



# एसजेवीएन लिमिटेड

मिनी-रत्न शिड्यूल 'A' पीएसयू  
निगमित पर्यावरण विभाग  
ISO 9001:2015 Certified

## कार्यालय:

कार्यकारी निर्देशक,  
निगमित पर्यावरण विभाग,  
शक्ति सदन, शानान,  
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संख्या: SJVN/CHQ/ENV/F27/2023-158

दिनांक: 29/11/2023

सेवा में,

अतिरिक्त प्रधान मुख्य वन संरक्षण(सी),  
पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय,  
क्षेत्रीय कार्यालय (NCZ), 25, सुभाष रोड,  
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**Sub: Six Monthly Monitoring Report on Compliance to Environmental Aspects (For period April, 2023 - September, 2023) i.r.o Naitwar Mori HPS (60 MW), Uttarakhand.**

**Ref: EC Letter No.: J-12011/16/2010/IA.I, June 16, 2016 (issued by MoEF&CC)**

Sir,

Kind reference is invited to above referred endorsement vide which Naitwar Mori Hydroelectric Project (60 MW) of SJVN in Uttarkashi District (Uttarakhand) is granted Environment Clearance. As per EIA notification 2006, submission of six-monthly compliance report is required as to be submitted. Further, it is also desired vide notification dated 26.11.2018 to submit half yearly compliance reports in soft copies only.


Therefore, Six Monthly Monitoring Report on compliance to Environment Aspect (for the period ending September 2023) is submitted for your kind information, please.

संलग्नक: यथोपरि।

सधन्यवाद,

भवदीय,

एसजेवीएन लिमिटेड के लिए,



(कार्यकारी निर्देशक)

प्रतिलिपि (केवल ईमेल के माध्यम से):

1. Inspector General of Forests, MoEF&CC, IRO, Shimla, C.G.O. Complex, Shivalik Block, Longwood, Shimla – 171001, Himachal Pradesh, E-mail: [iro.shimla-mefcc@gov.in](mailto:iro.shimla-mefcc@gov.in)
2. Member Secretary, H.P. State Pollution Control Board, Him Parivesh, Phase-III, New Shimla-171009, E-mail: [mnbspcb-hp@nic.in](mailto:mnbspcb-hp@nic.in)
3. Deputy Director General of Forests (C), MoEF&CC, IRO, 25, Subhash Road, Dehradun – 248001, E-mail: [moef.ddn@gov.in](mailto:moef.ddn@gov.in)

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पंजीकृत एवं कॉर्पोरेट कार्यालय: एस जे वी एन लिमिटेड, शक्ति सदन, शानान, शिमला, हिमाचल प्रदेश-171006



**Six Monthly Monitoring Report on Compliance to Environmental Aspects (For Period Ending September, 2023)**

<b>A) Name of Project</b>	Naitwar Mori HEP (60 MW)
<b>Type of the Project</b>	Hydroelectric
<b>Location</b>	PO Mori, Tehsil Mori, District Uttarkashi, Uttarakhand.
<b>ContactAddress</b>	
<b>(a) Concerned Project Head</b>	Head of Project, PO Mori, Tehsil Mori, District Uttarkashi, Uttarakhand, PIN 249128
<b>(b) Concerned Environment Division (Project)</b>	Head (Environment), PO Mori, Tehsil Mori, District Uttarkashi, Uttarakhand, PIN 249128
<b>(c) Concerned Environment Division (Corporate)</b>	Head (Environment), SJVN Corporate Headquarters, Shanan, Shimla, HP, PIN 171006 Contact No. 0177-2660198
<b>Environment Clearance</b>	J-12011/16/2010/IA.I dated 16.06.16 and corrigendum issued vide even no. dated 07.08.18

**PART – A: Specific Conditions**

<b>S.No.</b>	<b>Condition of Environment Clearance</b>	<b>Status</b>
i.	The following Catchment Area Treatment (CAT) Plan as proposed in the EIA/EMP report (Chapter – 1 in the EMP dated February, 2011) and mentioned vide letter no. SJVN/AGM/NMHEP/PEC/11-431 dated 02.09.2011 shall be strictly implemented in consultation with Uttarakhand Forest Department. Major works shall be completed before impounding. The financial allocation of Rs. 769 lakhs for CAT plan implementation shall not be diverted for any other purpose. As per plan, the area of CAT is 3995.28 ha.	The amount, i.e. Rs.12.9666 Crores against implementation of CAT plan has been deposited by SJVN in CAMPA fund.  In this regard, about Rs. <b>483.8812</b> lakh and Rs. 461.31 lakh has been spent by Tons Forest Division and Govind Wild Life Sanctuary & NP, Purola respectively till date (total Rs. 945.19 lakh). ( <b>Annexure-I</b> )
ii.	The R&R Benefits for the land losing households will be as per the National Rehabilitation and Resettlement Policy, 2010 of SJVNL as well as NRRP – 2007 whichever is higher. Adequate publicity of the compensation package of NRRP 2007/SJVNL R&R Policy 2010 shall be given in the affected villages. All R&R	R&R Plan of NMHEP is in line with the National Rehabilitation and Resettlement Policy (NRRP) – 2007.  R&R Plan of NMHEP was notified in the Official Gazette of Uttarakhand on 04.11.2017 and the same was published in two daily newspapers in the local area before its implementation. Also, the same

	issues shall be completed before commissioning of the project.	has been uploaded in the official website of District Uttarkashi. The copies of R&R Plan have also been provided in the office of SDM Purola, Tehsildar Mori, BDO Mori, Panchayat Pradhans and villagers.
iii.	A monitoring committee for R&R shall be constituted which must include representatives of project affected persons from SC/ST category and a women beneficiary.	The village-wise R&R/Grievance Redressal Committee has been constituted under the Chairmanship of ADM-cum-R&R Administrator, Uttarkashi comprising of SDM, BDO, SC/ST representative, Women representative, Panchayat Pradhan (representative of PAFs) and representatives of project management.
iv.	All the commitments made during the public hearing shall be fulfilled completely by the project proponent.	The commitments viz infrastructural development works, community development works, employment to the locals, hiring of local contractors, hiring of local vehicles, technical education to the local youth, merit scholarship schemes etc. made during public hearing have been included in R&R Plan of the project which being implemented through R&R administrator (i.e. ADM-Uttarkashi) appointed by Govt.
v.	Consolidation and compilation of the muck shall be carried out only in the designated muck dumping sites as submitted in the EIA/EMP Report & in the reply submitted in February, 2011. As per the proposed muck disposal plan, out of the 7,11,240m <sup>3</sup> muck generated 30-40% will be utilized as construction material and remaining 4,29,583 m <sup>3</sup> will be dumped at the 2 designated disposal areas in 4.5 ha. The identified muck dumping sites shall be at least 30 m horizontally away from high flood level (HFL).	Presently around 8.72 lakh M <sup>3</sup> of muck has been generated out of which around 4.34 lakh m <sup>3</sup> has been reutilized for development of construction material, roads and facility areas. Remaining 4.38 lakh m <sup>3</sup> of muck has been dumped in two dumping sites. These dumping sites are located 30 m horizontally away from HFL of river Tons.
vi.	A minimum environmental flow of 3.55 cumecs i.e. average river discharge in the 4 consecutive leanest months in the 90% dependable year shall be have to be maintained. However, 5.0 cumecs shall be maintained as environmental flow during September – October and March – April months. Monsoon flow shall be 30% of the total Monsoon discharge.	The environment flow arrangement has been built in the barrage structure and specified environment flow shall be maintained during operation stage of the project.
vii.	Continuous monitoring system for the flow rate measurement shall be installed and data be displaced at appropriate site for information of civil society and stakeholders. Six monthly results shall be	Shall be ensured during operation stage of the project.

	submitted to the concerned Regional Office of the Ministry and SPCB	
viii.	The Fishery Conservation & Management Plan as proposed in the EMP & in the reply submitted in August, 2011 shall be implemented completely in consultation with the Fisheries Department, Government of Uttarakhand. As proposed, the construction of fish ladder shall also be taken up and allocated budget of Rs. 1.00 Crore shall not be diverted for any other purpose.	Vertical slot type fish pass design has been finalized based upon recommendation of CIFRI. Accordingly, the work for construction of Fish Ladder is in progress.
ix.	Real time telemetry and data acquisition system including all weather hydro meteorological stations shall be installed for in-flow monitoring and advance flood warning. Advance flood warning and advance communication systems shall be installed in consultation with the downstream authorities.	A hydro meteorological station has been set up at the SJVN Site Office near Barrage. It measures the ambient temperature, wind speed, relative humidity, wind direction, rainfall and dew point. Further, the procurement/installation of advance flood warning system (Early Warning System) at three location in the Catchment area is under process.
x.	As proposed in the EMP, the Compensatory Afforestation Programme on 79.76 ha of land with soil binding species @3000 plants/ha and broad leaved species @ 2000 plants/ha with the help of State Forest Department in the degraded forest area shall be strictly taken-up. The allocated grants of Rs.3.74 Crores shall not be diverted for any other purpose.	As part of diversion of forest land, compensatory afforestation over 80.00 ha of civil soyam and forest land has been proposed at a cost of Rs.1,84,24,160/-. The said amount has been deposited with Compensatory Afforestation Fund (CAF) Uttaranchal as part of compensatory levies for compliance to Stage – I Forest Clearance.  The compensatory afforestation works have been completed on 80.00 hectare of land by Forest deptt and maintainance work is in progress.
xi.	Greenbelt development along the approach roads, residential areas, office complex, barrage site and along the reservoir as proposed in the EIA/EMP with 50 different plant species shall be undertaken immediately and allocated grant of Rs. 44 lakhs shall not be diverted for any other purpose.	2430 nos. of various species of tree/grass saplings like, <i>jackranda</i> , <i>gulmohar</i> , <i>alstonia</i> , <i>silver oak</i> , <i>kachnar</i> , <i>deodar</i> , <i>pomegranate</i> , <i>local bamboo</i> , etc. have been planted in consultation with State Forest Department at appropriate locations in the project area. Plantation of remaining saplings is being taken up in synchronization with construction work.
xii.	The Biodiversity Conservation and Management Plan shall be taken-up strictly as outlined in the EIA/EMP report and implemented in consultation with the State Forest Department. The allocated grants of Rs. 43 lakhs shall not be diverted for any other purpose. A report of	The detailed Biodiversity Conservation and Management Plan for Rs. 43.00 lakh has been prepared by CF Yamuna Circle, Dehradun & DFO, Tons Forest Division, Purola. Accordingly, SJVN has deposited Rs. 43.00 lakh to DFO Tons, Forest

	implementation shall be included in the six monthly compliance report to be submitted to the Ministry.	Division, Purola on 22.10.2019 for implementation.  DFO, Tons Forest Division, Purola vide his letter No. 1731/19-3, dated 17.11.2023 has informed that an amount of ₹ 3.81 Lakhs has been spent in FY 2022-23 against Biodiversity Conservation and Management Plan ( <b>Annexure-I</b> ). With this the total amount of ₹ 28.2 lakh has been spent so far against Biodiversity Conservation and Management Plan.
xiii.	Equipment likely to generate high noise levels shall meet the ambient noise standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000 as amended in 2010 under the Environment (Protection) Act, 1986 (EPA). For this necessary insulators etc. may be ensured.	Noise level data is got monitored by SJVN from Pollution Control Research Institute, BHEL, Haridwar from 20.06.2018 onwards. The noise level data is being submitted to Regional Office, MoEF&CC Dehradun as part of six-monthly monitoring report.  All high noise generating equipment's have been provided with mufflers as per manufacture's specification.  Noise level data monitored on 02-05 August 2023 by SJVN from Pollution Control Research Institute, BHEL, Haridwar is attached as <b>Annexure-II</b> .
xiv.	Any other clearance from any other organization/department, if required shall be obtained before commencing the project.	Condition is being complied with.
xv.	As outlined in the report submitted dated 29.12.2011 for an amount of Rs.6.26 crores shall be spent for the Local Area Development in the project	The Rehabilitation and Resettlement Plan of NMHEP, consisting of infrastructural and community development works is being implemented through R&R Administrator i.e. ADM Uttarkashi who is appointed by Govt. of Uttarakhand.  In this regard, a budget of Rs.1445 lacs have been deposited with R&R Administrator, Uttarkashi out of which an amount of Rs. 800.45 lacs have been incurred as follows: a) Rehabilitation grant – Rs.163.26 lacs b) Subsistence allowance – Rs.65.30 lacs c) Health care – Rs.125.00 lacs d) Educational facilities – Rs.61.92 Lacs e) Recreational Facilities– Rs.2.35 Lacs. f) Widow Pension: 40.82 Lacs

		<p>g) Infra &amp; Community Development activity - Rs.284.03 Lacs.</p> <p>h) Income generation scheme- Rs 40.80 Lacs.</p> <p>i) Subsistence allowance- 16.97 Lacs</p>
xvi.	Two openings in the dam shall be kept to ensure environmental flow. One opening shall be for minimum environmental flow of 3.55 cumecs which will be un-gated and other will be gated which will be opened during the months when higher environmental flow of 5 cumecs is released. During the months of September – October and March – April, both the openings will discharge 5 cumecs.	Suitable provisions have been made in the Barrage structure to ensure environmental flow releases.
xvii.	Besides keeping environmental flows, fish hatcheries will be developed for stocking of fingerlings, both upstream and downstream of the dam site.	State Fisheries Department had been requested to provide a plan for development of fish hatcheries for stocking of fingerlings from 2009 onwards. In this regard, Director (Fisheries) vide letter dated 12.01.2018 and 23.03.19 and Asst. Director (Fisheries) vide letter no. 422 dated 27.10.2020 has communicated that they are in process of survey of land for Fish hatchery.
xviii.	Pension for elderly widows shall be increased to Rs.1500 per month	The provision of yearly pension @Rs.18,000/- per year (Rs. 1500/- pm) has been kept in the R&R Plan of NMHEP for the vulnerable group family head residing in the affected village. In this regard, 57 widow ladies have been covered under this provision and provided monthly pension of Rs. 1500/- pm w.e.f. Nov. 2017.
xix.	The public toilets (130 nos.) with septic tanks shall be provided and maintained in each of the affected villages. A sum of Rs.61 lakhs shall be kept separately for this purpose and shall not be diverted for any other purpose.	<p>The list of beneficiaries for the construction of toilets in the Project Affected Villages have been finalized through BDO Mori and further submitted to ADM-cum-R&amp;R Administrator, Uttarkashi.</p> <p>In this regard 84 nos. of eligible BPL families were benefited by constructed 84 nos of toilets in Project Affected villages i.e. Bainol, Naitwar &amp; Gainchwan gaon.</p>
xx.	System and facility for solid waste management shall also be provided in the project affected villages.	Project has provided waste collection bins in the PAV i.e. <i>Bainol, Gainchwan &amp; Naitwar</i> villages, amounting to around Rs. 1 lakh. Project had developed waste collection pits in Bainol Village (PAV) and Naitwar Village (PAV) and expenditure incurred are INR 58,000/- and INR

		1,77,000/- respectively. Further, dustbins have been distributed in Project Affected Villages, Hospital, Tehsil Mori, Schools, Vendors of Mori Market, Forest Deptt. and SHO, Mori.
xxi.	Alternate sources for drinking water shall be provided to the affected villages and other villages in the vicinity, in case, natural springs are affected due to construction of the project. This shall be carried out in consultation with the State Irrigation and Public Health Department.	Noted. If it is technically established that the drinking water resources are dried up due to project works, the same shall be restored and water supply schemes shall be provided by SJVN on instructions of State Govt./Central Govt. through State Water Supply Dept.  Nevertheless, drinking water supply schemes have already been provided in the Project Affected Villages viz. Bainol, Naitwar and Gainchwangaon as a CSR initiative through SJVN foundation.
xxii.	For planting of trees and other biological measures, indigenous and among them endemic tree species should be preferred. Turfing may be done by perennial grasses in consultation with a Horticulturist. Proponents themselves may take this responsibility under the guidance of a scientist/expert in vegetative propagation and mass multiplication (tissues culture)	Construction work at project site commenced in March 2018 and work is in progress. Plantation and turfing activities depicted herein shall be undertaken in consultation with scientists/experts after completion of the construction activities of the Project.
xxiii.	A specialist in reproduction biology of fishes, CIFRI should study the viable and feasible alternatives on the blocked migratory movement of fish species like <i>Schizothorax richardsonii</i> , <i>Tor putitora</i> , <i>Tor tor</i> , etc. due to construction of the dam so that these species would not become locally extinct.	The said study has been undertaken by CIFRI, Kolkatta.  The final study on " <i>Viable and Feasible Alternatives on the Blocked Migratory Movement of Fish Species</i> " i.r.o. of NMHEP has been submitted by CIFRI and same has been shared with MoEF&CC (HQ) and Regional Office, Dehradun and also intimated vide six monthly report submitted as on 01 December 2021. The recommendations of study are being adopted by the project in the fish pass design.

#### **PART – B: General Conditions**

(i.)	Adequate arrangement for providing free fuel like kerosene/wood/LPG shall be made at project cost for the labour engaged in the construction work so that indiscriminate felling of trees is prevented.	To avoid indiscriminate felling of trees, canteen facility is being provided by Contractors to the labour force engaged in construction activity of the project.
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(ii)	Medical facilities as well as recreational facilities shall also be provided to the labourers.	Dispensary has been provided at Contractor facility. Further, First Aid kits along-with trained staff provided at Barrage, Adit-1 and Power house.
(iii)	All the labourers to be engaged for construction works shall be thoroughly examined by health personnel and adequately treated before issuing them work permit.	Being complied.
(iv)	No fugitive dust emissions should be observed at the construction sites. Water sprinkling arrangements shall be made to suppress the fugitive emissions.	All measures suggested in the EIA/EMP report including sprinkling of water are being undertaken at project site.
(vi)	Potable drinking water and proper sanitary facilities should be provided for the labour force and the local area people.	The provision mentioned for said activity in the EMP is being taken care by main contractor as part of the contract agreement. Drinking water supply schemes have already been provided in the Project Affected Villages viz. Bainol, Naitwar and Gainchwangaon as a CSR initiative through SJVN foundation.
(vii)	Restoration of construction area including dumping site of excavated materials shall be ensured by leveling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation.	Construction work at project site has started in March 2018 and work is in progress at various locations. Restoration of construction area and dumping sites shall be done after completion of project components and in synchronization with construction activities.
(viii)	Financial provision shall be made in the total budget of the project for implementation of the above suggested safeguard measures.	Financial provision of Rs. 32.48 Crores towards implementation of Environment Management Plan has been kept in the total budget of the project.
	Status on implementation of EMP? Budgetary provision on EMP for INR 32.48 crores shall be exclusively spent on the purpose.	Expenditure on EMP: INR 45.58 crores. Details on physical and financial progress on stipulated subheads of EMP is bulleted below,
	<ul style="list-style-type: none"> <li>CAT Plan (INR 7.69 crores)</li> </ul> (Revised Cost: INR12.9666 crores)	Amount Deposited: INR 12.9666 crores. Utilization: State Forest Department has utilized approx. INR 945.19 lakhs by Uttarakhand Forest Deptt. <b>(Annexure-I)</b> .
	<ul style="list-style-type: none"> <li>R&amp;R Plan (INR 13 crores)</li> </ul> (Revised Cost: INR14.45 crores)	Amount Deposited with ADM, Uttarkashi: INR 14.45 crores.
	<ul style="list-style-type: none"> <li>CA and NPV for Forest Land Transfer (INR 3.74 crores)</li> </ul>	Amount deposited Against CA: INR1,84,24,160/- Against NPV: INR3,74,47,790/-
<ul style="list-style-type: none"> <li>Greenbelt, Landscape and Restoration Plan (INR 44 lakhs)</li> </ul>	<i>Expenditure done: INR 6.91 lakhs</i>	

	<ul style="list-style-type: none"> <li>Reservoir Rim Treatment Plan (INR 22.09 lakhs)</li> </ul>	INR 62.72 lakhs
	<ul style="list-style-type: none"> <li>Fuel Management Plan (INR 3.5 lakhs)</li> </ul>	INR 13.821lakhs. Provided Solar Cocker to Project affected families.
	<ul style="list-style-type: none"> <li>Fisheries Management Plan (Provision made in DPR) (INR 1 crores)</li> </ul>	Vertical slot type fish pass design has been finalized based upon recommendation of CIFRI. Accordingly, the work for construction of Fish Ladder having the contract price of Rs. 1.93 crore has been awarded on 08.09.2021.
	<ul style="list-style-type: none"> <li>Water, Air and Noise Quality Management Plan (INR 20 lakhs)</li> </ul>	The provision mentioned for said activity in the EMP is being taken care by main contractor as part of the contract document No. II of IV, para 2.3.14.1- control of Air Pollution and para 2.3.14.2 – control of noise pollution.
	<ul style="list-style-type: none"> <li>Muck Disposal Plan (INR 3.8780 crores)</li> </ul>	INR 8.86 crores.
	<ul style="list-style-type: none"> <li>Health Management Plan (Provision made in R&amp;R) (INR 40 lakhs)</li> </ul>	INR 125.00 lakh (One Ambulance and miscellaneous medical aids provided to PHC Mori) under Health Management Plan of R&R provision.
	<ul style="list-style-type: none"> <li>Dam Break Modelling &amp; Disaster Management Plan (INR 52.60 lakhs)</li> </ul>	Nil
	<ul style="list-style-type: none"> <li>Environmental Awareness Plan (INR 9 lakhs)</li> </ul>	Expenditure done: INR 3.59 lakhs (approx.)
	<ul style="list-style-type: none"> <li>Environmental Monitoring Plan (INR 36.50 lakhs)</li> </ul>	INR 28.88 lakhs. Details: Monitoring being done by M/s Pollution Control Research Institute (BHEL), Haridwar. Latest monitoring done in August, 2023.
	The project proponent shall also submit six monthly compliance reports of the stipulated EC conditions (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF& CC and State Pollution Control Board. Both monitoring report and compliance report shall be up-loaded on the website of the Proponent.	Six-monthly compliance reports are being regularly submitted to MoEF&CC Regional Office (North-Central Zone), Dehradun, CPCB Zonal Office (North), Lucknow and Uttarakhand Environment Protection and Pollution Control Board, Dehradun and also uploaded on our website <a href="http://www.sjvn.nic.in">www.sjvn.nic.in</a> . Yes, latest six-monthly report submitted by project to MoEF&CC on 01 June, 2023.
5.	The project proponent shall provide full cooperation and all required documents/data to the officials from concerned Regional Office of the Ministry who would be monitoring the implementation of environmental safeguards.	Full cooperation will be provided to officials from concerned Regional office of MoEF&CC during monitoring of the project.

6.	The responsibility of implementation of environmental safeguards rests fully with the M/s Satluj Jal Vidyut Nigam Ltd. And Government of Uttarakhand.	Noted	
7.	Besides the above stated conditions, the project proponent and Government of Uttarakhand shall also implement all other environmental safeguards, as proposed in the EIA/EMP report and other reports from time to time.	All environmental safeguard measures proposed in the EIA/EMP report are being implemented.	
8.	The Environmental Management Plan shall be strictly adhered to and a sum of Rs.32.48 crores, the budgetary provisions for implementation of EMP shall not be diverted for any other purpose.	Financial provision of Rs. 32.48 Crores towards implementation of Environment Management Plan shall not be diverted for any other purpose. At present a total of Rs. 45.58 crores have been spent so far on implementation of EMP.	
9.	Any change in the scope of the project shall be intimated to the Ministry and fresh approval if required, shall be taken from the Ministry.	There is no change in the scope of the project.	
10.	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary and to take action including	Noted	
11.	This clearance letter is valid for a period of 10 years from the date of issue of this letter for commencement of construction work.	The major work for the project has been awarded on 05.12.17 and construction activities have commenced from March 2018 onwards.	
12.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/Municipal Corporation, Urban local body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the Proponent.	The condition has been complied with. The clearance letter is available on company website <a href="http://www.sjvn.nic.in">www.sjvn.nic.in</a> .	
13.	A multi-disciplinary committee for monitoring the implementation of environmental safeguards during construction shall be constituted by the Proponent in consultation with the Ministry. The proponent shall suggest the members for approval of the Ministry. Proponent shall organize six monthly meetings of the Committee and submit the monitoring report to the Ministry.	A Multi-Disciplinary Committee for Naitwar Mori HE Project has been constituted vide MoEF&CC letter no. J-12011/16/2010-IA.I dated 09.07.2018. The 4 <sup>th</sup> meeting of MDC was held on 27.05.2023.	
14.	The proponent should advertise at least two local newspapers widely circulated in the region around the project. One of which shall be in the vernacular	Complied	

	language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letter area available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment, Forest Climate Change at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a>	
15.	After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment and downstream ecology. The study shall be undertaken by an independent agency, decided in consultation with the Ministry.	Condition shall be complied during operation stage of the project.
16.	The proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitoring data (both in hard copies as well as e-mail) to the respective Regional office of MoEF&CC and Zonal office of CPCB and the SPCB.	<p>Six-monthly compliance reports are being regularly submitted to MoEF&amp;CC Regional Office (North-Central Zone), Dehradun, CPCB Zonal Office (North), Lucknow and Uttarakhand Environment Protection and Pollution Control Board, Dehradun and also uploaded on our website <a href="http://www.sjvn.nic.in">www.sjvn.nic.in</a>.</p> <p>The last compliance report for the period ending March, 2023 was submitted on 01.06.2023.</p> <p>Environment Monitoring results carried out during the period of compliance are enclosed as <b>Annexure-III</b>.</p>
17.	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if referred, within a period of 30 days from the date of issue, as prescribed under Section – 10 of the National Green Tribunal Act, 2010.	To the best of our knowledge, no such appeal has been made with National Green Tribunal against Environment Clearance issued to Naitwar Mori HE Project.

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**प्रपत्र**  
**टौन्स वन प्रभाग, पुरोला में नैटवाड-मोरी जल विद्युत परियोजना में कैंट प्लान योजना के अन्तर्गत किये गये कार्यों का विवरण। (वित्तीय वर्ष 2023-24)**

क्र०सं	योजना का नाम	कार्य का नाम	प्राप्त धनराशि	इकाई	भौतिक	व्यय धनराशि	अभ्युक्ति
0							(धनराशि रु० में)
1	सतसुज जल विद्युत परियोजना (वन जमा)	3	4	5	6	7	8
1	सतसुज जल विद्युत परियोजना (वन जमा)	सतसुज जल विद्युत परियोजना के अन्तर्गत सान्द्रा रेंज के डैमोल करण-15 व 16 बफर जोन के आस-पास वन पचायत ग्राम सभा रिक्त भूमि पर 7000 पौधों का वृक्षारोपण कार्य	897,000	पौध संख्या	वन पचायत सरपंच सरास को बाबत 2000 सरास में वृक्षारोपण के प्रथम वर्ष-अनुक्षण मुगलान (7000 पौध रोपण)	72,300	उक्त धनराशि वित्तीय वर्ष 2022-23 में व्यय की गयी है।
2		जैव विविधता के अन्तर्गत प्राय	1,860,228	पौध संख्या	जैव विविधता वनीकरण के अन्तर्गत किये गये पौधों की देख-रेख व अनुक्षण कार्य करने का पारिश्रमिक (20 हे०)	381,066	
3		नैटवाड-मोरी जल विद्युत परियोजना के निर्माण एवं विकास कार्य के अन्तर्गत टौन्स वन प्रभाग, पुरोला द्वारा तितली पार्क के समीप निर्मित शौचालय की व्यवस्था कार्य किये जाने हेतु	20,000	-	देवता रेंज के अन्तर्गत तितली पार्क के समीप निर्मित शौचालय की व्यवस्था	20,000	
4		नैटवाड-मोरी जल विद्युत परियोजना के निर्माण एवं विकास के अन्तर्गत खनन चुगान क्षेत्र देवता रेंज के भासला-1,2 व 3 के बफर जोन के आस-पास क्षेत्रों में वृक्षारोपण कार्य।	179,800	पौध संख्या	वन पचायत देवती को 2000 पौधरोपण का मुगलान	179,800	
5	सतसुज जल विद्युत परियोजना (सी०ए०) अनुक्षण प्रथम वर्ष	Thadung-3a (Purola Range)	253000	ha	20.00	0	
		Thadung-12 (Purola Range)	253000	ha	20.00	0	
		Dalmu-8 (Purola Range)	253000	ha	20.00	0	
		Ludrala Soyam (Singtoor Range)	114000	ha	9.00	0	
		Benol-4 (Sandra Range)	139000	ha	11.00	0	
		<b>Total :-</b>	<b>1012000</b>				
		<b>G. Total :-</b>	<b>3969028</b>			<b>653173</b>	

उप वन संरक्षक,  
 टौन्स वन प्रभाग, पुरोला।



कार्यालय, उप वन संरक्षक, टॉन्स वन प्रभाग, पुरोला  
E-Mail:- dfo\_tons@yahoo.co.in, Tel:- 01373223328



पत्रांक- 1731

/19-3

दिनांक, पुरोला,

17/11/2023

सं. सं.

वरिष्ठ प्रमुख (पर्यावरण),

नैदाड-मांसी जल विद्युत परियोजना,

पर्यावरण विभाग, नैनीताल उत्तरकाशी।

विषय :-

कैम्पेट उपचार योजना, जैव विविधता प्रवर्धन योजना एवं क्षतिपूर्क वनीकरण की

अर्थवार्तिक प्रगति आख्या के सम्बन्ध में।

सन्दर्भ :-

आपका पत्रांक-एसजेडीएन/एनएमएवर्द्धी/पर्यावरण/23-286 दिनांक 09.10.2023।

महोदय,

उपरोक्त विषयक सन्दर्भित पत्र के क्रम में इस वन प्रभाग से नैदाड मांसी जल विद्युत परियोजना के अन्तर्गत कैम्पेट उपचार योजना, जैव विविधता योजना, क्षतिपूर्क वनीकरण एवं नैदाड मांसी जल विद्युत परियोजना के अन्तर्गत कार्य की प्रगति सूचना संलग्न कर सूचनाएँ एवं आवश्यक कार्रवाही हेतु प्रेषित।

संलग्न-उपरोक्तानुसार।

महोदय  
(कृपया कोमाए)  
उप वन संरक्षक,  
टॉन्स वन प्रभाग, पुरोला।

Amexdr-I





**नैटवाड जल विद्युत परियोजना परियोजना (कैट-प्लान) के अन्तर्गत वर्ष 2023-24 के अन्तर्गत भौतिक एवं वित्तीय लक्ष्य**

वन प्रभाग का नाम:- टौन्स वन प्रभाग

घटक, सहघटक, उपघटक, कार्यमद	कोड संख्या	घटक, सहघटक, उपघटक एवं कार्यमद	भौतिक	इकाई	दर	प्रस्तावित धनराशि (लाख में)	प्रस्तावित आवंटन (लाख में)	स्थल का नाम	जी0पी0एस0 लोकेशन तथा कै0एम0एल0 फाईल	अभ्युक्ति (वृक्षारोपण अनुसंधान की स्थलवार सफलता प्रतिशत)
1	2	3	4	5	6	7	8.00	9	10	11
<b>नैटवाड जल विद्युत परियोजना परियोजना (कैट-प्लान) के अन्तर्गत वर्ष 2023-24 के अन्तर्गत भौतिक एवं वित्तीय लक्ष्य</b>										

**प्रभाग का नाम :- गोविन्द वन्य जीव बिहार, पुरोला नैटवाड**

घटक, सहघटक, उपघटक, कार्यमद	कोड संख्या	घटक, सहघटक एवं कार्यमद	भौतिक	इकाई	दर	प्रस्तावित धनराशि (लाख में)	स्थल का नाम	जी0पी0एस0 लोकेशन तथा कै0एम0एल0 फाईल	अभ्युक्ति (वृक्षारोपण अनुसंधान की स्थलवार सफलता प्रतिशत)
1	2	3	4	5	6	7	8	9	10
घटक	1	परियोजना प्रबन्धन (12%)							
सहघटक	1.1	प्रशासनिक व्यय (10%)							
उपघटक	1.1.1	पूँजीगत व्यय (3%)							
कार्यमद	1.1.1.1	उपकरण एवं आपूर्ति तथा भवनों की स्थापना यथा क्षेत्रीय हट/स्टोर	0	No.	0.00	2.50	1.67	-	25
कार्यमद	1.1.1.2	वाहनों का क्रय (चौपहिया एवं दुपहिया)	0	No.	0.00	16.00	0.00	-	28
					योग -	18.50	1.67		
उपघटक	1.1.2	आवर्ती व्यय (7%)							
कार्यमद	1.1.2.1	सविदा स्टाफ (कृषि/उद्यान, पशुपालन विशेषज्ञों) वरिष्ठ परियोजना समन्वयक तथा ग्राम प्रेरक का वेतन/सेवा शुल्क	Computer Operator 1x12mont hs	No.	0.00000	0.00	0.00	-	-
कार्यमद	1.1.2.2	वन कर्मचारियों को परियोजना भत्ता/मानदेय	0	No.	0.00	0.50	0.33	-	8

कर्यमद	1.1.2.3	वाहनों हेतु इंधन, रखरखाव, मरम्मत तथा आवश्यकतानुसार वाहन किराये पर लेना	0	No.	0.00	1.00	0.67	-	-	29
कर्यमद	1.1.2.4	परियोजना स्टाफ और मोटिवेटर्स को संचार एवं वाहन भत्ता	0	No.	0.00	1.00	0.67	-	-	4
कर्यमद	1.1.2.5	कार्यालय व्यय	0	No.	0.00	0.25	0.17	-	-	22
					योग -	2.75	1.84			
सहघटक	1.2	अनुश्रवण एवं मूल्यांकन (2%)								
उपघटक	1.2.1	प्रबन्ध सूचना प्रणाली (MIS / GIS)	0	No.	0.00	0.00	0.00	-	-	-
उपघटक	1.2.2	समवर्ती अनुश्रवण एवं मूल्यांकन	0	No.	0.00	0.00	0.00	-	-	-
उपघटक	1.2.3	अध्ययन (Baseline / Mid-term/End-term)	0	No.	0.00	0.00	0.00	-	-	-
उपघटक	1.2.4	नियन्त्रण प्रणाली एवं वित्तीय सेवा लेखा परीक्षा की समीक्षा (Internal + External)	0	No.	0.00	0.00	0.00	-	-	-
					योग -	0.00	0.00			
					कुल योग (1)	21.25	3.51			
घटक	2	तैयारी का फंड (10%)								
सहघटक	2.1	संस्थागत पद्धति का विकास (4%)					0.00			
उपघटक	2.1.1	संस्थागत विकास एवं सहायता (1%)	0	No.	0.00	0.00	0.00	-	-	-
उपघटक	2.1.2	प्रवेश बिन्दु कार्य-सामुदायिक परिसम्पत्तियों की छुट-पुट मरम्मत (धारा / नौला मरम्मत / पेयजल मरम्मत आदि) (3%)	0	No.	0.00	0.00	0.00	-	-	-
सहघटक	2.2	क्षमता विकास एवं प्रचार-प्रसार (4%)					0.00			
उपघटक	2.2.1	ग्रामीणों, वन पंचायतों एवं विभागीय परियोजना कर्मिकों का क्षमता विकास एवं प्रशिक्षण (3%)	0	No.	0.00	0.00	0.00	-	-	-
उपघटक	2.2.2	परियोजना प्रचार-प्रसार तथा अभिलेखीकरण (1%)	0	No.	0.00	0.00	0.00	-	-	-





कार्यमद	3.1.4.1	मानव व वन्यजीव संघर्ष कम करने हेतु फ्रिंज क्षेत्र में फलदार प्रजातियों का वृक्षारोपण	0	No.	0.00	0.00	0.00	0.00	0.00	—	—	—
कार्यमद	3.1.4.2	सॉल्ट लिक	0	No.	0.00	0.00	0.00	0.00	0.00	—	—	—
कार्यमद	3.1.4.3	वास स्थल का सुधार	0	No.	0.00	0.50	0.33	—	—	—	—	—
कार्यमद	3.1.4.4	अन्य	0	No.	4.00	2.00	1.33	—	—	—	—	—
					योग -	2.50	1.66	—	—	—	—	—
उपघटक	3.1.5	वैकल्पिक ऊर्जा (सौर ऊर्जा, पाइन ब्रिकेटिंग, घराट उच्चिकरण) (2%)	0	No.	0.00	0.00	0.00	—	—	—	—	—
					कुल योग (3.1)	54.32	36.21	—	—	—	—	—
सहघटक	3.2	संरक्षण लक्षित आजीविका संवर्धन (12%)										
उपघटक	3.2.1	कृषि विकास (4%)										
कार्यमद	3.2.1.1	कृषि वानिकी विकास	0	No.	0.00	0.00	0.00	—	—	—	—	—
कार्यमद	3.2.1.2	उन्नत कृषि तकनीक एवं मृदा उर्वरता सुधार आदि	0	No.	10.00	3.00	2.00	—	—	—	—	—
कार्यमद	3.2.1.3	अन्य	0	No.	0.00	0.00	0.00	—	—	—	—	—
					योग	3.00	2.00	—	—	—	—	—
उपघटक	3.2.2	औद्यानिकी (3%)										
कार्यमद	3.2.2.1	बागवानी विकास	0	No.	0.00	0.00	0.00	—	—	—	—	—
कार्यमद	3.2.2.2	औषधीय एवं सुगन्धित पौधों का प्रदर्शन	0	No.	0.00	0.00	0.00	—	—	—	—	—
कार्यमद	3.2.2.3	अन्य (फल पौध वितरण)	0	No.	1000.00	0.50	0.33	—	—	—	—	—
			0	No.	31.00	1.19	0.79	—	—	—	—	—
					योग	1.69	1.12	—	—	—	—	—
उपघटक	3.2.3	पशुपालन										
कार्यमद	3.2.3.1	कृषि भूमि में चारे का विकास	0	No.	100.00	0.85	0.56	—	—	—	—	—
कार्यमद	3.2.3.2	चारे के बर्तन/नाद का निर्माण	0	No.	0.00	0.00	0.00	—	—	—	—	—
कार्यमद	3.2.3.3	प्राकृतिक नस्ल सुधार केन्द्र	0	No.	0.00	0.00	0.00	—	—	—	—	—
कार्यमद	3.2.3.4	अन्य	0	No.	0.00	0.00	0.00	—	—	—	—	—
					योग	0.85	0.56	—	—	—	—	—
उपघटक	3.2.4	गैर कृषि (Non Farm) क्षेत्र में आय अर्जक गतिविधियों हेतु सहायता (1%)										

कार्यमद	3.2.4.1	नेचर गाइड/ईको-टूरिज्म	11	No.	0.00	0.00	0.00				
कार्यमद	3.2.4.2	स्थानीय हस्त-शिल्प विकास	0	No.	0.00	0.00	0.00	-	-	-	-
कार्यमद	3.2.4.3	अन्य (उन्नत कृषि उपकरणों का वितरण)	0	No.	0.00	0.00	0.00	-	-	-	-
उपघटक	3.2.5	सामाजिक सुरक्षा सहयोग (1%)	0	No.	0.00	0.00	0.00	-	-	-	-
				<b>कुल योग (3.2)</b>		<b>5.54</b>	<b>3.68</b>				
घटक	4	समेकन फंड (1%)									
सहघटक	4.1	विज्ञान प्दान का क्रियान्वयन (0.5%)	11	No.	0.30	0.00	0.00				
सहघटक	4.2	परियोजना कार्यों का संकलन समेकन एवं समापन (0.5%) (सामाजिक, संस्थागत, तकनीकी एवं आजीविका आदि से सम्बन्धित)	11	No.	0.30	0.00	0.00				
				<b>कुल योग (4)</b>		<b>0.00</b>	<b>0.00</b>				
घटक	5	आकस्मिक व्यय (2%)	0	No.	0.00	0.00	0.00	-	-	-	-
				<b>कुल योग (5)</b>		<b>0.00</b>	<b>0.00</b>				
				<b>महायोग - (1)+(2)+(3.1)+(3.2)+(4)+(5)</b>		<b>81.11</b>	<b>43.40</b>				



## प्रदूषण नियन्त्रण अनुसंधान संस्थान

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार (उत्तराखण्ड) -249403  
**POLLUTION CONTROL RESEARCH INSTITUTE**

(A Govt. of India – UNDP / UNIDO Project)  
**BHARAT HEAVY ELECTRICALS LIMITED**  
 RANIPUR, HARIDWAR (U.K.) - 249 403

(Approved Lab under Environment (Protection) Act, 1986; EIA Consultancy by NABET, QCI)

### TEST REPORT AMBIENT NOISE MONITORING

Lab. Ref.: PCRI: Air & Noise: 2023-24 : 498-502

Date: 06-09-2023

#### A. GENERAL INFORMATION:

1	Name and address of Plant	:	M/s SJVN Limited, Naitwar-Mori Hydro Electric Project, Mori, District- Uttarkashi, Uttarakhand
2	Work Order No.	:	23-0088-0-691
3	Date of sampling	:	02.08.2023, 03.08.2023, 04.08.2023 & 05.08.2023
4	Instrument used	:	Sound Level Meter
5	Measurement carried out by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

#### B. RESULTS OF NOISE MEASUREMENT:


All measurement in dB (A)

Sl. No.	Location	Measured Values	Allowable Limit (Day Time) * Leq.
1.	Barrage Site Office	69	75 dB (A)
2.	Near Stone Crusher	67	
3.	Near Bainol Village	60	
4.	Near Sandra Range Quarry	68	
5.	Near Devta Range Quarry	59	

Leq. : Equivalent Sound Pressure Level

\*Allowable Noise Limit: Ambient Air Quality Standards in respect of Noise: Environmental (Protection) Rule, 1986-Schedule-III for Industrial Area

Prepared by

  
 Ankur Mohan  
 Engineer (PCRI)

Approved by

  
 Avinash Kumar  
 Manager (PCRI)

Remarks :- (1) This report refers only to the particular sample/job submitted for testing.  
 (2) This report is not to be reproduced wholly or partly and can not be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.  
 (3) Samples will be disposed off after one month from the date of issue of Test Certificate





## प्रदूषण नियन्त्रण अनुसंधान संस्थान

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार (उत्तराखण्ड) -249403

### POLLUTION CONTROL RESEARCH INSTITUTE

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BHARAT HEAVY ELECTRICALS LIMITED

RANIPUR, HARIDWAR (U.K.) - 249 403

(Approved Lab under Environment (Protection) Act, 1986; EIA Consultancy by NABET, QCI)

### TEST REPORT AMBIENT AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2023-24 : 493

Date: 06-09-2023

#### A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s SJVN Limited, Naitwar-Mori Hydro Electric Project, Mori, District- Uttarkashi (Uttarakhand)
2.	Work Order No.	:	23-0088-0-691
3.	Date of sampling	:	02.08.2023 to 03.08.2023
4.	Location of Sampling	:	Barrage Office ( Site)
5.	Method of Sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006), NDIR & Gas Detection System, IS-5182 (Part-9), AAS, PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

#### B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	NAAQ Standards*
1.	Particulate Matter less than 10 $\mu\text{m}$ or $\text{PM}_{10}$	$\mu\text{g}/\text{m}^3$	40	100
2.	Particulate Matter less than 2.5 $\mu\text{m}$ or $\text{PM}_{2.5}$	$\mu\text{g}/\text{m}^3$	23	60
3.	Sulphur Dioxide ( $\text{SO}_2$ )	$\mu\text{g}/\text{m}^3$	BDL	80
4.	Nitrogen Dioxide ( $\text{NO}_2$ )	$\mu\text{g}/\text{m}^3$	6	80
5.	Carbon Monoxide ( $\text{CO}$ )	$\text{mg}/\text{m}^3$	BDL	4
6.	Lead ( $\text{Pb}$ )	$\mu\text{g}/\text{m}^3$	BDL	1
7.	Ammonia ( $\text{NH}_3$ )	$\mu\text{g}/\text{m}^3$	BDL	400
8.	Ozone ( $\text{O}_3$ )	$\mu\text{g}/\text{m}^3$	32	180
9.	Benzene ( $\text{C}_6\text{H}_6$ )	$\mu\text{g}/\text{m}^3$	BDL	5
10.	Benzo(a)pyrene ( BaP )	$\text{ng}/\text{m}^3$	BDL	1
11.	Arsenic ( $\text{As}$ )	$\text{ng}/\text{m}^3$	BDL	6
12.	Nickel ( $\text{Ni}$ )	$\text{ng}/\text{m}^3$	BDL	20

BDL: Below Detectable Limit,

\*National Ambient Air Quality Standards as per CPCB Notification N. Delhi, the 18 Nov. 2009 for Industrial, Residential and Rural Areas

Prepared by

Ankur Mohan  
Engineer (PCRI)

Approved by

Avinash Kumar  
Manager (PCRI)

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(2) This report is not to be reproduced wholly or partly and can not be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.  
(3) Samples will be disposed off after one month from the date of issue of Test Certificate



## प्रदूषण नियन्त्रण अनुसंधान संस्थान

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार (उत्तराखण्ड) -249403  
**POLLUTION CONTROL RESEARCH INSTITUTE**  
(A Govt. of India – UNDP / UNIDO Project)  
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RANIPUR, HARIDWAR (U.K.) - 249 403

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### **TEST REPORT** **AMBIENT AIR MONITORING**

Lab. Ref.: PCRI: Air & Noise: 2023-24 : 494  
Date: 06-09-2023

#### **A. GENERAL INFORMATION:**

1.	Name and address of Plant	:	M/s SJVN Limited, Naitwar-Mori Hydro Electric Project, Mori, District- Uttarkashi (Uttarakhand)
2.	Work Order No.	:	23-0088-0-691
3.	Date of sampling	:	02.08.2023 to 03.08.2023
4.	Location of Sampling	:	Near Stone Crusher ( Site)
5.	Method of Sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006), NDIR & Gas Detection System, IS-5182 (Part-9), AAS, PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

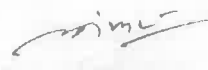
#### **B. RESULTS OF AMBIENT AIR MONITORING:**

Sl. No.	Parameter	Unit	Obtained Value	NAAQ Standards*
1.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	95	100
2.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	47	60
3.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	BDL	80
4.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	8	80
5.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	0.10	4
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
8.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	40	180
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	BDL	20

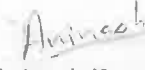
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Prepared by

  
Ankur Mohan  
Engineer (PCRI)

Approved by

  
Avinash Kumar  
Manager (PCRI)

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### TEST REPORT AMBIENT AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2023-24 : 495

Date: 06-09-2023

#### A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s SJVN Limited, Naitwar-Mori Hydro Electric Project, Mori, District- Uttarkashi (Uttarakhand)
2.	Work Order No.	:	23-0088-0-691
3.	Date of sampling	:	03.08.2023 to 04.08.2023
4.	Location of Sampling	:	Near Bainol Village
5.	Method of Sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006), NDIR & Gas Detection System, IS-5182 (Part-9), AAS, PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

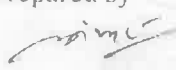
#### B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	NAAQ Standards*
1.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	68	100
2.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	31	60
3.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	BDL	80
4.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	BDL	80
5.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	0.15	4
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
8.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	39	180
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	BDL	20

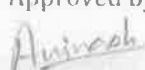
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### TEST REPORT AMBIENT AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2023-24 : 496  
Date: 06-09-2023

#### A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s SJVN Limited, Naitwar-Mori Hydro Electric Project, Mori, District- Uttarkashi (Uttarakhand)
2.	Work Order No.	:	23-0088-0-691
3.	Date of sampling	:	03.08.2023 to 04.08.2023
4.	Location of Sampling	:	Sandra Range Quarry (Panwar House)
5.	Method of Sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006), NDIR & Gas Detection System, IS-5182 (Part-9), AAS, PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

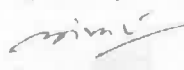
#### B. RESULTS OF AMBIENT AIR MONITORING:

Sl. No.	Parameter	Unit	Obtained Value	NAAQ Standards*
1.	Particulate Matter less than 10 $\mu\text{m}$ or $\text{PM}_{10}$	$\mu\text{g}/\text{m}^3$	43	100
2.	Particulate Matter less than 2.5 $\mu\text{m}$ or $\text{PM}_{2.5}$	$\mu\text{g}/\text{m}^3$	21	60
3.	Sulphur Dioxide ( $\text{SO}_2$ )	$\mu\text{g}/\text{m}^3$	BDL	80
4.	Nitrogen Dioxide ( $\text{NO}_2$ )	$\mu\text{g}/\text{m}^3$	BDL	80
5.	Carbon Monoxide ( $\text{CO}$ )	$\text{mg}/\text{m}^3$	0.11	4
6.	Lead ( $\text{Pb}$ )	$\mu\text{g}/\text{m}^3$	BDL	1
7.	Ammonia ( $\text{NH}_3$ )	$\mu\text{g}/\text{m}^3$	BDL	400
8.	Ozone ( $\text{O}_3$ )	$\mu\text{g}/\text{m}^3$	33	180
9.	Benzene ( $\text{C}_6\text{H}_6$ )	$\mu\text{g}/\text{m}^3$	BDL	5
10.	Benzo(a)pyrene ( BaP )	$\text{ng}/\text{m}^3$	BDL	1
11.	Arsenic ( $\text{As}$ )	$\text{ng}/\text{m}^3$	BDL	6
12.	Nickel ( $\text{Ni}$ )	$\text{ng}/\text{m}^3$	BDL	20


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### **TEST REPORT** **AMBIENT AIR MONITORING**

Lab. Ref.: PCRI: Air & Noise: 2023-24 : 497  
Date: 06-09-2023

#### **A. GENERAL INFORMATION:**

1.	Name and address of Plant	:	M/s SJVN Limited, Naitwar-Mori Hydro Electric Project, Mori, District- Uttarkashi (Uttarakhand)
2.	Work Order No.	:	23-0088-0-691
3.	Date of sampling	:	04.08.2023 to 05.08.2023
4.	Location of Sampling	:	Near Devta Range Quarry (Khooni Gad)
5.	Method of Sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006), NDIR & Gas Detection System, IS-5182 (Part-9), AAS, PM2.5 Sampler
6.	Duration of Sampling	:	24 Hours
7.	Sample collection by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

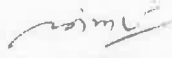
#### **B. RESULTS OF AMBIENT AIR MONITORING:**

Sl. No.	Parameter	Unit	Obtained Value	NAAQ Standards*
1.	Particulate Matter less than 10 µm or PM <sub>10</sub>	µg/m <sup>3</sup>	59	100
2.	Particulate Matter less than 2.5 µm or PM <sub>2.5</sub>	µg/m <sup>3</sup>	28	60
3.	Sulphur Dioxide ( SO <sub>2</sub> )	µg/m <sup>3</sup>	BDL	80
4.	Nitrogen Dioxide ( NO <sub>2</sub> )	µg/m <sup>3</sup>	BDL	80
5.	Carbon Monoxide ( CO )	mg/m <sup>3</sup>	0.13	4
6.	Lead ( Pb )	µg/m <sup>3</sup>	BDL	1
7.	Ammonia ( NH <sub>3</sub> )	µg/m <sup>3</sup>	BDL	400
8.	Ozone ( O <sub>3</sub> )	µg/m <sup>3</sup>	37	180
9.	Benzene ( C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	BDL	5
10.	Benzo(a)pyrene ( BaP )	ng/m <sup>3</sup>	BDL	1
11.	Arsenic ( As )	ng/m <sup>3</sup>	BDL	6
12.	Nickel ( Ni )	ng/m <sup>3</sup>	BDL	20

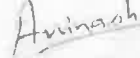
BDL: Below Detectable Limit,

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(Approved Lab under Environment (Protection) Act, 1986; EIA Consultancy by NABET, QCI)

### **TEST REPORT** **AMBIENT NOISE MONITORING**

Lab. Ref.: PCRI: Air & Noise: 2023-24 : 498-502  
Date: 06-09-2023

#### **A. GENERAL INFORMATION:**

1	Name and address of Plant	:	M/s SJVN Limited, Naitwar-Mori Hydro Electric Project, Mori, District- Uttarkashi, Uttarakhand
2	Work Order No.	:	23-0088-0-691
3	Date of sampling	:	02.08.2023, 03.08.2023, 04.08.2023 & 05.08.2023
4	Instrument used	:	Sound Level Meter
5	Measurement carried out by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

#### **B. RESULTS OF NOISE MEASUREMENT:**


All measurement in dB (A)

Sl. No.	Location	Measured Values	Allowable Limit (Day Time) * Leq.
1.	Barrage Site Office	69	75 dB (A)
2.	Near Stone Crusher	67	
3.	Near Bainol Village	60	
4.	Near Sandra Range Quarry	68	
5.	Near Devta Range Quarry	59	


**Leq. :** Equivalent Sound Pressure Level

**\*Allowable Noise Limit:** Ambient Air Quality Standards in respect of Noise: Environmental (Protection) Rule, 1986-Schedule-III for Industrial Area

Prepared by

  
Ankur Mohan  
Engineer (PCRI)

Approved by

  
Avinash Kumar  
Manager (PCRI)

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## TEST REPORT

**Lab Reference No:** TL230246 **Date:** 05.09.2023  
**Indentor:** M/s SJVN Limited, (A Joint Venture of Govt. of India & Govt. of Himachal Pradesh), Naitwar-Mori Hydro Electric Project, Mori, Distt. Uttarkashi, Uttarakhand-249128  
**Customer's Ref. No.:** PO SJVN/NMHEP/PCD-151/22-80-82 Dated 03.07.2023  
**Work Order No.:** 23-0088-O-691  
**Sample Collected by:** PCRI Staff **Collection Date:** 05.08.2023  
**Sample/Job:** Water Sample from U/s of Barrage Site

PARAMETER	UNIT	OBTAINED VALUE
Ammonical Nitrogen (as N)	mg/L	ND
Free Ammonia (as NH <sub>3</sub> )	mg/L	ND
Arsenic (as As)	mg/L	ND
BOD <sub>5</sub> at 27°C	mg/L	1.6
Cadmium (as Cd)	mg/L	0.002
COD	mg/l	7.0
Dissolved Phosphate (as P)	mg/L	0.80
Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND
Chromium Total (as Cr)	mg/L	ND
Colour	Hazen	<5
Copper (as Cu)	mg/L	0.01
Cyanide (as CN)	mg/L	ND
Fluoride (as F)	mg/L	0.99
Iron (as Fe)	mg/L	0.45
Lead (as Pb)	mg/L	0.02
Manganese (as Mn)	mg/L	0.03
Mercury (as Hg)	mg/L	ND
Nickel (as Ni)	mg/L	ND
Odour		Agreeable

Contd..2

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CRI/051

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## TEST REPORT

-Page 2-

Lab Reference No: TL230246

Date : 05.09.2023

PARAMETER	UNIT	OBTAINED VALUE
Nitrate (as NO <sub>3</sub> )	mg/L	5.1
Mineral Oil (Oil & Grease)	mg/L	ND
pH	-	7.64
Phenol	mg/L	ND
Total Residual Chlorine	mg/L	ND
Selenium (as Se)	mg/L	ND
Sulphide (as S)	mg/L	ND
Temperature	°C	16.5
Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	1.12
Total Dissolved Solids	mg/L	34
Total Suspended Solids	mg/L	48
Vanadium (as V)	mg/L	ND
Zinc (as Zn)	mg/L	0.03

ND-Not Detectable

Prepared by

Ankur Mohan  
Engineer (PCRI)

Approved by

Shailendra Kumar  
Dy. General Manager (PCRI)

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**POLLUTION CONTROL RESEARCH INSTITUTE**  
(A Govt. of India - UNDP / UNIDO Project)  
**BHARAT HEAVY ELECTRICALS LIMITED**  
RANIPUR, HARIDWAR (U.K.) - 249 403

(Approved Lab under Environment (Protection) Act, 1986; EIA Consultancy by NABET, QCI)

### TEST REPORT

**Lab Reference No:** TL230247 **Date :** 05.09.2023  
**Indentor** M/s SJVN Limited, (A Joint Venture of Govt. of India & Govt. of Himachal Pradesh), Naitwar-Mori Hydro Electric Project, Mori, Distt. Uttarkashi, Uttarakhand-249128  
**Customer's Ref. No.:** PO SJVN/NMHEP/PCD-151/22-80-82 Dated 03.07.2023  
**Work Order No.:** 23-0088-O-691  
**Sample Collected by:** PCRI Staff **Collection Date:** 05.08.2023  
**Sample/Job:** Water Sample from D/s of Barrage Site after Chibragad Confluence

PARAMETER	UNIT	OBTAINED VALUE
Ammonical Nitrogen (as N)	mg/L	ND
Free Ammonia (as NH <sub>3</sub> )	mg/L	ND
Arsenic (as As)	mg/L	ND
BOD <sub>5</sub> at 27°C	mg/L	1.8
Cadmium (as Cd)	mg/L	0.003
COD	mg/L	8.0
Dissolved Phosphate (as P)	mg/L	0.85
Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND
Chromium Total (as Cr)	mg/L	ND
Colour	Hazen	<5
Copper (as Cu)	mg/L	0.01
Cyanide (as CN)	mg/L	ND
Fluoride (as F)	mg/L	1.09
Iron (as Fe)	mg/L	0.48
Lead (as Pb)	mg/L	0.02
Manganese (as Mn)	mg/L	0.03
Mercury (as Hg)	mg/L	ND
Nickel (as Ni)	mg/L	ND
Odour	-	Agreeable

Contd..2

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**TEST REPORT**

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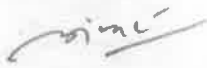
Lab Reference No: TL230247

Date : 05.09.2023

PARAMETER	UNIT	OBTAINED VALUE
Nitrate (as NO <sub>3</sub> )	mg/L	5.95
Mineral Oil (Oil & Grease)	mg/L	ND
pH	-	7.66
Phenol	mg/L	ND
Total Residual Chlorine	mg/L	ND
Selenium (as Se)	mg/L	ND
Sulphide (as S)	mg/L	ND
Temperature	°C	16.9
Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	1.12
Total Dissolved Solids	mg/L	36
Total Suspended Solids	mg/L	58
Vanadium (as V)	mg/L	ND
Zinc (as Zn)	mg/L	0.03

ND-Not Detectable

Prepared by

  
Ankur Mohan  
Engineer (PCRI)

Approved by

  
Shailendra Kumar  
Dy. General Manager (PCRI)

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BHARAT HEAVY ELECTRICALS LIMITED  
RANIPUR, HARIDWAR (U.K.) - 249 403

(Approved Lab under Environment (Protection) Act, 1986; EIA Consultancy by NABET, QCI)

### TEST REPORT

**Lab Reference No:** TL230248 **Date :** 05.09.2023  
**Indentor** M/s SJVN Limited, (A Joint Venture of Govt. of India & Govt. of Himachal Pradesh), Naitwar-Mori Hydro Electric Project, Mori, Distt. Uttarkashi, Uttarakhand-249128  
**Customer's Ref. No.:** PO SJVN/NMHEP/PCD-151/22-80-82 Dated 03.07.2023  
**Work Order No.:** 23-0088-O-691  
**Sample Collected by:** PCRI Staff **Collection Date:** 05.08.2023  
**Sample/Job:** Water Sample from site before Miyagad Confluence

PARAMETER	UNIT	OBTAINED VALUE
Ammonical Nitrogen (as N)	mg/L	ND
Free Ammonia (as NH <sub>3</sub> )	mg/L	ND
Arsenic (as As)	mg/L	ND
BOD <sub>3</sub> at 27°C	mg/L	1.2
Cadmium (as Cd)	mg/L	0.003
COD	mg/L	5.0
Dissolved Phosphate (as P)	mg/L	0.89
Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND
Chromium Total (as Cr)	mg/L	ND
Colour	Hazen	<5
Copper (as Cu)	mg/L	0.01
Cyanide (as CN)	mg/L	ND
Fluoride (as F)	mg/L	0.97
Iron (as Fe)	mg/L	0.38
Lead (as Pb)	mg/L	0.02
Manganese (as Mn)	mg/L	0.03
Mercury (as Hg)	mg/L	ND
Nickel (as Ni)	mg/L	ND
Odour	-	Agreeable

Contd..2

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### TEST REPORT

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Lab Reference No:

TL230248

Date : 05.09.2023

PARAMETER	UNIT	OBTAINED VALUE
Nitrate (as NO <sub>3</sub> )	mg/L	4.8
Mineral Oil (Oil & Grease)	mg/L	ND
pH	-	7.28
Phenol	mg/L	ND
Total Residual Chlorine	mg/L	ND
Selenium (as Se)	mg/L	ND
Sulphide (as S)	mg/L	ND
Temperature	°C	17.0
Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	0.84
Total Dissolved Solids	mg/L	32
Total Suspended Solids	mg/L	66
Vanadium (as V)	mg/L	ND
Zinc (as Zn)	mg/L	0.02

ND-Not Detectable

Prepared by

Ankur Mohan  
Engineer (PCRI)

Approved by

Shailendra Kumar  
Dy. General Manager (PCRI)

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**TEST REPORT**

**Lab Reference No:** TL230249 **Date :** 05.09.2023  
**Indentor** M/s SJVN Limited, (A Joint Venture of Govt. of India & Govt. of Himachal Pradesh), Naitwar-Mori Hydro Electric Project, Mori, Distt. Uttarkashi, Uttarakhand-249128  
**Customer's Ref. No.:** PO SJVN/NMHEP/PCD-151/22-80-82 Dated 03.07.2023  
**Work Order No.:** 23-0088-O-691  
**Sample Collected by:** PCRI Staff **Collection Date:** 05.08.2023  
**Sample/Job:** Water Sample from site after Miyagad Confluence

PARAMETER	UNIT	OBTAINED VALUE
Ammonical Nitrogen (as N)	mg/L	ND
Free Ammonia (as NH <sub>3</sub> )	mg/L	ND
Arsenic (as As)	mg/L	ND
BOD <sub>3</sub> at 27°C	mg/L	2.0
Cadmium (as Cd)	mg/L	0.003
COD	mg/L	8.0
Dissolved Phosphate (as P)	mg/L	0.97
Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND
Chromium Total (as Cr)	mg/L	ND
Colour	Hazen	<5
Copper (as Cu)	mg/L	0.01
Cyanide (as CN)	mg/L	ND
Fluoride (as F)	mg/L	0.94
Iron (as Fe)	mg/L	0.62
Lead (as Pb)	mg/L	0.02
Manganese (as Mn)	mg/L	0.03
Mercury (as Hg)	mg/L	ND
Nickel (as Ni)	mg/L	ND
Odour		Agreeable

**Contd..2**

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### TEST REPORT

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Lab Reference No: TL230249

Date : 05.09.2023

PARAMETER	UNIT	OBTAINED VALUE
Nitrate (as NO <sub>3</sub> )	mg/L	5.84
Mineral Oil (Oil & Grease)	mg/L	ND
pH	-	7.45
Phenol	mg/L	ND
Total Residual Chlorine	mg/L	ND
Selenium (as Se)	mg/L	ND
Sulphide (as S)	mg/L	ND
Temperature	°C	16.8
Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	0.84
Total Dissolved Solids	mg/L	32
Total Suspended Solids	mg/L	62
Vanadium (as V)	mg/L	ND
Zinc (as Zn)	mg/L	0.02

ND-Not Detectable

Prepared by

Ankur Mohan  
Engineer (PCRI)

Approved by

Shailendra Kumar  
Dy. General Manager (PCRI)

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RANIPUR, HARIDWAR (U.K.) - 249 403

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### TEST REPORT

**Lab Reference No:** TL230250 **Date :** 05.09.2023  
**Indentor** M/s SJVN Limited, (A Joint Venture of Govt. of India & Govt. of Himachal Pradesh), Naitwar-Mori Hydro Electric Project, Mori, Distt. Uttarkashi, Uttarakhand-249128  
**Customer's Ref. No.:** PO SJVN/NMHEP/PCD-151/22-80-82 Dated 03.07.2023  
**Work Order No.:** 23-0088-O-691  
**Sample Collected by:** PCRI Staff **Collection Date:** 05.08.2023  
**Sample/Job:** Water Sample from site after Sandra Range Quarry

PARAMETER	UNIT	OBTAINED VALUE
Ammonical Nitrogen (as N)	mg/L	ND
Free Ammonia (as NH <sub>3</sub> )	mg/L	ND
Arsenic (as As)	mg/L	ND
BOD <sub>3</sub> at 27°C	mg/L	1.8
Cadmium (as Cd)	mg/L	0.003
COD	mg/L	8.0
Dissolved Phosphate (as P)	mg/L	0.89
Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND
Chromium Total (as Cr)	mg/L	ND
Colour	Hazen	<5
Copper (as Cu)	mg/L	0.02
Cyanide (as CN)	mg/L	ND
Fluoride (as F)	mg/L	0.80
Iron (as Fe)	mg/L	0.60
Lead (as Pb)	mg/L	0.02
Manganese (as Mn)	mg/L	0.04
Mercury (as Hg)	mg/L	ND
Nickel (as Ni)	mg/L	ND
Odour		Agreeable

Contd..2

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### TEST REPORT

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Lab Reference No: TL230250 Date : 05.09.2023

PARAMETER	UNIT	OBTAINED VALUE
Nitrate (as NO <sub>3</sub> )	mg/L	6.0
Mineral Oil (Oil & Grease)	mg/L	ND
pH	-	8.38
Phenol	mg/L	ND
Total Residual Chlorine	mg/L	ND
Selenium (as Se)	mg/L	ND
Sulphide (as S)	mg/L	ND
Temperature	°C	17.2
Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	1.12
Total Dissolved Solids	mg/L	38
Total Suspended Solids	mg/L	60
Vanadium (as V)	mg/L	ND
Zinc (as Zn)	mg/L	0.03

ND-Not Detectable

Prepared by

Ankur Mohan  
Engineer (PCRI)

Approved by

Shailendra Kumar  
Dy. General Manager (PCRI)

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RANIPUR, HARIDWAR (U.K.) - 249 403

(Approved Lab under Environment (Protection) Act, 1986; EIA Consultancy by NABET, QCI)

**TEST REPORT**

**Lab Reference No:** TL230251 **Date:** 05.09.2023  
**Indentor** M/s SJVN Limited, (A Joint Venture of Govt. of India & Govt. of Himachal Pradesh), Naltwar-Mori Hydro Electric Project, Mori, Distt. Uttarkashi, Uttarakhand-249128  
**Customer's Ref. No.:** PO SJVN/NMHEP/PCD-151/22-80-82 Dated 03.07.2023  
**Work Order No.:** 23-0088-O-691  
**Sample Collected by:** PCRI Staff **Collection Date:** 05.08.2023  
**Sample/Job:** Water Sample from D/s of Power House Site

PARAMETER	UNIT	OBTAINED VALUE
Ammonical Nitrogen (as N)	mg/L	ND
Free Ammonia (as NH <sub>3</sub> )	mg/L	ND
Arsenic (as As)	mg/L	ND
BOD <sub>3</sub> at 27°C	mg/L	2.2
Cadmium (as Cd)	mg/L	ND
COD	mg/L	10.0
Dissolved Phosphate (as P)	mg/L	0.89
Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND
Chromium Total (as Cr)	mg/L	ND
Colour	Hazen	<5
Copper (as Cu)	mg/L	0.01
Cyanide (as CN)	mg/L	ND
Fluoride (as F)	mg/L	1.11
Iron (as Fe)	mg/L	0.75
Lead (as Pb)	mg/L	0.03
Manganese (as Mn)	mg/L	0.04
Mercury (as Hg)	mg/L	ND
Nickel (as Ni)	mg/L	ND
Odour	-	Agreeable

**Contd..2**

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**TEST REPORT**

-Page 2-

Lab Reference No: TL230251 Date : 05.09.2023

PARAMETER	UNIT	OBTAINED VALUE
Nitrate (as NO <sub>3</sub> )	mg/L	5.68
Mineral Oil (Oil & Grease)	mg/L	ND
pH	-	7.57
Phenol	mg/L	ND
Total Residual Chlorine	mg/L	ND
Selenium (as Se)	mg/L	ND
Sulphide (as S)	mg/L	ND
Temperature	°C	17.5
Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	0.84
Total Dissolved Solids	mg/L	36
Total Suspended Solids	mg/L	54
Vanadium (as V)	mg/L	ND
Zinc (as Zn)	mg/L	0.03

ND-Not Detectable

Prepared by

Ankur Mohan  
Engineer (PCRI)

Approved by

Shailendra Kumar  
Dy. General Manager (PCRI)

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**TEST REPORT**

**Lab Reference No:** TL230252 **Date :** 05.09.2023  
**Indentor** M/s SJVN Limited, (A Joint Venture of Govt. of India & Govt. of Himachal Pradesh), Naitwar-Mori Hydro Electric Project, Mori, Distt. Uttarkashi, Uttarakhand-249128  
**Customer's Ref. No.:** PO SJVN/NMHEP/PCD-151/22-80-82 Dated 03.07.2023  
**Work Order No.:** 23-0088-O-691  
**Sample Collected by:** PCRI Staff **Collection Date:** 05.08.2023  
**Sample/Job:** Water Sample from D/s of Khooni Gad Quarry Site

PARAMETER	UNIT	OBTAINED VALUE
Ammonical Nitrogen (as N)	mg/L	ND
Free Ammonia (as NH <sub>3</sub> )	mg/L	ND
Arsenic (as As)	mg/L	ND
BOD <sub>3</sub> at 27°C	mg/L	2.8
Cadmium (as Cd)	mg/L	ND
COD	mg/L	13
Dissolved Phosphate (as P)	mg/L	0.93
Hexavalent Chromium (as Cr <sup>+6</sup> )	mg/L	ND
Chromium Total (as Cr)	mg/L	ND
Colour	Hazen	<5
Copper (as Cu)	mg/L	0.02
Cyanide (as CN)	mg/L	ND
Fluoride (as F)	mg/L	0.83
Iron (as Fe)	mg/L	2.19
Lead (as Pb)	mg/L	0.02
Manganese (as Mn)	mg/L	0.04
Mercury (as Hg)	mg/L	ND
Nickel (as Ni)	mg/L	ND
Odour		Agreeable

**Contd..2**

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**POLLUTION CONTROL RESEARCH INSTITUTE**  
(A Govt. of India – UNDP / UNIDO Project)  
BHARAT HEAVY ELECTRICALS LIMITED  
RANIPUR, HARIDWAR (U.K.) - 249 403

(Approved Lab under Environment (Protection) Act, 1986; EIA Consultancy by NABET, QCI)

**TEST REPORT**

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Lab Reference No: TL230252 Date : 05.09.2023

PARAMETER	UNIT	OBTAINED VALUE
Nitrate (as NO <sub>3</sub> )	mg/L	5.68
Mineral Oil (Oil & Grease)	mg/L	ND
pH	-	8.69
Phenol	mg/L	ND
Total Residual Chlorine	mg/L	ND
Selenium (as Se)	mg/L	ND
Sulphide (as S)	mg/L	ND
Temperature	°C	18.0
Total Kjeldahl Nitrogen (as NH <sub>3</sub> )	mg/L	1.12
Total Dissolved Solids	mg/L	40
Total Suspended Solids	mg/L	56
Vanadium (as V)	mg/L	ND
Zinc (as Zn)	mg/L	0.07

ND-Not Detectable

Prepared by

Ankur Mohan  
Engineer (PCRI)

Approved by

Shailendra Kumar  
Dy. General Manager (PCRI)

- Remarks :-
- (1) This report refers only to the particular sample/job submitted for testing.
  - (2) This report is not to be reproduced wholly or partly and can not be used as an evidence in the court of law and should not be used in any advertising media without our special permission in writing.
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