

**BEFORE THE HON'BLE NATONAL GREEN TRIBUNAL,
PRINCIPAL BENCH AT NEW DELHI**

O.A. NO. 1292 OF 2024

RENUMBERED AS

Execution Application No. 45 of 2024

IN

O.A. No. 498 of 2015

IN THE MATTER OF:

GANESH SINGH PANCHAL

... APPLICANT

VERSUS

STATE OF UTTARAKHAND & ORS.

...RESPONDENTS

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THROUGH COUNSEL

Place: Dehradun, Uttarakhand

Date: 16.04.2025

ADARSH CHAMOLI

Counsel For District Magistrate,

Bageshwar

Panel Counsel for State of Uttarakhand

5, Lawyers' Chamber Block-I,

Delhi High Court, New Delhi – 110003

Mobile: 8375955697

Email: adarshchamoli93@gmail.com

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IN THE MATTER OF:

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**RESPONSE AFFIDAVIT ON BEHALF OF DISTRICT
MAGISTRATE, BAGESHWAR**

I, Ashish Kumar Bhatgain, S/o
Shri Chitramani Bhatgain, aged
about 43 years, presently posted as
District Magistrate, Bageshwar,
Uttarakhand:


(Deponent)



I, the above name deponent, do hereby solemnly affirm and stated as hereunder:

1. That the deponent is presently posted as District Magistrate, Bageshwar, Uttarakhand i.e. in the present matter as such he is fully conversant with the facts of the case and competent to swear the present Affidavit.
2. That this Hon'ble Tribunal, vide order dated 20.02.2025 has granted 45 days' time to Respondent No. 4 to install Discharge Measurement Devices and had further directed the Deponent along with Superintendent of Police, Bageshwar to ensure compliance by Respondent No. 4 of this Hon'ble Tribunal's said order dated 20.02.2025. The relevant portion of the said order dated 20.02.2025 is reproduced here as under:

“ ...

10. Respondent No. 4 is granted 45 days' time for installation of the Discharge Measurement Devices.

11. In case of failure to do so, the Respondent No. 4 will not be allowed to carry out any further operations and the District Magistrate, Bageshwar, the Superintendent of Police, Bageshwar and Regional Officer, UKPCB, Bhageshwar are directed to ensure compliance with this order.

...”



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3. In compliance of the aforesaid order dated 20.02.2025, the Additional District Magistrate, Bageshwar, vide letter dated 02.04.2025 bearing number 569/20-J.A./2024, directed the Sub-Divisional Magistrate, Kapkot and other technical officers to investigate the matter and necessary instructions were also issued to the Superintendent of Police Bageshwar and the Manager of Respondent No. 4 i.e. M/s Parvatiya Power Ltd. Copy of the letter dated 02.04.2025 bearing number 569/20-J.A./2024 is annexed as **Annexure R1**.

4. That in compliance of the aforesaid letter dated 02.04.2025, an inspection with respect to the installation of the Discharge Measurement Devices at the premises of Respondent No. 4 was conducted on 04.04.2025 by the following individuals:

- a. Sub-Divisional Magistrate, Kapkot
- b. Executive Engineer, Electricity Distribution Division, U.P.C. Ltd. Bageshwar
- c. Executive Engineer, Irrigation department (Shichai Vibhag) Kapkot
- d. Additional Engineer (A.E) (Mechanical), Construction Division, PWD, Kapkot.

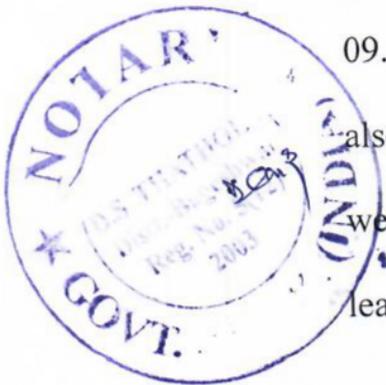


5. At the time of the inspection, a “fully contracted sharp crested rectangular wire” designed by University of Petroleum and Energy Studies Dehradun (UPES) was installed on the spot to measure the

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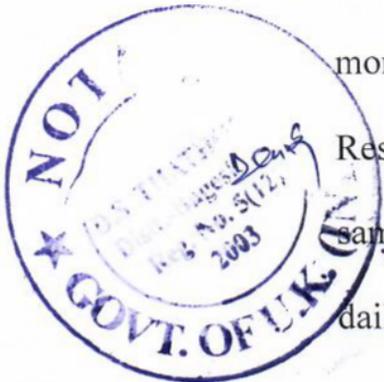
flow of water released into the Saryu river by Respondent No. 4, Parvatiya Power Limited, through which the flow of water released into the river is measured before being used for power generation, and a CCTV camera was also installed on the spot to monitor the gap in the water level in the said device.

6. During the inspection, the depth of water to be released was measured to be 0.12 m by the said device and on calculating this depth as per the design and formula provided by the University of Petroleum and Energy Studies Dehradun (UPES), the amount of water to be released has been estimated to be 0.23 cumec.
7. That as per the site inspection conducted by the Uttarakhand Jal Vidyut Nigam Limited (UJVNL) on 27.01.2025 (Annexure P-9, Response Affidavit of Respondent No. 2), the average lean season flow for the Loharkhet SHP of Respondent No. 4 is 1.38 cumec and therefore, the amount of water to be released being 0.23 cumec is 16.60% of the aforesaid 1.38 cumec which is more than 15% being the minimum requirement as directed by this Hon'ble Tribunal in its final order dated 09.07.2017 passed in O.A. No. 498 of 2015. Apart from this, it was also seen that after releasing the full flow of the river in the trench weaver for a short time, water was also flowing into the river through leakage, which was in addition to 16.60 per cent.



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8. The representative of Respondent No. 4 present at the site was also directed to make arrangements for online display of the CCTV camera installed at the site and to make arrangements for proper lighting for monitoring the readings at night and to install night vision CCTV camera as well as ensure that the daily report of the flow of water released into the river per hour is made available to the District Magistrate Bageshwar through the Sub-Divisional Magistrate Kapkot.
9. Compliance report regarding completion of installation work was submitted by the Additional District Magistrate, Kapkot on 08.04.2025, vide letter dated 07.04.2025 bearing number 950/P.A./Miscellaneous/2024-25 along with supporting photographs and technical report a copy of which is annexed as **Annexure R2**.
10. Apart from the above, daily hourly report of water flow of the hydroelectric project dated 05.04.2025, 06.04.2025 and 07.04.2025 has also been submitted at the office of the deponent for compliance and the same are annexed as **Annexure R3**.
11. It is also noteworthy that the main responsibility of keeping proper monitoring of release of 15% of Average Lean Season discharge by Respondent No. 4 lies with UJVNL and Respondent No. 3 and for the same, the concerned block level officers have been directed to provide daily reports while ensuring continuous monitoring from this level. A



letter dated 08.04.2025 bearing number 645/20-J.A./NGT/2024-25 was also sent to the Executive Engineer, Irrigation department, Kapkot, District Bageshwar as well as to the Executive Engineer, District-Small Water Projects, UJVN Limited, Dharchula, District Pithoragarh. Copy of the letter dated 08.04.2025 bearing number 645/20-J.A./NGT/2024-25 is annexed as **Annexure R4**.

12. That further, the Project Manager of Respondent No. 4 has intimated to Uttarakhand Pollution Control Board vide its letter dated 12.04.2025 bearing number PPL/KAP/03/107/210 that Discharge Measurement Gauge for measuring the minimum e-flow of the river as well as the at the intake of the project has been installed. Copy of the letter dated 12.04.2025 dated bearing number PPL/KAP/03/107/210 is annexed as **Annexure R5**.

13. That the contents of the Affidavit have been prepared under the instructions of the deponent and the same are true and correct and nothing material and has been concealed therefrom.



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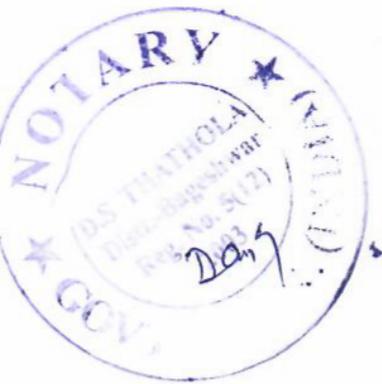
14. That the deponent undertakes to comply with any further directions that this Hon'ble Tribunal may pass in the present matter.


DEPONENT

VERIFICATION

Verified at Bageshwar, Uttarakhand on 16 day of April 2025 that the contents of the above affidavit are true and correct to the best of my knowledge and belief, no part of it is false and nothing material has been concealed therefrom.


DEPONENT



Ashish Kumar Bhatnagar
 श्री चित्तमंजरी Bhatnagar
 जिला मजिस्ट्रेट Bageshwar
 पता श्री Bhatnagar, Singh Bhatnagar
 16 अप्रैल 2025
 जांच किया गया।
 16.4.2025

पंजीकृत।

कार्यालय जिलाधिकारी, बागेश्वर।

संख्या:-569/बीस-जे0ए0/2024

दिनांक 02/04/2025

प्रबन्धक,

मै0 पर्वतीय पावर प्राईवेट लि0 मुनार, लोहारखेत,
जिला बागेश्वर।

विषय- मा0 एन0जी0टी0 में योजित Execution Application No. 45/2024 in O.A. No.498/2015 (IA No. 114/2025, IA No. 113/ 2025) में पारित आदेश दिनांक 20.02.2025 के अनुपालन के संबंध में।

उपरोक्त विषयक सदस्य-सचिव, उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड, देहरादून के पत्रांक: यूकेपीसीबी/एच. ओ./सा0-183-837/2025/2014 दिनांक 22.03.2025 से मा0 एन0जी0टी0 में योजित Execution Application No. 45/2024 in O.A. No.498/2015 (IA No. 114/2025, IA No. 113/ 2025) में पारित आदेश दिनांक 20.02.2025 में मा0 एन0जी0टी0 द्वारा अन्य निर्देशों के साथ-साथ निम्नलिखित निर्देश निर्गत किये गये हैं।

10. Respondent No. 4 is granted 45 days' time for installation of the Discharge Measurement Devices.
11. In case of failure to do so, Respondent No. 4 will not be allowed to carry out any further operations and the District Magistrate, Bageshwar. the Superintendent of police, Bageshwar and Regional Officer. UKPCB, Bageshwar are directed to ensure compliance with this order.

उक्त निर्देशों के क्रम में आपको निर्देशित किया जाता है कि मा0 एन0जी0टी0 द्वारा पारित आदेश दिनांक 20.02.2025 के अनुपालन में परियोजना के नजदीक में सी0सी0टी0वी0 कैमरा की व्यवस्था एवं डिजिटल मीटर वाटर फ्लो 15 प्रतिशत की स्थापना करते हुए प्रत्येक दिन में की गई कार्यवाही से इस कार्यालय को अवगत कराते हुए डिजिटल मीटर वाटर फ्लो 15 प्रतिशत की निगरानी किया जाना सुनिश्चित करेंगे, ताकि मा0 एन0जी0टी0 द्वारा दिये गये निर्देशों का अनुपालन सुनिश्चित किया जा सके, अन्यथा की स्थिति में नियमानुसार वाटर फ्लो संयंत्र स्थापित न किये जाने किये जाने की स्थिति में परियोजना के विरुद्ध नियमानुसार अग्रेत्तर कार्यवाही सुनिश्चित की जायेगी।

(एन0एस0नबियाल)

अपर जिलाधिकारी, बागेश्वर।

प्रतिलिपि- परगना मजिस्ट्रेट, कपकोट को उपर्युक्तानुसार इस निर्देश के साथ प्रेषित कि मै0 पर्वतीय पावर प्राईवेट लि0 मुनार, लोहारखेत जिला बागेश्वर का स्थल निरीक्षण कर उक्त के संबंध में साप्ताहिक रूप से विस्तृत आख्या इस कार्यालय को उपलब्ध कराना सुनिश्चित करें।

(एन0एस0नबियाल)

अपर जिलाधिकारी, बागेश्वर।

Mel mky
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de

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Annexure R2

02/J.A

9

कार्यालय उपजिलाधिकारी कपकोट, जिला बागेश्वर।

संख्या 950/पी0ए0-विविध/2024-25

दिनांक 07 अप्रैल, 2025

DC
11/4/25

सेवा में,

जिलाधिकारी,
बागेश्वर।

विषय:-

मा0 एन0जी0टी0 में योजित Exceution Application NO- 45/2024 in O.A NO. 498/2015 (IA No. 114/2025, No. 113/2025) में पारित आदेश दिनांक 20.02.2025 के अनुपालन के संबंध में।

महोदय,

कृप्या उपरोक्त विषयक अपने कार्यालय पत्र संख्या-568/बीस-जे0ए0/2024 दिनांक 02.04.2025 का संदर्भ ग्रहण करने का कष्ट करें। संदर्भित पत्र द्वारा मा0 एन0जी0टी0 में योजित Exceution Application NO- 45/2024 in O.A NO. 498/2015 (IA No. 114/2025, No. 113/2025) में पारित आदेश दिनांक 20.02.2025 के अनुपालन के संबंध में क्रमांक संख्या 10 व 11 में दिये गये निर्देशों के क्रम में संयुक्त जाँच आख्या उपलब्ध कराने हेतु निर्देशित किया गया है।

उक्त के अनुपालन में इस कार्यालय के पत्र संख्या-940/पी0ए0-संयुक्त जाँच/2024-25 दिनांक 03 अप्रैल, 2025 द्वारा दिनांक 04.04.2025 को राजस्व विभाग, विद्युत विभाग, सिचाई विभाग व लोक निर्माण विभाग की उपस्थिति में मौका स्थल का संयुक्त निरीक्षण किया गया।

अतः उक्तानुसार संयुक्त निरीक्षण आख्या पत्र के साथ संलग्न कर अग्रिम कार्यवाही हेतु

सादर सेवा में प्रेषित।

संलग्न :- उक्तानुसार।

भवदीय,

(अनिल सिंह रावत)
उपजिलाधिकारी,
कपकोट।

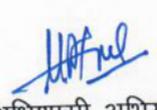
कार्यालय जिलाधिकारी बागेश्वर के पत्र संख्या 568/बीस-जे0एस0/2024 दिनांक 02.04.2025 द्वारा दिये गये निर्देशों के क्रम में माननीय एन0जी0टी0 में योजित Execution Application No. 45/2024 in O.A. No. 498/2015(IA No. 114/2025, IA No. 113/2025) में पारित आदेश दिनांक 20.02.2025 के अनुपालन में आज दिनांक 04.04.2025 को पर्वतीय पावर लिमिटेड (4.8 मेगावाट) मुनार परियोजना का निरीक्षण किया गया जिसमें निम्नलिखित अधिकारीगण उपस्थित थे।

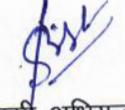
1. श्री अनिल सिंह रावत, उपजिलाधिकारी कपकोट।
2. मोहम्मद अफजाल, अधिशासी अभियन्ता, विद्युत वितरण खण्ड उ0पा0का0लि0 बागेश्वर।
3. श्री जगत सिंह बिष्ट, अधिशासी अभियन्ता, सिंचाई खण्ड कपकोट।
4. श्री विपिन चन्द्र सनवाल, अपर सहायक अभियन्ता (यांत्रिक) निर्माण खण्ड लो0नि0वि0 कपकोट।

निरीक्षण के दौरान मौके पर पर्वतीय पावर लिमिटेड द्वारा सरयू नदी में छोड़े जाने वाले पानी के प्रवाह को मापने के लिये University of Petroleum and Energy Studies Dehradun (UPES) द्वारा परिकल्पित Fully contracted sharp crested rectangular wier का निर्माण किया गया है। जिसके माध्यम से विद्युत उत्पादन में प्रयुक्त किये जाने से पूर्व नदी में छोड़े जाने वाले पानी के प्रवाह की माप की जाती है, एवं मौके पर उपरोक्त युक्ति में पानी के स्तर के माप की निगरानी करने के लिये सी0सी0टी0वी0 कैमरा भी स्थापित किया गया है। ओ0ए0 संख्या 498/2015 (एम0ए0 संख्या 628/2016) मा0 एन0जी0टी0 ने दिनांक 09.08.2017 के माध्यम से निर्देश दिया गया है कि देश की सभी नदियों में नदी के औसत Lean season प्रवाह का न्यूनतम 15 प्रतिशत बनाये रखा जायेगा। निरीक्षण के दौरान छोड़े जाने वाले पानी की गहराई उक्त युक्ति द्वारा 0.12 मी0 मापी गयी। इस गहराई की माप को University of Petroleum and Energy Studies Dehradun (UPES) द्वारा उपलब्ध कराये गये डिजाइन एवं सूत्र के अनुसार गणना करने पर छोड़े जाने वाले पानी की मात्रा 0.23 क्यूमैक आंकी गयी है, जो कि उत्तराखण्ड शासनादेश संख्या 268751/I-1/2025-05 /03 (रिट) / 2024 - ई फाईल 7063 दिनांक 16 जनवरी 2025 के क्रम में प्रबन्ध निदेशक यू0जे0वी0एन0एल0 देहरादून के कार्यालय पत्रांक 389/यू0जे0वी0एन0एल0/01/प्र0 नि0सी0-18, 20 जनवरी 2025 के द्वारा गठित जांच समिति के द्वारा आगणित Average lean value 1.38 Cumec का 16.60 प्रतिशत था। जो lean Season प्रवाह का न्यूनतम 15 प्रतिशत से अधिक है। इसके अतिरिक्त यह भी देखा गया कि ट्रैन्च वीयर में अल्प समय के लिये नदी के पूर्ण प्रवाह को प्रवाहित करने के उपरान्त लीकेज के द्वारा भी पानी नदी में प्रवाहित हो रहा था, जो कि 16.60 प्रतिशत के अतिरिक्त था।

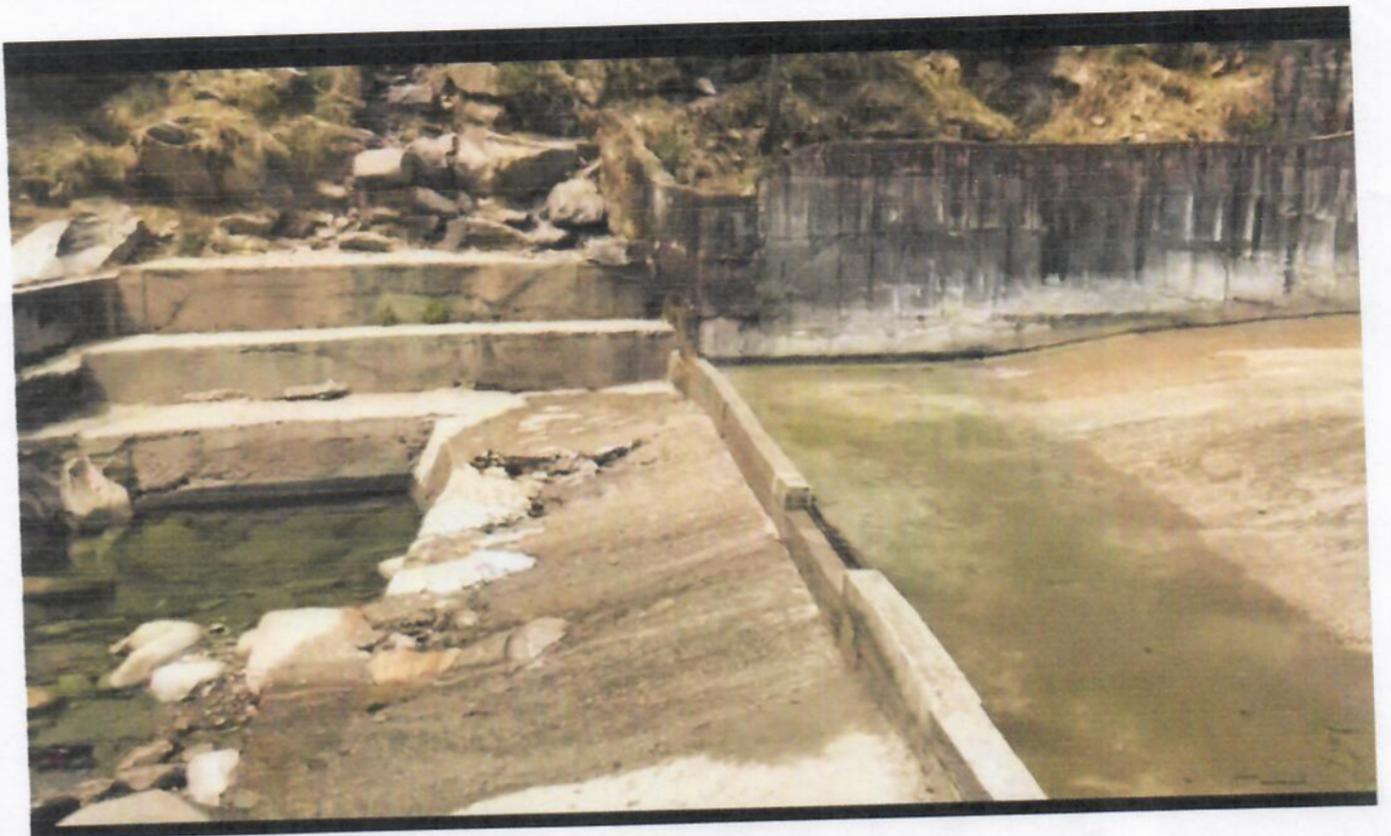
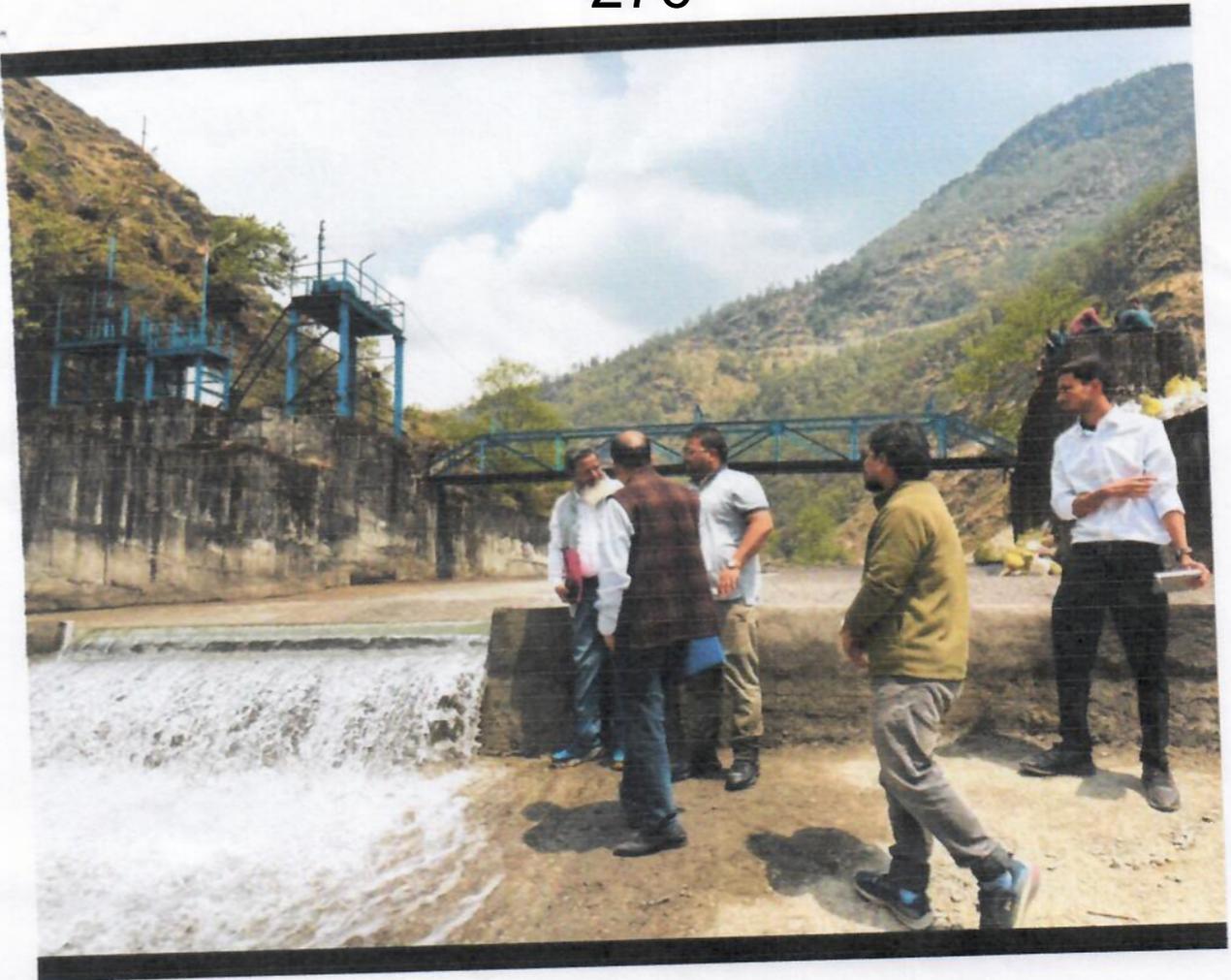
उपरोक्त निरीक्षण एवं उपलब्ध आंकड़ों के आधार पर यह ज्ञात होता है कि Average lean value का 15 प्रतिशत पानी छोड़ने के लिये लगाये गये मापक यंत्र (युक्ति) में पानी की गहराई को कम से कम 0.12 मी0 बनाये (Maintain) रखे जाने की आवश्यकता होगी। स्थल पर पर्वतीय पावर लिमिटेड के उपस्थित प्रतिनिधि को यह भी निर्देशित किया गया कि मौके पर लगे सी0सी0टी0वी0 कैमरे का ऑनलाईन डिस्पले प्रदर्शित (Access) करने की व्यवस्था करें, एवं रात्रि के समय के लिये रीडिंग की निगरानी हेतु समुचित प्रकाश की व्यवस्था एवं नाइट वीजन सी0सी0टी0वी0 कैमरा लगाने की व्यवस्था के साथ-साथ नदी में छोड़े जाने वाले जलप्रवाह के प्रतिघंटे की दैनिक रिपोर्ट उपजिलाधिकारी कपकोट के माध्यम से जिलाधिकारी बागेश्वर को उपलब्ध कराना सुनिश्चित करें।


अपर सहायक अभियन्ता
(यांत्रिक) निर्माण खण्ड
लो0नि0वि0 कपकोट।


अधिशासी अभियन्ता
विद्युत वितरण खण्ड
उ0पा0का0लि0 बागेश्वर।


अधिशासी अभियन्ता
सिंचाई खण्ड कपकोट।


उपजिलाधिकारी
कपकोट







Report on
WEIR DESIGN

*Name of Site: Loharkhet Hydro Electric Power Plant, Loharkhet, Distt. Bageshwar,
Uttarakhand*

Submitted to:
Parvatiya Power Ltd.

Submitted by:
Civil Engineering Department
Sustainability Cluster, UPES
Energy Acres, P.O. Bidholi Via Prem Nagar
Dehradun 248007 (Uttarakhand) India
Ph.: +91.135.2102690,91, 2776093, 95 Fax: +91.135.2776094
Web: www.upes.ac.in

SUMMARY REPORT ON THE WEIR DESIGN

A. Project information

1. **Project Title:** Design of a weir for flow estimation for lean flow (0.05 to 0.30 m³/s).
2. **Principal Investigator:** Dr. Kuldeep Swarnkar, Assistant Professor, Department of Civil Engineering, Sustainability Cluster, School of Advanced Engineering, UPES
3. **Co-Principal Investigator:** Dr. Rahul Silori, Associate Professor, Department of Civil Engineering, Sustainability Cluster, School of Advanced Engineering, UPES
4. **PI and Co-PI's Institution:** UPES, Bidholi Campus, Dehradun-248007
5. **Date of Commencement:** 27th March 2025
6. **Approved Date of Completion:** 30th March 2025 (On extremely urgent basis)
7. **Objective for the Project:**

The objective of the project is to design a weir for lean flow that can estimate a flow from 0.05 m³/s to 0.30 m³/s.

The data provided is as follows:

Channel Geometry Data:

Lateral profile of the channel = 23 m RCC Channel

Bed elevation data = 0.4 m

Hydrological Data:

The minimum flow rate of river during lean season flow = 0.05 m³/s

Maximum flow rate of river during lean season flow = 0.30 m³/s

Water/bed Levels: No seasonal variations at bed level.

Geotechnical Data:

The channel is made up of RCC.

Soil Properties: Soil type, bearing capacity, and permeability = NA

Foundation Conditions: Depth to bedrock = NA

Environmental Data:

Sediment Transport: Sediment load = NA

Particle size distribution = 0.002 mm to 20 mm

Ecological Impact: Potential effects due to construction of weir on local flora and fauna, including fish migration = No ill effects to ecological system.

B. Project Outcomes

1. Brief description of the project's requirements:

The project aims to construct a weir for flow measurement during lean flow. Mainly there are three types of weirs namely, Broad crested, Ogee crested, and Sharp crested. Based on the channel's conditions and requirements, we recommend having contracted sharp crested rectangular weir that can have portable weir plate. The weir can be dismantled during storm weather flow, and it will not cause an obstruction in the flow. A sharp-crested weir consists of a vertical flat plate with a sharp edge at the top (the crest), placed in an open channel so that the liquid must flow over the crest to drop into the pool below the weir. In sharp crested weirs we have mainly three types: Rectangular, V-notch, and trapezoidal. For this case rectangular weir will be suitable as per the discharge range. Again, as the width of the reach is 23 m so it is not feasible to have a rectangular sharp crest weir throughout the width of the reach. Hence, concluding all requirements and conditions contracted sharp crested rectangular weir will be best suitable. A cross-section and projection of the required weir is shown in Figure 1. Also, the weir can be designed in a way that it can be dismantled during storm weather flow and for this purpose, it should have portable weir plate.

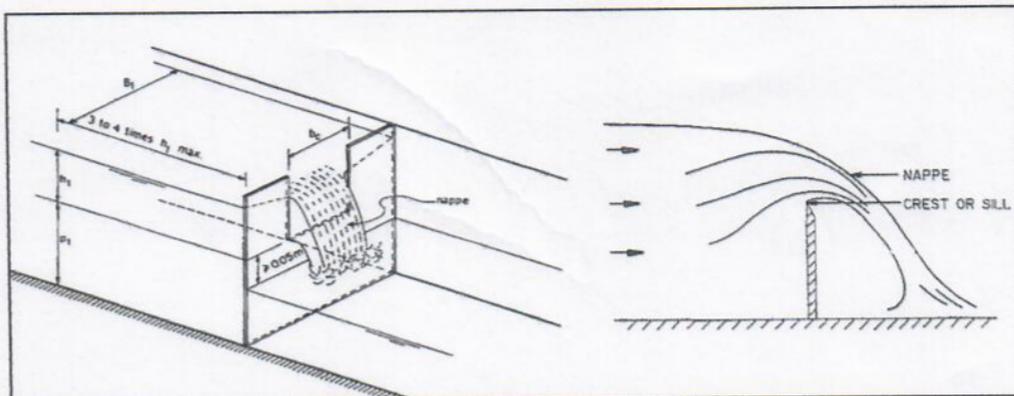


Figure 1: A contracted sharp crested rectangular weir and its side view.

Illustrations in Figure 1 are summarized here:

h_1 : Depth of the flow over the crest of the weir (in upstream).

p_1 : Depth of water from channel bed to crest of the weir (in upstream).

B_1 : Width of the channel, and b_c : Width of the crest.

Some of the basic terminology used in connection with sharp-crested weirs are:

Drawdown occurs upstream of the weir plate due to the acceleration of the water as it approaches the weir. For that the depth of the flow should be measured upstream (3-4 times of the h_1). The term Nappe is used for the sheet of water flowing over the weir. Free flow is the flow condition over a sharp-crested weir when there is free access to air under the nappe.

2. Design of the weir

When we design a weir, it requires several data sets such as:

- (i) Detailed topographic survey
- (ii) Collection of hydrological, sediment and evaporation data
- (iii) Surface and sub surface investigation including laboratory tests
- (iv) Diversion requirements
- (v) Construction material
- (vi) Communication system
- (vii) Other miscellaneous studies.

For these data sets detailed investigations need to be carried out and based on that basic components can be designed such as: upstream protection arrangement, type and design of crest, stilling basin, downstream protection arrangement, divide walls, fish pass, under sluices, abutments, guide bunds etc.

In the present case, an RCC structure is already there (Figure 2) and it is required to have a small weir just for measurement of the lean flow ranging from 0.05 to 0.30 m^3/s . For this design, based on the available data it is suggested that a contracted sharp crested rectangular weir can function well. Also, it will be feasible to have portable weir plates in this case. In storm weather, the weir plates can be removed and stored to be used for the lean flow whenever it occurs. In this way neither will the weir be affecting the flow and nor will it be getting damaged.

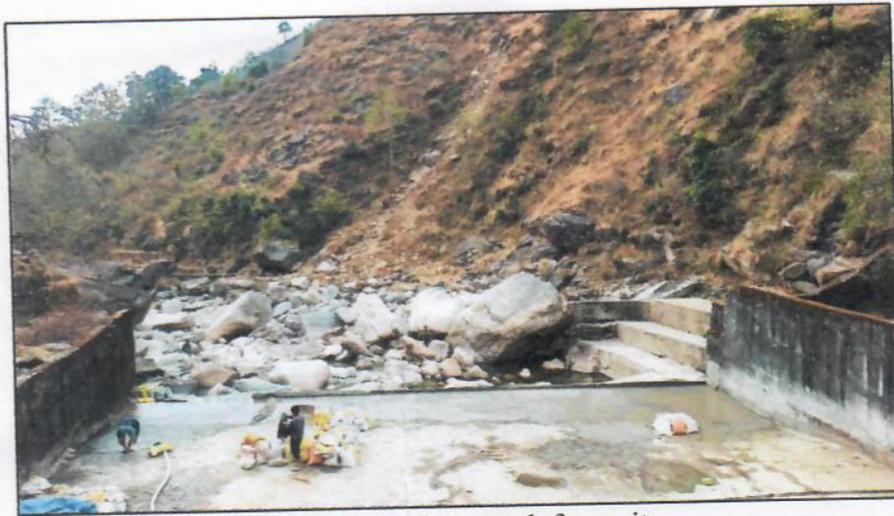


Figure 2: A photograph from site.

As shown in the photograph the slope of the channel is sufficient to retard depth of flow in downstream. Since water won't be accumulating downstream during the lean flow, the height of the crest can be taken as 0.15 m from the bed level. Now, the relationship between the flow and depth of the water over the crest of the contracted sharp crested rectangular weir can be defined by the Kindsvater-Carter equation as follows:

$$Q = \left[C_1 \left(\frac{h_1}{p_1} \right) + C_2 \right] (b_c - 0.003)(h_1 + k_b)^{1.5} \quad (\text{Equation 1})$$

Where, "Q" is the flow (m^3/s); "C₁ and C₂" are site specific coefficients; "h₁" is the depth of the flow over the crest of the weir (to be measured 3-4 times of the h_{max} in upstream) in meters; "p₁" is the depth of water from channel bed to crest of the weir (in upstream) in meters; "b_c" is the width of the crest in meters; and "k_b" value is also site-specific and for reference it can be used from the Figure 3 shown below in meters.

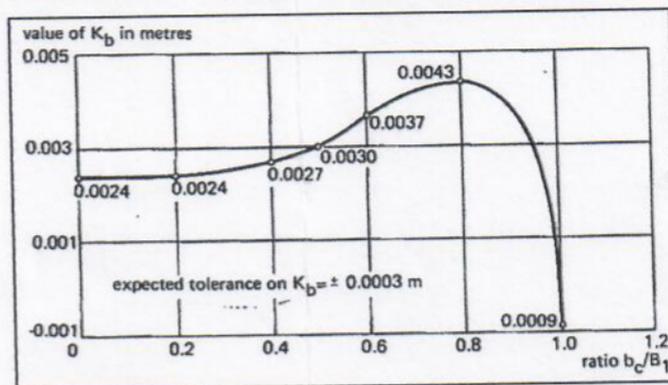


Figure 3: Values of k_b , as a function of b/B .

As the equation is too specific and difficult to apply on site so it can be used in a simplified way based on some conditions. The following equation provides simplified calculations for discharge:

$$Q = 1.84(b_c - 0.2h_1)(h_1^{1.5}) \quad (\text{Equation 2})$$

Here, the nomenclature is the same as for Equation 1 and the minimum criteria for applying this equation is as follows:

1. $(B_1 - b_c) \geq 4h_1$
2. $(h_1/b_c) \leq 0.5$
3. $0.04 \text{ m} \leq h_1 < 0.14 \text{ m}$
4. $b_c \geq 0.30 \text{ m}$

Further simplifying the Equation 1 by using $b_c = 3\text{m}$,

$$Q = 1.84(3 - 0.2h_1)(h_1^{1.5}) \quad (\text{Equation 3})$$

Now, on the basis of Equation 3 and using the observed value of h_1 , the discharge can be calculated at the site. Note that the value of h_1 is in meters and the discharge Q is in m^3/s .

Dimensions for the fully contracted sharp crested rectangular weir:

Carrying out computations using discharge equations, the appropriate dimensions for the weir are as follows:

- Width of the channel (B_1) = 23 meters (given)
- Width of the weir opening (b_c) = **3 meters**
- Depth of the water from channel bed to weir crest (p_1) = 0.15 meters
- $h_{\text{max}} = 0.14$ meters (for flow) + 0.01 meters of free board
- Total height of the weir plate from RCC channel bed = **0.30 meters**
- Width of the channel to be obstructed = $23 - 3 = 20$ meters
- For obstruction of the flow, an RCC wall of width 0.30 m and height 0.30 m is already constructed at the site.
- Dimensions of the plate for weir opening = **3 m x 0.15 m**
- Thickness of the weir plate = 8 mm

The drawings for contracted sharp crest rectangular weir

1. Weir plate:

- The weir plate can be 3.5 m x 0.35 m.
- It can be fixed in mortar from bottom after inserting it, 5 cm below bed. On both sides it can be supported by RCC, because of that width of 0.2 meters is considered on both sides.
- In between RCC wall and nappe remaining 0.05 m width on both sides of the weir plate is required to act as a vent to have free flow condition.
- The opening of the weir will be 3 m x 0.15 m.
- The thickness of the weir plate can be 8 mm.
- The weir plate should be attached to the RCC wall in a manner that there should be no leakages of the water.
- The weir plate should be aligned with the upstream surface of the RCC wall.
- A drawing of weir plate as per these dimensions is shown below:

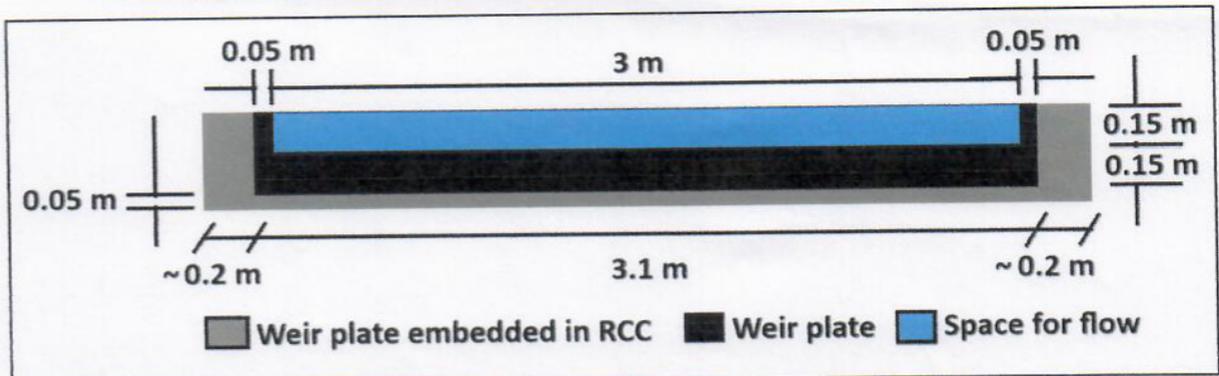


Figure 4: Drawing of the weir plate.

2. Sharp edges of the weir plate:

- The weir plate has a thickness of 8 mm.
- To have a free flow condition of the flow over the weir, the weir plate should have sharp crest and sides for opening edges.
- The opening of the weir should have a thickness of 2 mm in left, right, and bottom (it will be required for smooth free flow).

- Both sides and bottom of the opening should be perpendicular to the direction of the flow.
- The crest of the weir should be aligned parallel to the water level. That means it should not have any tilt.
- The drawing for the sharp crest and sides is shown in Figure 5.

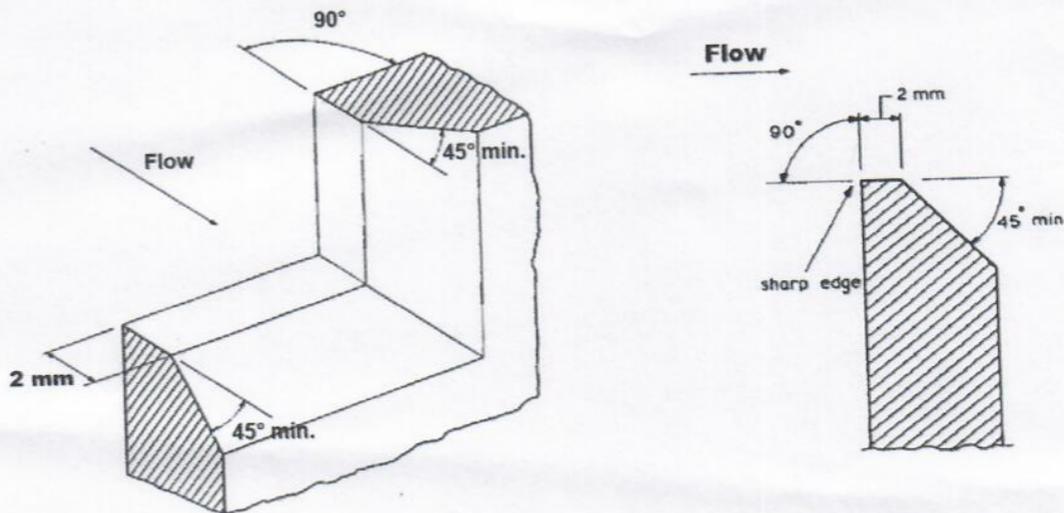


Figure 5: Flow-wise enlarged view of crest and side corner with cross-section over a sharp-crested (thin-plate) weir.

3. Arrangement of weir plate to the RCC wall:

- All plates should be arranged together with supports using nuts and bolts of 15 mm diameter.
- All supports should be attached to the RCC channel bed using 15 mm bolts of appropriate length (as per the strength of the bed).
- Side supports on the left and right should also have bolts fixed inside walls.
- All the joints should have a 5 mm rubber layer between plates and supports for water tightness.
- Once the structure has been deployed it will form a weir for discharge measurement in the range of 0.2 to 2 m³/s. The arrangement of the structure will look as shown in Figure 6.



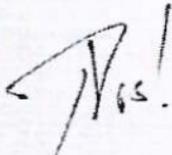
Figure 6: A view of the weir once it gets deployed at the site.

- Also, note that the discharge will deviate in a narrow range based on the unrecognized site conditions.
- The discharge values from Equation 3 need to be cross checked with the actual discharge at the site.
- Once the weir is constructed the calibration of weir will take place and that will result in a final site-specific updated equation for the discharge measurement based on the height of the flow.
- Please reach out to us for calibration purpose after the construction work is completed.

PARVATIYA POWER LTD.**LOHARKHET SMALL HYDRO ELECTRIC POWER PLANT, LOHARKHET, DISTT- BAGESHWAR
(UTTARAKHAND)**

Date 5.04.2025

Time	Water Level(M)	Water discharge(Qmec)
07:00	0.12	0.23
08:00	0.12	0.23
09:00	0.12	0.23
10:00	0.12	0.23
11:00	0.121	0.23
12:00	0.121	0.23
13:00	0.12	0.23
14:00	0.122	0.23
15:00	0.12	0.23
16:00	0.122	0.23
17:00	0.121	0.23
18:00	0.122	0.23



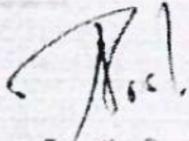
Parvatiya Power Ltd.
Loharkhet Hydro Electric Power Plant
Loharkhet, Distt. Bageshwar
Uttarakhand

PARVATIYA POWER LTD.

**LOHARKHET SMALL HYDRO ELECTRIC POWER PLANT, LOHARKHET, DISTT- BAGESHWAR
(UTTARAKHAND)**

Date 6.04.2025

Time	Water Level(M)	Water discharge(Qmec)
07:00	0.12	0.228
08:00	0.12	0.228
09:00	0.122	0.233
10:00	0.122	0.233
11:00	0.121	0.230
12:00	0.121	0.230
13:00	0.12	0.228
14:00	0.123	0.236
15:00	0.122	0.233
16:00	0.121	0.230
17:00	0.121	0.230
18:00	0.122	0.233



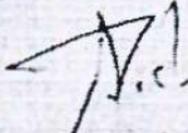
Parvatiya Power Ltd.
Loharkhet Hydro Electric Power Plant
Loharkhet, Distt. Bageshwar
Uttarakhand

PARVATIYA POWER LTD.

**LOHARKHET SMALL HYDRO ELECTRIC POWER PLANT, LOHARKHET, DISTT- BAGESHWAR
(UTTARAKHAND)**

Date 7.04.2025

Time	Water Level(M)	Water discharge(Qmec)
07:00	0.121	0.230
08:00	0.122	0.233
09:00	0.122	0.233
10:00	0.122	0.233
11:00	0.121	0.230
12:00	0.12	0.228
13:00	0.12	0.228
14:00	0.12	0.228
15:00	0.121	0.230
16:00	0.1202	0.228
17:00	0.1205	0.229
18:00	0.1201	0.228


Parvatiya Power Ltd.
Loharkhet Hydro Electric Power Plant
Loharkhet, Distt. Bageshwar
Uttarakhand

कार्यालय जिलाधिकारी/जिला मजिस्ट्रेट, बागेश्वर।
संख्या:-645/बीस-जे0ए0/एन0जी0टी0/2024-25 दिनांक 08/04/2025

- 1- अधिशासी अभियन्ता, सिंचाई खण्ड, कपकोट जनपद बागेश्वर।
- 2- अधिशासी अभियन्ता, जानपद-लघुजल परियोजनाएँ, (UJVNL) लिमिटेड, धारचूला जनपद पिथौरागढ़।

विषय- मा0 राष्ट्रीय हरित प्राधिकरण नई दिल्ली द्वारा Exectuion Application No.45/2024 In Original Application No. 498/2015 (IA No 114/2025, IA No 113/2025) दिनांक 20.02.2025 के अनुपालन के संबंध में।

उपर्युक्त विषयक मा0 राष्ट्रीय हरित प्राधिकरण नई दिल्ली द्वारा विषयाकित याचिका में पारित आदेश दिनांक 20.2.2025 के अनुपालन में उप जिलाधिकारी कपकोट की अध्यक्षता में गठित जॉच समिति की रिपोर्ट दिनांकित 07 अप्रैल, 2025 उपलब्ध कराई गई है।

अतः प्राप्त रिपोर्ट की प्रति संलग्न करते हुए आपको निर्देशित किया जाता है कि समिति की रिपोर्ट में उल्लिखित तथ्यों के अनुसार मैसर्स पर्वतीय पावर लि0 मुनार-लोहरखेत द्वारा परियोजना से Average Lean Season Discharge का 15 प्रतिशत पानी छोड़ने की समुचित निगरानी सुनिश्चित करते हुए दैनिक रिपोर्ट भी उपलब्ध कराना सुनिश्चित करें। इस सम्बन्ध में किसी भी प्रकार की शिथिलता न बरती जाय।

संलग्नक:-यथोक्त।

(आशीष कुमार भटगाई)
जिला मजिस्ट्रेट, बागेश्वर।

प्रतिलिपि:- निम्नांकितों को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित:-

1. सदस्य सचिव, उत्तराखण्ड प्रदूषण नियन्त्रण बोर्ड देहरादून।
2. प्रबन्धन,निदेशक, यूजेवीएन लिमिटेड,उत्तराखण्ड देहरादून।
3. पुलिस अधीक्षक, बागेश्वर।
4. उप जिलाधिकारी, कपकोट।
5. क्षेत्रीय अधिकारी, उत्तराखण्ड प्रदूषण नियन्त्रण बोर्ड, हल्द्वानी।

(आशीष कुमार भटगाई)
जिला मजिस्ट्रेट, बागेश्वर।

मि. ग. म. टी.
9/4/25

by mail



PARVATIYA POWER LTD.

(Formerly: PARVATIYA POWER (P) LTD.)

Registered & Project Office: 825 Gandhi Chowk, Ranikhet- 263 645 (Uttarakhand)

INDIA, Distt.-Almora, Tel:91-5966-220049&220263,Fax:91-5963-253435,

E-Mail: loharkhethep@yahoo.in

GSTIN: 05AACCP4405F1ZW

CIN: U40101UR1994PLC017151

पत्रांकसंख्या: PPL/K&P/03/107/210

दिनांक: 12/04/2025

सेवा में,

श्रीमान क्षेत्रीय अधिकारी

उत्तराखंड प्रदूषण नियंत्रण बोर्ड

हल्द्वानी

विषय: -Execution Application No. 45/2024 in original application No./498/2015 before the National Green Tribunal, Principal Bench, New Delhi के सम्बन्ध में

महोदय,

उपरोक्त विषयक आपके कार्यालय के पत्रांक संख्या: यू के पी सी बी/ आर० ओ०एच०/रिट/25/23-03

दिनांक 03/04/25, जो श्रीमान सदस्य सचिव महोदय, उत्तराखंड प्रदूषण नियंत्रण बोर्ड देहरादून एवं श्रीमान जिलाधिकारी महोदय को पृष्ठांकित है, के संदर्भ में सादर अवगत कराना है कि परियोजना द्वारा छोड़े जा रहे नदी के न्यूनतम पर्यावरणीय प्रवाह की गणना हेतु परियोजना के इन्टेक (ट्रेंच वीयर) पर डिस्चार्ज साइट की स्थापना करने के साथ ही DISCHARGE MEASUREMENT GAUGE भी अधिष्ठापित कर दिया गया है, जिस संदर्भ में आपको पूर्व में कार्यालय के पत्रांक संख्या PPL/K&P/03/105/208 दिनांक 08/04/25 द्वारा अवगत करा दिया गया था।

महोदय आपके कार्यालय के उपरोक्त विषयक पत्रांक के निर्देशानुसार अवगत कराना है कि परियोजना के ट्रेंच वीयर पर न्यूनतम पर्यावरणीय प्रवाह के के आंकलन एवं मापन हेतु डिजिटल श्राव मापक यन्त्र के अधिष्ठापन का कार्य गतिमान है एवं तात्कालिक रूप से उक्त साइट पर CCTV कैमरा का अधिष्ठापन कार्य पूर्ण कर लिया गया है एवं श्रीमान जिलाधिकारी महोदय के निर्देशानुसार प्रति घंटा E- Flow Data एवं CCTV कैमरा फुटेज की सूचना जिलाधिकारी कार्यालय को उपलब्ध कराई जा रही है।

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महोदय भौगोलिक विषमताओं के कारण डिजिटल श्राव मापक यन्त्र के अधिष्ठापन कार्य में कुछ विलम्ब हो रहा है परन्तु आगामी लीन सीजन से पूर्व ही उक्त डिजिटल श्राव मापक यन्त्र का अधिष्ठापन कार्य पूर्ण करने के उपरान्त पृथक से लिंक श्रीमान जिलाधिकारी कार्यालय बागेश्वर एवं उत्तराखंड प्रदूषण नियंत्रण बोर्ड हल्द्वानी को सादर प्रेषित एवं सूचित कर दिया जायेगा

महोदय आपके सादर संज्ञान में लाना है कि दिनांक 10/04/2025 से दिनांक 10/06/2025 तक परियोजना में फीडर पाइप लाइन के मरम्मत कार्य हेतु परियोजना द्वारा विधुत उत्पादन कार्य बंद किया गया है अतः उक्त अवधि में नदी में सम्पूर्ण जल प्रवाहित किया जा रहा है

भवदीय



Project Manager
Parvatiya Power Ltd.
Loharkhet Hydro Electric Power Plant
Loharkhet Distt.-Bageshwar
Uttarakhand

राजेश उपाध्याय

परियोजना प्रबंधक (मोबाइल – 8859095212)

पर्वतीय पावर लिमिटेड , कपकोट जिला -बागेश्वर

प्रतिलिपि: - सादर सूचनार्थ प्रेषित

- 1- श्रीमान सदस्य सचिव महोदय उत्तराखंड प्रदूषण नियंत्रण बोर्ड देहरादून
- 2- श्रीमान जिलाधिकारी महोदय जिला बागेश्वर महोदय को उनके पत्रांक 569/बीस- जे 0एफ0/2024 दिनांक 02/04/2024 के क्रम में सादर सूचनार्थ प्रेषित