii) A baseline health survey, especially for pulmonary functions should be done in the region, and this should be followed by periodic tests after the commissioning of the power station in order to monitor the impact, if any, on the health of the local inhabitants.
- ix) At least six air quality monitoring stations should be set up in consultation with the State Pollution Control Board for estimation of SO<sub>2</sub>, NOX & SPM. The exact location of the monitoring stations should be decided in consultation with State Pollution Control Board as also based on meteorological conditions, human settlements, vegetation etc. Stack emission should be monitored by setting up of automatic stack monitoring units for SO<sub>2</sub> and SPM measurements. The data on stack emission and ambient air quality should be submitted to the State Pollution Control Board once in three months and to this Ministry once in six months alongwith the statistical analysis.
- x) Air and water quality standards as prescribed under the Environment(Protection) Act, 1986, the Air(Prevention and Control of Pollution) Act, 1981 and the Water(Prevention and Control of Pollution) Act, 1974 should be complied with including the revised standards that may be prescribed in future.
- xi) Hot water coming out of condensers should be adequately cooled so that its temperature at the point of confluence in the main water bodies do not exceed the standard of 5°C over and above the ambient temperature of the receiving water.

3. The conditions stipulated may be varied or new conditions may be added or the clearance revoked, if necessary in the interest of environmental protection,

(182) K. S. MURTHY  
संसाधन (HR) and



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and if there is any change in the project profile, non-satisfactory implementation of the stipulated conditions, etc..

4. The stipulations will be implemented, among other, under the Water(Prevention & Control of Pollution) Act, 1974, the Air(Prevention and Control of Pollution) Act, 1981 the Environment(Protection) Act, 1986 and the Public Liability Insurance Act, 1991.

5. Necessary funds should be provided in the project for implementation of the above mentioned conditions and environmental safeguards. The funds ear-marked for the environmental protection measures should not be diverted for other purposes and yearwise expenditure should be reported to this Ministry.

S. Anand  
Joint Director(S)

The Chairman,  
National Thermal Power Corporation,  
Scope Complex,  
Lodi Road,  
New Delhi-110003.

Copy for necessary action to:-

1. Shri Kalp Nath Rai, Minister of State for Power and Non-Conventional Energy Sources, Shram Shakti Bhawan, New Delhi.
2. Chief Minister, Uttar Pradesh, Lucknow.
3. Shri Virendra Singh, Member of Parliament, 161, North Avenue, New Delhi.
4. The Secretary, Department of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
5. The Chairman, Central Electricity Authority, Seva Bhawan, R.K. Puram, New Delhi-110066.
6. The Chairman, U.P. Pollution Control Board, Pragati Kendra, IIInd Floor, Kapurthala Commercial Complex, Ailganj, Lucknow-226020.
7. The Regional Office, Min. of Environment & Forest, 4, Windsor Place, Lucknow-226001.
8. Guard file.

( Pr. S. Bhosalk)  
Joint Director(S)

एन  
श्रीनिवास मुनि (मानव संसाधन)  
K. S. MURTHY  
अध्यक्ष (HR)



FAX TO

SHRI R. B. PATHAK  
DGM (CONSTN), RIHAND

FAX NO - 0522-636009

No. J.13011/30/S7-IX.11(T)  
Government of India  
Ministry of Environment and Forests

Paryavaran Bhavan  
CCO Complex,  
Lodi Road,  
New Delhi-110003.

February 22, 1999.

Subject: 2 x 500 MW Rihand Stage-II Thermal Power Project of M/s National Thermal Power Corporation Ltd. - Revalidation of Environmental Clearance reg.

Reference is invited to letters No. J.3/1200/F-98/3/003/B dated 11<sup>th</sup> and 29<sup>th</sup> December, 1998 and No. CC:EDE:0000.999:03 dated 5<sup>th</sup> and 8<sup>th</sup> February, 1999 regarding the above mentioned subject.

2. The 2 x 500 MW Coal Based Rihand Stage-II Power Project was accorded environmental clearance in May, 1992 stipulating a number of safeguard measures. Keeping in view the geo-hydrological studies of ash pond area and the feasibility studies being undertaken for backfilling of Open Cast Mines by M/s Coal India Limited, it has been decided to revalidate the environmental clearance accorded to the project in May, 1992 with following amendments and additional conditions :-

- i) NTPC would, subject to techno-economic feasibility and environmental suitability for backfilling of Mine(s) with fly ash being established in the study being conducted by Coal India Limited, take up atleast one Mine in Sioreauli area for backfilling in ash, in consultation with CIL within three months of receipt of study report.
- ii) Ash pond area need not be lined keeping in view the soil profile. However, periodic monitoring of ground water in tube wells around the existing ash pond and geo-chemical analysis of soil and ground water should be undertaken to monitor changes in the chemical characteristics.
- iii) For maintaining the water quality of the Rihand Reservoir, NTPC should ensure that effluent discharge into the Reservoir is strictly in conformity with the applicable standards.

के. श्रीनिवास मूर्ति/K. S. MURTHY  
अपर महाप्रबंधक (मानव संसाधन)  
Addl. General Manager (HR)  
रेहान्द/NTPC Ltd. Rihand  
Sonebhadra (U.P.)

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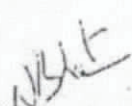
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TO: 636009


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- iv) NTPC should get NOC from UPPCB transferred in favour of Riband Power Project instead of Singrauli Unit-II.
- v) As stipulated in condition No. viii of the clearance letter of 12<sup>th</sup> May, 1992, baseline health survey should be immediately undertaken

3. All other conditions stipulated earlier remain unchanged and should be strictly implemented for Stage-II of the project.

  
(Nalini Bhat)  
Additional Director

Shri T. Shankaralingam,  
Executive Director (Engg.),  
National Thermal Power Corporation Ltd.  
Plot No. A-8-A, Sector-24,  
NOIDA (U.P.)-201 301.

  
के. श्रीनिवास मूर्ति/K. S. MURTHY  
अपर महाप्रबंधक (मानव संसाधन)  
Addl. General Manager (HR)  
एनटीपीसी लि. रिहन्द/NTPC Ltd. Riband  
सोनमढ़ (उप्रो)/Sonbhadra (U.P.)



**By Speed Post**

No. J-13011/ 57/ 2008-IA.II(T)  
Government of India  
Ministry of Environment & Forests

Paryavaran Bhawan  
CGO Complex, Lodi Road  
New Delhi-110003

Dated: 5<sup>th</sup> February, 2009

To

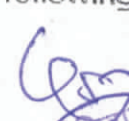
M/s National Thermal Power Corporation Ltd.  
Plot No. A-8A, Sector 24,  
Post Box No.13  
Noida-201301,  
Uttar Pradesh


**Sub: Rihand Super TPP, Stage-III (2X500 MW) at Bijpur village, District Sonbhadra, Uttar Pradesh M/s NTPC Ltd.-Environmental Clearance regarding.**

The undersigned is directed to refer. to your communication no CC:ESE:1240:2008:GEN:03B dated 24.09.2008 regarding the subject mentioned above. Subsequent information furnished vide letter dated 16.12 .2008 has also been considered.

2. It is noted that the proposal is for grant of environmental clearance for setting up of a 2x500 MW thermal power project as an expansion stage-III within the existing complex. The land requirement for the project is 730 acres, which includes 430 acres for ash disposal, 150 acres for main plant and 150 acres for railway siding and pipeline corridor. Water requirement will be met from the discharge channel of Rihand STPP Stage-I. No additional water will be drawn from Rihand Reservoir. Public hearing was held on 20.6.2008. No National Park and Wildlife Sanctuary is located within 25 Km from project area. Total cost of the project is Rs 4572.96 crores, which includes Rs. 486.50 crores for environmental protection measures.


3. The proposal has been considered and Ministry of Environment & Forests hereby accords environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions:-

  
K. S. MURTHY  
ज्य. महाप्रबंधक (मानव संसाधन)  
General Manager (HR)  
NTPC Ltd. Rihand

  
विजय कुमार श्रीवास्तव V. K. SRIVASTAVA  
ज्य. महाप्रबंधक (पर्यावरण)  
General Manager (Env)  
NTPC Ltd. Rihand




- (i) No additional land shall be used/acquired in excess of 730 acres for any activity/facility of this project.
- (ii) Ash pond shall be at least 500 m away from FRL of Govind Ballabh Pant Sagar (Rihand Reservoir)
- (iii) Sulphur and ash contents in the coal to be used in unit-I shall not exceed 0.3% and 41%, while for unit-II, 0.38% and 37% respectively at any given time.
- (iv) A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments for SO<sub>x</sub>, NO<sub>x</sub>, Hg and Particulate. Exit velocity of flue gases shall not be less than 22 m/sec.
- (v) High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm<sup>3</sup>.
- (vi) Space provision shall be kept for retrofitting of FGD, if required at a later date.
- (vii) Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- (viii) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. The project authorities should adhere to the provision stipulated in the fly ash notification of September, 1999 and as amended in August, 2003 in regard to fly ash utilization. Unutilized fly ash and bottom ash shall be disposed off in the ash pond.
- (ix) Closed cycle cooling system with cooling towers shall be provided. COC of at least 4 shall be adopted and the effluents shall be treated as per the prescribed norms.
- (x) The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.
- (xi) A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.
- (xii) Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.
- (xiii) Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Details of these measures along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry at Lucknow.
- (xiv) Storage facilities for auxillary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in the DMP. Sulphur content in the liquid fuel shall not exceed 0.5%.

  
 के. श्रीनिवासी मूर्ति/K. S. MURTHY  
 महाप्रबन्धक (मानव संसाधन)  
 (HR)



- (xv) Regular monitoring of ground water in and around the ash pond area including heavy metals (Arsenic, Mercury, Cr, lead etc.) shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry.
- (xvi) A green belt of adequate width and density shall be developed around the plant periphery covering 1/3 of project area preferably with local species.
- (xvii) Adequate funds shall be allocated for undertaking CSR activities.
- (xviii) First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- (xix) Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.
- (xx) Regular monitoring of the ambient air quality in the impact zone shall be carried out and records maintained. In case the air quality levels exceed the prescribed standards, necessary corrective measures shall be taken.
- (xxi) Regular monitoring of ground level concentration of SO<sub>2</sub>, NO<sub>x</sub>, SPM and RSPM shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry.
- (xxii) A detailed plan for health monitoring in the area within the impact zone shall be prepared and implemented along with local administration. The plan should, besides others, also provide for monitoring of respiratory disorders. The plan should be submitted within 3 months to this Ministry and its Regional Office at Lucknow.
- (xxiii) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (xxiv) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution

  
 के. श्रीनिवास मूर्ति/K. S. MURTHY  
 महापबंधक (मानव संसाधन)



Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>.

(xxv) A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.

(xxvi) Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry/ Regional Office/CPCB/SPCB.

(xxvii) Regional Office of the Ministry of Environment & Forests located at Lucknow will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will upload the compliance status in their website and update the same from time to time. Criteria pollutant levels (stack and ambient levels) will be displayed at the main gate of the power plant.

(xxviii) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.

(xxix) The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.

(xxx) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Lucknow /the CPCB/the SPCB who would be monitoring the compliance of environmental status.

4. The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. MOEF may impose additional environmental conditions or modify the existing ones, if necessary.

5. The environmental clearance accorded shall be valid for a period of 5 years to start operations by the power plant.

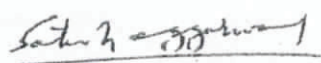
6. In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.

  
के. श्रीनिवास मुर्ती (मानव संसाधन)  
अपर महाप्रबंधक (HR)  
Rihand




7. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.


8. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

  
(Dr. S.K. AGGARWAL)  
DIRECTOR

**Copy to:**

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Secretary (Environment), Forests and Environment Department, Govt. of Uttar Pradesh, Room No. 13, New Buildings Vidhan Bhawan, Lucknow- 226 001.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Uttar Pradesh Pollution Control Board, PICUP Bhawan, 3<sup>rd</sup> Floor, B- Block, Vibhuti Khand, Gomti Nagar, Lucknow - 226 020 - with a request to display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office for 30 days.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
6. The Chief Conservator of Forests, Regional Office (CZ), Kendriya Bhandar, 5<sup>th</sup> Floor, Sector-H, Aliganj, Lucknow-226 020, Uttar Pradesh.
7. Director (EI), MOEF.
8. Guard file.
9. Monitoring file.

  
(Dr. S.K. AGGARWAL)  
DIRECTOR

  
के. श्रीनिवास मूर्ति/K. S. MURTHY  
अपर महाप्रबंधक (मानव संसाधन)  
General Manager (HR)  
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