



State Level Environment Impact Assessment Authority

Himachal Pradesh

Ministry of Environment, Forest & Climate Change, Government of India,

at Department of Environment Science & Technology,

Paryavaran Bhawan, Near US Club, Shimla-1

Ph: 0177-2656559, 2659608 Fax: 2659609

F. No. HPSEIAA/2013/186-3271

Dated: 29-9-2017

To

The General Manager

Ravi & Chenab Projects,

HP Power Corporation Limited,

Sundla, District, Chamba-HP-176312.

Subject:

Project proposal for Chanju-III HEP (48MW) by GM (Ravi & Chenab Project), HPPCL- Environmental Clearance-reg.

Sir,

This has a reference to your application dated 25/08/2017 seeking prior environmental clearance for the above project under Environment Impact Assessment Notification, 2006. The proposal has been appraised as per prescribed procedure in the light of provisions under the Environment Impact Assessment Notification, dated 14th September 2006 on the basis of documents viz; Form-I, Pre-feasibility Report, EIA/EMP etc. by the State Expert Appraisal Committee constituted by the competent authority in its 56th Meeting held on 19th September, 2017. The said project involves following salient features:

- a. **Online Proposal No.** : SIA/HP/RIV/18132/2013 dated 03/01/2017 for TOR's
SIA/HP/RIV/20089/2013 dated 25/08/2017 for EC
- b. **Project type** : Category 1 (c), River Valley and Hydroelectric Project
- c. **Project Location** : Setting up of 48 MW Chanju-III Hydro Electric Project on Chanju and Mahed Nallah in District-Chamba of Himachal Pradesh.
Location Coordinates: Longitude: 76°20'07" Latitude: 32°42'15"
Power House Location: 76°16'35" Latitude: 32°42'59"
- d. **Project Capacity** : 48 MW
- e. **EMP costs** : Rs. 32.45 Crores.
- f. **Institutional Mechanisms for Env. Protection** : The following will be responsible for maintenance of APCDs and Solid Waste Management sites:
i) Construction phase: Developer/ Project Proponent.
ii) Operational Phase: Developer/ Project Proponent.
- g. **Validity period of EC** : 10 Years from date of issue.

Em. The SEIAA examined the proposal in its 34th Meeting held on 22nd September, 2017 and considered the recommendations made by SEAC in its 56th Meeting held on 19th September, 2017. After considering the recommendations of the State Level Expert Appraisal Committee, the State level Environmental Impact Assessment Authority accords Environmental Clearance to the project as per provisions of the EIA Notification No. S.O. 1533 dated 14th September, 2006 of Ministry of Environment & Forests, Govt subject to strict compliance of terms and conditions as mentioned below. The Authority reserves the right to revise, revoke or impose additional condition at any stage.

SM **Part-A- Specific Conditions:**

PO **Construction Phase:**

1. "Consent to Establish" shall be obtained from H.P. State Pollution Control Board under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981 a copy of same shall be submitted to State Environment Impact Assessment Authority (SEIAA) before start of any construction work at the site.
2. Provisions shall be made for the housing of 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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

3. All required sanitary and hygienic measures should be taken before, during and after the completion of project.
4. A First Aid Room will be provided in the project both during construction and operation phase of the project.
5. Adequate arrangements for safe disposal of waste water and solid waste generated during the construction phase shall be ensured.
6. All the top soil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
7. Disposal of muck including excavated material during construction phase should not create any adverse effects on the neighboring communities and disposed-off taking the necessary precautions for general safety and health aspects of public, only in approved sites with the approval of competent authority.
8. Soil and ground water samples shall be got tested from authorized agency to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
9. Construction spoils including bituminous material and other hazardous materials including oil from construction equipments must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water. If necessary, oil trap should be installed where there is deployment of heavy machineries.
10. Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the competent authority.
11. Diesel generator sets during construction phase should have acoustic enclosures and should conform to Environment (Protection) Act, 1986 and Rules framed there under for air and noise emission standards. Low sulphur diesel type should be used.
12. The diesel required for operating DG sets shall be stored in under tanks and if required, clearance from Chief Controller of Explosives shall be taken.
13. Vehicles/ equipment deployed during construction phase should be in good condition and should conform to applicable air and noise emission standards, should have vehicle pollution check certificate and should be operated only during non-peaking hours.
14. Ambient noise levels should conform to residential standards both during day and night. Only limited necessary construction should be done during night time. Fortnightly monitoring of ambient air quality (SPM, SO₂ and NO_x) and equivalent noise levels should be ensured during construction phase should be closely monitored during construction phase so as to conform to the stipulated standards fixed by the competent authority.
15. Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and 2003 in case the project site falls within 100 KM distance of Thermal Power Stations.
16. Use of Ready-Mix concrete is recommended for this project.
17. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices and technologies available.
18. The approval of the Competent Authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments etc. as per National Building Code including protection measures from lightening etc.
19. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.
20. The proponent shall be liable for action under the Environment (Protection) Act, 1986 for the violation of any provision of the said Act.

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II- Operational Phase:

1. "Consent to Operate" shall be obtained from H.P. State Pollution Control Board under Water (Prevention and Control of Pollution) Act 1974 and Air (Prevention and Control of Pollution) Act 1981 a copy of same shall be submitted to State Environment Impact Assessment Authority (SEIAA) before start of any construction work at the site.
2. The installation of the Effluent Treatment Plant/Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Member Secretary, HPSEIAA-cum-Director, Department of Environment, Science & Technology before the project is commissioned for operation. Treated effluent emanating from STP shall be recycled/ reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of unused treated effluent shall conform to the norms and standards prescribed. Necessary measures should be made to mitigate the odour problem from STP.

3. The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert solid waste should be disposed of to the approved sites for land filling after recovering recyclable materials.
4. Diesel power generating sets proposed as source of backup power for elevators and common area illumination during operation phase should be enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. The proponent shall be required to use low sulphur diesel. The location of the DG sets may be decided in consultation with the competent authority.
5. Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
6. Necessary arrangements for rain water harvesting for roof run-off and surface run-off should be made.
7. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized as per norms prescribed by the Competent Authority and no public space should be used for this purpose.
8. A report on the energy conservation measures conforming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials and technologies, R&U Factors etc. and submitted to the SEIAA.
9. Energy conservation measures like installation of CFLs/ TFLs for the lighting the surrounding areas/ outside areas the building should be integral part of the project design and should be in place before project commissioning. Used CFLs/ TFLs should be properly collected and disposed off/ sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the possible extent.
10. Adequate steps should be taken to prevent odour problem from solid waste processing site and STP.
11. Sprinkling of water etc. be used for air pollution control during construction phase so as to avoid disturbance to the surroundings.

Part-B- General Conditions:

1. The environmental safe guards contained/given in the proposal for management of environmental pollution should be implemented in letter and spirit.
2. Bio-monthly Environment Monitoring Reports should be submitted to the SEIAA and MoEF&CC, Regional Office at Dehradun.
3. Officials from the State Environment Impact Assessment Authority, Regional Office of MoEF, Dehradun and Department of Environment, Science & Technology GoHP 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. A complete set of all the documents submitted to the State Authority Should be forwarded to the Regional Office of MoEF, Dehradun.
4. A complete set of all the documents submitted to the State Authority should be forwarded to the Regional Office of MoEF&CC, Dehradun.
5. In the case of any change (s) in the scope of the project, the project would require a fresh appraisal by this Authority.
6. The SEIAA reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safe guards and measures in a time bound and satisfactory manner.
7. All other statutory clearances shall be obtained, as applicable by the project proponents.
8. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and Environment Impact Assessment Notification, 2006.
9. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

Part-C- Special Conditions:

1. The Project Proponents shall release 15% minimum water discharge as per State Government policy. The Project Proponent would also install online flow measurement instruments for measuring discharge.

2. The Project Proponent shall carry out and submit study on Ecological Flows w.r.t. release of water for maintenance of ecological needs for the D/S affected areas of the project within one year period. The Project Proponent would also regulate minimum release of water based on the study but it would not be less than Government of Himachal Pradesh Policy.
3. The Project Proponent shall not allow the workers for extraction of fuel wood from nearby by forest land area.
4. The Project Proponent shall regularly monitor their Carbon footprints and would strive to be carbon neutral. The Carbon Balance sheet be submitted to Authority from time to time.
5. It shall be responsibility of the Project Proponent to obtain all the requisite approvals/ clearances/ NOCs as may be applicable to the project from competent authorities under different Acts/ Rules/ Regulation/ Order etc.
6. The construction material such as Grit/ Bajri, Sand shall be obtained from the competent authorized dealers/ suppliers only and no illegal mining etc. shall be caused/ resorted to.
7. The project proponent shall not undertake any tree felling without statutory clearance under Forest Conservation Act, 1980 from MoEF&CC, Gol and the tree felling shall be done by the HP State Forest Corporation as per the set procedure/ guidelines.
8. The lying of transmission lines shall not be part of present Environment Clearance.
9. The Project authorities shall increase the height of retaining structures by at least 1-2 mtrs above to filled/ dumping line by ensuring the sustainability of retaining structure from civil engineering i.e. horizontal and vertical stability point of view as well. The angle of repose shall not exceed 30 degree.
10. No muck disposal sites shall be located near the river/ nallah bank and shall maintain a vertical distance of more than 10 meters from river bank. The Project Proponent shall submit an affidavit to this account.
11. The Project Proponent shall raise the muck retaining walls on muck disposal sites before start of dumping in those sites.
12. The Project Proponent shall submit the details on quantum of generation of muck on monthly basis, its reuse and dumped, on a proper format for all the approved sites separately during the construction phase.
13. The Project Proponents shall also ensure that the reclamation works are undertaken immediately after the complete filling of the muck disposal site.
14. It shall be ensured that disposal of muck including excavated material during construction phase shall not create any adverse effects on the neighboring communities and it would be disposed off only after taking the necessary precautions for general safety and health aspects of public.
15. All the topsoil excavated during construction activities shall be stored for use in reclamation works, horticulture, landscape development etc. within the Project site.
16. The Project Proponent shall develop the muck dumping areas as village utility areas.
17. The diesel generator sets during construction phase shall have proper acoustic enclosures and should conform to the provisions of Environment (Protection) Act, 1986 and Rules framed there under for air and noise emission standards. The low sulphur grade diesel would be used for DG sets.
18. The Developer shall ensure that the vehicles/ equipment deployed during construction phase are in good condition and conform to air and noise emission standards and should have vehicle pollution check certificate from authorized agency.
19. The traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. The Developer shall ensure that parking is fully internalized as per norms prescribed by the competent authority and no public space is used for this purpose.
20. It shall be the responsibility of Project Proponent to ensure that the qualitative and quantitative aspects of CAT plan implementation are achieved and documented and to also ensure that CAT plan addresses the issue associated w.r.t. D/S affected areas as well.
21. It is also advised that bio-engineering aspects may also be incorporated/ exercised during the implementation of CAT plan.
22. The silt disposal from de-silting chambers shall be addressed adequately. No silt flushing shall be done during the lean season.
23. The LADC cost of total project cost shall not be the part of EMP.
24. The PP shall perform to achieve the targets, actions as shown in the EIA Report EIA/ EMP matrix w.r.t. baseline data, probable incremental pollution load and also as elaborated in the matrix w.r.t. component of activity, resultant pollution, mitigation action plan for during the post construction phases given in EIA/ EMP Report.
25. The Project Proponent shall establish effective Environment Monitoring Cell during the construction phase itself.

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26. The Proponent shall consult the local office of the Department of Forests or any other such authorized agency, university, institution for types of trees which should be planted for development of the green belt around the project site.
27. The Project Proponent shall provide fuel facility to the labour to avoid any illegal access to the forests by the laborers for fuel wood. Provision should be made for the supply of kerosene or cooking gas/pressure cooker to the laborers during construction phase.
28. The PP shall construct and provide toilets for use of laborer in the ratio of 1:20 (i.e. one toilet for twenty labourers).
29. The PP shall ensure proper handling of the municipal wastes, dispose off the non-biodegradable waste including biomedical wastes, if any, in a scientific manner; dispose hazardous wastes such used CFL etc. at the designated authorized hazardous wastes dumping site at TSDP Nalagarh. The PP shall also explore option for buy back mechanism for the waste CFL.
30. The PP shall reduce the number and capacity of DG sets as proposed and shall meet the requirement out of non-conventional sources of energy.
31. The PP shall undertake construction and development of STP during construction period and shall submit progress report of same to the Authority.
32. The PP shall undertake air quality monitoring during construction period/ phase on monthly basis besides ensuring that the ambient air quality is maintained and monitored at the project site during the construction phase.
33. During the construction phase, the PP shall ensure that water sprinkling is done for preventing the dust/air pollution.
34. A separate energy meter shall be installed for STP and log book shall be maintained on energy consumption. Interlocking of electric supply to STP and housing complex shall be ensured by the PP.
35. The PP shall submit photographs and video of the project progress during the construction phase at least three times, and once after operational stage.
36. The PP shall make all necessary arrangements for solid waste management viz; collection, segregation, transportation to the site and final disposal. The SWM and waste water management shall be the sole responsibility of the Developer.
37. The design of STP and waste management facilities as proposed by the developer shall be installed as proposed, failing which he shall be liable of legal action. It shall be sole responsibility of Developer to operate and maintain the STP.
38. The PP will plant the species of various types which are endemic to area and have high carbon sequestering potential.
39. Street lighting should be energy efficient-use of High Pressure Sodium Vapour (HPSV) lamps and CFL/LEDs should be promoted. Solar energy may be used for heating and outdoor lighting.
40. The solar lights shall be used for the street lighting.

Yours sincerely,

Archan

Member Secretary

State Level Environment Impact Assessment Authority
Himachal Pradesh

Dated:

2017

Endst. No. As Above.

Copy to following for further necessary action:

1. The Secretary (Environment), Ministry of Environment, Forests & Climate Change (MoEF&CC), GoI, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 110003
2. The Chairman, Central Pollution Control Board, Him Parivesh Bhawan, CBD-cum-office Complex, East Arjun Nagar, New Delhi-110032.
3. The Chairman, Himachal Pradesh State Pollution Control Board, Shimla-171009.
4. The Director (Environment, Science & Technology) to the GoHP, Shimla-171001.
5. Adviser (IA), MoEF&CC, GoI, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 110003.
6. Additional Pr. Chief Conservator of Forests, MoEF&CC, GoI, Regional Office, Dehradun, C/o Forest Research Institute, P.O. New Forest, Dehradun, Uttarakhand- 248006.
7. Monitoring Cell, MoEF&CC, GoI, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 110003
8. Record File.

Member Secretary

State Level Environment Impact Assessment Authority
Himachal Pradesh

SLA/HP/RIV/20089/2013: 5/5