



# एसजेवीएन लिमिटेड

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

कार्यालय:

कार्यकारी निदेशक,  
निगमित पर्यावरण विभाग,  
शक्ति सदन, शनान,  
जिला शिमला, हिमाचल प्रदेश - 171006  
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संख्या: SJVN/CHQ/ENV/F-24/2024-49

दिनांक: 31/05/2024

To

**Member Secretary**  
**River Valley and Hydroelectric Projects,**  
**MoEF&CC, Govt. of India,**  
**Indira Paryavaran Bhawan, Jor Bagh,**  
**New Delhi – 110003**  
E-mail: [munna.shah@gov.in](mailto:munna.shah@gov.in)

**Sub: Six Monthly Report on Compliance of Environmental Conditions (For period October, 2023 – March, 2024) i.r.o Luhri HEP Stage-I (210MW), Himachal Pradesh.**

**Ref : EC Letter No.: J-12011/18/2015-IA-I(R), dated 17 March 2020; Proposal No.: IA/HP/RIV/29585/2015**

Sir,

Kind reference is invited to above referred endorsement vide which Luhri HEP Stage-I (210MW) of SJVN in Shimla and Kullu Districts (Himachal Pradesh) was granted Environment Clearance by MoEF&CC. As per EIA notification 2006, submission of six-monthly status of the stipulated environment condition is a mandatory requirement. Further, it is also desired vide notification dated 26.11.2018 to submit half yearly compliance reports in soft copies only.

Therefore, Six-Monthly Report on compliance of Environmental Conditions (for the period October, 2023 – March, 2024) is submitted herewith for your kind information, please.

संलग्नक: यथोपरि।

सधन्यवाद,

भवदीय,  
एसजेवीएन लिमिटेड के लिए,

(कार्यकारी निदेशक)

प्रतिलिपि (केवल ईमेल के माध्यम से):

1. Inspector General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Shimla 1st & 2nd Floor, C.G.O. Complex, Longwood, Shimla – 171001, 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: [mshpcb-hp@nic.in](mailto:mshpcb-hp@nic.in)

Website: [www.sjvn.nic.in](http://www.sjvn.nic.in)

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

**Six Monthly Compliance Report of 210 MW Luhri HEP Stage-I (SJVN Limited)**  
**Submitted to Ministry of Environment & Forests (Gol)**  
**(Period: Oct 01, 2023 to March 31, 2024)**

<b>A)</b>	<b>Name of Project</b>	Luhri Stage-I Hydroelectric Project (210 MW)
	<b>Type of Project</b>	Hydropower
	<b>Location</b>	Districts Kullu and Shimla
	<b>EC Letter no.</b>	J-12011/18/2015-IA-I (R) Pt dated 17.03.2020
	<b>Contact Address</b>	
	<b>a) Concerned Project Head</b>	Head of Project, Luhri Stage-I HEP, SJVN Ltd., Bithal, PO Shamathala, Tehsil Kumarsain, District Shimla, Himachal Pradesh-172030, Contact No. 01782-222615
	<b>b) Concerned Environment Division (Corporate)</b>	Head (Environment), SJVN Corporate Headquarters, Shanan, Shimla, HP, PIN 171006 Contact No. 0177-2660180

S.N.	Conditions	Status
12011/18/2015-IA-I (R) Pt dated 17.03.2020	Conditions imposed by the Ministry of Environment & Forests, Gol while granting environment clearance vide letter no. J-	
i.	<p>The Environmental Management Plan (EMP) shall be strictly adhered to and a sum of Rs.14860.57 lakhs the budgetary provisions for implementation of EMP shall be fully utilized. In case of revision of the project cost or due to price level change the cost of EMP shall also be updated proportionately.</p>	<p>Details supplied in <b>Enclosure-1</b>.</p>
ii.	<p>The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017 IA.III dated 1<sup>st</sup>May 2018 regarding Corporate Environment Responsibility Project proponent shall require to invest amount of Rs. 866.5 lakhs towards the Upgradation of Educational Facilities (Rs131 lakhs), Upgradation of Public Health Centers (Rs 85 lakhs), Solid Waste Segregation and Collection Centre (Rs 75 lakhs), Sewerage/ drainage line and Septic tanks (Rs165 lakhs), Solar Street Lights (Rs 67.5 lakhs), Drip Irrigation System (Rs195 lakhs), Rain shelters (Rs 48 lakhs) and Drinking Water Supply Scheme (Rs 100 lakhs). The entire activities under CER shall be treated as a project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half-yearly compliance report and to a District Collector.</p>	<p><b>COMPLETED</b></p> <ul style="list-style-type: none"> <li>• <u>INR 80.43 lakhs</u> funded for the development of Drinking Water supply scheme for Nirath Village. Scheme completed on 27.07.2022</li> <li>• <u>INR 5 lakhs</u> funded for the development of play ground at GPS, Koel, Kullu. Works completed on 28.02.2024</li> <li>• Medical material/equipment, worth <u>INR 6.9 lakhs</u> distributed in Public Health Centre/Sub Centre in the Project area.</li> </ul> <p><b>ONGOING</b></p> <ul style="list-style-type: none"> <li>• <u>INR 3.74 lakhs</u> funded against approved cost of INR 12.49 lakhs for the development of stage at GSSS, Neither, Kullu.</li> </ul> <p>Fundings against the CER are reported to the concerned DCs on a real time basis. Moreover, the instant report is being shared with MoEF&amp;CC as per laid schedule.</p>

iii	Based on the recommendation of Cumulative Impact Assessment and Carrying capacity study of Satluj River Basin or as per the ToR conditions or minimum 15% of the average flow of four consecutive leanest months or as submitted in the EIA/EMP report, whichever value is higher, shall be released as environmental flow.	Shall be ensured
iv	Necessary permission/ clearance to be obtained for quarrying construction materials for the Project as per the EIA Notification, 2006 and subsequent amendments thereof.	<ul style="list-style-type: none"> <li>● There are two approved quarries - Moin and Koel.</li> <li>● EC issued by SEIAA, HP on 03.07.2021 &amp; 15.07.2021, respectively.</li> </ul>
v	Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with a scientific approach and recycled. Use of single-use plastics may be discouraged.	Being ensured
vi	Wildlife Conservation plan for all Schedules I species shall be implemented with the approval of the Competent Authority.	Wildlife Conservation Plan (for INR 105 lakh) being worked out by HP Forest Department.
vii	Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines. Private land shall be acquired as per provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.	Being ensured
viii	The Environmental Clearance is valid for a period of 10 years from the date of issue of this letter for commissioning of the Project.	Noted

ix	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.	Shall be ensured.
x	Any other clearances /permissions/ approvals from any other organization/ department, as applicable to the Project shall be taken.	Complied
<b>ANNEXURE-I: Standard EC Condition for River valley and Hydro Electric Project</b>		
i	The Project proponent shall obtain Forest Clearance under the provisions of Forest (Conservation) Act, 1981, in case of the diversion of forest land for non-forest purpose involved in the project.	<p>Project (98.1004 ha)</p> <ul style="list-style-type: none"> <li>● FC-I granted on 19.09.2018</li> <li>● FC-II granted on 29.03.2019</li> </ul> <p>Additional land (0.9486 ha) - For Moin Road to Quarry Site</p> <ul style="list-style-type: none"> <li>● FC-I granted on 21.12.2020</li> <li>● FC-II granted on 13.10.2021</li> </ul>
ii	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.	Not applicable

iii	<p>The project proponent shall prepare a Site-Specific Conservation Plan &amp; Wildlife Management Plan and approved by the Chief Wildlife Warden. These commendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).</p>	<p>The Site-Specific Conservation Plan &amp; Wildlife Management Plan under scrutiny and being finalized by HP Forest Department.</p>
iv	<p>The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention &amp; Control of Pollution) Act, 1981 and the Water (Prevention &amp; Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.</p>	<p><b>Consent to Establish</b></p> <ul style="list-style-type: none"> <li>● CTE valid till 13.09.2021 (Issued on 14.09.2020)</li> <li>● RCTE valid till 31.03.2023 (Issued on 08.11.2021)</li> <li>● RCTE applied on 07.02.2023, with a validity request till 31.03.2025. Proposal under scrutiny by HPSPCB.</li> </ul>
v	<p>NOC shall be obtained from National Commission of Seismic Design Parameters (NCSDS) of CWC.</p>	<ul style="list-style-type: none"> <li>● Parameters approved during 31st Meeting of NCSDP on 23.06.2016</li> <li>● NOC granted on 07.10.2016</li> </ul>
vi	<p>Necessary approval of CEA shall be obtained as the Project cost is more than Rs. 1,000 crore.</p>	<p>CEA (GoI) accorded concurrence on 01.05.2018</p>
<b>II</b>	<b>Air Quality monitoring and preservation</b>	

i	Regular monitoring of various environmental parameters viz. Water Quality, Ambient Air Quality and Noise levels as per the CPCB guidelines at designated locations shall be carried out on monthly basis and a detailed database of the same shall be prepared and recorded. This shall be used as a baseline data for post construction EIA/ Monitoring purposes.	Monitoring being done by HPSPCB as per the laid Environment Monitoring Plan. Further, internal monitoring is done through SJVN Laboratory. Refer <b>Enclosure-2</b> for reports by HPSPCB.
ii	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply with prescribed standards.	Being ensured
iii	Necessary control measures such as water sprinkling arrangements, etc. be taken up to arrest fugitive dust at all the construction sites	Being ensured ( <b>Enclosure-3</b> )
<b>III</b>		
<b>Water quality monitoring and preservation</b>		
i	Before impounding of the water, coffer dams for both at the upstream and downstream are to be decommissioned as per EIA/EMP report so that once the Project is commissioned; cofferdam should not create any adverse impact on water environment including the rock mass and muck used for the coffer dam.	Shall be ensured
ii	As there would be fluctuation of water level during peaking period, efforts be made to reduce impact on aquatic life including impacts during spawning period both at the	Shall be ensured

	upstream and downstream of the Project	
iii	Water depth sensors shall be installed at suitable locations to monitor e-flow. Hourly data to be collected and converted to discharge data. The Gauge and Discharge data in the form of Excel Sheets are to be submitted to the Regional Office, MoEF&CC and to the CWC on a weekly basis.	Shall be ensured
<b>IV</b>	<b>Noise monitoring and prevention</b>	
i	All the equipment likely to generate high noise shall be appropriately enclosed or in built noise enclosures be provided so as to 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 (EPA), 1986.	Being ensured
ii	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB (A) during day time and 70 dB(A) during night time.	Being ensured
<b>V</b>	<b>Catchment Area Treatment Plan</b>	

i	<p>Catchment Area Treatment (CAT) Plan as proposed in the EIA/EMP report shall be implemented in consultation with the State Forest Department and shall be implemented in synchronization with the construction of the project.</p>	<ul style="list-style-type: none"> <li>● Executing Agency: HP Forest Dept.</li> <li>● Fund remitted: <u>INR 56.68 crore</u> (on 29.11.2018)</li> <li>● UC awaited</li> </ul>
<b>VI</b>	<b>Waste Management</b>	
i	<p>Muck disposal be carried out only in the approved and earmarked sites. The dumping sites shall be located sufficiently away from the HFL of the river. Efforts be made to reuse the muck for construction and other filling purposes and balance be disposed of at the designated disposal sites. Once the muck disposal sites are inactive, proper treatment measures like both engineering and biological measures be carried out so that sites are stabilized quickly.</p>	<ul style="list-style-type: none"> <li>● Amendment in EC issued by MoEF&amp;CC on 18.03.2021 citing change in location and area of dumping sites.</li> <li>● Status of muck generation and disposal up to March 31, 2024 mentioned in <b>Enclosure-1</b></li> </ul>
ii	<p>Solid waste management should be planned in detail. Land filling of plastic waste shall be avoided and instead be used for various purposes as envisaged in the EIA / EMP reports. Efforts be made to avoid one time use of plastics.</p>	Being ensured
<b>VII</b>	<b>Green Belt, EMP Cost, Fisheries and Wildlife Management</b>	

i	Detailed information on species composition particular to fish species from previous study/literature be inventoried and proper management plan shall be prepared for in-situ conservation in the streams, tributaries of river and the main river itself for which adequate budget provision be made and followed strictly.	<ul style="list-style-type: none"> <li>● Executing Agency: HP Fisheries Dept.</li> <li>● Fund remitted: <u>INR 105 lakhs</u> on 12.02.2021</li> <li>● UC: INR 30 lakhs (Cumulative INR 30 lakhs)</li> </ul> <p>Expenditure details as under: INR 30 lakh utilized for the development of Fish landing centre for Kol dam reservoir at Sunni, Shimla. (<b>Enclosure-1</b>)</p>
ii	Wildlife Conservation Plan prepared for both core and buffer zones shall be implemented in consultation with the local State Forest Department.	Shall be ensured
iii	To enrich the habitat of the Project site, plantation shall be raised as envisaged in the EIA/ EMP report. Plantation to be developed along the periphery of the reservoir in multi-layers with local indigenous species in consultation with the local State Forest Department.	Shall be ensured
iv	Compensatory Afforestation programme shall be implemented as per the plan approved.	<ul style="list-style-type: none"> <li>● Outlay: INR 6.13 crores (including departmental and contingency charges; plus INR 4 lakhs for CA against additional land)</li> <li>● Remitted funds: INR 6.13 crores on 19.11.2018</li> <li>● Executing Agency: HP Forest Department</li> <li>● UC: Awaited.</li> </ul>
v	Fish ladder/pass as envisaged in the EIA/EMP report shall be provided for migration of fishes, if any. Regular monitoring of this facility be carried out to ensure its	Reservoir fishery has been proposed in the EIA/EMP report.

	effectiveness.	
<b>VIII</b>	<b>Public hearing and Human health issues</b>	
i	Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt.	<ul style="list-style-type: none"> <li>• R&amp;R Scheme approved by GoHP. Implementation being done as per directions by R&amp;R Committee headed by the Deputy Commissioner</li> <li>• R&amp;R plan approved on 04.01.2022 and 04.06.2022 for Kullu and Shimla districts, respectively.</li> <li>• INR 65 lakhs disbursed in Shimla (Cumulative - INR 29.73 crores disbursed against the approved INR 32.92 crores)</li> <li>• INR NIL disbursed in Kullu (Cumulative - INR 15.05 crores disbursed against the approved INR 15 crores)</li> <li>• Resettlement of displaced families in progress.</li> </ul>
ii	Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.	<ul style="list-style-type: none"> <li>• Crop compensation: INR 93.78 lakhs (Cumulative - INR 12.55 crores)</li> <li>• Crack Compensation: INR 76 lakhs (Cumulative - INR 80.02 lakhs)</li> </ul>
iii	Preventive measures viz. fuming and spraying of mosquito control shall be done in and around the labour colonies, affected villages, stagnated pools, etc. Provisions be made to not to create any stagnated pools to avoid creation of breeding grounds of the vector borne diseases.	Being ensured
iv	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	Being ensured through Contract provisions.

	of temporary structures to be removed after the completion of the project.	
v	Labour force to be engaged for construction works shall be examined thoroughly and adequately treated before issuing them work permit. Medical facilities shall be provided at the construction sites.	Workers are issued work permits upon medical checkup. Moreover, first aid unit and ambulance facility developed at the Project site.
vi	Early Warning Telemetric system shall be installed in the upper catchment area of the Project for advance intimation of flood forecast.	Shall be ensured
vii	Emergency preparedness plan be made for any eventuality of the dam failure and shall be implemented as per the Dam Break Analysis.	Shall be ensured
<b>IX</b>	<b>Corporate Environment Responsibility</b>	
i	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/ 2017-IA.III, dated 1 <sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.	Being ensured
ii	Skill mapping be undertaken for the youths of the affected project area and based on the skill mapping, necessary trainings to the youths be provided for their long time livelihood generation.	Being ensured
iii	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and	The SJVN has a well laid down environmental policy duly approved by the Board of Directors.

	<p>balances and to bring into focus any infringements /deviation/ violation of the environmental /forest/ wildlife norms/ conditions. The company shall have a defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholder's / stakeholders. The copy of the board resolution in this regard shall be submitted to the MoEF&amp;CC as a part of a six-monthly report.</p>	
iv	<p>A separate Environmental Cell both at the project and company headquarter level, with qualified personnel shall be set up under the control of a Senior Executive, who will directly report to the head of the organization.</p>	<p>Environment Cell at Project and Corporate established.</p>
v	<p>Action plan for implementing EMP and environmental conditions along with the responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in a separate account and not to be diverted for any other purpose. Year wise progress of implementation of the action plan shall be reported to the Ministry/ Regional Office along with the Six Monthly Compliance Report.</p>	<p>Action plan along with responsibility matrix approved by Competent Authority on 14.01.2022. Further, budget provisions are made in the Project cost duly approved by CCEA.</p>
vi	<p>Post EIA and SIA be prepared for the Project through a third party and evaluation report be submitted to the Ministry after five years of</p>	<p>Shall be ensured</p>

	commissioning of the project.	
vii	Multi-Disciplinary Committee (MDC) be constituted with experts from Ecology, Forestry, Wildlife, Sociology, Soil Conservation, Fisheries, NGO, etc. to oversee implementation of various environmental safeguards proposed in EIA / EMP report during construction of the project. The monitoring report of the Committee shall be uploaded in the web site of the Company.	MDC approval awaited from the MoEF&CC. Ministry requested vide letter dated 10.06.2021, followed by reminders dated 25.10.2021, 21.03.2022, 21.06.2022, 02.08.2022, 30.09.2022, 16.03.2023, 28.09.2023 and 27.04.2024.
<b>X</b>	<b>Miscellaneous</b>	
i	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	<ul style="list-style-type: none"> <li>● EC advertised in two local newspapers: Divya Himachal &amp; Amar Ujala on 24.03.2020.</li> <li>● Further, a copy of Environment clearance is also displayed permanently at SJVN website <a href="http://www.sjvn.nic.in">www.sjvn.nic.in</a>.</li> </ul>
ii	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	<ul style="list-style-type: none"> <li>● EC has been shared with concerned Gram Pradhans, Chairperson BDCs &amp; Chairperson Zila Parishad on 23.03.2020.</li> <li>● Further, copies of EC have also been sent to concerned Deputy Commissioner, SDM &amp; HPSPCB for displaying the same for 30 days for public information on 23.03.2020.</li> </ul>

iii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on a half- yearly basis.	Being ensured
iv	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at Environment Clearance portal.	Latest Six Monthly Compliance Report uploaded on PARIVESH on 29.11.2023
v	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the web site of the company.	Shall be done upon operation of Project.
vi	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	PROJECT <ul style="list-style-type: none"> <li>● Financial Approval by CCEA: 20.11.2020</li> <li>● Date of Financial Closure: 28.02.2022</li> <li>● Start of land development work: Work awarded on 24.11.2020</li> <li>● Actual Work started in March 2021</li> <li>● Start of Operation (COD): Not yet declared.</li> </ul>
vii	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Being ensured
viii	The project proponent shall abide by all the	Being ensured

	commitments and recommendations made in the EIA/ EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	
ix	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Shall be complied
x	Concealing factual data or submission of false/ fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Shall abide the condition
xi	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Shall abide the condition
xii	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Shall abide the condition
xiii	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data information/monitoring reports.	Being ensured
xiv	The above conditions shall be forced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974,	Shall abide the condition

	the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	
xv	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Complied. No appeal reported.
<b>Additional conditions imposed by the Ministry of Environment &amp; Forests, GoI in environment clearance amendment vide letter no. J-12011/18/2015-IA-I (R) Pt dated 18.03.2021</b>		
i	Necessary control measures such as water sprinkling arrangement at all the construction and muck disposal sites and construction of paved roads leading to muck disposal sites shall be made to arrest fugitive dust and proper institutional mechanism be prepared for supervising this activity during operation & maintenance stage of the project.	Being ensured
ii	Stabilization of muck disposal sites using biological and engineering measures shall be taken up to ensure that muck does not roll down the slopes and shall be disposed of safely and that it does not pollute the natural streams and water bodies in the surrounding area. The engineering measures for the muck disposal arrangement be evolved after	Being ensured

	carrying out required slope stability analysis.	
iii	Necessary consent shall be obtained from District Administration due to proposed change in private land use for dumping of muck.	It has been intimated - State Administration i.e. SDM, Rampur & Kumarsain vide letter dated 20.03.2021.

Note: Photographs of few of the environmental aspects at **Enclosure-3**.

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**Enclosure-I**

S.N.	Management Plans/ Aspects	Cost in Lakh (INR)	Implementing status
1	Catchment Area Treatment Plan	5668.34	<ul style="list-style-type: none"><li>• Executing Agency: HP Forest Dept.</li><li>• Fund remitted: <u>INR 56.68 crore</u> (on 29.11.2018)</li><li>• UC awaited</li></ul>
2	Muck Management Plan	513.77	<b>Protection Measures:</b> <ul style="list-style-type: none"><li>• Executing Agency: M/s LHPC</li><li>• INR 27.30 lakhs (<u>Cumulative INR 54 lakhs</u>)</li></ul> Muck Details (with 45 % Swell Factor): Generated: 19.96 lakh m <sup>3</sup> Utilized: 8.08 lakh m <sup>3</sup> Dumped: 11.88 lakh m <sup>3</sup>
3	Compensatory Afforestation and Biodiversity Management Plan	1408.06	<b>CA/NPV/Addl. CA/contingency charges/departmental charges/cost of trees:</b> <ul style="list-style-type: none"><li>• Executing Agency: HP Forest Dept.</li><li>• Fund remitted: <u>INR 14.61 crore</u> (on 29.11.2018)</li></ul>
4	Landscaping and Restoration *	80	<b>Protection works at site, staff camp, crusher site and labour colony:</b> <ul style="list-style-type: none"><li>• INR Zero lakhs (<u>Cumulative INR 83.70 lakhs</u>).</li></ul>
5	Management plan for Air, Water and Noise Environment	25	<b>Awareness:</b> <u>Cumulative INR 0.04 lakhs.</u> <b>Others:</b> INR 22.20 lakhs ( <u>Cumulative INR 133 lakhs</u> ). Brief details as under: <ul style="list-style-type: none"><li>• Water tanker (INR 5.7 lakhs)</li><li>• PPE (INR 16.5 lakhs)</li></ul>

\* Apart from mentioned cost, additional cost for the measures to be implemented would be through Contractors engaged in project construction activities

# Exclusive of private land cost

6	Labour, Energy Conservation Measures and Waste Management Plan	245	<b>For labour:</b> <ul style="list-style-type: none"> <li>• <u>Cumulative INR 0.236 lakhs</u> for dustbins</li> <li>• <u>Cumulative INR 3.39 lakhs</u> for bio-toilets.</li> </ul>
7	Reservoir Rim Treatment and Greenbelt Development Plan	108.63	Shall be taken up during commissioning of Project.
8	Dam Broak Analysis and Disaster Management Plan	143	Shall be taken up during commissioning of Project.
9	Fisheries Management Plan	92	<ul style="list-style-type: none"> <li>• Fund remitted: <u>INR 105 lakhs</u></li> <li>• UC: INR 30 lakhs (Cumulative INR 30 lakhs)</li> </ul>
10	Resettlement and Rehabilitation Plan #	6243.75	R&R plan approved on 04.01.2022 and 04.06.2022 for Kullu and Shimla districts, respectively. <ul style="list-style-type: none"> <li>• INR 65 lakhs disbursed in Shimla (<u>Cumulative - INR 29.73 crores</u> disbursed against the approved INR 32.92 crores)</li> <li>• INR NIL disbursed in Kullu (<u>Cumulative - INR 15.05 crores</u> disbursed against the approved INR 15 crores)</li> <li>• Resettlement of displaced families in progress.</li> </ul>
11	Public Health Management Plan	185.4	Ambulance, first aid boxes, medicines: <ul style="list-style-type: none"> <li>• INR 6.63 lakhs (<u>Cumulative INR 31.93 lakhs</u>).</li> </ul>
12	Environment Monitoring Plan	147.62	<b>Monitoring by HPSPCB as per their Monitoring plan:</b> <ul style="list-style-type: none"> <li>• INR 6.28 lakhs remitted (Cumulative <u>INR 36 lakhs</u> against the approved INR 546.93 lakhs).The monitoring plan is for 45 years</li> </ul> <b>Ecological Study by M/s Terracon:</b> <ul style="list-style-type: none"> <li>• Total five year study (two years completed).</li> <li>• INR 6.13 lakhs (<u>Cumulative INR 13.13 lakhs</u> against the awarded INR 35 lakhs)</li> </ul> <b>SJVN Laboratory:</b> <ul style="list-style-type: none"> <li>• INR 1.53 lakhs spent on chemicals, equipment, filter paper, etc. (<u>Cumulative INR 14.39 lakhs</u>)</li> </ul>
A	<b>Cost of Management Plans</b>	<b>14860.57</b>	12082 lakhs
B	<b>Corporate Environmental Responsibility (CER)</b>	<b>866.5</b>	INR 1.5 lakh funded ( <u>Cumulative INR 96.07 lakhs</u> ). Details supplied at Serial No. ii of the Report.
	<b>Grand Total (A+B)</b>	<b>15727.07</b>	12178 lakhs

\* Apart from mentioned cost, additional cost for the measures to be implemented would be through Contractors engaged in project construction activities

# Exclusive of private land cost



**H.P.STATE POLLUTION CONTROL BOARD  
REPORT BY STATE BOARD ANALYST  
(Stack/Ambient Air) Monitoring Report**

Report No: 10807770/A-9606

11/10/2023

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Point of collection: Near Nirath Village  
Date of collection: 16/09/2023  
Time of collection: 09:00  
Collected by : Lokesh Kumar, JEE  
Date of receipt: 04/10/2023

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	41.49	microgrammes/m <sup>3</sup>	NA	NA



Rajender Kumar , SO  
RL Shimla



**H.P.STATE POLLUTION CONTROL BOARD  
REPORT BY STATE BOARD ANALYST  
(Stack/Ambient Air) Monitoring Report**

Report No: 10807768/A-9607

11/10/2023

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

**Point of collection:** Dam/Power House site (right bank R. Satluj)

**Date of collection:** 14/09/2023

**Time of collection:** 09:30

**Collected by :** Lokesh Kumar, JEE

**Date of receipt:** 04/10/2023

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	92.01	microgrammes/m <sup>3</sup>	NA	NA



Rajender Kumar , SO  
RL Shimla



**H.P.STATE POLLUTION CONTROL BOARD  
REPORT BY STATE BOARD ANALYST  
(Stack/Ambient Air) Monitoring Report**

Report No: 10807765/A-9608

11/10/2023

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Point of collection: **Dam/Power House site (left bank R. Safluj)**  
Date of collection: **14/09/2023**  
Time of collection: **09:00**  
Collected by : **Lokesh Kumar, JEE**  
Date of receipt: **04/10/2023**

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	97.74	microgrammes/m <sup>3</sup>	NA	NA



Rajender Kumar ,SO  
RL Shimla



**H.P.STATE POLLUTION CONTROL BOARD  
REPORT BY STATE BOARD ANALYST  
(Stack/Ambient Air) Monitoring Report**

Report No: 10807762/A-9609

11/10/2023

**ISSUED TO:** LUIRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Point of collection: **Main Office site, Bithal Village**  
Date of collection: **13/09/2023**  
Time of collection: **09:30**  
Collected by : **Lokesh Kumar, JEE**  
Date of receipt: **04/10/2023**

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	45.45	microgrammes/m <sup>3</sup>	NA	NA



Rajender Kumar ,SO  
RL Shimla



**H.P.STATE POLLUTION CONTROL BOARD  
REPORT BY STATE BOARD ANALYST  
(Stack/Ambient Air) Monitoring Report**

Report No: 10807760/A-9610

11/10/2023

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030 .

Point of collection: **Bithal Village**  
Date of collection: **13/09/2023**  
Time of collection: **09:00**  
Collected by : **Lokesh Kumar, JEE**  
Date of receipt: **04/10/2023**

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	134.85	microgrammes/m <sup>3</sup>	NA	NA



Rajender Kumar , SO  
RL Shimla



## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 10989662/W-10084

09/11/2023

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 31/10/2023

Description of sample: R. Satluj TRT of Luhri HEP

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	pH	7.73		NA	NA
2	Conductivity	201.2	microsiemens	NA	NA
3	DO	9.1	mg/L	NA	NA
4	Fecal Coliform	Less than 1.8	MPN/100ml	NA	NA
5	BOD	0.6	mg/L	NA	NA
6	Turbidity	4.8	NTU	NA	NA
7	TSS	20	mg/L	NA	NA
8	Fluoride	0.12	mg/L	NA	NA
9	Boron	0.05	mg/L	NA	NA
10	Nitrate-N	0.26	mg/L	NA	NA
11	Nitrite-N	0.02	mg/L	NA	NA
12	Ammonical Nitrogen	ND		NA	NA
13	Sulphate	20.22	mg/L	NA	NA
14	Ca++	20.04	mg/L	NA	NA
15	COD	4.8	mg/L	NA	NA
16	Total Phosphate	BDL	mg/L	NA	NA
17	Sodium	4.43	mg/L	NA	NA
18	TDS	118.0	mg/L	NA	NA
19	Potassium	3.19	mg/L	NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 10989645/W-10085

09/11/2023

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 31/10/2023  
Description of sample: River Satluj U/s Dam Luhri HEP

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	pH	8.07		NA	NA
2	DO	9.2	mg/L	NA	NA
3	Fecal Coliform	4.5	MPN/100ml	NA	NA
4	BOD	0.6	mg/L	NA	NA
5	Turbidity	3.4	NTU	NA	NA
6	TSS	9	mg/L	NA	NA
7	Fluoride	0.12	mg/L	NA	NA
8	Boron	0.07	mg/L	NA	NA
9	Nitrate-N	0.32	mg/L	NA	NA
10	Nitrite-N	0.02	mg/L	NA	NA
11	Ammonical Nitrogen	ND		NA	NA
12	Sulphate	19.11	mg/L	NA	NA
13	Ca++	20.84	mg/L	NA	NA
14	COD	5.6	mg/L	NA	NA
15	Total Phosphate	BDL	mg/L	NA	NA
16	Sodium	4.61	mg/L	NA	NA
17	TDS	94.0	mg/L	NA	NA
18	Potassium	4.18	mg/L	NA	NA
19	Conductivity	171.3	microsiemens	NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 10989748/W-10080

09/11/2023

ISSUED TO: LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 31/10/2023

Description of sample: River Satluj D/s after conf. with Bhera Khad

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	pH	7.66		NA	NA
2	TSS	8	mg/L	NA	NA
3	Fluoride	0.13	mg/L	NA	NA
4	Boron	0.07	mg/L	NA	NA
5	Nitrate-N	0.33	mg/L	NA	NA
6	Nitrite-N	ND		NA	NA
7	Ammonical Nitrogen	ND		NA	NA
8	Sulphate	18.24	mg/L	NA	NA
9	Ca++	20.44	mg/L	NA	NA
10	COD	4.4	mg/L	NA	NA
11	Total Phosphate	BDL	mg/L	NA	NA
12	Sodium	4.49	mg/L	NA	NA
13	TDS	106.0	mg/L	NA	NA
14	Potassium	2.65	mg/L	NA	NA
15	Conductivity	179.7	microsiemens	NA	NA
16	DO	9.2	mg/L	NA	NA
17	BOD	0.6	mg/L	NA	NA
18	Turbidity	4.6	NTU	NA	NA
19	Fecal Coliform	Less than 1.8	MPN/100ml	NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 10989734/W-10081

09/11/2023

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 31/10/2023  
Description of sample: Bhera Khad

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	pH	8.00		NA	NA
2	Conductivity	230.5	microsiemens	NA	NA
3	DO	9.6	mg/L	NA	NA
4	Fecal Coliform	27.0	MPN/100ml	NA	NA
5	BOD	0.7	mg/L	NA	NA
6	Turbidity	4.2	NTU	NA	NA
7	TSS	14	mg/L	NA	NA
8	Fluoride	0.12	mg/L	NA	NA
9	Boron	0.08	mg/L	NA	NA
10	Nitrate-N	1.52	mg/L	NA	NA
11	Sulphate	8.79	mg/L	NA	NA
12	Ca++	28.05	mg/L	NA	NA
13	COD	5.2	mg/L	NA	NA
14	Total Phosphate	BDL	mg/L	NA	NA
15	Sodium	4.79	mg/L	NA	NA
16	TDS	128.0	mg/L	NA	NA
17	Potassium	12.17	mg/L	NA	NA
18	Ammonical Nitrogen	ND		NA	NA
19	Nitrite-N	ND		NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 10989706/W-10082

09/11/2023

ISSUED TO: LUHRI HEP Stage I  
Village Bithal P.O .Samathlala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 31/10/2023

Description of sample: R. Satluj D/s Dam before conf. of Bhera Khad

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	pH	7.53		NA	NA
2	Conductivity	166.0	microsiemens	NA	NA
3	DO	9.1	mg/L	NA	NA
4	Fecal Coliform	70.0	MPN/100ml	NA	NA
5	BOD	0.7	mg/L	NA	NA
6	Turbidity	4.4	NTU	NA	NA
7	TSS	15	mg/L	NA	NA
8	Fluoride	0.15	mg/L	NA	NA
9	Boron	0.09	mg/L	NA	NA
10	Nitrate-N	1.70	mg/L	NA	NA
11	Sulphate	19.65	mg/L	NA	NA
12	Ca++	20.44	mg/L	NA	NA
13	COD	4.8	mg/L	NA	NA
14	Total Phosphate	BDL	mg/L	NA	NA
15	Sodium	4.45	mg/L	NA	NA
16	TDS	94.0	mg/L	NA	NA
17	Potassium	2.50	mg/L	NA	NA
18	Nitrite-N	0.02	mg/L	NA	NA
19	Ammonical Nitrogen	ND		NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 10989686/W-10083

09/11/2023

ISSUED TO: LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 31/10/2023  
Description of sample: Hand Pump Nirath

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	TSS	15	mg/L	NA	NA
2	Fluoride	0.10	mg/L	NA	NA
3	Boron	0.06	mg/L	NA	NA
4	Nitrate-N	1.58	mg/L	NA	NA
5	Nitrite-N	0.02	mg/L	NA	NA
6	Ammonical Nitrogen	ND		NA	NA
7	Sulphate	65.33	mg/L	NA	NA
8	Ca <sup>++</sup>	82.16	mg/L	NA	NA
9	COD	4.0	mg/L	NA	NA
10	Total Phosphate	BDL	mg/L	NA	NA
11	pH	7.88		NA	NA
12	Conductivity	697.2	microsiemens	NA	NA
13	DO	9.1	mg/L	NA	NA
14	Fecal Coliform	Less than 1.8	MPN/100ml	NA	NA
15	BOD	0.7	mg/L	NA	NA
16	Turbidity	27.3	NTU	NA	NA
17	Sodium	29.72	mg/L	NA	NA
18	TDS	380.0	mg/L	NA	NA
19	Potassium	21.25	mg/L	NA	NA





**H.P.STATE POLLUTION CONTROL BOARD**  
**REPORT BY STATE BOARD ANALYST**  
**(Stack/Ambient Air) Monitoring Report**

03/7

Report No: 11583218/A-11234

17/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumharsain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Point of collection: **Dam Site (right bank of R. Satluj)**  
Date of collection: 24/01/2024  
Time of collection: 09:30  
Collected by : Anju Negi, AEE  
Date of receipt: 05/02/2024

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	36.98	microgrammes/m <sup>3</sup>	NA	NA

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Dr Rajender Kumar ,SO  
RL Shimla



**H.P.STATE POLLUTION CONTROL BOARD**  
**REPORT BY STATE BOARD ANALYST**  
**(Stack/Ambient Air) Monitoring Report**

Report No: 11583188/A-11231

17/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Point of collection: Dam Site (left bank of R. Satluj)  
Date of collection: 24/01/2024  
Time of collection: 09:00  
Collected by : Anju Negi, AEE  
Date of receipt: 05/02/2024

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	102.84	microgrammes/m <sup>3</sup>	NA	NA



Dr Rajender Kumar , SO  
RL Shimla



**H.P.STATE POLLUTION CONTROL BOARD**  
**REPORT BY STATE BOARD ANALYST**  
**(Stack/Ambient Air) Monitoring Report**

Report No: 11583107/A-11232

17/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Point of collection: **Bithal Village**

Date of collection: **23/01/2024**

Time of collection: **09:30**

Collected by : **Anju Negi, AEE**

Date of receipt: **05/02/2024**

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	232.81	microgrammes/m <sup>3</sup>	NA	NA



Dr Rajender Kumar ,SO  
RL Shimla



**H.P.STATE POLLUTION CONTROL BOARD  
REPORT BY STATE BOARD ANALYST  
(Stack/Ambient Air) Monitoring Report**

Report No: 11583265/A-11230

17/02/2024

**ISSUED TO:** LUHRIHEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

**Point of collection:** Nirath Village

**Date of collection:** 27/01/2024

**Time of collection:** 09:00

**Collected by :** Anju Negi, AEE

**Date of receipt:** 05/02/2024

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	33.14	microgrammes/m <sup>3</sup>	NA	NA



Dr Rajender Kumar , SO  
RL Shimla



**H.P.STATE POLLUTION CONTROL BOARD**  
**REPORT BY STATE BOARD ANALYST**  
**(Stack/Ambient Air) Monitoring Report**

Report No: 11582890/A-11229

17/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Point of collection: Near Main office site, Bithal

Date of collection: 23/01/2024

Time of collection: 09:00

Collected by : Anju Negi, AEE

Date of receipt: 05/02/2024

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	PM 10	28.60	microgrammes/m <sup>3</sup>	NA	NA

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Dr Rajender Kumar , SO  
RL Shimla



## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 11605959/W-11293

23/02/2024

ISSUED TO: LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 03/02/2024

Description of sample: R. Satluj u/s Dam luhri HEP

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	Nitrate-N	0.26	mg/L	NA	NA
2	Nitrite-N	ND		NA	NA
3	pH	8.28		NA	NA
4	Conductivity	122.7	microsiemens	NA	NA
5	DO	9.2	mg/L	NA	NA
6	Fecal Coliform	less than 1.8	MPN/100ml	NA	NA
7	Turbidity	8.6	NTU	NA	NA
8	TSS	1.0	mg/L	NA	NA
9	COD	4.4	mg/L	NA	NA
10	Total Phosphate	0.29	mg/L	NA	NA
11	Sulphate	28.15	mg/L	NA	NA
12	Ca <sup>++</sup>	26.05	mg/L	NA	NA
13	Sodium	7.62	mg/L	NA	NA
14	TDS	71.0	mg/L	NA	NA
15	Potassium	3.94	mg/L	NA	NA
16	Ammonical Nitrogen	ND		NA	NA
17	BOD	0.6	mg/L	NA	NA
18	Fluoride	0.12	mg/L	NA	NA
19	Boron	0.05	mg/L	NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 11605975/W-11294

23/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: **03/02/2024**  
Description of sample: **R. Satluj TRT of luhri HEP**

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	Sodium	8.01	mg/L	NA	NA
2	TDS	97.0	mg/L	NA	NA
3	Potassium	4.08	mg/L	NA	NA
4	DO	9.2	mg/L	NA	NA
5	TSS	42	mg/L	NA	NA
6	Fluoride	0.11	mg/L	NA	NA
7	Boron	0.04	mg/L	NA	NA
8	COD	4.0	mg/L	NA	NA
9	Sulphate	28.92	mg/L	NA	NA
10	Ca <sup>++</sup>	27.65	mg/L	NA	NA
11	Nitrate-N	0.31	mg/L	NA	NA
12	Nitrite-N	ND		NA	NA
13	Ammonical Nitrogen	ND		NA	NA
14	BOD	0.6	mg/L	NA	NA
15	Fecal Coliform	6.8	MPN/100ml	NA	NA
16	pH	8.03		NA	NA
17	Turbidity	79.3	NTU	NA	NA
18	Conductivity	171.6	microsiemens	NA	NA
19	Total Phosphate	0.34	mg/L	NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 11606057/W-11302

23/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bihal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 03/02/2024

Description of sample: River Satluj D/s Dam before conf. with Bhera Khad

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	pH	8.27		NA	NA
2	Conductivity	124.4	microsiemens	NA	NA
3	DO	9.2	mg/L	NA	NA
4	BOD	0.8	mg/L	NA	NA
5	Turbidity	53.2	NTU	NA	NA
6	TSS	47	mg/L	NA	NA
7	Fluoride	0.12	mg/L	NA	NA
8	Boron	0.05	mg/L	NA	NA
9	Sodium	7.73	mg/L	NA	NA
10	COD	4.4	mg/L	NA	NA
11	Total Phosphate	0.35	mg/L	NA	NA
12	Sulphate	30.91	mg/L	NA	NA
13	Ca <sup>++</sup>	25.25	mg/L	NA	NA
14	TDS	74.0	mg/L	NA	NA
15	Potassium	4.06	mg/L	NA	NA
16	Nitrate-N	0.21	mg/L	NA	NA
17	Nitrite-N	ND		NA	NA
18	Ammonical Nitrogen	ND		NA	NA
19	Fecal Coliform	less than 1.8	MPN/100ml	NA	NA





**H.P.STATE POLLUTION CONTROL BOARD  
REPORT BY STATE BOARD ANALYST**

Report No: 11606085/W-11298

23/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 03/02/2024  
Description of sample: Bhera Khad

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	TSS	58	ug/L	NA	NA
2	Fluoride	0.11	mg/L	NA	NA
3	Boron	0.04	mg/L	NA	NA
4	COD	4.4	mg/L	NA	NA
5	Total Phosphate	BDL	mg/L	NA	NA
6	Sulphate	11.32	mg/L	NA	NA
7	Ca++	35.65	mg/L	NA	NA
8	Sodium	4.18	mg/L	NA	NA
9	TDS	90.0	mg/L	NA	NA
10	Potassium	5.21	mg L	NA	NA
11	Nitrate-N	0.23	mg/L	NA	NA
12	Nitrite-N	ND		NA	NA
13	Ammonical Nitrogen	ND		NA	NA
14	pH	8.20		NA	NA
15	Conductivity	153.6	microsiemens	NA	NA
16	DO	9.7	mg/L	NA	NA
17	Fecal Coliform	2.0	MPN/100ml	NA	NA
18	BOD	0.8	mg/L	NA	NA
19	Turbidity	12.8	NTU	NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 11606016/W-11295

23/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

Sample received on: 03/02/2024  
Description of sample: Hand pump Nirath

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	pH	8.02		NA	NA
2	Conductivity	365.8	microsiemens	NA	NA
3	DO	9.1	mg/L	NA	NA
4	Fecal Coliform	2.0	MPN/100ml	NA	NA
5	BOD	0.7	mg/L	NA	NA
6	Turbidity	144.4	NTU	NA	NA
7	TSS	39.0	mg/L	NA	NA
8	COD	5.6	mg/L	NA	NA
9	Nitrate-N	0.43	mg/L	NA	NA
10	Nitrite-N	ND		NA	NA
11	Fluoride	0.10	mg/L	NA	NA
12	Boron	0.04	mg/L	NA	NA
13	Total Phosphate	BDL	mg/L	NA	NA
14	Sulphate	51.07	mg/L	NA	NA
15	Ca++	86.97	mg/L	NA	NA
16	Sodium	26.68	mg/L	NA	NA
17	TDS	204.0	mg/L	NA	NA
18	Potassium	21.72	mg/L	NA	NA
19	Ammonical Nitrogen	ND		NA	NA





## H.P.STATE POLLUTION CONTROL BOARD REPORT BY STATE BOARD ANALYST

Report No: 11606132/W-11300

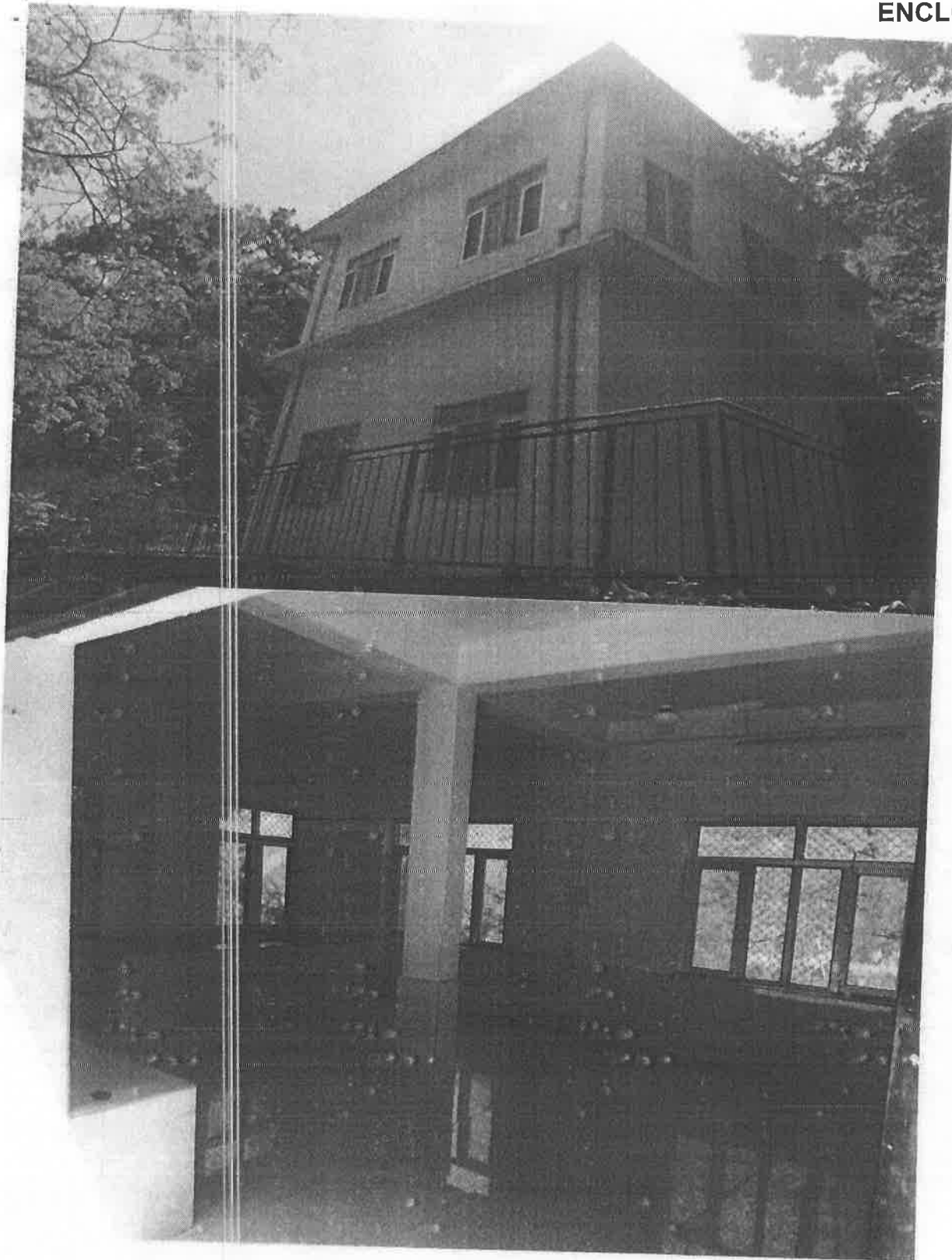
23/02/2024

**ISSUED TO:** LUHRI HEP Stage I  
Village Bithal P.O .Samathala, Tehsil Kumhersain, District Shimla, Kumarsain  
Distt.Shimla Rampur, H.P.172030

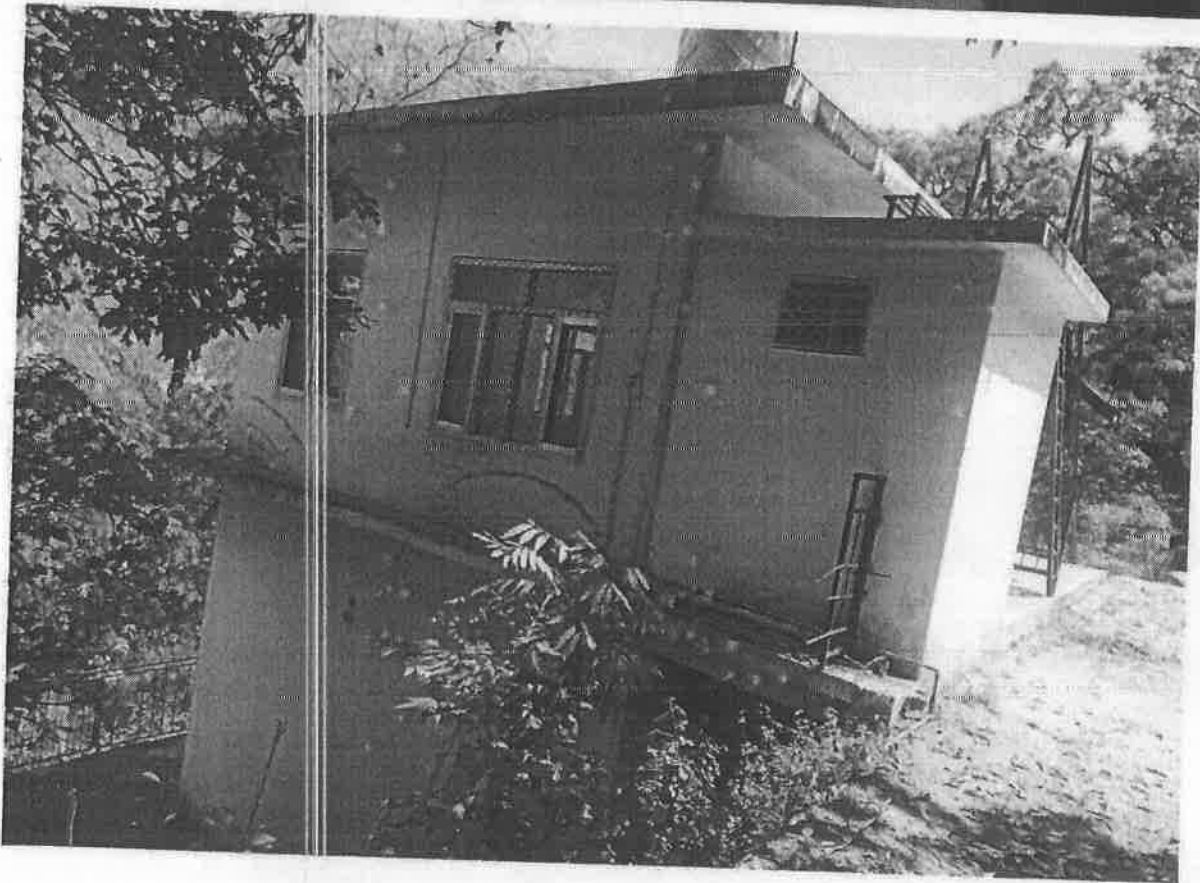
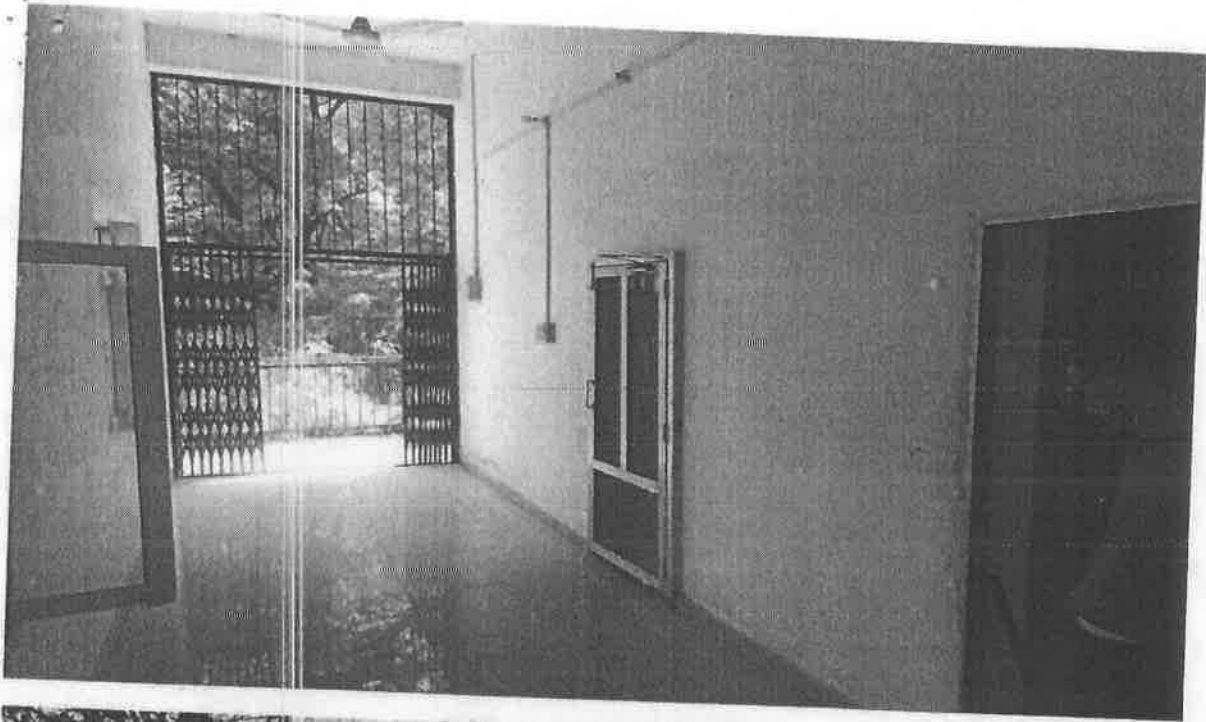
Sample received on: 03/02/2024  
Description of sample: R. Satluj after conf. with Bhera Khad

SAMPLING PARAMETERS					
Sr. No.	Parameter Name	Results	Units	Permissible Limit	Remark/Result Analysis
1	pH	8.08		NA	NA
2	Conductivity	186.7	microsiemens	NA	NA
3	DO	9.3	mg/L	NA	NA
4	Fecal Coliform	6.8	MPN/100ml	NA	NA
5	BOD	0.6	mg/L	NA	NA
6	Turbidity	112.4	NTU	NA	NA
7	TSS	80.0	mg/L	NA	NA
8	Fluoride	0.13	mg/L	NA	NA
9	Boron	0.05	mg/L	NA	NA
10	COD	4.0	mg/L	NA	NA
11	Total Phosphate	0.21	mg/L	NA	NA
12	Sulphate	35.32	mg/L	NA	NA
13	Ca <sup>++</sup>	44.08	mg/L	NA	NA
14	Sodium	13.85	mg/L	NA	NA
15	Potassium	9.24	mg/L	NA	NA
16	Nitrate-N	0.33	mg/L	NA	NA
17	Nitrite-N	ND		NA	NA
18	Ammonical Nitrogen	ND		NA	NA
19	TDS	116.0	mg/L	NA	NA

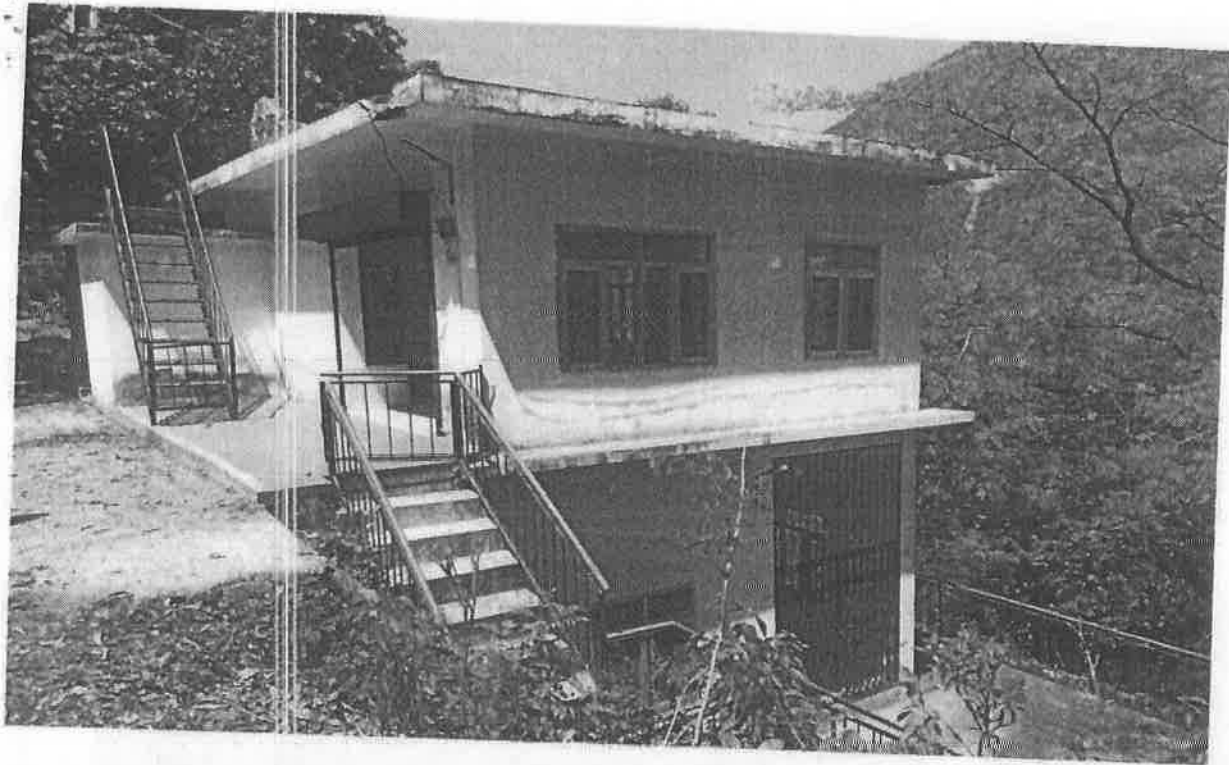




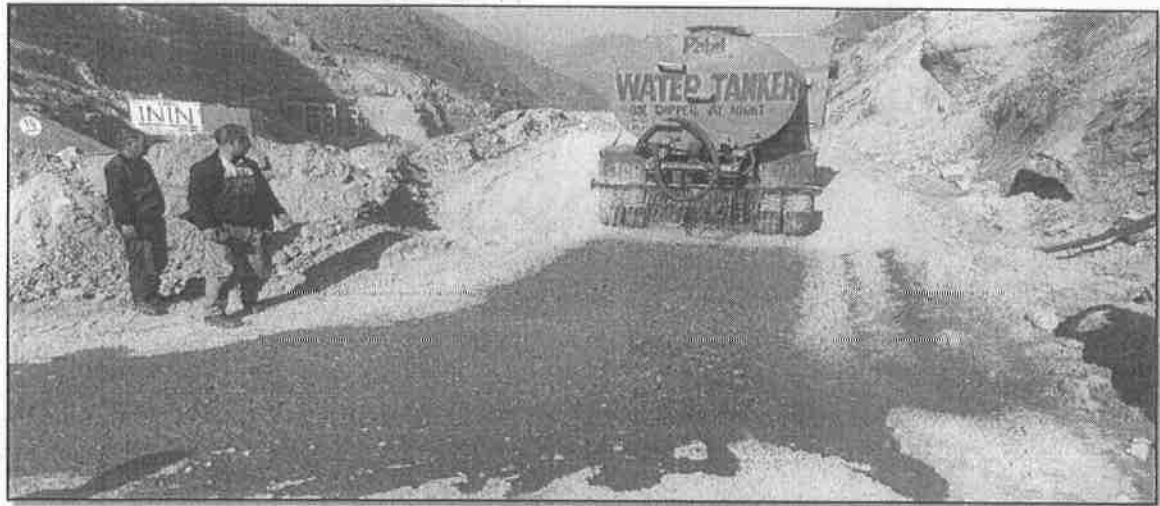
**FISH LANDING CENTRE, SUNNI (SHIMLA)  
UNDER: FISHERIES MANAGEMENT PLAN**



**FISH LANDING CENTRE, SUNNI (SHIMLA)  
UNDER: FISHERIES MANAGEMENT PLAN**



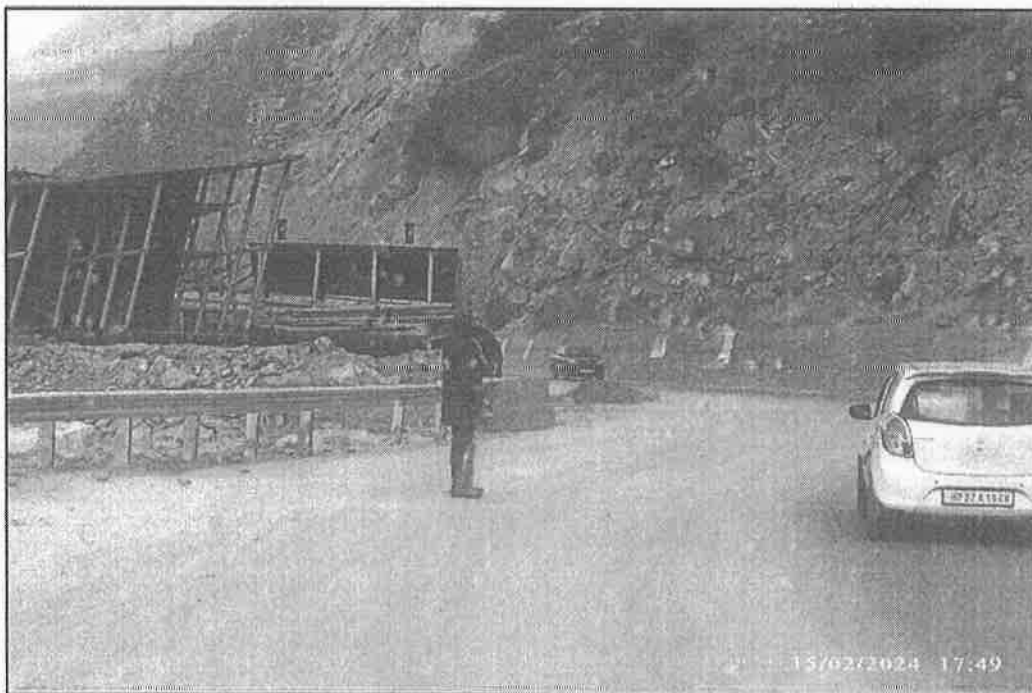
**FISH LANDING CENTRE, SUNNI (SHIMLA)  
UNDER: FISHERIES MANAGEMENT PLAN**



**Picture-1. Water Tanker sprinkling water.**



**Picture-2. Water sprinkler being used at Crusher Plant.**

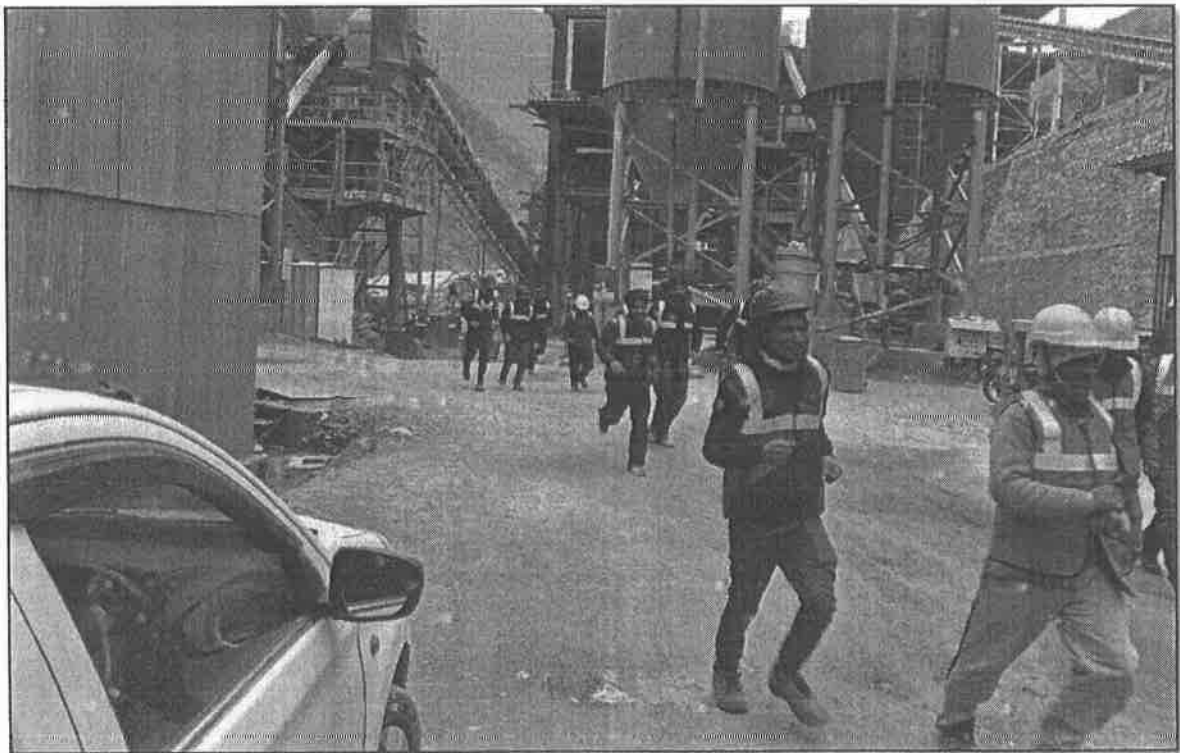


**Picture-3. Manual cleaning work.**

*[Handwritten signature]*

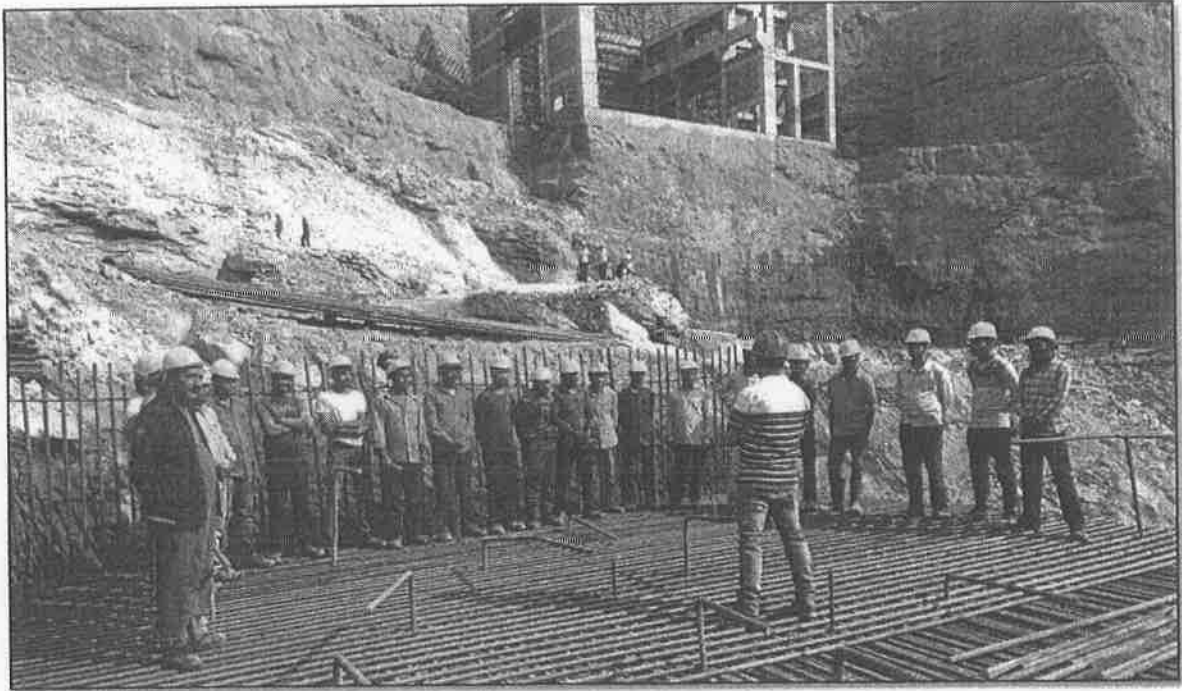


**Picture-5. Convex mirrors installed.**



**Picture-6. Mock Drill at Site.**

*[Handwritten signature]*



**Picture-7. Safety Meeting at Site.**



**Picture-8. Medical Camp at Site.**



**Picture-9. Medical Checkup at site.**

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