टीएचडीसी इंडिया लिमिटेड
(श्रेणी–क मिनी रत्न उपक्रम)
THDC INDIA LIMITED
(Schedule – A Mini Ratna PSU)

LiFE Lifestyle for Environment

सं० टीएचडीसी/ऋ०/सा०एवं पर्या०/फ०-117/329(E) दिनांक : 21-05-2025

सेवा में,

1. Deputy Director General of Forests (C)
पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय,
उत्तर केन्द्रीय क्षेत्रीय कार्यालय,
25, सुभाष रोड, देहरादून – 248001

2. सदस्य – सचिव,
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय,
आई.ए. डिवीज़न (आर.वी. एवं एच.ई.पी.),
वायु विंग, कमरा सं० 303, इंदिरा पर्यावरण भवन
जोर बाग रोड, नई दिल्ली - 110 003

विषय: 22nd Six monthly progress report (October' 2024 - March' 2025) on environmental aspects of Vishnugad Pipalkoti Hydroelectric Project (444 MW) located at Distt. Chamoli, Uttarakhand - reg.

Sir,

In compliance to Point (vii) of Part B: General Conditions of Environment Clearance letter No. J-12011/29/2007-IA.I dtd. 22.08.2007 and subsequent fresh clearance on dated 26.08.2021 issued by MoEF&CC, please find enclosed herewith the Six monthly progress report on environmental aspects of Vishnugad Pipalkoti Hydroelectric Project (444 MW) located at Distt. Chamoli, Uttarakhand for your kind perusal and record please.

Thanking You,

21/05/2025

(विपिन थपलियाल)
उप० महाप्रबंधक (पर्यावरण)

संलग्नक: उपरोक्तानुसार

प्रतिलिपि: सादर सूचनार्थ

1. **अपर महाप्रबंधक (सामाजिक एवं पर्यावरण),** टीएचडीसीआईएल, ऋषिकेश
2. **महाप्रबंधक (सामाजिक एवं पर्यावरण),** टीएचडीसीआईएल, पीपलकोटी

SIX MONTHLY PROGRESS REPORT ON ENVIRONMENTAL ASPECTS

Period October' 2024 to March' 2025

1.	**Name of the Project**	**VISHNUGAD PIPALKOTI HYDRO ELECTRIC PROJECT (444 MW)**
2.	**Type of the Project**	Hydroelectric Project
3.	**Clearances OM No. & Date** **a) Environment Clearance** **b) Forest Clearance**	 i) Letter No. J-12011/29/2007-IA.I, Dated 22.08.2007 ii) Corrigendum regarding Catchment Area, letter no. J-12011/29/2007-IA.I, Dated 18.01.2008 iii) Amendment regarding minimum environmental flow, letter no. J-12011/29/2007-IA-I, Dated 31.05.2011 iv) Extension of validity of Environment Clearance till 21.08.2020, letter no. J-12011/29/2007-IA.I, Dated 25.04.2018. v) Extension of validity of Environment Clearance till 21.08.2021, letter no. J-12011/10/2020-IA.I (R), Dated 02.03.2021. vi) Fresh Environment Clearance granted by MoEF&CC vide letter dtd. 26.08.2021. i) Stage-II Forest Clearance (Final) Letter No. F.No.8-65/2009-FC, Dated 28.05.2013
4.	**Locations** **a) District(s)** **b) State (s)** **c) Latitude (Dam Site)** **d) Longitude (Dam Site)**	 **a)** Chamoli **b)** Uttarakhand **c)** 79°29'30" E **d)** 30°30'50" N
5.	**Address for Correspondence** a) Address of concerned Project Head (with pin code and telephone / fax nos.) b) Address of concerned HOD in Corporate Office (with pin code & telephone/ fax no.)	**a)** Sh. Ajay Verma, CGM (Project), VPHEP, THDCIL, Alaknandapuram, Siyasain, Pipalkoti, Distt. Chamoli (Uttarakhand). Pin code: 246472 Tel (O): 01372-256200 Fax (O): 0137-256203 **b)** Sh. Harsh Kumar, AGM (S&E), THDCIL, Bypass Road, Pragatipuram, Rishikesh (Uttarakhand) Pin code: 249201 Tel (O): 0135-2433454 Fax (O): 0135-2439404
6.	**Details of Environmental Management Plan**	Attached as **Annexure – I**
7.	**Break - up of the Project area** (land details) a) Dam and Submergence area (forest & non-forest)	Total land Acquired by Project - 141.568 Ha. (Includes Private & Forest Land) **a)** Dam and Submergence area Forest: 28.478 Ha. Non-Forest: -

	b) Others	**b)** Others **(Exclusive of above 'a')** Forest: 71.912 Ha. Non-Forest: 31.639 Ha. (Private) Transferred to Project by PWD: 9.539 Ha.
8.	**Breakup of the Project affected population with enumeration of those losing houses / dwelling units only, agricultural land only, both dwelling units and agricultural land and landless laborers / Artisans.** **a) SC /ST /Tribal's** **b) Others**	Attached as **Annexure - II**
9.	**Financial details** **a) Project cost as originally planned and subsequent revised estimates and the years of price reference.**	**a)** Investment approval to the project amounting to Rs. 2491.58 Cr at March, 2008 Price Level has been accorded by CCEA on 21.08.2008. Revised RCE of Rs. 3860.35 Cr (including IDC & FC) at Feb'19 PL has been vetted by CEA on 20.03.2020.
	b) Actual expenditure incurred on the Project so far.	**b)** The expenditure incurred on VPHEP Project till March' 2025 is Rs. 4609.64 Cr.
	c) Allocations made for Environmental Management Plan.	**c)** Rs. 109.53 Crs (As per EMP of VPHEP formulated during July' 2021)
10.	**Forest Land requirements** **a) Status of approval for diversion of forest land for non -forestry use**	**a)** Vide letter no. F.No.8-65/2009-FC dated 28.05.2013, stage-II Forest clearance was accorded by MoEF, GoI.
	b) The status of clear felling in forest land	**b)** The details of 812 Number of Tree Felling is under: Dam - 555, Approach Road (TRT to Siyasain to Durgapur) – 200, Approach Road (Siyasain Road to Dhobi Ghat) – 07 & Dumpyard (Siyasain) - 50
11	**Status of construction** a) Date of commencement (actual and/planned) b) Date of completion (actual or planned)	a) 17.01.2014 b) Planned: 16.07.2018 (54 months from date of commencement of construction work). Revised: The commissioning of the 1st unit of Project is expected in October' 2026.
12.	**Reason for the delay if the project is yet to be started.**	NIL
13.	**Details of site visit** a) By Monitoring Committee	a) Vide order dated 17.10.2014, District Magistrate, Chamoli has constituted the Environment Monitoring Committee. Second meeting of committee was conducted on 22.02.2016

	b) By Regional Office	Based on the suggestions of the Additional Director, MoEF&CC, R.O. Dehradun (Jan' 2017 visit), the Multi-Disciplinary Committee has been re-constituted vide MoEF&CC letter no. J-12011/29/2007-IA-I dated 10.10.2017. The reconstituted Multi-Disciplinary Committee (MDC) under the chairmanship of PCCF-HoFF, Uttarakhand has visited the project site on 28.07.2018. The 4th MDC meeting was held on 22.08.2022 under the chairmanship of PCCF-HoFF, GoUK at Van Bhawan, Dehradun. a) Dr. S.C. Katiyar, Addl. Director (S), MoEF&CC, North Central Regional Office, Dehradun visited the VPHE Project on 09.01.2017 & 10.01.2017. b) Dr. S. C. Garkoti, Advisor, MoEF&CC, New Delhi along with Dr. S. C. Katiyar, Addl. Director (S), MoEF&CC, North Central Regional Office, Dehradun has visited the VPHEP site on 02.08.2017 & 03.08.2017. c) Dr. S.C. Katiyar, Addl. Director (S), MoEF&CC, North Central Regional Office, Dehradun has visited the VPHE Project on 28.07.2018. d) Sh. Pankaj Agarwal, Addl. PCCF and Dr. S. C. Katiyar, Addl. Director, MoEF&CC, Regional Office, Dehradun has visited the VPHE Project on 11-12 Nov 2018. e) Dr. Krishnendu Mondal, Scientist – C, MoEF&CC, Regional Office, Dehradun has visited the VPHEP Project on 12-13 Oct' 2020. f) Dr. Krishnendu Mondal, Dy. Director, MoEF&CC, Regional Office, Dehradun has visited the VPHEP Project on 07-08 Nov' 2022. g) Dr. Vipin Gupta, Scientist-B, MoEF&CC, Regional Office, Dehradun has visited the Project Site on 12-13 June' 2023.
14.	**Brief Note on the status of Compliance of the conditions stipulated by MoEFCC**	A brief note on status of conditions stipulated by MOEF is enclosed as **Annexure - III.**

Annexure - I

ENVIRONMENTAL MANAGEMENT PLAN

S. NO.	PLAN	ACHIEVEMENT
1	Development of Herbal Garden	• Based on recommendations of HRDI, Mandal, Gopeshwar, Herbal Garden has been developed in the VPHEP colony over an area of 1800 sqm. approx. Also, two nos. dedicated manpower/gardener has been deployed for the maintenance of Herbal Garden. • Approx. Rs. 23.15 lakhs have been incurred on various works related to the development of the Herbal Garden till March' 2025. • Medicinal plants like Baansh (Bambusa vulgaris), Meethi Tulsi (Stevia Rebaudiana), Ashwagandha (Withania somnifera), Lemon Grass (Cymbogogon felxuosus), Sarpgandha (Rauvolfia Serpentiina), Tejpaat (Cinnamomum tamala) Harad (Terminalia chebula), Ghrit kumari (Aloe Barbadenisis), Badi Elachi (Amomum subulatum), Belpatra (Aegle Marmelos), Aanwala (Phyllanthes Emblica), Reeta (Sapindus mukorossi) etc. planted.
2	Road Side Plantation	• Requisite funds have been deposited under CAMPA for implementation. • Matter is under persuasion with State Forest Deptt. for start of works.
3	Wildlife Protection (related to NDBR & KWLS)	– Wildlife Protection: – Two (02) nos. Watch Towers has been installed at identified locations at Powerhouse and TBM sites nearby the boundary of KWLS. – Ten nos. Camera Traps were procured on the recommendation of E&S panel. Out of which, 08 nos. Camera Traps handed over to Forest Department (Nanda Devi National Park) for installation in NDBR on 20.03.2018 and has been installed in NDBR by Forest Department at appropriate location. Balance 02 nos. of Camera Traps have been handed over to Kedarnath Forest Division on 12.06.2019. – Controlled Blasting techniques are being practiced and the same is being monitored by construction contractor through Central Institute of Mining & Fuel Research (CIMFR), Roorkee. – Awareness Programs are being organized from time to time. – A cleanliness campaign was organized at VPHEP as part of the Swachhta Hi Seva programme, which was held on October 1, 2023, at the VPHEP office complex. – The Swachhta Pakhwada was successfully organized from 16 May 2024 to 31 May 2024 at the under-construction VPHEP project of THDC India Limited, Pipalkoti. – A plantation drive along with an awareness program was organized on the occasion of World Environment Day, 5 June, 2024 in the project premises on the theme of "Land restoration, desertification and drought resilience". – A two days national seminar was organized on 10-11 February 2025 at Post Graduate College, Jyotirmath on diverse themes of Bio-Diversity & its conservation, Sustainable Development & Environment Conservation.
4	Compensatory Afforestation in 120.27 Ha	• Compensatory Afforestation and other works (Roadside Plantation, construction of 4 feet high pillar etc.) is being done by the State Forest Department, GoUK. Requisite funds have already been deposited by THDCIL in CAMPA. • THDCIL is continuously pursuing the issue with Senior Forest Officials at Dehradun and at Divisional Level. • Issue was also discussed in the meeting of Multi-Disciplinary Committee constituted by MoEF&CC, New Delhi under

		the chairmanship of PCCF-HoFF, GoUK held on 22.08.2022 at Van Bhawan, Dehradun. • The Chairman - MDC, PCCF-HoFF, has directed the concerned Forest officials to take all-out efforts to for early completion of these activities. • Compensatory Afforestation works in 105.583 Ha area has been completed out of 120.27 Ha by State Forest Department as informed by Forest Deptt. up to March' 2025.
5	Catchment Area Treatment Plan	• Total Implementation value for CAT is Rs. 47 Crs., the total amount of Rs. 47 Crs stands deposited by THDCIL in CAMPA fund. DFO Badrinath Forest Division is the Nodal Officer for CAT Plan. • Vide letter dtd. 30.12.2017, final approval has been granted to DPR along with Micro plans for CAT Plan of VPHEP by Forest Deptt., GoUK. • State Forest Deptt., Uttarakhand is executing activities as per approved DPR. An expenditure of Rs. 45.24 Cr (approx.) has been made by Forest Deptt. till March' 2025 under CAT Plan of VPHEP. • Issue of slow progress of CAT Plan was also discussed in the meeting of Multi-Disciplinary Committee constituted by MoEF&CC, New Delhi under the chairmanship of PCCF-HoFF, GoUK held on 22.08.2022 at Van Bhawan, Dehradun. • The Chairman - MDC, PCCF-HoFF, has directed the concerned Forest officials to take all-out efforts to for early completion of the CAT related works. • DFO Badrinath, Nodal Officer has been requested for earliest completion of works under CAT Plan of VPHEP.
6	Muck Management Plan	• Dumping of muck is being done at designated / identified area & well above the high flood level. Engineering measures such as construction of gabion faced reinforced earth wall with uniaxial geo-grid reinforcement are adopted at dumping site. Benches are being developed to discontinue the slopes in dumpyard. • Work of plantation of Vetivar (Chrysopogon Zizanioides) grass as slope stabilization measure at Siyasain dumping site (DY-4) has been started in September 2018. • Plantation in approx. 15,000 sqm. area has been completed at DY-4. • M/s HCC Ltd. has been instructed to ensure necessary reclamation works at all Disposal sites. • For Biological measures at Muck dumping sites, plantation of local plant species (such as Ghingaru, Hinsalu, Nirgundi, Kilmoda, Kingod, etc) will also be done along with Vetiver Grass as suggested during the 1st meeting of the monitoring cell constituted by Hon'ble NGT under the chairmanship of Chief Secretary, GoUK held on 19.01.2023. • Details of muck management till March 2025, is as under ➢ Muck generated (Approx.) = 39.23 Lacs m3 ➢ Muck utilization (Approx.) = 13.90 Lacs m3 ➢ Muck utilized for Community Development works = 2.93 Lacs m3 ➢ Muck dumped (Approx.) = 22.40 Lacs m3
7	Fish Management Plan	• The Consultancy Services for preparation & supporting Implementation of Fish Management Plan for VPHEP have been awarded to Directorate of Coldwater Fisheries Research (ICAR-DCFR), Bhimtal.

		• For framing the appropriate fish management plan, ICAR-DCFR has conducted a series of fish survey and water sampling work along River Alaknanda from Vishnupyarag to Karan Prayag. • Final Report has been received from ICAR-DCFR. ICAR-DCFR has recommended to construct Snow Trout Fish Hatchery. • Also, a one-week training on Aquatic Biodiversity in Feb' 2020, has also been conducted for the Executives of Environment Deptt. at College of Fisheries, GB Pant University of Agriculture & Technology (GBPUAT), Pantnagar by HRD, Rishikesh. • A two-day Fish Ranching and awareness program was conducted on March 23–24, 2025. The ranching is aimed to promote the conservation of indigenous fish species, particularly Schizothorax spp. (snow trout), in the Alaknanda River near the Birahi tributary in Chamoli district. The event was a collectively organized by VPHEP-THDC, Pipalkoti, ICAR-Central Institute of Coldwater Fisheries Research (Bhimtal) and Department of Fisheries, Chamoli. A key highlight of the event was the release of 200 high-quality, disease-free snow trout brooders and 5,000 fry into the Alaknanda River near the Birahi tributary confluence.
8	Green Belt Development Plan (Plantation of approx 12500 trees)	• Green Belt Development has been implemented under the Consultancy of noted Environmentalist Sh. Jagat Singh Chaudhary alias "Junglee" and with the help of State Forest Deptt. Broad-Leaved, Fast-Growing plant species have also been planted as suggested by "Jungli Ji" and Forest Deptt. • Till March' 2025, cumulatively 9300 nos. (approx.) plants (Jacaranda, Silver Oak, Jamun, Harad, Bahera, Tejpaat, Amaltaas, Neem, Amrood, Padam, Bamboo etc.) are planted. Maintenance of plants is being done regularly.
9	Restoration of Quarry Site	• Till March' 2025, no Quarry site has been opened for excavation / mining. • All statutory clearances for Gadi Quarry have been obtained. Mining from Gadi Quarry has not yet been started. • Currently, in view of the unnecessity of the approved mining lease area of Gadi Quarry to the Project, request for surrender had been made to the District Mining Officer by the Project through its letters dated 16.12.2023 and 10.04.2024.
10	Solid Waste Management	**VPHEP COLONY** • The Solid Waste is collected at source, stored in bins and transported through vehicle for handing over to Nagar Panchayat, Pipalkoti for safe disposal. • Necessary infrastructure for SWM facility constructed nearby the VPHEP colony area. • Roadside Bins (Separate bins for Organic and Inorganic Waste) etc. have been procured and installed at appropriate locations for proper collection of waste. • Additionally, 01 nos. mini truck has been procured through SEWA-THDC and donated to Nagar Panchayat – Pipalkoti. As per mutual agreement Nagar Panchayat – Pipalkoti is collecting the solid waste of VPHEP for safe disposal. • Meeting was done with Executive Officer in charge of the Nagar Panchayat to ensure safe disposal of waste at Pipalkoti. • Initiatives like replacing plastic water bottle with reusable Glass bottles in meetings have been implemented at Project.

		• Ban of Single use plastic– VPHEP has been declared zero plastic zone on 05.06.2023 i.e., Environment Day. **M/S HCC LTD. – WORKER/LABOR CAMPS** • Necessary provisions have been kept for Waste Collection, Handling, Segregation, Disposal process under the contractor's EMP. • Separate bins are placed at labour camps and construction sites for biodegradable and non-biodegradable wastes. • The waste collected is handed over to Nagar Palika / Panchayat. • Wastes (Hazardous/E-waste/others) being stored in storage yard for safe disposal and handed over to authorized vendors only.
11	Road Construction	• During Road Construction all precautionary measures for soil erosion, slope stability, drainage to be taken care as per Indian Standards • Regular Water Sprinkling is being done for dust suppression. • Provision for water drainage along the road line is provided wherever required.
12	Sanitary Facility Labor Camp	• HCC has constructed the camps for its staff / workers and for PRW workers at Helang for the persons engaged at Dam site activities and also at Haat & Batula (Haat-Kauria Road) for the Power House activities. • Also, HCC has hired various private accommodations / hotels for accommodating the officers and workers at site. • All the accommodations are provided with Toilets, Bathrooms and community mess. Septic cum Soak pit tank have also been constructed at camp sites for safe disposal of sewage.
13	Fuel	• Community kitchen for labor / worker at camps being run on LPG. • Usage of approx. 15,338 nos. commercial LPG cylinders have been reported by the contractor up to March' 2025.
14	Public Health Delivery Plan	**Public Health Delivery system** **– VPHEP, THDCIL** • At VPHEP Complex, a Dispensary is operational with adequate number of beds. • Medical Staff includes Doctor, Nurse, Para medical staff, Dresser etc. • Additional facilities by engaging staff on contractual basis deputed. Ambulance deployed. • The Medical Facilities are extended free of cost among Project Affected people apart from local Population as well. • A well equipped pathology lab has also been started in the dispensary to support health checkup. • Awareness program on menstrual hygiene and gender sensitization are also being conducted on regular basis covering affected villages and nearby schools. A MoU for the construction of New Building at District Hospital Gopeshwar has been signed between THDCIL and Chief Medical Officer, Chamoli, Gopeshwar. 1st installment of 15% of total MoU value of Rs. 19.78 Lakhs has been released to CMO Chamoli on dt. 24.03.2023 and 2nd instalment of 25% of total MoU value of Rs. 32.98 Lakhs has

		been released to CMO Chamoli on 21.05.2024 and the executing agency submitted the physical progress report and 85% work has been executed till December 2024. **– M/s HCC** • 01 nos. First Aid Centres operational at each at Power House, TBM and Dam site. • Para Medical Staff & facilities deployed at First Aid Centers. • Ambulance facilities available at Power House, TBM and Dam. • Necessary treatment including required vaccination is being given to labors from time to time.
15	Environmental Monitoring Plan	The monitoring on Environment Parameters (Air/Water/Noise/Effluents/Indoor Air/Emissions from DG Sets/Emissions from Vehicles/Noise from Construction Machinery/Meteorology etc.) to be monitored by the construction contractor. Blasting is being done in a controlled manner and monitoring of the same is being done through the reputed organization *Central Institute of Mining and Fuel Research, Roorkee*. Various monitoring includes; **Monitoring of Air/Water/Noise etc. by contractor:** The monitoring being conducted at different time intervals. Report from M/s HCC for Ambient Air, Indoor Air, drinking water, Effluent water & Noise level monitoring conducted during the period January' 2025 to March' 2025 has been received and all parameters are found within the permissible limits. **Monitoring of Incidence of Water Related Diseases:** MoU was signed with CMO, District Hospital Gopeshwar, Chamoli in 2015 for a period of 04 years. Monitoring of water related diseases was carried out and various HIV awareness programs have been organized in affected villages as per MoU through CMO, District Hospital Gopeshwar Chamoli. An MoU was signed with CMO, District Hospital Chamoli on 23.05.2020 for 03 years. A fresh MoU has been signed with CMO, District Chamoli, Gopeshwar on 14.07.2023 for 2 years. The fifth Installment of Rs 1,12,600 was released on 03.02.2025. Quarterly Monitoring reports up to December' 2024 have been received. **Ecological Monitoring:** A MoU was signed with Post Graduate College, Gopeshwar on 19.05.2020 for 03 years. Annual Report for the year 2020-21, 2021-22 and 2022-23 has been received. **River Water Quality Monitoring:** Monitoring is being conducted at regular intervals through M/s PCRI BHEL Haridwar. Last set conducted during February' 2025 & parameters are well within the permissible limit. **Meteorological Monitoring:** Automatic Weather Station (AWS) for Recording of Temperature, Wind Speed & Direction, Humidity & Rainfall has been installed at VPHEP Colony campus, Siyasain.
16	Third Party Monitoring	For Third Party Monitoring, M/s WAPCOS was engaged vide agreement dtd. 10.10.2014. Final consolidated report from

	Mechanism for Environmental Works	(2015-2018) has been received in August 2019. Further in continuation, a MoU has also been signed between M/s WAPCOS and THDCIL on 18.04.2019 for Third Party EMP monitoring works of VPHEP from April 2019 to March 2020. Final consolidated report was submitted by M/s WAPCOS. For further continuing the monitoring, the work has been awarded to M/s WAPCOS from Jan' 2021 for a period of 03 years (36 months) on 31.12.2020. On the request of M/s WAPCOS, time extension has been given from 15.01.2024 to 14.01.2025 for Third-Party for Monitoring and Evaluation of Environment Management Plan (EMP). The 6th half yearly report for the period July 2024 to December 2024 and Consolidated Monitoring Report for the period January 2022 to December 2024 is received.
17	Third Party Monitoring Mechanism for CAT Works	The MoU has been signed with ICFRE, Dehradun on 11.12.2014. Letter issued & date of start reckoned as 10.08.2015. Half yearly Reports to be furnished at regular intervals. The monitoring works for additional period upto Dec' 2021 has been awarded to M/s ICFRE, Dehradun vide GM (S&E), Rishikesh letter dtd. 25.02.2020. Subsequently, the work has been further extended for a period of six months vide letter dtd. 23.06.2022. ICFRE 11th final report for the period of October 2021-March 2022 is received. Consolidated draft final report for 12th report January 2016 - June 2022 has been received and under finalization.
18	ISO 9001, ISO 14001 & OH&S 45001	VPHEP project is ISO 9001:2015, 14001:2015 & 45001:2018 certified unit.
19	Archaeological Management Plan	As per the EMP, following actions are to be taken, i.e. • The Laxmi Narayan Temple at Village Haat is to be preserved through ASI Dehradun. • A 10 Member Committee comprising 8 Members from Village Haat has been constituted by DM, Chamoli and 1st meeting of committee was held on 17.01.2015. • ASI Dehradun was requested vide letters dated 11.02.2016, 01.06.2016, 05.09.2016 and 26.12.2016 for visit and consultancy. • Meanwhile, the ASI team has visited the project on 21.02.2016. It was discussed with ASI team to provide the Action Plan and consent for executing the work. • Thereafter, the ASI team visited the project on 18th March 2017 for site visit and assured that the necessary proposal shall be prepared and submitted very soon. • A preliminary report has been obtained from ASI Dehradun. • A meeting under the chairmanship of District Administration in presence of representative from ASI and The World Bank has been conducted between THDCIL and the representatives from Haat village on 23.04.2019 at VPHEP for protection and beautification works of Laxmi Narayan Temple at village Haat. The preliminary report

		of ASI Dehradun along with further protection plan suggested by The World Bank has also been shared and discussed with the Temple Committee and others during the meeting. • Drawings as per the suggestions of the World Bank have been issued by Design Department, THDCIL, Rishikesh. • Necessary action has been initiated at various levels of department. Recently, vide letter dtd. 20.09.2021, ASI Dehradun has been requested to provide the DPR for taking up the preservation work of Laxmi Narayan Temple. • Also, DM-Chamoli vide letter dtd. 27.10.2021 has also requested DG-ASI, New Delhi for directing the concerned official for taking up the work at the earliest. • ASI Officials from Dehradun Circle visited the site on 14.03.2022. Matter is being pursued with ASI officials. Further, Remains of Archaeological importance also need to be preserved or conserved. • An Archaeological Chance Find Card has also been issued to the contractor to report Chance finds, if any. • No chance finds reported till date. An Archaeological Museum is proposed to be opened in the project area for display of Archaeological findings, if any. • A meeting was also held with SA, ASI in his Dehradun office for taking up the work of DPR for preservation and restoration of Laxmi Narayan Temple. • Presently, in compliance to the Hon'ble Court Order, Project has stopped muck dumping within 100m radius of Temple complex.

Annexure - II (as on March, 2025)

Details of SC/ST/OBC/Others Title holder of Project Affected Villages Loosing House/Land

Sl	Name of Village	Titleholder Loosing House					Titleholder Loosing Land					Titleholder Loosing Land & House					Landless Labour					Artesian
		SC	ST	OBC	Other	Total	SC	ST	OBC	Other	Total	SC	ST	OBC	Other	Total	SC	ST	OBC	Other	Total	
1	Jaisaal	0	0	0	0	**0**	0	0	4	97	**101**	0	0	0	12	**12**	0	0	0	0	**0**	0
2	Haat	2	2	0	0	**4**	20	3	0	87	**110**	40	8	4	87	**139**	0	0	0	0	**0**	0
3	Tenduli Chak Haat	0	0	0	0	**0**	4	0	0	0	**4**	0	0	0	0	**0**	0	0	0	0	**0**	0
4	Guniyala	0	0	0	0	**0**	0	0	0	25	**25**	0	0	0	0	**0**	0	0	0	0	**0**	0
5	Batula	0	0	0	2	**2**	4	1	0	42	**47**	0	0	0	0	**0**	0	0	0	0	**0**	0
6	Naurakh	0	0	0	0	**0**	7	0	0	60	**67**	0	0	0	0	**0**	0	0	0	0	**0**	0
7	Gulabkoti	0	0	0	0	**0**	48	0	0	0	**48**	0	0	0	0	**0**	0	0	0	0	**0**	0
Total		**2**	**2**	**0**	**2**	**6**	**83**	**4**	**4**	**311**	**402**	**40**	**8**	**4**	**99**	**151**	**0**	**0**	**0**	**0**	**0**	**0**

ANNEXURE-III

STATUS OF CONDITIONS ON ENVIRONMENT CLEARANCE

SL. NO.	BRIEF DESCRIPTION OF CONDITIONS	STATUS AS ON MARCH' 2025
	MoEF&CC LETTER Dated: 22.08.2007	
	PART - A: SPECIFIC CONDITIONS	
1.	6202-hectare degraded Catchment Area of high category to be treated. CAT as has been proposed should be completed in three years.	Total Implementation value for CAT is Rs. 47 Crs., the total amount of Rs. 47 Crs stands deposited by THDCIL in CAMPA fund. DFO, Badrinath Forest Division is the Nodal Officer for CAT Plan. DPR for CAT along with micro plans has been approved during December 2017. Forest Deptt. is executing activities as per approved DPR. Out of total 47 Crs., expenditure of Rs. 45.24 Cr (approx.) has been made by Forest Deptt. till March' 2025 under CAT Plan of VPHEP. Matter was also discussed in the 4th meeting of Multi-Disciplinary Committee constituted by MoEF&CC, New Delhi under the chairmanship of PCCF-HoFF, GoUK held on 22.08.2022 at Van Bhawan, Dehradun. The Chairman - MDC, PCCF-HoFF, has directed the concerned Forest officials to take all-out efforts to for early completion of these activities. DFO Badrinath, Nodal Officer has been requested for earliest completion of works under CAT Plan of VPHEP.
2.	346 project affected families are likely to lose their agriculture land. All the PAFs would be compensated as per the rates that would be assessed and decided by the district authorities. Over and above these compensation, the PAFs will be given" land for land" or "Vocation / job" or "financial assistance "in addition to various rehabilitation benefits as per the NRRP	Land Compensation as assessed & decided by Land Acquisition Officer is being disbursed through Special Land Acquisition Officer (SLAO) in accordance with the provisions of LA Act. About 96% PAF's have received payment from SLAO. Besides SLAO Payment, Project is extending various other benefits to the Project Affected Families in accordance to the R&R Policy of Project, framed based on NRRP-2007 & considering the World Bank Operational Policy. The Affected Families are getting cash benefits in the form of various Grants like Fuel & fodder, Widow assistance, various Community Development Works etc. Also, VPHEP-THDCIL has employed 636 Project Affected Persons directly or indirectly and through

	- 2003.	Contractor HCC. Apart from above, Project is complying with the other Social Obligation as well.
3.	A Monitoring Committee for R & R should be constituted which must include representatives of project - affected persons from SC/ST category and a woman beneficiary.	Monitoring Committee has been constituted by DM, Chamoli; vide Order No. 725/26-MB (2008-09), Dt. 09.11.2009.
4.	All the equipment which are likely to generate high noise levels are to be fully mollified (Noise reduction measures) in view of the proximity of the project to Nanda Devi Biosphere Reserve.	The PUC certificate for the Light, Heavy Vehicles including for hired one and other construction equipment are being undertaken as per prevailing Guidelines, Rules and acts & renewed from time to time. The controlled blasting is being undertaken involving non electric delay detonation technique. Blasting is done during day time at pre-notified time only. Blast pattern & vibration is monitored by Central Institute of Mining and Fuel Research (CIMFR), Roorkee. No blasting is done during night & no disturbance is created for wild life habitat. M/s PCRI-BHEL, Haridwar and M/s Arihant Analytical Laboratory Pvt. Ltd., Sonipat, Haryana recognized by MoEF&CC has been engaged to monitor the Environmental Parameters that includes Noise as well. The monitoring is being conducted at regular intervals as stipulated. The last set of monitoring was conducted through M/s PCRI-BHEL, Haridwar in February' 2025 & M/s Arihant Analytical Laboratory Pvt. Ltd., Sonipat, Haryana during March' 2025. Reports have been received and all parameters are within permissible limit. Also, for Third Party Monitoring of EMP works, M/s WAPCOS (a PSU) has been engaged. The 6th half yearly report for the period July 2024 to December 2024 and Consolidated Monitoring Report for the period January 2022 to December 2024 is received.
5.	Minimum Water Flow of 15.65 Cumecs (Revised by letter dtd. 31.05.2011) should be released downstream during lean season.	MEFR shall be ensured as per latest Gazette Notification dtd. 10.10.2018 of MoWR, RD&GR, GoI.
6.	Consolidation and compilation of the muck should be carried out in the muck	Dumping of muck is being done at designated / identified area & well above the high flood level.

	dump sites and the dump sites should be above high flood level.	Engineering measures such as construction of gabion faced reinforced earth wall with uniaxial geo-grid reinforcement are adopted at dumping site. Benches are being developed to discontinue the slopes in dumpyards. Biological measures such as formation of Micro–benches (kyaries), laying of top soil, plantation of vetivar grass, manuring etc. are also being undertaken at site for slope stabilization. Plantation of Vetivar (Chrysopogon Zizanioides) in approx. 15,000 sqm. area has been completed till March' 2025 at DY- 4. For Biological measures at Muck dumping sites, plantation of local plant species (such as Ghingaru, Hinsalu, Nirgundi, Kilmoda, Kingod, etc) will also be done along with Vetiver Grass as suggested during the 1st meeting of the monitoring cell constituted by Hon'ble NGT under the chairmanship of Chief Secretary, GoUK held on 19.01.2023. Project is taking several initiatives to stabilize the DY through biological measures. 200 plants sapling were planted in the DY-4 on 17.07.2024 and large quantity of milky grass seeds were spread and sown in dump yards and slopes for greenery and stabilization of the DY's.
7.	The project area is situated in close proximity to Nanda Devi Bio-Sphere Reserve, the possibility of the endemic flora cannot be ruled out completely. Hence suggested the plantation of those species which come under Rare, Endangered and Threatened (RET) category, if any, should be planted during the implementation of CAT and Compensatory Afforestation Works.	The implementation of CAT Plan & Compensatory Afforestation works are being undertaken by State Forest Department, Uttarakhand. State Forest Department is executing the plantation of appropriate species as per their approved DPR of CAT Plan of VPHEP. Matter was also discussed in the 4th meeting of Multi-Disciplinary Committee constituted by MoEF&CC, New Delhi under the chairmanship of PCCF-HoFF, GoUK held on 22.08.2022 at Van Bhawan, Dehradun. The Chairman - MDC, PCCF-HoFF, has directed the Nodal Officer, Forest Deptt. to take immediate necessary action and expedite the matter.
8.	Commitment made during public hearing should be fulfilled.	Commitments made during Public Hearing are being fulfilled (**Annexure – IV**).
PART - B: GENERAL CONDITIONS		
1.	Adequate free fuel arrangement should be made for the labour force engaged in the construction works at project cost so that indiscriminate felling of trees is	Contractor is running Community mess for its employees & work force. As per contractor report, approx. 15,338 nos. Commercial LPG Cylinders have been utilized in the Community Mess up to March' 2025.

	prevented.	
2.	Fuel depot may be opened at the site to provide the fuel (kerosene / wood / LPG). Medical facilities as well as recreational facilities should also be provided to the labors.	● Community Kitchen established in Camps for Contractors Employees & Workforce. ● 01 nos. First Aid Centres operational at each at Power House, TBM and Dam site. ● Para Medical Staff & facilities deployed at First Aid Centers. ● Ambulance facilities available at Power House, TBM & Dam area. ● Necessary treatment including required vaccination is being given to labors from time to time. ● Recreational facilities have been provided at labor camps by the contractor.
3.	All the labourers to be engaged for construction works should be thoroughly examined by health personnel and adequately treated before issuing them work permit.	Pre-Employment Medical checkup is undertaken before induction and issuing Work Permit to the labours. Also, Medical examination & vaccination of workmen is done from time to time. Treatment as & when required is also administered.
4.	Restoration of construction area including dumping site of excavated materials should be ensured by leveling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation.	Proper re-vegetation provisions exist in EMP and will be ensured after accomplishment of Dumping activity & at appropriate time. Biological measures such as formation of Micro–benches (kyaries), laying of top soil, plantation of vetivar grass, manuring etc. are also being undertaken at site for slope stabilization. Plantation of Vetivar (Chrysopogon Zizanioides) in approx. 15,000 sqm area has been completed till March' 2025 at DY- 4. For Biological measures at Muck dumping sites, plantation of local plant species (such as Ghingaru, Hinsalu, Nirgundi, Kilmoda, Kingod, etc.) will also be done along with Vetiver Grass as suggested during the 1st meeting of the monitoring cell constituted by Hon'ble NGT under the chairmanship of Chief Secretary, GoUK held on 19.01.2023. Project is taking several initiatives to stabilize the DY through biological measures. 200 plants sapling were planted in the DY-4 on 17.07.2024 and large quantity of milky grass seeds were spread and sown in dump yards and slopes for greenery and stabilization of the DY's.
5.	Financial provision should be made in the total budget of the project for implementation of the above suggested safeguard measures.	Budget Provisions of Rupees 109.53 Crores in EMP of July' 2021 have been earmarked towards implementation of Environment Management Plan (EMP) by Project.
6.	A Multi-Disciplinary Committee should	District Magistrate, Chamoli, vide order dated 17.10.2014, constituted the Environment

	be constituted with representatives from various disciplines of forestry, ecology, wildlife, soil conservation, NGO etc. to oversee the effective implementation of the suggested safeguard measures.	Monitoring Committee under the Chairmanship of Chief Development Officer (CDO), District Chamoli. The 1st Meeting was undertaken on 20.03.2015. The 2nd Meeting of committee was conducted on 22.02.2016. Based on the suggestions of the Additional Director, MoEF&CC R.O. Dehradun (Jan 2017 visit), the Multi-Disciplinary Committee has been re-constituted vide MoEF&CC letter no. J-12011/29/2007-IA-1 dated 10.10.2017. The 1st meeting of Multi-Disciplinary Committee under the chairmanship of PCCF-HoFF, GoUK held on 28.07.2018 at Project site. The 2nd meeting of Multi-Disciplinary Committee was held on 28.02.2020 under the chairmanship of PCCF-HOFF, GoUK at Van Bhawan Dehradun & 3rd meeting of Multi-Disciplinary Committee was held on 31.07.2021 under the chairmanship of PCCF-HOFF, GoUK at Van Bhawan. Dehradun. The 4th MDC meeting was held on 22.08.2022 under the chairmanship of PCCF-HoFF, GoUK at Van Bhawan, Dehradun.
7.	Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Lucknow for review.	Last Six-Monthly report was submitted to concerned office vide letter dated 30.10.2024.
OTHER CONDITIONS		
4.	Officials from Regional Office MOEF, Lucknow who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents / data by the project proponents during their inspection.	Full Logistic supports as and when required will be ensured by Project. a) Dr. S.C. Katiyar, Addl. Director (S), MoEF&CC, North Central Regional Office, Dehradun visited the VPHE Project on 09.01.2017 & 10.01.2017. b) Dr. S. C. Garkoti, Advisor, MoEF&CC, New Delhi along with Dr. S. C. Katiyar, Addl. Director (S), MoEF&CC, North Central Regional Office, Dehradun has visited the VPHEP site on 02.08.2017 & 03.08.2017. c) Dr. S.C. Katiyar, Addl. Director (S), MoEF&CC, North Central Regional Office, Dehradun has visited the VPHE Project on 28.07.2018. d) Sh. Pankaj Agarwal, Addl. PCCF and Dr. S. C. Katiyar, Addl. Director, MoEF&CC, Regional Office, Dehradun has visited the VPHE Project on 11-12 Nov 2018. e) Dr. Krishnendu Mondal, Scientist – C, MoEF&CC, Regional Office, Dehradun has visited

		the VPHEP Project on 12-13 Oct' 2020. f) Dr. Krishnendu Mondal, Dy. Director, MoEF&CC, Regional Office, Dehradun has visited the VPHEP Project on 07-08 Nov' 2022. g) Dr. Vipin Gupta, Scientist-B, MoEF&CC, Regional Office, Dehradun has visited the Project Site on 12-13 June' 2023.
5.	The responsibility of implementation of environmental safeguards rests fully with the THDC Ltd. & Government of Uttarakhand.	THDCIL ensures Implementation of environmental safeguards as applicable.
6.	In case of change in the scope of the project, project would require a fresh appraisal.	There is no change in Project Scope.
EC validity Extension vide MoEF&CC Letter Dated: 25.04.2018		
1.	The project proponent (PP) should ascertain that there shall not be any wash off during the rainy season beyond the retaining wall, PP should monitor the silt flow at the downstream and upstream of the river during monsoon season. Similarly, PP should provide adequate width having intermittent retaining bunds so that silt is collected at the retaining bunds during rainy season and silt is let out in to the river.	Retaining structure of suitable load bearing capacity has been developed at each dumping sites, so that there shall not be any wash off during rainy season. Terraces at dumpyards has been developed and benches are being developed to discontinue the slopes in dumpyards. Also, to control silt wash off biological measures such as formation of Micro –benches (kyaries), laying of top soil, plantation of vetivar grass, manuring etc. are also being undertaken at site. Project is taking several initiatives to stabilize the DY through biological measures. 200 plants sapling were planted in the DY-4 on 17.07.2024 and large quantity of milky grass seeds were spread and sown in dump yards and slopes for greenery and stabilization of the DY's.
2.	The PP should opine that as and when any active dumps/muck disposal sites are getting inactive, intermediate measures like both engineering and biological to be carried–out so that no silt is going into the downstream of the river.	Benches are being developed to discontinue the slopes in dumpyards. Engineering measures such as construction of gabion faced reinforced earth wall with uniaxial geo-grid reinforcement are adopted at dumping site. Biological measures such as formation of Micro–benches (kyaries), laying of top soil, plantation of vetivar grass, manuring etc. are also being undertaken at site for slope stabilization. Plantation of Vetivar (Chrysopogon Zizanioides) in approx. 15,000 sqm. area has been completed till March' 2025 at DY- 4.

		For Biological measures at Muck dumping sites, plantation of local plant species (such as Ghingaru, Hinsalu, Nirgundi, Kilmoda, Kingod, etc) will also be done along with Vetiver Grass as suggested during the 1st meeting of the monitoring cell constituted by Hon'ble NGT under the chairmanship of Chief Secretary, GoUK held on 19.01.2023. Project is taking several initiatives to stabilize the DY through biological measures. 200 plants sapling were planted in the DY-4 on 17.07.2024 and large quantity of milky grass seeds were spread and sown in dump yards and slopes for greenery and stabilization of the DY's.
3.	The PP should ensure that in case of generation of any top soil, a site exclusively for topsoil dumping and also make commitment that collection of topsoil and prevention of the same be made so that nutrient value of the soil is retained and utilized subsequently at the time of plantation, reclamation of muck dumps, etc.	Necessary provision has been made and same is being complied with. Topsoil generated from different sites, if any, is being used for biological stabilization measures at Dumping site.
4.	There should be benching of dumps of appropriate height and stabilization of slopes so that spoils of muck etc. are not created during rainy season. In critical areas, use of geo-textile along the slopes and provision of garland drains on the toe of dumps are to be provided for better stabilization and biological measures. This has to be strictly adhered to.	Benches are being developed to discontinue the slopes in dump yards. Engineering measures such as construction of gabion faced reinforced earth wall with uniaxial geo-grid reinforcement are adopted at dumping site.
5.	All the terms and conditions of the Environmental Clearance stipulated in Letter J-12011/29/2007-IA.I dated 22.08.2007, 18.01.2008 and 30.11.2011 remains unchanged.	Details of the same are provided above.

Environment Clearance (EC) conditions of VPHEP granted by MoEF&CC vide letter dtd. 26.08.2021

Additional Terms & Conditions		
S.No.	**Brief Description of conditions**	**Status as on March' 2025**
i.	The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP report. The budgetary provisions for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the Project cost or due to price level change, the cost of EMP shall also be updated proportionately.	The Environmental Management Plan (EMP) will be strictly adhered to as submitted in the EIA/EMP report. The Budgetary provisions for implementation of EMP shall not be diverted for any other purpose and cost of EMP shall be revised proportionately in case of revision of Project Cost or due to price level change. Revised Budget Provisions of Rupees 109.53 Crores in EMP of July' 2021 have been earmarked towards implementation of Environment Management Plan (EMP) by Project.
ii.	Environment matrix provided in EMP be revised if any data change. Number and period of stocking of Fish be incorporated in EMP.	Environment matrix provided in EMP shall be revised if any data change occurs. Fish Management Plan has been prepared through Indian Council of Agricultural Research – Directorate of Coldwater Fisheries Research (ICAR-DCFR), Bhimtal as per the recommendations of the Wildlife Institute of India, Dehradun. The stocking details have been included in the Fish Management Plan for VPHEP prepared by ICAR-DCFR, Bhimtal.
iii.	Separate budget shall be allocated for Fish Hatcheries and Herbal and the same shall be implement in stipulated time period.	Separate Budget is allocated for Fish Management Plan & Herbal Garden. Fish Management Plan has been prepared through ICAR-DCFR as per the recommendations of the Wildlife Institute of India, Dehradun. In the EMP 2007, the Budget provisions for Fisheries Management was 65 Lakhs, which has been revised to 429 Lakhs in the EMP 2021, out of which 279 Lakhs has already been incurred till now. Based on recommendations of Herbal Research and Development Institute, Mandal, Gopeshwar (a nodal agency of Uttarakhand Medicinal Plant Board), a

		Herbal Garden has been already developed in the project over an area of 1800 sqm. approx. Approx. Rs. 23.15 lakhs have been incurred on various works related to the development of the Herbal Garden. Medicinal plants like Harad (Terminalia Chebula), Lemon Grass (Cymbogogonfelxuosus), Sarpgandha (RauvolfiaSerpentiina), Aloe Vera etc. planted. Also, two nos. dedicated manpower/gardener has been deployed for the maintenance of Herbal Garden.
iv.	The contract clause limiting the No. of vehicles used during excavation and transportation shall followed scrupulously and the same shall informed to the ministry.	After careful assessment of requirements, optimum number of vehicles required for excavation and transportation are being deployed at site.
v.	Pasture Development Plan be revised in terms of Rate of plantation and their Cost.	Pasture Development Plan has not been envisaged under the EMP. However, The Pasture Development plan, Social Forestry works and Fuel wood and fodder related works are being implemented as per the Catchment Area Treatment Plan prepared and implemented by Forest Department. The budget allocated for the CAT plan i.e., 4700 Lakhs has already been submitted to CAMPA Fund. Further, for loss of Fuel & Fodder, PAFs are being compensated with the Fuel & Fodder grant. Each entitled house hold in the affected habitation is being paid 100 days of Minimum Agriculture Wages per year for a period of 5 yrs. On the recommendations of the World Bank, THDCIL has increased disbursement of Fuel & Fodder Grants from 5 years to 8 years. The amount is paid as a grant / assistance towards the loss of fuel and fodder. Around 2600 households are getting benefited through this assistance.
vi.	After 5 years of the Commissioning of the Project, a study shall be undertaken regarding impact of the Project on the Environment. The study shall be undertaken by an independent agency.	As stipulated, study to be conducted after 5 years of commissioning of Project.
vii.	Geological changes or Catastrophic event within 10km region, every two-year data shall be submitted to RO, MoEF&CC. The same shall be obtained from Geological Survey of India. If any major events which can affect the Dam,	The Report regarding Geological changes or Catastrophic event within 10 km region for the past 4 years has been obtained from Geological Survey of India on 01.08.2023.

	Management plan shall be prepared and submit to the RO, MoEF&CC.	
viii.	Solid waste generated, especially plastic waste, etc. should not be disposed off as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.	Solid Waste, Hazardous/E-waste/others are being disposed-off as per prevalent rules and regulation of MoEF&CC, CPCB etc. The Hazardous/E-waste/Biomedical waste generated at site is handed over to authorized agency for safe disposal and recycling. Necessary infrastructure facility for Solid Waste Management has been constructed in the Project Colony. Solid waste generated is safely collected and handed over to Nagar Panchayat, Pipalkoti for safe disposal. At construction sites and labour camps, separate bins are placed for biodegradable and non-biodegradable Solid waste. The waste so collected is handed over to Nagar Panchayat (Joshimath) at Dam Site and Nagar Panchayat (Pipalkoti) at Power House Site. Additionally, 01 nos. mini truck has been procured through SEWA-THDC and donated to Nagar Panchayat, Pipalkoti for collection of Solid waste. Meeting was done with Executive Officer in charge of the Nagar Panchayat to discuss safe disposal of waste at Pipalkoti. Initiatives like replacing plastic water bottle with reusable Glass bottles in meetings have been implemented at Project. Ban of Single use plastic– VPHEP has been declared zero plastic zone on 05.06.2023 i.e., Environment Day.
ix.	PP shall ensure the Ambient Air Quality Monitoring Stations for real time data display and regularly submit to respective RO, MoEF&CC.	Sensor based AQMS with real time data display has been successfully established at VPHEP office complex and the data is attached under **Annexure** A-2: Environment Monitoring Reports.
x.	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.	No new Land is being acquired for the Project. Land Compensation as assessed & decided by Land Acquisition Officer is being disbursed through Special Land Acquisition Officer (SLAO) in accordance to the provisions of LA Act. About 96% PAF's have received payment from SLAO. Besides SLAO Payment, Project is extending various other benefits to the

		Project Affected Families in accordance to the R&R Policy of Project, framed based on NRRP-2007 & considering the World Bank Operational Policy. The Affected Families are getting cash benefits in the form of various Grants. Apart from above, Project is complying with the other Social Obligation as well.
xi.	PP shall procure construction material only from those Organizations having all valid legal/statutory clearances/permissions or necessary permission to be obtained for quarrying construction materials for the Project as per the EIA Notification, 2006 and as amended thereof.	The same is being complied as per rules and regulation stipulated in EIA Notification, 2006 and as amended thereof.
xii.	An institutional mechanism to be developed to ensure the preference of jobs to PAFs and also a policy for preferential treatment for award of sundry works to the PAFs and their dependents.	THDCIL has formulated a Rehabilitation &Resettlement policy (R&R Policy) for the Vishnugad Pipalkoti Hydro Electric Project. The Policy is based on the National Rehabilitation & Resettlement Policy 2007 (NRRP-2007) incorporating the better features considering the World Bank Guidelines. The Policy addresses the R&R issues through proactive approach and appropriate Planning on Land Acquisition. Besides disbursement of compensation by Special Land Acquisition Officer (SLAO), the Policy envisages provisions of grants and other benefits considering the categories and the Entitlements. An institutional mechanism has already been identified in the R&R Policy of VPHEP as under: "Employment opportunity, if any, 100% recruitment at the level of workman (including technical & ministerial) required to be done will be done first from the land oustees & in case of non-availability of suitable candidate among the land oustees, the recruitment will be done from other residents of Uttarakhand state, whose names are registered on live register of any employment". In addition, other provisions for economic/employment opportunities have been done as under: i. Employment with contracting agencies. ii. Allotment of shops/kiosk. iii. Award of petty contracts.

		iv. Vehicle hiring. v. PCO/Internet kiosk. vi. Newspaper vendors. vii. Any other opportunity deemed fit by the project. Till date, 20 PAP's have been provided with permanent employment in THDCIL. In addition, around 3000 persons have been provided direct / in direct employment opportunities in main project construction company and through other modes as mentioned above.
xiii.	Necessary control measures such as water sprinkling arrangements, and construction of paved roads leading to Muck disposal sites etc. shall be taken up on priority to arrest fugitive dust at all the construction sites.	Water Sprinkling is being done on regular basis to control fugitive dust emission at all the construction sites.
xiv.	Stabilization of Muck disposal sites using biological and engineering measures shall be taken up immediately to ensure that Muck does not roll down the slopes and shall be disposed safely and that it does not pollute the natural streams and water bodies in surrounding area. Report of the same to be submitted to Ministry and its Regional office.	Dumping of muck is being done at designated / identified area & well above the high flood level. Engineering measures such as construction of gabion faced reinforced earth wall with uniaxial geo-grid reinforcement are adopted at dumping site. Benches are being developed to discontinue the slopes in dumpyards. Biological measures such as formation of Micro–benches (kyaries), laying of top soil, plantation of vetivar grass, manuring etc. are also being undertaken at site for slope stabilization. Plantation of Vetivar (Chrysopogon Zizanioides) in approx. 15,000 sqm.area has been completed till March 2025 at DY- 4. For Biological measures at Muck dumping sites, plantation of local plant species (such as Ghingaru, Hinsalu, Nirgundi, Kilmoda, Kingod, etc) will also be done along with Vetiver Grass as suggested during the 1st meeting of the monitoring cell constituted by Hon'ble NGT under the chairmanship of Chief Secretary, GoUK held on 19.01.2023. Project is taking several initiatives to stabilize the DY through biological measures. 200 plants sapling were planted in the DY-4 on 17.07.2024 and large quantity of milky grass seeds were spread and sown in dump yards and slopes for greenery and stabilization of the DY's.

xv.	A multi-specialty hospital to cater the need of people living within 10 km radius of the Project shall be established.	The matter was discussed with District Administration for establishing Multi-Speciality hospital. The District Magistrate, Chamoli has suggested to up-grade / adopt the District Hospital, Gopeshwar which will cater the need of all the people living in the Chamoli District. District Hospital is located at district headquarter in Gopeshwar Town of Chamoli District. The District Hospital is located within the 9 km radius of the project boundary. After various levels of discussions with District Authorities in this regard, CMO Chamoli, vide Letter dtd. 01.01.2022, has requested to take up the work of construction of a new building on the land available on the left side of the main building of the District Hospital, Gopeshwar, Chamoli. The proposed new structure envisages construction of Registration Room and User Charges Room on Ground Floor, Laboratory on 1st Floor and District Drug store on 2nd Floor. A MoU has been signed on 17.12.2022 between THDC India Ltd. and Chief Medical Officer, District Chamoli, Gopeshwar for a total amount of Rs. 155.42 Lakhs (including taxes for construction of the new building at District Hospital Gopeshwar and 1st installment of 15% of total MoU value of Rs. 19.79 Lakhs has been released to CMO Chamoli on 24.03.2023 and 2nd instalment of 25% of total MoU value of Rs. 32.98 Lakhs has been released to CMO Chamoli on 21.05.2024 and the executing agency submitted the physical progress report and 85% work has been executed till December 2024. In addition, a dispensary is already operational at VPHEP comprising of proper medical staff viz. Doctor, Nurse, Para-Medical staff, Dresser, 02 nos. ambulance etc. in place. The Medical Facilities are being extended free of cost among Project Affected People including population from nearby villages as well. A well-equipped pathology lab has also been started in the dispensary to support health checkup.
xvi.	Solar lights for illumination along with associated Solar panels to be provided to the families living in rural areas within 10 km radius of Project.	The VPHEP Project has already installed 240 Nos. of Solar lights to the PAFs & surrounding areas of the project under the Community Development.
xvii.	The e-flow shall continue to be released as per the previous EC granted to the Project.	MEFR shall be ensured as per latest Gazette Notification dtd. 10.10.2018 of MoWR, RD&GR, GoI.

xviii.	Computer labs with internet facility shall be established in primary schools within 10 km radius of Project.	The VPHEP Project has engaged an expert Agency M/s MRIDA Energy& Development Pvt. Ltd, New Delhi towards the work "Engagement of Specialized Agency to help Prepare Livelihood Development / Employment Generation Plan & its Implementation in relation to VPHEP" for supporting Livelihood Development / Employment Generation in the Project Affected villages. The aim of the work was to conduct Pilot Projects on the ground, showcasing successful examples of rural entrepreneurship where Project Affected Persons could generate their own livelihood and income opportunities, and become job creators as against job seekers. The Pilot ranged from low investment agricultural interventions to be carried out in large numbers, to medium investment interventions like poly houses and bee keeping which would be more visible and generate higher returns, to group / community level interventions like Development Hubs (Computer Centre) impacting larger numbers of Project Affected Persons. The Development Hub will also act as computer training centers for the youth from the PAFs also, leveraging the strength of the computer literacy of the Village Level Entrepreneurs (VLEs) and these centres. Since the agreement with the M/s Mrida has been completed, THDC has launched its own livelihood initiative name "Nayi Udaan" under that one computer training centre has been established near the market area. The computer training centre is a physical space that provides access to Digital services, Online services, Banking services, E-citizen services, and skill development services all under one roof. The development initiative will enable community members to access all services in one location, saving money and time both. The computer training centre facilitates digital connectivity, fosters the development of digital skills and promotes the adoption of emerging digital technologies. For distribution of Computers and other necessary items, need based assessment in the nearby Govt. schools has been conducted by Project team. The core elements of the project strategy are a) promote entrepreneurship amongst individuals / groups b) ensure financial and personal commitment from intended beneficiaries c) a holistic approach to sustainable livelihoods, including market linkages d) ensure convergence with Government schemes and incentives to maximize project outlay as well as impact e) showcase successful entrepreneurs through Pilot Projects, establish pockets of

		excellence, and create Brand Ambassadors who will facilitate scaling up of successful interventions as well as impact. The contract was completed on 26.01.2023. Benefits under the Livelihood Development/Employment Creation Plan are regularly provided to the project affected individuals through these pilot initiatives. 16 computers have been distributed to nearby 15 primary and upper primary schools in the District Chamoli.
xix.	Sport complex with multi - sport facility shall be established. The children's from economically weaker section shall be given free of cost sport facility.	The VPHEP Project is situated in Chamoli District which is located in Hilly Terrain of state Uttarakhand. The Hilly terrains are land constraint area where Land is not easily available for Infrastructure Development. The Project is also located at Land constraint terrain. After completion of Muck Dumping at Dump yard near Project Colony, an open space with Terrace will be available. The same Terrace will be developed for creating necessary Infrastructure for Multi-Sports complex and shall be opened for the Local Population. In the meantime, a Club with Volleyball Court, already developed at the Project site Colony shall remain available for the Local Population.
xx.	A time bound action plan for compliance of each of the above condition will be submitted to RO, MoEF&CC within 3 months.	A time bound action plan for compliance of each of the above condition has been has been submitted to MoEF&CC vide letter dtd. 26.11.2021.
xxi.	Observations raised by RO, MoEF&CC in certified compliance report shall be complied with and if not done in stipulated time/ before commencement of Project, Environmental Clearance will be withdrawn.	Currently, no observations have been raised by RO, MoEF&CC.
xxii.	The Multi-Disciplinary Committee needs to be reconstituted and the meeting needs to be held at regular interval	Based on the suggestions of the Additional Director, MoEF&CC R.O. Dehradun (Jan 2017 visit), the Multi-Disciplinary Committee has been re-constituted vide MoEF&CC letter no. J-12011/29/2007-IA-1 dated 10.10.2017.
xxiii.	PP should establish in house Project Environment laboratory for measurement of Environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee Environment management shall be setup which	At present, the Environment Monitoring at Project site is being conducted on regular basis by M/s PCRI-BHEL, Haridwar, M/s Arihant Analytical Laboratory Pvt. Ltd., Sonipat, Haryana & M/s WAPCOS recognized by MoEF&CC.

	should comprise of Environment Engineers, Laboratory chemist and (at site) Environment laboratory staff for monitoring of air, water quality parameters on routine basis.	Environment Lab has been established at the Project site & will be further strengthened for effective environment monitoring at site.
xxiv.	All the specific conditions mentioned in the EC dated 22nd August 2007 shall be complied within stipulated time.	The conditions laid down letter J-12011/29/2007-IA.I dated 22.08.2007 is being fully complied and status of same are provided above.
Standard EC Conditions for River Valley and Hydro-electric projects		
I. Statutory compliance:		
i.	The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non- forest purpose involved in the project.	The Forest Clearance for the Project has been granted by MoEF&CC on 28.05.2013 and GO from GoUK has been issued on 06.12.2013.
ii.	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable	The Wildlife Clearance form NBWL has been granted on 20.12.2012.
iii.	The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations 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 reports. (in case of the presence of schedule-I species in the study area)	● The Wildlife Management Plan has already been incorporated under the Catchment Area Treatment (CAT) Plan of the VPHEP. The DPR of CAT Plan of VPHEP was prepared by the State Forest Department, Uttarakhand and has been approved by PCCF, Uttarakhand. Total amount of Rs. 47 Crs. for implementation of CAT Plan has been deposited by THDCIL in CAMPA Fund. ● The Compensatory Afforestation Plan & Catchment Area Treatment Plan is being implemented by State Forest Deptt., Uttarakhand. The Project does not fall under Core & Buffer Zone. ● For Wildlife Protection, various additional measures have been undertaken at the Project. The details are as follows: ● Two (02) nos. Watch Towers has been installed at identified locations in consultation with Forest Deptt. at Powerhouse and TBM sites nearby the boundary of KWLS. ● 10 (Ten) nos. Camera Traps were procured on the recommendation of E&S

		panel. Out of which,08 nos. Camera Traps handed over to Forest Department (Nanda Devi National Park) for installation in NDBR on 20.03.2018 and has been installed in NDBR by Forest Department at appropriate location. Balance 02 nos. of Camera Traps has been handed over to Forest officials on 12.06.2019. ● Controlled Blasting techniques are being practiced and the same is being monitored by construction contractor through Central Institute of Mining & Fuel Research (CIMFR), Roorkee. ● A cleanliness campaign was organized at VPHEP as part of the Swachhta Hi Seva programme, which was held on October 1, 2023, at the VPHEP office complex. ● The Swachhta Pakhwada was successfully organized from 16 May 2024 to 31 May 2024 at the under-construction VPHEP project of THDC India Limited, Pipalkoti. A plantation drive along with an awareness program was organized on the occasion of World Environment Day, 5 June, 2024 in the project premises on the theme of "Land restoration, desertification and drought resilience". ● Awareness Programs are being organized from time to time. ● A two days national seminar was organized on 10-11 February 2025 at Post Graduate College, Jyotirmath on diverse themes of Bio-Diversity & its conservation, Sustainable Development & Environment Conservation. ● Contractor has also established residential accommodation with Community mess for its workers to avoid possibility of felling of trees and restrict movement of labour in the Forest. Approx. 15,338 nos. Commercial LPG Cylinders have been utilized in the Community Mess up to March' 2025.
iv.	The project proponent shall obtain Consent to Establish/ Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control	The CTE from UKPCB has been granted from 10.04.2007.

	Board/ Committee.	
v.	NOC shall be obtained from National Commission of Seismic Design Parameters (NCSDS) of CWC.	NOC from National Commission of Seismic Design parameters (NCSDP)have already been obtained vide letter No CWC/2/2/2008/FE&SA/425 dated 04.05.2008.
vi.	Necessary approval of CEA shall be obtained for those projects having the project cost more than Rs. 1,000 crore.	The approval from CEA has already been obtained vide letter dated 21.09.2006.
II. Air quality monitoring and preservation		
(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.	M/s PCRI-BHEL, Haridwar and M/s Arihant Analytical Laboratory Pvt. Ltd., Sonipat, Haryana recognized by MoEF&CC has been engaged to monitor the Environmental Parameters that includes Noise as well. The monitoring is being conducted at regular intervals as stipulated. The last set of monitoring was conducted through M/s PCRI-BHEL, Haridwar in February' 2025 & M/s Arihant Analytical Laboratory Pvt. Ltd. during March' 2025. Reports have been received and all parameters are within permissible limit. Also, for Third Party Monitoring of EMP, M/s WAPCOS (a PSU) has been engaged. The 6th half yearly report for the period July 2024 to December 2024 and Consolidated Monitoring Report for the period January 2022 to December 2024 is received.
(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 prescribed standards.	The PUC certificate for the Light, Heavy Vehicles including for hired one and other construction equipment are being undertaken as per prevailing Guidelines, Rules and acts & renewed from time to time by the contractor. Water Sprinkling is being done on regular basis to control fugitive dust emission at all the construction sites. Also, ventilation has been provided in the Underground areas by the contractor.
(iii)	Necessary control measures such as water sprinkling arrangements, etc. be taken up to arrest fugitive dust at all the construction sites.	Water Sprinkling is being done on regular basis to control fugitive dust emission at all the construction sites.
III. Water quality monitoring and preservation		
(i)	Conjunctive use of surface water to be planned in the project to check water logging as well as to increase crops productivity. The field drains shall be connected with natural drainage system.	Not applicable

(ii)	Remodelling of existing natural drains (link drains) and connecting them with irrigated land through constructed field drains, collector tor drains, etc. are to be ensured on priority basis.	Not applicable
(iii)	Before impounding of the water, Cofferdams 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 Cofferdam.	A concrete cofferdam is constructed for diverting the water at upstream of Dam. No cofferdam has been constructed the downstream of the river. During the commissioning of the Project, the part of Cofferdam at Dam site will be decommissioned without any adverse impact on the water environment.
(iv)	As the reservoir will be acting as balancing reservoir and 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 upstream and downstream of the project	The reservoir of VPHEP project shall be fluctuating between EL 1267 m to 1252.5 m after the commissioning of Project. Moreover, E-Flow shall be maintained vide Gazette Notification dtd.10.10.2018 of MoWR, RD&GR for reducing the impacts on the aquatic life.
(v)	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 Sheet be submitted to the Regional Office, MoEF&CC and to the CWC on weekly basis.	The reservoir of VPHEP project shall be fluctuating between EL 1267 m to 1252.5 m after the commissioning of Project. Moreover, E-Flow shall be maintained vide Gazette Notification dtd.10.10.2018 of MoWR, RD&GR.
(vi)	Mixed irrigation shall be practiced and necessary awareness be given to all the farmers and trained in the use of such systems. Proper crops selection shall be carried out for making irrigation facility more effective.	Not applicable
(vii)	On Farm Development (OFD) works like landscaping, land levelling, drainage facilities, field irrigation channels and farm roads, etc. should be taken up in phased manner prior to the start of irrigation in the entire command area. The Command Area Development Plan should be	Not applicable

	strictly implemented as proposed in the EIA/ EMP report	
IV. Noise monitoring and prevention		
(i)	All the equipment likely to generate high noise shall be appropriately enclosed or inbuilt 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.	The PUC certificate for the Light, Heavy Vehicles including for hired one and other construction equipment are being undertaken as per prevailing Guidelines, Rules and acts & renewed from time to time. The controlled blasting is being undertaken involving non electric delay detonation technique. Blasting is done during day time at pre-notified time only. Blast pattern & vibration is monitored by Central Institute of Mining and Fuel Research (CIMFR), Roorkee. No blasting is done during night & no disturbance is created for wild life habitat. M/s PCRI-BHEL, Haridwar and M/s Arihant Analytical Laboratory Pvt. Ltd., Sonipat, Haryana recognized by MoEF&CC has been engaged to monitor the Environmental Parameters that includes Noise as well. The monitoring is being conducted at regular intervals as stipulated. The last set of monitoring was conducted through M/s PCRI-BHEL, Haridwar in the month of February' 2025 & M/s Arihant Analytical Laboratory Pvt. Ltd., Sonipat, Haryana during March' 2025. Reports have been received and all parameters are within permissible limit. Also, for Third Party Monitoring of EMP, M/s WAPCOS (a PSU) has been engaged. The 6th half yearly report for the period July 2024 to December 2024 and Consolidated Monitoring Report for the period January 2022 to December 2024 is received.
(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.	M/s PCRI-BHEL, Haridwar and M/s Arihant Analytical Laboratory Pvt. Ltd., Sonipat, Haryana recognized by MoEF&CC has been engaged to monitor the Environmental Parameters that includes Noise as well. The monitoring is being conducted at regular intervals as stipulated. The last set of monitoring was conducted through M/s PCRI-BHEL, Haridwar in the month of February' 2025 & M/s Arihant Analytical Laboratory Pvt. Ltd., Sonipat, Haryana during March' 2025. Reports have been received and all parameters are within

		permissible limit. Also, for Third Party Monitoring of EMP, M/s WAPCOS (a PSU) has been engaged. The 6th half yearly report for the period July 2024 to December 2024 and Consolidated Monitoring Report for the period January 2022 to December 2024 is received.
V. Catchment Area Treatment Plan		
(i)	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.	Total Implementation value for CAT is Rs. 47 Crs., the total amount of Rs. 47 Crs stands deposited by THDCIL in CAMPA fund. DFO, Badrinath Forest Division is the Nodal Officer for CAT Plan. DPR for CAT along with micro plans has been approved during December 2017. Forest Deptt. is executing activities as per approved DPR. Out of total 47 Crs., expenditure of Rs. 45.24 Cr (approx.) has been made by Forest Deptt. till March' 2025 under CAT Plan of VPHEP. Matter was also discussed in the 4th meeting of Multi-Disciplinary Committee constituted by MoEF&CC, New Delhi under the chairmanship of PCCF-HoFF, GoUK held on 22.08.2022 at Van Bhawan, Dehradun. The Chairman - MDC, PCCF-HoFF, has directed the concerned Forest officials to take all-out efforts to for early completion of these activities. DFO Badrinath, Nodal Officer has been requested for earliest completion of works under CAT Plan of VPHEP.
VI. Waste management		
(i)	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 balanced 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.	Dumping of muck is being done at designated / identified area & well above the high flood level. Engineering measures such as construction of gabion faced reinforced earth wall with uniaxial geo-grid reinforcement are adopted at dumping site. Benches are being developed to discontinue the slopes in dumpyards. Biological measures such as formation of Micro–benches (kyaries), laying of top soil, plantation of vetivar grass, manuring etc. are also being undertaken at site for slope stabilization. Plantation of Vetivar (Chrysopogon Zizanioides) in approx. 15,000 sqm. area has been completed till March' 2025 at DY- 4. For Biological measures at Muck dumping sites, plantation of local plant species (such as Ghingaru, Hinsalu, Nirgundi, Kilmoda, Kingod, etc). will also be done along with Vetiver Grass as suggested during the 1st meeting of the

		monitoring cell constituted by Hon'ble NGT under the chairmanship of Chief Secretary, GoUK held on 19.01.2023. Project is taking several initiatives to stabilize the DY through biological measures. 200 plants sapling were planted in the DY-4 on 17.07.2024 and large quantity of milky grass seeds were spread and sown in dump yards and slopes for greenery and stabilization of the DY's.
(ii)	Solid waste management should be planned in details. 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.	Solid Waste, Hazardous/E-waste/others are being disposed-off as per prevalent rules and regulation of MoEF&CC, CPCB etc. The Hazardous/E-waste/Biomedical waste generated at site is handed over to authorized agency for safe disposal and recycling. Necessary infrastructure facility for Solid Waste Management has been constructed in the Project Colony. Solid waste generated is safely collected and handed over to Nagar Panchayat, Pipalkoti for safe disposal. At construction sites and labour camps, separate bins are placed for biodegradable and non-biodegradable Solid waste. The waste so collected is handed over to Nagar Panchayat (Joshimath) at Dam Site and Nagar Panchayat (Pipalkoti) at Power House Site. Additionally, 01 nos. mini-truck has been procured through SEWA-THDC and donated to Nagar Panchayat, Pipalkoti for collection of Solid waste. Meeting was done with Executive Officer in charge of the Nagar Panchayat to discuss safe disposal of waste at Pipalkoti. Initiatives like replacing plastic water bottle with reusable Glass bottles in meetings have been implemented at Project. Ban of Single use plastic – VPHEP has been declared zero plastic zone on 05.06.2023 i.e., World Environment Day.
VII. Green Belt, EMP Cost, Fisheries and Wildlife Management		
(i)	Based on the recommendation of Cumulative Impact Assessment and Carrying capacity study of river basin or as per the ToR conditions or minimum 15% of the average flow of four consecutive leanest months, whichever value is higher, shall be released as environmental flow.	MEFR shall be ensured after commissioning of the Project as per latest Gazette Notification dtd. 10.10.2018 of MoWR,RD&GR, GoI.
(ii)	Detailed information on species composition particular to fish species from previous	The Fish Management Plan for VPHEP has been prepared through Indian Council of Agricultural Research – Directorate of Coldwater Fisheries

	study/literature be inventorized 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.	Research (ICAR-DCFR), Bhimtal as per the recommendations of the Wildlife Institute of India, Dehradun. Based on the findings of the survey/primary data, construction of Fish Hatchery has been recommended by ICAR-DCFR under the Fish Management Plan. In the EMP 2007, the Budget provisions for Fisheries Management was 65 Lakhs, which has been revised to 429 Lakhs in the EMP 2021, out of which 279 Lakhs has already been incurred till now. A two-day Fish Ranching and awareness program was conducted on March 23–24, 2025.The ranching is aimed to promote the conservation of indigenous fish species, particularly Schizothorax spp. (snow trout), in the Alaknanda River near the Birahi tributary in Chamoli district. The event was a collectively organized by VPHEP-THDC, Pipalkoti, the ICAR-Central Institute of Coldwater Fisheries Research (Bhimtal), and the Department of Fisheries, Chamoli. A key highlight of the event was the release of 200 high-quality, disease-free snow trout brooders and 5,000 fry into the Alaknanda River near the Birahi tributary confluence.
(iii)	Wildlife Conservation Plan prepared for both core and buffer zones shall be implemented in consultation with the local State Forest Department.	The Project does not fall under Core & Buffer zone.
(iv)	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.	Green Belt Development has been implemented under the Consultancy of noted Environmentalist Sh. Jagat Singh Chaudhary alias “Junglee” and with the help of State Forest Deptt. Broad-Leaved, Fast-Growing plant species have also been planted as suggested by “Jungli Ji” and Forest Deptt. Till March’ 2025, cumulatively 9300 nos. (approx.) trees are planted. Maintenance of plants is being done regularly.
(v)	Compensatory afforestation programme shall be implemented as per the plan approved.	Compensatory Afforestation and other works (Roadside Plantation, construction of 4 feet high pillar etc.) is being done by the State Forest Department, GoUK. Requisite funds have already been deposited by THDCIL in CAMPA. However, the funds yet to be released by the CAMPA to the concerned Forest Deptt. THDCIL is continuously pursuing the issue with Senior Forest Officials at Dehradun and at Divisional Level.

		The 48 Ha land stands diverted for CA works and Forest Dept. has informed that the plantation works have been completed. Till March' 25 Compensatory Afforestation works in 105.583 Ha area has been completed out of 120.27 Ha as informed by State Forest Department.
(vi)	Fish ladder /pass as envisaged in the EIA/EMP report shall be provided for migration of fishes. Regular monitoring of this facility be carried out to ensure its effectiveness.	The Fish Management Plan for VPHEP has been prepared through Indian Council of Agricultural Research – Directorate of Coldwater Fisheries Research (ICAR-DCFR), Bhimtal. Based on the findings of the survey/primary data, construction of Fish Hatchery has been recommended by ICAR-DCFR under the Fish Management Plan as Fish Ladder / pass was not found feasible.
VIII. Public hearing and Human health issues		
(i)	Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt.	Land Compensation as assessed & decided by Land Acquisition Officer is being disbursed through Special Land Acquisition Officer (SLAO) in accordance to the provisions of LA Act. About 96% PAF's have received payment from SLAO. Besides SLAO Payment, Project is extending various other benefits to the Project Affected Families in accordance to the R&R Policy of Project, framed based on NRRP-2007 & considering the World Bank Operational Policy. The Affected Families are getting cash benefits in the form of various Grants. Apart from above, Project is complying with the Social Obligation details are annexed at **Annexure A-1**.
(ii)	Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.	The budget provision of Rs 1930 Lakh is already earmarked under Corporate Environment Responsibility. Social Obligation details are annexed at **Annexure A-1**.
(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	Shall be complied with.

(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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Contractor has established residential accommodation/camps with Toilets, bathrooms, drinking water & Community mess for its workers. Septic cum Soak pit tank have also been constructed at camp sites for safe disposal of sewage. First Aid centers with Para-medical staff have been established by the contractor at all work sites with Ambulance facility.
(v)	Labour force to be engaged for construction works shall be examined throughly and adequately treated before issuing them work permit. Medical facilities shall be provided at the construction sites.	Pre-Employment Medical checkup is undertaken before induction and issuing Work Permit to the labours. Also, Medical examination & vaccination of workmen is done from time to time. Treatment as & when required is also administered.
(vi)	Early Warning Telemetric system shall be installed in the upper catchment area of the project for advance intimation of flood forecast.	In the U/s of VPHEP, NTPC has already been installed EFWS (Early Flood Warning System) at Tapovan Vishnugad HEP. The EFWS Installation work has been completed by NTPC & is now functioning. VPHEP is being connected with NTPC Control Room Joshimath via Satellite/Mobile Phones. 3 no. Satellite Phones are working at Dam site, Power House/ Administrative Block and TRT Outfall and their respective numbers has been shared with NTPC officials for 24*7 communication for any Emergency situation. Letter of Award (LOA) has been issued to M/s Industrial Automation Logic Solution for Installation of Early Flood Warning System with date of start on 01.11.2024 at different location of upstream & downstream tributaries of river Alaknanda. Electric Manually operated Siren system has been installed to warn population of D/s of the Project at Dam site, Power house & TRT down-stream site and working properly. Caution/ warning sign boards have been displayed from Helang to Chamoli Market.
(vii)	Emergency preparedness plan be made for any eventuality of the dam failure and shall be implemented as per the Dam Break Analysis	Crisis and Disaster Management Plan is already prepared for the Project.

IX. Corporate Environment Responsibility		
(i)	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65 / 2017-IA. III dated 1st May, 2018, as applicable, regarding Corporate Environment Responsibility.	The provision of CER has been included under the EMP 2021 of VPHEP. The same shall be complied with.
(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.	Complied with. For details, please refer point no. xii of Additional Terms & Conditions.
(iii)	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/ deviation/ violation of the environmental/ forest/ wildlife norms/ conditions. The company shall have defined system of reporting infringements/ deviation/ violation of the environmental/ forest/ wildlife norms/ conditions and/ or shareholders/ stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	The Environment Policy of THDCIL is already under place and is also displayed at THDCIL website. Website Link of the Environment Policy is as below: https://thdc.co.in/en/environment/environment-policy
(iv)	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	The THDCIL has placed a separate Environment Deptt. at Head quarter / Corporate office as well as at Project site. The Deptt. is headed by a General Manager level at corporate office who reports to the Management of the organization. At Project level the Deptt. is headed by General Manger level which reports to the Head of Project. Both the Deptts. has been deployed with well qualified professionals and staff.
(v)	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall	The responsibility Matrix is already included in the EIA-EMP of the Project. The funds earmarked under EMP will not be diverted for any other purpose.

	be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/ Regional Office along with the Six Monthly Compliance Report.	
(vi)	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 commissioning of the project.	As stipulated, study to be conducted after 5 years of commissioning of 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 website of the Company.	Based on the suggestions of the Additional Director, MoEF&CC R.O. Dehradun (Jan 2017 visit), the Multi-Disciplinary Committee has been re-constituted vide MoEF&CC letter no. J-12011/29/2007-IA-1 dated 10.10.2017. The 1st meeting of Multi-Disciplinary Committee under the chairmanship of PCCF-HoFF, GoUK held on 28.07.2018 at Project site. The 2nd meeting of Multi-Disciplinary Committee was held on 28.02.2020 under the chairmanship of PCCF-HOFF, GoUK at Van Bhawan Dehradun & 3rd meeting of Multi-Disciplinary Committee was held on 31.07.2021 under the chairmanship of PCCF-HOFF, GoUK at Van Bhawan. Dehradun. The 4th MDC meeting was held on 22.08.2022 under the chairmanship of PCCF-HoFF,GoUK at Van Bhawan, Dehradun.
(viii)	Formation of Water User Association/ Co-operative be made involvement of the whole community be ensured for discipline use of available water for irrigation purposes	Not applicable
	X. Miscellaneous	
(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 5 prominently	The EC has been published in two (02) local newspapers namely Amar Ujala& Hindustan on 01.09.2021. Details have been provided in the previous report. The EC of the Project has been uploaded on the website of THDCIL. The

	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.	website link of the EC is as below: https://thdc.co.in/index.php/en/vishnugad-pipalkoti-he-project/statutory-clearances
(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.	The copy of EC has been distributed to DM, SDMs, DFOs and Heads of Local Bodies, Panchayats and Municipal Bodies. Details have been already provided in the earlier report.
(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 half-yearly basis.	Complied with. https://thdc.co.in/en/vishnugad-pipalkoti-he-project/environment-monitoring
(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.	Complied with.
(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 website of the company.	The Environment Statement for each Financial Year is being regularly submitted to UKPCB. Last Environment Statement (Form-V) for FY 2023-24 has been submitted to UKPCB vide letter dtd. 24.09.2024 and same is uploaded on company's website https://thdc.co.in/en/vishnugad-pipalkoti-he-project/environment-monitoring
(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. vii. The project authorities must strictly adhere to the stipulations	The Project is under active construction stage and is complying with all the stipulations / commitments / recommendations of the UKPCB, EIA-EMP as well as Public Hearing. Before commissioning of the Project, Ministry will be well informed including its RO.

	made by the State Pollution Control Board and the State Government. viii. The project proponent shall abide by all the 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.	
(vii)	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)	No expansion / modifications of the Project is planned.
(viii)	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.	Noted and shall be complied with.
(ix)	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Noted.
(x)	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Additional Conditions, if any, stipulated by the Ministry in the future shall be complied with.
(xi)	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.	Full cooperation and logistic support, as and when required, will be ensured by Project.
(xii)	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment(Protection) Act, 1986,	Noted and complied with.

	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.	
(xiii)	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	Appeal No. 21/2021 filed by Dr. Bharat Jhunjhunwala before NGT on dated 08.10.2021. Vide Order dtd. 16.08.2022, the Hon'ble Court has disposed-off the appeal and upheld the grant of EC of VPHEP and laid some additional conditions.

ANNEXURE - IV

COMMITMENTS OF PROJECT DURING PUBLIC HEARING ON 09.01.2007

S. No	ISSUES RAISED	STATUS AS ON March' 2025
1	Negative impact on Environment due to Project's Activities shall not take place and provisions shall be made as per the standards and approval from competent level shall be obtained.	As per Environmental studies undertaken, no significant impacts have been noticed. However, EMP envisages precautionary measures to prevent occurrence of negative impacts and action is being taken accordingly.
2	Geological structures around the project area shall not be affected, In this regard, permission from concerned department shall be taken after Detailed investigations and implementation of recommendations shall be ensured.	● Work is being undertaken only in areas where approval has been accorded by concerned authorities/agencies. ● No Incidence or deviation was noticed during the Reporting period ● Work in project area is done with due precautions such as mechanical excavation, controlled blasting, vibration monitoring etc.
3	Minimum water flow shall be ensured in river Alaknanda in such a way that the aquatic fauna is not adversely affected and also there is no impact on water quality.	MEFR shall be ensured as per the latest Gazette Notification dtd. 10.10.2018 of MoWR, RD&GR, GoI.
4	There shall be no negative impact on the Area's Forest resources, Flora, Fauna, and life style of the people, due to the Project's activities. In this regard, proper appropriate measures shall be taken and permission from concerned department shall be taken.	● Environment Management measures are properly taken care off. Entry of the workforce is restricted in forest area. ● The contractor is running Community mess for workforce. ● Labors camps have been constructed at different locations and in isolation from local villagers. Meanwhile hired accommodation and community mess is being provided by contractor. ● Nevertheless, awareness programmes are being conducted to safeguard flora and fauna.
5	During all stages of Project, Local people shall be given job opportunities on priority basis.	Based on the requirement, direct & indirect job opportunities are being extended among local people on a priority basis at THDCIL & Contractors Level. Employment opportunities includes: ● Direct/Indirect job opportunities in THDCIL &

		with Contractor ● Award of petty Contracts ● Hiring of Vehicles ● Livelihood Activities Details are indicated at **Annexure-A1** under Employment.
6	Arrangements as per standards/policy shall be ensured for Project Affected Persons and Complete compensation of the acquired land shall be released to the concerned in time.	Land Compensation as assessed & decided by the Land Acquisition Officer is being disbursed through the Special Land Acquisition Officer (SLAO) in accordance with the provisions of the LA Act. About 96% PAFs have received payment from SLAO. Besides SLAO Payment, the Project is extending various other benefits to the Project Affected Families in accordance with the R&R Policy of Project, framed based on NRRP-2007 & considering the World Bank Operational Policy. The Affected Families are getting cash benefits in the form of various Grants. like Fuel & fodder, Widow assistance, etc. Also, VPHEP-THDCIL has employed 636 Project Affected Persons directly or indirectly and through Contractor HCC Apart from the above, the Project is complying with the Social Obligation & the details are as per **Annexure-A1**.
7	The explosives in construction-related activities shall be used only in avoidable situations in minimum required quantity.	● The explosive is used in avoidable situations only & in minimum quantity. ● The controlled blasting is being undertaken involving non-non-electric delay detonation technique ● Blasting is done during the daytime only and at pre-notified time. Blast pattern & vibration is monitored by the Central Institute of Mining and Fuel Research (CIMFR), Roorkee.
8	Various facilities developed for the project shall be available for the people of the area and community development works shall be carried out in nearby villages.	Various facilities, awareness programs etc. under Community Development have been made available for the Project Affected Villages including surrounding villages that comprise of; Construction of Pathways, waiting shelters, Community buildings, Road widening, Hill side slope protection works, Solar Street lights for villages, furniture & sports kits for community, water supply schemes, Teaching

		aids & furniture to schools, Construction of additional classrooms & toilets, promotion of sports & cultural activities, awareness camps on social & environmental aspects, health camps & awareness camps on HIV AIDS, Pulse Polio etc. New awareness drive regarding Menstrual Hygiene and gender sensitization named "Saheli" is initiated by THDCIL during 2022-23. This drive covered all 27 project affected villages along with 7 schools. As of now more than 1500 women and girls benefitted through our awareness drive. Saheli has achieved the set target and will continue to benefit the girls and women of the project-affected villages and schools through awareness drives in the future. Camp organized for creating awareness in women for Breast cancer at Daswana.
9	A Comprehensive Disaster Management Plan shall be prepared for the project and the recommendations of the Plan shall be complied.	A Comprehensive Disaster Management Plan has been prepared.
10	THDC shall ensure the development of Affected villages Forest Rehabilitation, as per directions of Uttarakhand Government and with the help of Local People.	● The development activities like construction of pathway, minor water supply schemes etc. under affected villages are being executed through involvement of local people. ● A provision of involving local population also exists under CAT plan.
11	Labors and their families, working in the construction works of the Project shall be properly vaccinated.	Medical examination of workforce is done prior to induction and properly vaccinated whenever needed. Medical camps are also organized for labors.
12	The proper development of religious places and Shamshan Ghats nearby the riverbank shall be ensured.	The aspect has been covered under Community Development activities at Point No. 8 above.
13	The treatment of sewage generated by the Labors engaged in construction works of the Project shall be ensured by means of Septic Tank and soak pits.	At each camp site; One Community latrine per 20 persons was provided. Each camp is equipped with septic cum soak pits. The effluent is being disposed-off in septic cum soak tanks.

14	To provide all necessary Project related information to local people, a Public Information Centre shall be established and completed information shall be provided to the people.	Project has established a Public Information Center (PIC) at the VPHEP campus. Necessary information related to Technical, Social & Environmental aspects are displayed and are available in PIC.
15	Complete details related to the project shall be published through Press and the views /opinions of the people shall properly solve.	Project-related information is being published in the local newspapers from time to time. Grievance Redressal Mechanism resolves the issues of affected population in accordance with R&R Policy of VPHEP. Also, such grievances are being resolved in the presence of local administration. VPHEP-THDCIL is maintaining Consultancy matrix to address any issues arise from Project affected villages

ANNEXURE A-1

SOCIAL RESPONSIBILITIES:

CONSTRUCTION OF COMMON PROPERTY RESOURCES:

In addition to the compensation / Grants provided by SLAO/ THDCIL, common property resources like Pathways, drinking water facility, Street Light, Primary School, Panchayat Ghar, Anganwari Kendra, etc. has been constructed at self-resettlement sites.

LOSS OF FUEL & FODDER:

Each entitled household in the affected habitation is being paid 100 days of Minimum Agriculture Wages per year for a period of 5 years. On the recommendations of the World Bank, THDCIL has increased the disbursement of Fuel and fodder Grants from 5 years to 8 years. The amount is paid as a grant/assistance towards the loss of fuel and fodder. Around 2596 households are getting benefited through this assistance.

COMMUNITY DEVELOPMENT WORKS:

Under Community development scheme various works have been taken up in the Project affected villages i.e.; construction of Pathways, Waiting for shelters, Community buildings, Road widening, Hill side slope protection works, Solar street lights for villages, furniture & sports kits for the community, water supply schemes, Teaching aids & furniture to schools, Construction of additional classrooms & toilets, promotion of sports & cultural activities, awareness camps on social & environmental aspects, health camps & awareness camps on HIV AIDS, Pulse Polio etc.

LIVELIHOOD ACTIVITIES:

Various activities have also been taken up to create livelihood opportunities for the PAF's i.e Dairy Development, Poultry, Tailoring, Stitching, Wool Knitting, Bee Keeping, Mushroom cultivation, vermin composting to promote organic farming, plantation, etc. Awareness programs for Project affected people are also organized with the help of various State Govt. Deptts i.e. Horticulture, Agriculture, Tourism, Animal Husbandry, etc., give awareness on various schemes, subsidies, technical assistance, etc., to convince local youth to opt for self-employed income generation activities. Around 500 beneficiaries are benefited from these programs.

On the recommendations of the World Bank, the work towards "Engagement of Specialized Agency to help Prepare Livelihood Development / Employment Generation; its Implementation in relation to VPHEP" was awarded to M/s MRIDA Renergy & Development Pvt. Ltd, New Delhi commenced on 03.01.2020. The agency has completed the Draft Baseline survey/final baseline survey submitted the draft strategy report by 31.03.2021. The final strategy report for Phase -1 (7 villages) was submitted on 03/09/2021. The contract was completed on 23.01.2023.

As of now a total of 28 nos. Polyhouses have been installed by M/s Mrida, and 58 PAPs have received Bee-Boxes (2 each) out of which 36 bee-keeping units are operating successfully, 17 are partially operating and bees in 5 units are dead. A total of 12 farmers have benefited from Farm Machinery Bank interventions in Guniyala. For the revival of existing pilot projects THDC has hired two Consultants and two Assistant Consultants from the Project Affected Community only.

VOCATIONAL TRAINING:

Apart from the above, Vocational Training in hotel management, Excavator Operator, Electrician, Fitter, Refrigerating Air Conditioning, and other skill enhancement activities, etc. are also undertaken, in coordination with various institutes like GMR Foundation, Dr. Reddy Foundation, and Industrial Training Institutes in nearby areas. Around 300 beneficiaries have been benefited through these programs. Two computer training centers have been started by M/s MRIDA, the Mayapur center has given training to 67 beneficiaries, proposal for running the computer training centre at pipalkoti is under process. Under " Nayi Udaan" THDCIL has setup two Stitching Training Centres at village Durgapur and Urgham and knitting centre at village mayapur and daswana. There are 38 female and 28 females are getting benefited through stitching and knitting training centre.

EDUCATION:

To promote Education the Project has undertaken various activities i.e.; Scholarship to project-affected Meritorious/Poor/ Girls students, Construction of additional classrooms & toilets, providing teaching aids & uniforms, assistance for getting admission in ITIs, assistance to schools for cultural activities etc. Around 1411 students having approx. 800 girls have been benefited through scholarship program of THDCIL till the Academic year 2018-19. The above assistance has been kept on hold as the schools were closed due to the COVID-19 pandemic.

HEALTH:

The project is helping PAPs by facilitating them to THDCILs Dispensaries established in the Project Campus. OPD / IPD facility including medicines is given free of cost to PAPs. In addition to this Medical health camps are organized in project-affected villages and an Ambulance facility is also provided to the needy PAPs free of cost. The health camps have been immensely beneficial for the local population & nearby areas that include people from project-affected villages of Project. Approx. 61,914 beneficiaries having 36,981 people from the community have been administered treatment in the dispensary. A new well-equipped pathology lab is established on 01.07.2022 in the dispensary. Five health camps has also been organized in the villages around the vicinity and more than 200 people got benefitted through it.

VPHEP-THDCIL launched an awareness drive "Saheli". This drive covered all 27 affected villages including Schools in and around the project with the aim to spread awareness about menstrual health and taboos and inform about their rights. VPHEP-THDCIL is also distributing hygiene kits, including sanitary pads, dusting powder, and intimate hygiene wash through this awareness drive. As of now more than 1400 women and girls have benefitted through our awareness drive. Saheli has achieved the set target and will continue to benefit the girls and women of the project-affected villages and schools through awareness drives in the future. Camp organized for creating awareness in women for Breast cancer at daswana.

One mini-truck TATA ACE 1.8 cum has been handed over to Nagar Panchayat, Pipalkoti, District Chamoli on the 9th June, 2020 through SEWA, THDCIL, Rishikesh under Corporate Social Responsibility (CSR). The vehicle is used for transportation of Garbage to Disposal sites under their control. The Garbage generated at THDCIL, Project Complex, VPHEP is also being addressed by Nagar Panchayat, Pipalkoti.

EMPLOYMENT:

Keeping in view that the Hydro Projects are capital intensive with the State of Art Technology and therefore do not offer many employment opportunities, particularly in the unskilled category, the option of providing a job with THDCIL as per policy is not considered as a rehabilitation option. However, as of date approx. 2424 persons have been provided direct/indirect employment opportunities in Project HCC / THDCIL/ Contractors/ Hiring of vehicles/Lease land for various purposes etc.

PCRI/051

प्रदूषण नियंत्रण अनुसंधान संस्थान

भारत हैवी इलेक्ट्रिकल्स लिमिटेड ,रानीपुर,हरिद्वार (उत्तराखंड) -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 AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2024-25 :0702
Date: 25-10-2024

A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s THDC India Ltd, Vishnugad Pipalkoti Hydro Electric Project, District-Chamoli (Uttarakhand)
2.	Work Order No.	:	24-0074-O-691
3.	Date of sampling	:	03.10.2024 to 04.10.2024
4.	Location of Sampling	:	Batching Plant DAM
5.	Method of Sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006) , FID, 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_{10}	µg/m³	85	100
2.	Particulate Matter less than 2.5 µm or $PM_{2.5}$	µg/m³	37	60
3.	Sulphur Dioxide (SO_2)	µg/m³	BDL	80
4.	Nitrogen Dioxide (NO_2)	µg/m³	8	80
5.	Carbon Monoxide (CO)	mg/m³	BDL	4
6.	Lead (Pb)	µg/m³	BDL	1
7.	Ammonia (NH_3)	µg/m³	BDL	400
8.	Ozone (O_3)	µg/m³	47	180
9.	Benzene (C_6H_6)	µg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	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
R S Yadav
Manager (PCRI)

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(3) Samples will be disposed off after one month from the date of issue of Test Certificate

PCRI/051

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भारत हैवी इलेक्ट्रिकल्स लिमिटेड ,रानीपुर,हरिद्वार (उत्तराखंड) -249403

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TEST REPORT

AMBIENT AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2024-25 :0703
Date: 25-10-2024

A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s THDC India Ltd, Vishnugad Pipalkoti Hydro Electric Project, District-Chamoli (Uttarakhand)
2.	Work Order No.	:	24-0074-O-691
3.	Date of sampling	:	03.10.2024 to 04.10.2024
4.	Location of Sampling	:	Batching Plant –Power House (PH)
5.	Method of Sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006), FID, 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_{10}	µg/m³	78	100
2.	Particulate Matter less than 2.5 µm or $PM_{2.5}$	µg/m³	33	60
3.	Sulphur Dioxide (SO_2)	µg/m³	BDL	80
4.	Nitrogen Dioxide (NO_2)	µg/m³	7	80
5.	Carbon Monoxide (CO)	mg/m³	BDL	4
6.	Lead (Pb)	µg/m³	BDL	1
7.	Ammonia (NH_3)	µg/m³	BDL	400
8.	Ozone (O_3)	µg/m³	45	180
9.	Benzene (C_6H_6)	µg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	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
R S Yadav
Manager (PCRI)

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भारत हैवी इलेक्ट्रिकल्स लिमिटेड ,रानीपुर,हरिद्वार (उत्तराखंड) -249403

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TEST REPORT

AMBIENT AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2024-25 :0704
Date: 25-10-2024

A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s THDC India Ltd, Vishnugad Pipalkoti Hydro Electric Project, District-Chamoli (Uttarakhand)
2.	Work Order No.	:	24-0074-O-691
3.	Date of sampling	:	04.10.2024 to 05.10.2024
4.	Location of Sampling	:	Dam site Fabrication Yard near Gulabkoti/Helong Village (DAM)
5.	Method of Sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006) , FID, 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_{10}	µg/m³	75	100
2.	Particulate Matter less than 2.5 µm or $PM_{2.5}$	µg/m³	30	60
3.	Sulphur Dioxide (SO_2)	µg/m³	BDL	80
4.	Nitrogen Dioxide (NO_2)	µg/m³	6	80
5.	Carbon Monoxide (CO)	mg/m³	BDL	4
6.	Lead (Pb)	µg/m³	BDL	1
7.	Ammonia (NH_3)	µg/m³	BDL	400
8.	Ozone (O_3)	µg/m³	43	180
9.	Benzene (C_6H_6)	µg/m³	BDL	5
10.	Benzo(a)pyrene (BaP)	ng/m³	BDL	1
11.	Arsenic (As)	ng/m³	BDL	6
12.	Nickel (Ni)	ng/m³	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
R S Yadav
Manager (PCRI)

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PCRI/051

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TEST REPORT
INDOOR AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2024-25 :0705
Date: 25-10-2024

A. GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s THDC India Ltd, Vishnugad Pipalkoti Hydro Electric Project, District-Chamoli (Uttarakhand)
2.	Work Order No.	:	24-0074-O-691
3.	Date of sampling	:	04.10.2024
4.	Location of sampling point	:	Fabrication Workshop at DAM site
5.	Method of sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006) , FID, NDIR & Gas Detection System, IS-5182 (Part-9)
6.	Duration of Sampling	:	8 Hours
7.	Sample collection by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

B. RESULTS OF WORKPLACE AIR MONITORING:

Sl.No.	Parameter	Unit	Obtained Value	Adopted Values TLV-TWA (ACGIH)*
1.	Particulate Matter less than 10 µm or PM_{10}	µg/m³	65	-
2.	Particulate Matter less than 2.5 µm or $PM_{2.5}$	µg/m³	32	-
3.	Sulphur Dioxide (SO_2)	mg/m³	BDL	5.2
4.	Nitrogen Dioxide (NO_2)	mg/m³	0.003	5.6
5.	Carbon Monoxide (CO)	ppm	7	25
6.	Carbon Dioxide (CO_2)	ppm	375	5000
7.	Hydro Carbons (HC)	ppm	BDL	-
8.	Acid Mist	mg/m³	BDL	-

BDL: Below Detectable Limit
***TLV-TWA (ACGIH):** Threshold limit Value-Time Weighted Average(ACGIH)

Prepared by

Ankur Mohan
Engineer (PCRI)

Approved by

R S Yadav
Manager (PCRI)

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TEST REPORT

INDOOR AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2024-25 :0706
Date: 25-10-2024

A.GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s THDC India Ltd, Vishnugad Pipalkoti Hydro Electric Project, District-Chamoli (Uttarakhand)
2.	Work Order No.	:	24-0074-O-691
3.	Date of sampling	:	03.10.2024
4.	Location of sampling point	:	Fabrication Workshop at PH site
5.	Method of sampling	:	IS:5182 (Part-II-2001, Part-23-2006, Part-VI-2006) , FID, NDIR & Gas Detection System, IS-5182 (Part-9)
6.	Duration of Sampling	:	8 Hours
7.	Sample collection by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

B. RESULTS OF WORKPLACE AIR MONITORING:

Sl.No.	Parameter	Unit	Obtained Value	Adopted Values TLV-TWA (ACGIH)*
1.	Particulate Matter less than 10 µm or PM_{10}	µg/m³	68	-
2.	Particulate Matter less than 2.5 µm or $PM_{2.5}$	µg/m³	29	-
3.	Sulphur Dioxide (SO_2)	mg/m³	BDL	5.2
4.	Nitrogen Dioxide (NO_2)	mg/m³	0.008	5.6
5.	Carbon Monoxide (CO)	ppm	8	25
6.	Carbon Dioxide (CO_2)	ppm	371	5000
7.	Hydro Carbons (HC)	ppm	BDL	-
8.	Acid Mist	mg/m³	BDL	-

BDL: Below Detectable Limit
***TLV-TWA (ACGIH):** Threshold limit Value-Time Weighted Average(ACGIH)

Prepared by

Ankur Mohan
Engineer (PCRI)

Approved by

R S Yadav
Manager (PCRI)

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

PCRI/051

TEST REPORT
WORKPLACE AIR MONITORING

Lab. Ref.: PCRI: Air & Noise: 2024-25 :0707
Date: 25-10-2024

A.GENERAL INFORMATION:

1.	Name and address of Plant	:	M/s THDC India Ltd, Vishnugad Pipalkoti Hydro Electric Project, District-Chamoli (Uttarakhand)
2.	Work Order No.	:	24-0074-O-691
3.	Date of sampling	:	03.10.2024
4.	Location of sampling point	:	Irritant Gases from UPS Batteries Room -Near Finance Office
5.	Method of sampling	:	Workplace Sampler and Gas Detection System
6.	Duration of Sampling	:	8 Hours
7.	Sample collection by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

B. RESULTS OF WORKPLACE AIR MONITORING:

Sl.No.	Parameter	Unit	Obtained Value	Adopted Values TLV-TWA (ACGIH)*
1.	Hydrogen Sulphide	ppm	0.11	1
2.	Metallic fumes (Pb)	mg/m^3	BDL	0.05
3.	Ammonia	ppm	BDL	25
4.	Acid Mist	mg/m^3	BDL	-

BDL: Below Detectable Limit
*__TLV-TWA (ACGIH)__: Threshold limit Value-Time Weighted Average(ACGIH)

Prepared by
Ankur Mohan
Engineer (PCRI)

Approved by
R S Yadav
Manager (PCRI)

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PCRI/051

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भारत हैवी इलेक्ट्रिकल्स लिमिटेड ,रानीपुर,हरिद्वार (उत्तराखंड) -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

WORKPLACE NOISE MONITORING

Lab. Ref.: PCRI: Air & Noise: 2024-25 :0708-0711
Date: 25-10-2024

A. GENERAL INFORMATION:

1	Name and address of Plant	:	M/s THDC India Ltd, Vishnugad Pipalkoti Hydro Electric Project, District-Chamoli (Uttarakhand)
2	Work Order No.	:	24-0074-O-691
3	Date of Measurement	:	05.10.2024
4	Instrument used	:	Sound Level Meter
5	Measurement carried out by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

B. RESULTS OF AMBIENT / WORKPLACE NOISE MEASUREMENT:

All measurement in dB (A)

Sl. No.	Location	Measured Values	Allowable Limit*
1.	Fabrication Workshop at PH site	62.7	90 dB (A)
2.	Batching Plant PH site	58.4	
3.	Fabrication Workshop at DAM site	83.5	
4.	Batching Plant DAM site	81.3	

***Allowable Limit:** For workplace: 90 dB(A) for 8 Hour Exposure Period as per OSHA.

Prepared by

Ankur Mohan
Engineer (PCRI)

Approved by

R S Yadav
Manager (PCRI)

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POLLUTION CONTROL RESEARCH INSTITUTE
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TEST REPORT

Lab Reference No: TL240718 **Date :** 25.10.2024

Indentor THDC India Ltd., Vishnugad Pipalkoti Hydro Electric Project, Alaknanda Puram, Siyasain, Pipalkoti, Chamoli (Uttarakhand)

Customer's Ref. No.: THDCIL/VPHEP/EWVT./F-037/84 Dated:18.07.2024

Work Order No.: 24-0074-O-691

Sample Collected by: PCRI Staff **Collection Date:** 04.10.2024

Sample/Job: River Water Sample from 1 km D/s of TRT outlet

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Alkalinity	mg/L	56	200	600
Aluminium (as Al)	mg/L	0.01	0.03	0.2
Ammonia (as Total Ammonia – N)	mg/L	ND	0.5	NR
Arsenic (as As)	mg/L	ND	0.01	0.05
Barium	mg/L	ND	0.7	NR
BOD at 27°C	mg/L	1.7	-	-
Boron (as B)	mg/L	ND	0.5	1.0
Cadmium (as Cd)	mg/L	ND	0.003	NR
Calcium (as Ca)	mg/L	24.05	75	200
Chloride (as Cl)	mg/L	08	250	1000
Chromium Total (as Cr)	mg/L	ND	0.05	NR
Colour	Hazen	5	5	15
Copper (as Cu)	mg/L	ND	0.05	1.5
Dissolved Oxygen (DO)	mg/L	8.4	-	-
Fluoride (as F)	mg/L	0.77	1.0	1.5
Hardness (as $CaCO_3$)	mg/L	120	200	600
Iron (as Fe)	mg/L	0.44	0.3	NR
Lead (as Pb)	mg/L	0.02	0.01	NR
Magnesium (as Mg)	mg/L	14.56	30	100
Manganese (as Mn)	mg/L	0.03	0.1	0.3
Mercury (as Hg)	mg/L	ND	0.001	NR

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)

PCRI/051

TEST REPORT

Lab Reference No: TL240718 **Date :** 25.10.2024

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012) Acceptable	Permissible
Mineral Oil	mg/L	ND	0.5	NR
Nickel (as Ni)	mg/L	ND	0.02	NR
Nitrate (as NO_3)	mg/L	0.98	45	NR
Odour	-	Agreeable	Agreeable	NR
pH	-	8.61	6.5-8.5	NR
Phenolic Compounds (as C_6H_5OH)	mg/L	ND	0.001	0.002
Selenium (as Se)	mg/L	ND	0.01	NR
Silver (as Ag)	mg/L	ND	0.1	NR
Sulphate (as SO_4)	mg/L	52.7	200	400
Sulphide as S	mg/L	ND	0.05	NR
Total Coliform	MPN/100 mL	28	Absent	NR
Total Dissolved Solids	mg/L	60	500	2000
Total Residual Chlorine	mg/L	ND	0.2	1.0
Total Suspended Solids	mg/L	146	-	-
Turbidity	NTU	1.46	1	5
Zinc (as Zn)	mg/L	0.32	5	15

ND – Not Detectable NR – No Relaxation

Prepared By

Ankur Mohan
Engineer (PCRI)

Approved By

Rajendra Singh Yadav
Manager (PCRI)

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TEST REPORT

Lab Reference No: TL240719 **Date :** 25.10.2024

Indentor THDC India Ltd., Vishnugad Pipalkoti Hydro Electric Project, Alaknanda Puram, Siyasain, Pipalkoti, Chamoli (Uttarakhand)

Customer's Ref. No.: THDCIL/VPHEP/EWVT./F-037/84 Dated:18.07.2024

Work Order No.: 24-0074-O-691

Sample Collected by: PCRI Staff **Collection Date:** 04.10.2024

Sample/Job: River Water Sample from 3 km D/s of TRT outlet

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Alkalinity	mg/L	32	200	600
Aluminium (as Al)	mg/L	0.01	0.03	0.2
Ammonia (as Total Ammonia – N)	mg/L	ND	0.5	NR
Arsenic (as As)	mg/L	ND	0.01	0.05
Barium	mg/L	ND	0.7	NR
BOD at 27°C	mg/L	1.9	-	-
Boron (as B)	mg/L	ND	0.5	1.0
Cadmium (as Cd)	mg/L	ND	0.003	NR
Calcium (as Ca)	mg/L	24.05	75	200
Chloride (as Cl)	mg/L	06	250	1000
Chromium Total (as Cr)	mg/L	ND	0.05	NR
Colour	Hazen	5	5	15
Copper (as Cu)	mg/L	ND	0.05	1.5
Dissolved Oxygen (DO)	mg/L	8.3	-	-
Fluoride (as F)	mg/L	1.01	1.0	1.5
Hardness (as $CaCO_3$)	mg/L	150	200	600
Iron (as Fe)	mg/L	0.16	0.3	NR
Lead (as Pb)	mg/L	0.02	0.01	NR
Magnesium (as Mg)	mg/L	21.84	30	100
Manganese (as Mn)	mg/L	0.02	0.1	0.3
Mercury (as Hg)	mg/L	ND	0.001	NR

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
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PCRI/051

TEST REPORT

Lab Reference No: TL240719 **Date :** 25.10.2024

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Mineral Oil	mg/L	ND	0.5	NR
Nickel (as Ni)	mg/L	ND	0.02	NR
Nitrate (as NO_3)	mg/L	0.89	45	NR
Odour	-	Agreeable	Agreeable	NR
pH	-	8.45	6.5-8.5	NR
Phenolic Compounds (as C_6H_5OH)	mg/L	ND	0.001	0.002
Selenium (as Se)	mg/L	ND	0.01	NR
Silver (as Ag)	mg/L	ND	0.1	NR
Sulphate (as SO_4)	mg/L	54.85	200	400
Sulphide as S	mg/L	ND	0.05	NR
Total Coliform	MPN/100 mL	31	Absent	NR
Total Dissolved Solids	mg/L	58	500	2000
Total Residual Chlorine	mg/L	ND	0.2	1.0
Total Suspended Solids	mg/L	121	-	-
Turbidity	NTU	1.63	1	5
Zinc (as Zn)	mg/L	0.16	5	15

ND – Not Detectable NR – No Relaxation

Prepared By

Ankur Mohan
Engineer (PCRI)

Approved By

Rajendra Singh Yadav
Manager (PCRI)

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TEST REPORT

Lab Reference No: TL240720 **Date :** 25.10.2024

Indentor THDC India Ltd., Vishnugad Pipalkoti Hydro Electric Project, Alaknanda Puram, Siyasain, Pipalkoti, Chamoli (Uttarakhand)

Customer's Ref. No.: THDCIL/VPHEP/EWVT./F-037/84 Dated:18.07.2024

Work Order No.: 24-0074-O-691

Sample Collected by: PCRI Staff **Collection Date:** 05.10.2024

Sample/Job: River Water Sample from 1 km U/s of Dam

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Alkalinity	mg/L	44	200	600
Aluminium (as Al)	mg/L	0.01	0.03	0.2
Ammonia (as Total Ammonia – N)	mg/L	ND	0.5	NR
Arsenic (as As)	mg/L	ND	0.01	0.05
Barium	mg/L	ND	0.7	NR
BOD at 27°C	mg/L	2.4	-	-
Boron (as B)	mg/L	ND	0.5	1.0
Cadmium (as Cd)	mg/L	ND	0.003	NR
Calcium (as Ca)	mg/L	22.44	75	200
Chloride (as Cl)	mg/L	05	250	1000
Chromium Total (as Cr)	mg/L	ND	0.05	NR
Colour	Hazen	5	5	15
Copper (as Cu)	mg/L	ND	0.05	1.5
Dissolved Oxygen (DO)	mg/L	7.9	-	-
Fluoride (as F)	mg/L	0.83	1.0	1.5
Hardness (as $CaCO_3$)	mg/L	118	200	600
Iron (as Fe)	mg/L	0.24	0.3	NR
Lead (as Pb)	mg/L	0.02	0.01	NR
Magnesium (as Mg)	mg/L	15.05	30	100
Manganese (as Mn)	mg/L	0.03	0.1	0.3
Mercury (as Hg)	mg/L	ND	0.001	NR

Contd..2

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POLLUTION CONTROL RESEARCH INSTITUTE
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BHARAT HEAVY ELECTRICALS LIMITED
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TEST REPORT

Lab Reference No: TL240720 **Date :** 25.10.2024

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012) Acceptable	Permissible
Mineral Oil	mg/L	ND	0.5	NR
Nickel (as Ni)	mg/L	ND	0.02	NR
Nitrate (as NO_3)	mg/L	1.3	45	NR
Odour	-	Agreeable	Agreeable	NR
pH	-	8.43	6.5-8.5	NR
Phenolic Compounds (as C_6H_5OH)	mg/L	ND	0.001	0.002
Selenium (as Se)	mg/L	ND	0.01	NR
Silver (as Ag)	mg/L	ND	0.1	NR
Sulphate (as SO_4)	mg/L	62.09	200	400
Sulphide as S	mg/L	ND	0.05	NR
Total Coliform	MPN/100 mL	38	Absent	NR
Total Dissolved Solids	mg/L	57	500	2000
Total Residual Chlorine	mg/L	ND	0.2	1.0
Total Suspended Solids	mg/L	133	-	-
Turbidity	NTU	30	1	5
Zinc (as Zn)	mg/L	0.20	5	15

ND – Not Detectable NR – No Relaxation

Prepared By

Ankur Mohan
Engineer (PCRI)

Approved By

Rajendra Singh Yadav
Manager (PCRI)

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TEST REPORT

Lab Reference No: TL240721 **Date :** 25.10.2024

Indentor THDC India Ltd., Vishnugad Pipalkoti Hydro Electric Project, Alaknanda Puram, Siyasain, Pipalkoti, Chamoli (Uttarakhand)

Customer's Ref. No.: THDCIL/VPHEP/EWVT./F-037/84 Dated:18.07.2024

Work Order No.: 24-0074-O-691

Sample Collected by: PCRI Staff **Collection Date:** 05.10.2024

Sample/Job: River Water Sample between Dam and PH site(Village Dwing/Tapon)

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Alkalinity	mg/L	48	200	600
Aluminium (as Al)	mg/L	0.01	0.03	0.2
Ammonia (as Total Ammonia – N)	mg/L	ND	0.5	NR
Arsenic (as As)	mg/L	ND	0.01	0.05
Barium	mg/L	ND	0.7	NR
BOD at 27°C	mg/L	2.2	-	-
Boron (as B)	mg/L	ND	0.5	1.0
Cadmium (as Cd)	mg/L	ND	0.003	NR
Calcium (as Ca)	mg/L	24.85	75	200
Chloride (as Cl)	mg/L	10	250	1000
Chromium Total (as Cr)	mg/L	ND	0.05	NR
Colour	Hazen	5	5	15
Copper (as Cu)	mg/L	ND	0.05	1.5
Dissolved Oxygen (DO)	mg/L	8.1	-	-
Fluoride (as F)	mg/L	0.88	1.0	1.5
Hardness (as $CaCO_3$)	mg/L	146	200	600
Iron (as Fe)	mg/L	0.24	0.3	NR
Lead (as Pb)	mg/L	0.02	0.01	NR
Magnesium (as Mg)	mg/L	20.39	30	100
Manganese (as Mn)	mg/L	0.03	0.1	0.3
Mercury (as Hg)	mg/L	ND	0.001	NR

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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)

PCRI/051

TEST REPORT

Lab Reference No: TL240721 **Date :** 25.10.2024

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Mineral Oil	mg/L	ND	0.5	NR
Nickel (as Ni)	mg/L	0.02	0.02	NR
Nitrate (as NO_3)	mg/L	0.78	45	NR
Odour	-	Agreeable	Agreeable	NR
pH	-	8.42	6.5-8.5	NR
Phenolic Compounds (as C_6H_5OH)	mg/L	ND	0.001	0.002
Selenium (as Se)	mg/L	ND	0.01	NR
Silver (as Ag)	mg/L	ND	0.1	NR
Sulphate (as SO_4)	mg/L	59.4	200	400
Sulphide as S	mg/L	ND	0.05	NR
Total Coliform	MPN/100 mL	35	Absent	NR
Total Dissolved Solids	mg/L	57	500	2000
Total Residual Chlorine	mg/L	ND	0.2	1.0
Total Suspended Solids	mg/L	135	-	-
Turbidity	NTU	35.8	1	5
Zinc (as Zn)	mg/L	0.26	5	15

ND – Not Detectable NR – No Relaxation

Prepared By

Ankur Mohan
Engineer (PCRI)

Approved By

Rajendra Singh Yadav
Manager (PCRI)

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PCRI/051

TEST REPORT

Lab Reference No: TL240893 **Date :** 17.03.2025

Indentor THDC India Ltd., Vishnugad Pipalkoti Hydro Electric Project, Alaknanda Puram, Siyasain, Pipalkoti, Chamoli (Uttarakhand)

Customer's Ref. No.: THDCIL/VPHEP/EWVT./F-37/84 Dated:18.07.2024

Work Order No.: 24-0074-O-691

Sample Collected by: PCRI Staff **Collection Date:** 21.02.2025

Sample/Job: River Water Sample from TRT 3 km D/s

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Alkalinity	mg/L	100	200	600
Aluminium (as Al)	mg/L	0.01	0.03	0.2
Ammonia (as Total Ammonia – N)	mg/L	ND	0.5	NR
Arsenic (as As)	mg/L	ND	0.01	0.05
Barium	mg/L	ND	0.7	NR
BOD at 27°C	mg/L	0.9	-	-
Boron (as B)	mg/L	ND	0.5	1.0
Cadmium (as Cd)	mg/L	ND	0.003	NR
Calcium (as Ca)	mg/L	26.45	75	200
Chloride (as Cl)	mg/L	5	250	1000
Chromium Total (as Cr)	mg/L	ND	0.05	NR
Colour	Hazen	<5	5	15
Copper (as Cu)	mg/L	ND	0.05	1.5
Dissolved Oxygen (DO)	mg/L	8.5	-	-
Fluoride (as F)	mg/L	0.72	1.0	1.5
Hardness (as $CaCO_3$)	mg/L	104	200	600
Iron (as Fe)	mg/L	0.25	0.3	NR
Lead (as Pb)	mg/L	0.02	0.01	NR
Magnesium (as Mg)	mg/L	9.21	30	100
Manganese (as Mn)	mg/L	0.05	0.1	0.3
Mercury (as Hg)	mg/L	ND	0.001	NR

Contd..2

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भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार (उत्तराखंड)
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)

PCRI/051

TEST REPORT

Lab Reference No: TL240893 **Date :** 17.03.2025

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Mineral Oil	mg/L	ND	0.5	NR
Nickel (as Ni)	mg/L	ND	0.02	NR
Nitrate (as NO_3)	mg/L	2.8	45	NR
Odour	-	Agreeable	Agreeable	NR
pH	-	8.36	6.5-8.5	NR
Phenolic Compounds (as C_6H_5OH)	mg/L	ND	0.001	0.002
Selenium (as Se)	mg/L	ND	0.01	NR
Silver (as Ag)	mg/L	ND	0.1	NR
Sulphate (as SO_4)	mg/L	36.08	200	400
Sulphide as S	mg/L	ND	0.05	NR
Total Coliform	MPN/100 mL	Absent	Absent	NR
Total Dissolved Solids	mg/L	163	500	2000
Total Residual Chlorine	mg/L	ND	0.2	1.0
Total Suspended Solids	mg/L	110	-	-
Turbidity	NTU	33.6	1	5
Zinc (as Zn)	mg/L	0.51	5	15

ND – Not Detectable NR – No Relaxation

Prepared by

Ankur Mohan
Sr. Engineer (PCRI)

Approved by

Shivam Saran
Manager (PCRI)

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PCRI/051

TEST REPORT

Lab Reference No: TL240894 **Date :** 17.03.2025

Indentor THDC India Ltd., Vishnugad Pipalkoti Hydro Electric Project, Alaknanda Puram, Siyasain, Pipalkoti, Chamoli (Uttarakhand)

Customer's Ref. No.: THDCIL/VPHEP/EWVT./F-37/84 Dated:18.07.2024

Work Order No.: 24-0074-O-691

Sample Collected by: PCRI Staff **Collection Date:** 21.02.2025

Sample/Job: Drinking Water Sample from Haat/Harsari Village

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Alkalinity	mg/L	288	200	600
Aluminium (as Al)	mg/L	0.01	0.03	0.2
Ammonia (as Total Ammonia – N)	mg/L	ND	0.5	NR
Arsenic (as As)	mg/L	ND	0.01	0.05
Barium	mg/L	ND	0.7	NR
BOD at 27°C	mg/L	0.4	-	-
Boron (as B)	mg/L	ND	0.5	1.0
Cadmium (as Cd)	mg/L	ND	0.003	NR
Calcium (as Ca)	mg/L	51.30	75	200
Chloride (as Cl)	mg/L	7	250	1000
Chromium Total (as Cr)	mg/L	ND	0.05	NR
Colour	Hazen	<5	5	15
Copper (as Cu)	mg/L	ND	0.05	1.5
Dissolved Oxygen (DO)	mg/L	8.0	-	-
Fluoride (as F)	mg/L	0.76	1.0	1.5
Hardness (as $CaCO_3$)	mg/L	254	200	600
Iron (as Fe)	mg/L	0.20	0.3	NR
Lead (as Pb)	mg/L	0.02	0.01	NR
Magnesium (as Mg)	mg/L	30.51	30	100
Manganese (as Mn)	mg/L	0.09	0.1	0.3
Mercury (as Hg)	mg/L	ND	0.001	NR

Contd..2

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

PCRI/051

TEST REPORT

Lab Reference No: TL240894 **Date :** 17.03.2025

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Mineral Oil	mg/L	ND	0.5	NR
Nickel (as Ni)	mg/L	ND	0.02	NR
Nitrate (as NO_3)	mg/L	1.9	45	NR
Odour	-	Agreeable	Agreeable	NR
pH	-	8.59	6.5-8.5	NR
Phenolic Compounds (as C_6H_5OH)	mg/L	ND	0.001	0.002
Selenium (as Se)	mg/L	ND	0.01	NR
Silver (as Ag)	mg/L	ND	0.1	NR
Sulphate (as SO_4)	mg/L	7.50	200	400
Sulphide as S	mg/L	ND	0.05	NR
Total Coliform	MPN/100 mL	Absent	Absent	NR
Total Dissolved Solids	mg/L	294	500	2000
Total Residual Chlorine	mg/L	ND	0.2	1.0
Total Suspended Solids	mg/L	13	-	-
Turbidity	NTU	1.24	1	5
Zinc (as Zn)	mg/L	0.56	5	15

ND – Not Detectable NR – No Relaxation

Prepared by

Ankur Mohan
Sr. Engineer (PCRI)

Approved by

Shivam Saran
Manager (PCRI)

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PCRI/051

TEST REPORT

Lab Reference No: TL240895 **Date :** 17.03.2025

Indentor THDC India Ltd., Vishnugad Pipalkoti Hydro Electric Project, Alaknanda Puram, Siyasain, Pipalkoti, Chamoli (Uttarakhand)

Customer's Ref. No.: THDCIL/VPHEP/EWVT./F-37/84 Dated:18.07.2024

Work Order No.: 24-0074-O-691

Sample Collected by: PCRI Staff **Collection Date:** 21.02.2025

Sample/Job: River Water Sample Between Tapon and Dwing Village

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Alkalinity	mg/L	124	200	600
Aluminium (as Al)	mg/L	0.01	0.03	0.2
Ammonia (as Total Ammonia – N)	mg/L	ND	0.5	NR
Arsenic (as As)	mg/L	ND	0.01	0.05
Barium	mg/L	ND	0.7	NR
BOD at 27°C	mg/L	0.8	-	-
Boron (as B)	mg/L	ND	0.5	1.0
Cadmium (as Cd)	mg/L	ND	0.003	NR
Calcium (as Ca)	mg/L	24.05	75	200
Chloride (as Cl)	mg/L	10	250	1000
Chromium Total (as Cr)	mg/L	ND	0.05	NR
Colour	Hazen	<5	5	15
Copper (as Cu)	mg/L	ND	0.05	1.5
Dissolved Oxygen (DO)	mg/L	8.1	-	-
Fluoride (as F)	mg/L	0.81	1.0	1.5
Hardness (as $CaCO_3$)	mg/L	124	200	600
Iron (as Fe)	mg/L	0.21	0.3	NR
Lead (as Pb)	mg/L	0.03	0.01	NR
Magnesium (as Mg)	mg/L	15.53	30	100
Manganese (as Mn)	mg/L	ND	0.1	0.3
Mercury (as Hg)	mg/L	ND	0.001	NR

Contd..2

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

TEST REPORT

Lab Reference No: TL240895 **Date :** 17.03.2025

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Mineral Oil	mg/L	ND	0.5	NR
Nickel (as Ni)	mg/L	ND	0.02	NR
Nitrate (as NO_3)	mg/L	2.3	45	NR
Odour	-	Agreeable	Agreeable	NR
pH	-	8.96	6.5-8.5	NR
Phenolic Compounds (as C_6H_5OH)	mg/L	ND	0.001	0.002
Selenium (as Se)	mg/L	ND	0.01	NR
Silver (as Ag)	mg/L	ND	0.1	NR
Sulphate (as SO_4)	mg/L	38.49	200	400
Sulphide as S	mg/L	ND	0.05	NR
Total Coliform	MPN/100 mL	5	Absent	NR
Total Dissolved Solids	mg/L	153	500	2000
Total Residual Chlorine	mg/L	ND	0.2	1.0
Total Suspended Solids	mg/L	99	-	-
Turbidity	NTU	21.1	1	5
Zinc (as Zn)	mg/L	0.60	5	15

ND – Not Detectable NR – No Relaxation

Prepared by

Ankur Mohan
Sr. Engineer (PCRI)

Approved by

Shivam Saran
Manager (PCRI)

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PCRI/051

TEST REPORT

Lab Reference No: TL240896 **Date :** 17.03.2025

Indentor THDC India Ltd., Vishnugad Pipalkoti Hydro Electric Project, Alaknanda Puram, Siyasain, Pipalkoti, Chamoli (Uttarakhand)

Customer's Ref. No.: THDCIL/VPHEP/EWVT./F-037/84 Dated:18.07.2024

Work Order No.: 24-0074-O-691

Sample Collected by: PCRI Staff **Collection Date:** 21.02.2025

Sample/Job: River Water Sample from Dam Site U/S- 1 km

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Alkalinity	mg/L	92	200	600
Aluminium (as Al)	mg/L	0.01	0.03	0.2
Ammonia (as Total Ammonia – N)	mg/L	ND	0.5	NR
Arsenic (as As)	mg/L	ND	0.01	0.05
Barium	mg/L	ND	0.7	NR
BOD at 27°C	mg/L	1.5	-	-
Boron (as B)	mg/L	ND	0.5	1.0
Cadmium (as Cd)	mg/L	ND	0.003	NR
Calcium (as Ca)	mg/L	24.85	75	200
Chloride (as Cl)	mg/L	9	250	1000
Chromium Total (as Cr)	mg/L	ND	0.05	NR
Colour	Hazen	<5	5	15
Copper (as Cu)	mg/L	ND	0.05	1.5
Dissolved Oxygen (DO)	mg/L	8.4	-	-
Fluoride (as F)	mg/L	0.89	1.0	1.5
Hardness (as $CaCO_3$)	mg/L	114	200	600
Iron (as Fe)	mg/L	0.21	0.3	NR
Lead (as Pb)	mg/L	0.02	0.01	NR
Magnesium (as Mg)	mg/L	12.62	30	100
Manganese (as Mn)	mg/L	ND	0.1	0.3
Mercury (as Hg)	mg/L	ND	0.001	NR

Contd..2

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PCRI/051

TEST REPORT

Lab Reference No: TL240896 **Date :** 17.03.2025

PARAMETER	UNIT	OBTAINED VALUE	STANDARD LIMITS (IS 10500:2012)	
			Acceptable	Permissible
Mineral Oil	mg/L	ND	0.5	NR
Nickel (as Ni)	mg/L	ND	0.02	NR
Nitrate (as NO_3)	mg/L	2.1	45	NR
Odour	-	Agreeable	Agreeable	NR
pH	-	8.35	6.5-8.5	NR
Phenolic Compounds (as C_6H_5OH)	mg/L	ND	0.001	0.002
Selenium (as Se)	mg/L	ND	0.01	NR
Silver (as Ag)	mg/L	ND	0.1	NR
Sulphate (as SO_4)	mg/L	36.69	200	400
Sulphide as S	mg/L	ND	0.05	NR
Total Coliform	MPN/100 mL	4	Absent	NR
Total Dissolved Solids	mg/L	137	500	2000
Total Residual Chlorine	mg/L	ND	0.2	1.0
Total Suspended Solids	mg/L	114	-	-
Turbidity	NTU	13.57	1	5
Zinc (as Zn)	mg/L	0.62	5	15

ND – Not Detectable NR – No Relaxation

Prepared by

Ankur Mohan
Sr. Engineer (PCRI)

Approved by

Shivam Saran
Manager (PCRI)

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भारत हैवी इलेक्ट्रिकल्स लिमिटेड ,रानीपुर,हरिद्वार (उत्तराखंड) -249403

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TEST REPORT

WORKPLACE NOISE MONITORING

Lab. Ref.: PCRI: Air & Noise: 2024-25 :1263-1266
Date: 26.02.2025

A. GENERAL INFORMATION:

1	Name and address of Plant	:	M/s THDC India Ltd, Vishnugad Pipalkoti Hydro Electric Project, District-Chamoli (Uttarakhand)
2	Work Order No.	:	24-0074-O-691
3	Date of Measurement	:	21.02.2025
4	Instrument used	:	Sound Level Meter
5	Measurement carried out by	:	PCRI, BHEL, Ranipur, Haridwar-249403 (UK)

B. RESULTS OF WORKPLACE NOISE MEASUREMENT:

All measurement in dB (A)

Sl. No.	Location	Measured Values	Allowable Limit*
1.	Batching Plant at DAM site	52.2	90 dB (A)
2.	Batching Plant at Power House site	66	
3.	Fabrication Workshop at DAM site	81.2	
4.	Fabrication Workshop at Power House site	73	

Leq. : Equivalent Sound Pressure Level
***Allowable Limit:** 90 dB(A) for 8 Hour Exposure Period as per OSHA

Prepared by
Anil Kumar Yadav
Dy. Manager (PCRI)

Approved by
R S Yadav
Manager (PCRI)

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H/ 9013

M/S HINDUSTAN CONSTRUCTION CO. LTD

Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO Mayapur (Pipal Koti)
Distt. Chamoli, Uttarakhand-246472

HCC

Environmental Monitoring

(JANUARY TO MARCH-2025)

: Submitted By:

ARIHANT ANALYTICAL LABORATORY PVT. LTD.
Plot No.272, Phase-IV, Sector-57, HSIIDC,
Kundli, Sonipat – 131 028, Haryana
Email: aalkundli@gmail.com

ARIHANT ANALYTICAL LABORATORY (P) LTD. AUTH. SIGN.

Certificate

This is to certify that Environmental monitoring work carried out by M/s Arihant Analytical Laboratory Pvt. Ltd. for M/s Hindustan Construction Co. Ltd.(January to March 2025) in reference to Work Order No.16066669.

The Environmental Monitoring Report is meant for internal use of your organization and to submit concern government department for official use only.

Date:
07-04-2025

For Arihant Analytical Laboratory Pvt. Ltd.

ARIHANT ANALYTICAL LABORATORY (P) LTD. AUTH. SIGN.

(Authorized Signatory)

LIST OF CONTENT

1. EXECUTIVE SUMMARY

2. AMBIENT AIR QUALITY MONIORING

3. STACK EMISSION (DG SETS & BOILER)

4. INDOOR AIR QUALITY MONIORING

5. AIR EMISSION STONE CRUSHER MONITORING

6. NOISE LEVEL MONITOIRNG

7. WASTE WATER SAMPLES

8. DRINKING WATER SAMPLES

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EXECUTIVE

SUMMARY



EXECUTIVE SUMMARY REPORTS FOR ENVIRONMENTAL MONITORING

(JANUARY TO MARCH 2025)

DISCUSSION OF RESULTS & CONCLUSION

1.0 Ambient Air Quality Monitoring

Ambient Air Quality was monitored at Four Locations for one month for parameters Respirable Suspended Particulate Matter (PM_{10}), Fine Particulate Matter ($PM_{2.5}$), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), and Found within the CPCB limits.

- Near HRT/TBM Portal
- TRT Road/Colony at Siyasin
- Power House at Haat/Harsari
- Near Crusher Area (Dam Site)
- Dam Site (Near Office)

2.0 Stack Emission (DG & Boiler):

Stack Emission was monitored for DG Sets & Boiler Stack. All the results were found with the prescribe limits as per CPCB Guidelines.

- DG No.1 (2000 KVA)
- DG No.2 (2000 KVA)
- DG No.3 (2000 KVA)
- DG No.4 (2000 KVA)
- DG No.5 (1010 KVA)
- Boiler Stack (850 kg/hr.)

3.0 Indoor Air Quality Monitoring

Indoor air quality was monitoring parameters Suspended Particulate Matter (SPM), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Carbon Dioxide (CO_2), Carbon Monoxide (CO), Silica Contents (SiO_2), Formaldehyde (HCHO), Methane (CH_4) and Found within the limits at 6 Locations.

- Inside MAT Tunnel
- Inside TRT Adit Tunnel
- Inside Ventilation Tunnel
- Inside Adit to HRT Tunnel
- Inside DT Tunnel
- Inside to Desilting Chamber (DC-03) Tunnel

4.0 Air Emission Stone Crusher Monitoring

Crusher Monitoring was done according to CPCB Standard and all the parameters were within the limits.

- Air Emission (Stone Crusher) – Power House

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5.0 Noise Monitoring:

Noise Level was monitored according to CPCB standards parameters Leq and found within the limits at 21 Locations:

- DG No.1 - 2000 KVA
- DG No.2 - 2000 KVA
- DG No.3 - 2000 KVA
- DG No.4 - 2000 KVA
- DG No.5 - 1010 KVA
- Near Siyasin Colony
- Near Haat/Harsari Village
- Near Batula Village
- Near Workshop
- Near HRT & DC Tunnel
- Near Crusher Area
- Near Batching Plant
- Near Boiler Section
- Near Main Office (Haat Village)
- Near Main Office (Dam Site)
- Near Camp Helong
- Near Main Office (Power House)
- Near Haul Road
- Inside TRT Tunnel
- Inside MAT Tunnel
- Inside Ventilation Tunnel

6.0 Waste Water (ETP Outlet):

Effluent water Quality was analysed and all parameters were found under to limits as per CPCB. Location as mentioned below.

- Batching Plant Power House
- Batching Plant Near Casting Yard
- Sedimentation Tank-Power House
- Sedimentation Tank- Crusher Plant
- WTP Plant-Inlet
- WTP Plant-Outlet
- DP Mess Outlet Power House
- Batching Plant Dam Site
- DP Mess Outlet Dam Site
- Sedimentation Tank-Dam Site

7.0 Drinking Water:

Drinking water Quality was analysed and parameters were found as per IS 10500:2012 Drinking water specification. Drinking water was monitored at following 6 locations:

- DP Mess Power House
- Office Pantry Power House
- Mess Power House
- PRWA Camp (Batula-2)
- Dam Site Mess (B-2)
- Near Office Dam Site

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AMBIENT

AIR

QUALITY

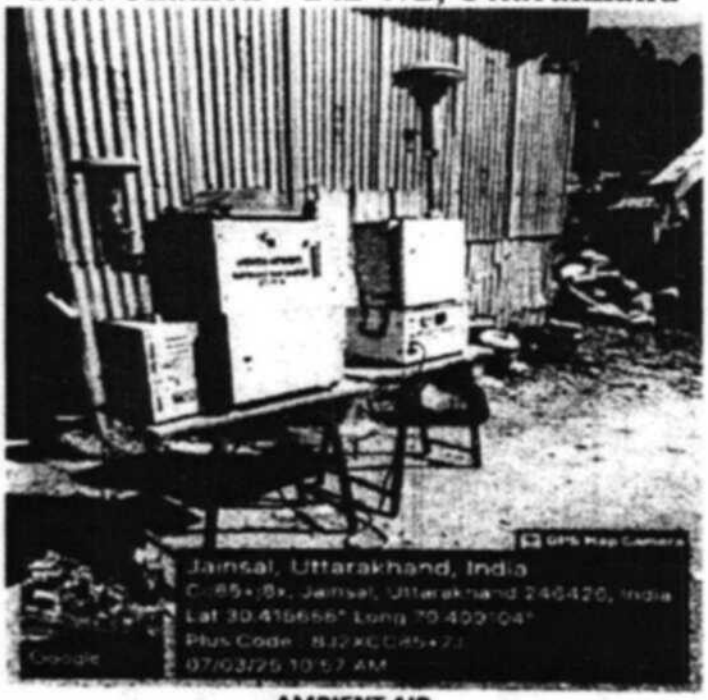
MONITORING



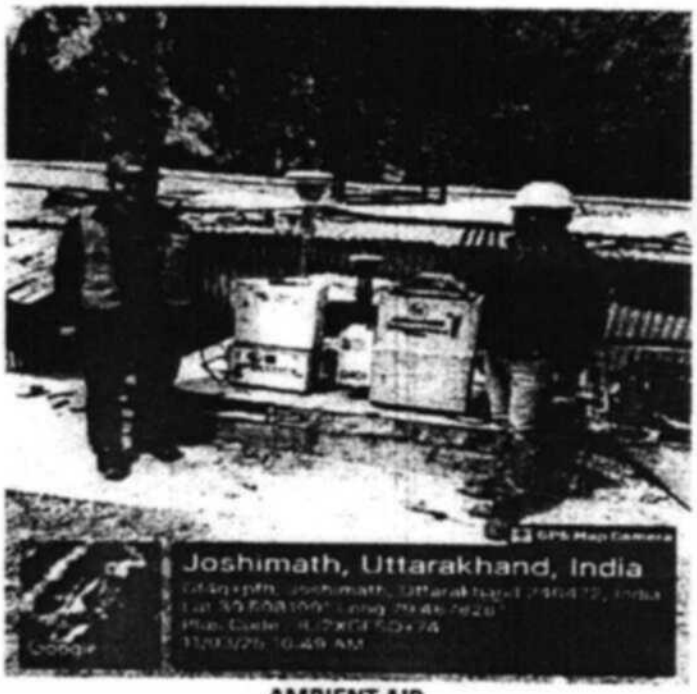
ENVIRONMENTAL MONITORING PHOTOGRAPHS

SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



AMBIENT AIR



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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250331001
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	03/04/2025
Sample Description:	**Ambient Air Quality Monitoring** (24 Hrs. for the Quarter of January to March 2025)	**Sampling Duration:**	24 Hrs.
Sampling Location:	**Near HRT/TBM Portal**	**Sampling Done By:**	AAL.

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m³)	Particulate Matter $PM_{2.5}$ (µg /m³)	Sulphur Dioxide SO_2 (µg /m³)	Nitrogen Dioxide NO_2 (µg /m³)
1	02/03/2025	67.5	36.7	15.8	24.1
2	06/03/2025	65.3	32.4	13.2	23.8
3	09/03/2025	68.2	39.6	11.9	25.2
4	13/03/2025	62.8	35.3	14.7	26.4
5	16/03/2025	65.9	33.5	10.3	18.1
6	20/03/2025	70.4	37.8	13.5	23.9
7	23/03/2025	67.3	38.5	10.9	20.5
8	27/03/2025	68.9	40.1	14.8	22.9
	Minimum	**62.8**	**32.4**	**10.3**	**18.1**
	Maximum	**70.4**	**40.1**	**15.8**	**26.4**
	Average	**67.0**	**36.7**	**13.1**	**23.1**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20250331002

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 03/04/2025

Sample Description: **Ambient Air Quality Monitoring**
(24 Hrs. for the Quarter of January to March 2025)

Sampling Duration: 24 Hrs.

Sampling Location: **TRT Road/Colony at Siyasin**

Sampling Done By: AAL.

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m³)	Particulate Matter $PM_{2.5}$ (µg /m³)	Sulphur Dioxide SO_2 (µg /m³)	Nitrogen Dioxide NO_2 (µg /m³)
1	04/03/2025	65.6	32.8	12.5	19.4
2	07/03/2025	63.2	30.9	13.2	23.6
3	10/03/2025	66.5	34.8	11.9	21.5
4	14/03/2025	68.3	37.2	14.6	22.9
5	18/03/2025	62.7	33.4	10.9	20.7
6	21/03/2025	65.2	36.9	10.5	21.4
7	25/03/2025	64.8	34.2	12.7	18.3
8	28/03/2025	63.9	35.8	13.3	24.2
	Minimum	**62.7**	**30.9**	**10.5**	**18.3**
	Maximum	**68.3**	**37.2**	**14.6**	**24.2**
	Average	**65.0**	**34.5**	**12.5**	**21.5**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20250331003

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 03/04/2025

Sample Description: **Ambient Air Quality Monitoring**
(24 Hrs. for the Quarter of January to March 2025)

Sampling Duration: 24 Hrs

Sampling Location: **Power House at Haat/Harsari**

Sampling Done By: AAL

TEST RESULT

S/N	Test Parameters → / Unit→ / Date of Sampling↓	Particulate Matter PM_{10} (µg /m³)	Particulate Matter $PM_{2.5}$ (µg /m³)	Sulphur Dioxide SO_2 (µg /m³)	Nitrogen Dioxide NO_2 (µg /m³)
1	04/03/2025	69.3	38.5	13.1	22.4
2	07/03/2025	71.4	40.3	15.2	25.8
3	10/03/2025	74.5	42.6	14.7	27.1
4	14/03/2025	68.2	41.5	12.3	24.3
5	18/03/2025	69.6	37.9	11.9	22.4
6	21/03/2025	66.3	35.7	10.2	26.8
7	25/03/2025	68.9	38.2	13.7	26.9
8	28/03/2025	72.6	41.8	15.5	21.7
	Minimum	**66.3**	**35.7**	**10.2**	**21.7**
	Maximum	**74.5**	**42.6**	**15.5**	**27.1**
	Average	**70.1**	**39.6**	**13.3**	**24.7**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

****End of Report****

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20250331004
		Date of Reporting:	03/04/2025
Sample Description:	**Ambient Air Quality Monitoring** (24 Hrs. for the Quarter of January to March 2025)	**Sampling Duration:**	24 Hrs.
Sampling Location:	**Near Crusher Area (Dam Site)**	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m³)	Particulate Matter $PM_{2.5}$ (µg /m³)	Sulphur Dioxide SO_2 (µg /m³)	Nitrogen Dioxide NO_2 (µg /m³)
1	05/03/2025	73.8	40.2	15.3	31.7
2	08/03/2025	75.4	42.5	18.9	28.3
3	11/03/2025	74.9	41.8	17.2	29.2
4	15/03/2025	78.5	45.3	19.7	25.4
5	19/03/2025	76.2	42.9	20.4	28.1
6	22/03/2025	72.7	39.6	16.8	24.5
7	26/03/2025	75.3	44.7	13.2	23.8
8	29/03/2025	71.8	43.4	12.5	25.1
	Minimum	**71.8**	**39.6**	**12.5**	**23.8**
	Maximum	**78.5**	**45.3**	**20.4**	**31.7**
	Average	**74.8**	**42.6**	**16.8**	**27.0**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

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Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250331005
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	03/04/2025
Sample Description:	**Ambient Air Quality Monitoring** (24 Hrs. for the Quarter of January to March 2025)	**Sampling Duration:**	24 Hrs.
Sampling Location:	**Dam Site (Near Office)**	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m³)	Particulate Matter $PM_{2.5}$ (µg /m³)	Sulphur Dioxide SO_2 (µg /m³)	Nitrogen Dioxide NO_2 (µg /m³)
1	05/03/2025	66.4	34.7	11.5	24.6
2	08/03/2025	67.3	32.9	13.7	25.3
3	11/03/2025	65.2	35.4	12.8	23.2
4	15/03/2025	69.2	37.3	15.4	22.8
5	19/03/2025	68.9	39.2	12.3	26.4
6	22/03/2025	65.4	33.5	11.8	25.8
7	26/03/2025	64.8	31.9	14.1	26.3
8	29/03/2025	62.7	34.5	15.6	23.1
	Minimum	**62.7**	**31.9**	**11.5**	**22.8**
	Maximum	**69.2**	**39.2**	**15.6**	**26.4**
	Average	**66.2**	**34.9**	**13.4**	**24.7**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

****End of Report****

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EMISSION

MONITORING



ENVIRONMENTAL MONITORING PHOTOGRAPHS

SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



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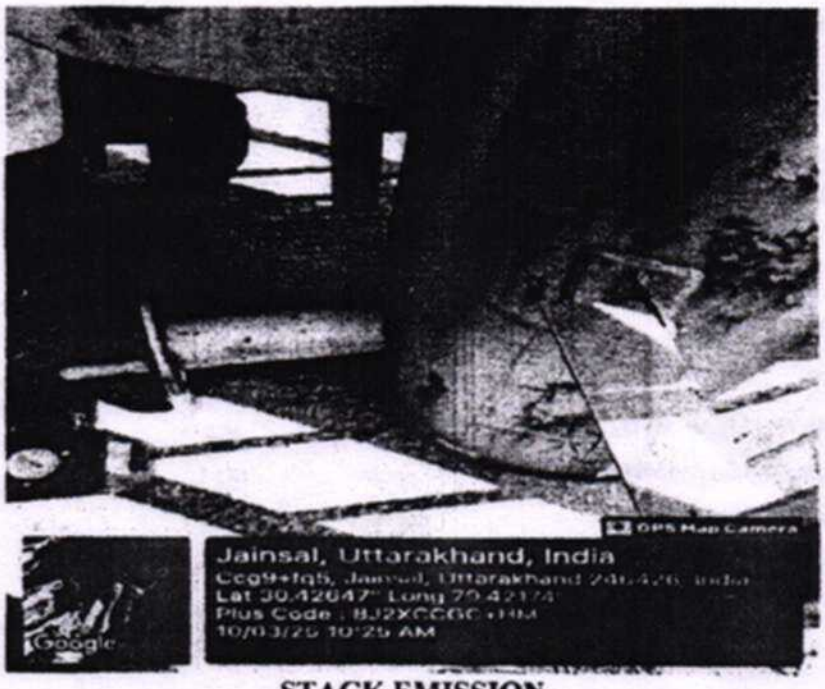

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TEST REPORT

Report No. AAL:ENV-20250313044

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **D G Stack Emission**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL.

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**2000 KVA - D G No.1**
Type of Stack	:	**Metal**
Diameter of Stack	:	12"
Height of Stack from Ground Level	:	12.5m
Height from Roof Level	:	-
Height at Which Sampling Port	:	6m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	Nil

Observations

Ambient Temperature(°C)	:	29
Stack Temperature (°C)	:	352
Velocity (m/s)	:	15.22
Quantity of emission ($Nm^3/hr.$)	:	1798.62

S. No.	Test Parameters	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	48.2	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	187.3	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	58.9	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	32.4	100	AAL/SOP/ENV/032-2022

CPCB- Central Pollution Control Board

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL ENV-20250313045

Issued To: **M/s Hindustan Construction Co. Ltd.**
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Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472. Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **D G Stack Emission**

Date of Monitoring: 08/03/2025 **Sampling Done By:** AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**2000 KVA - D G No.2**
Type of Stack	:	Metal
Diameter of Stack	:	12"
Height of Stack from Ground Level	:	12.5m
Height from Roof Level	:	-
Height at Which Sampling Port	:	6m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	Nil

Observations

Ambient Temperature(℃)	:	30
Stack Temperature (℃)	:	346
Velocity (m/s)	:	15.07
Quantity of emission ($Nm^3/hr.$)	:	1797.88

S. No.	Test Parameters	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	44.6	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	181.3	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	54.9	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	30.8	100	AAL/SOP/ENV/032-2022

CPCB=Central Pollution Control Board

****End of Report****

ASHUTOSH SRIVASTAVA
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Authorised Signatory

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Report No. AAL/ENV-20250313046

Date of Reporting: 20/03/2025

Sample Description: **D G Stack Emission**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	**Stack Attached to D G**
Source of Emission	:	**D G Set**
Capacity	:	**2000 KVA - D G No.3**
Type of Stack	:	**Metal**
Diameter of Stack	:	**12"**
Height of Stack from Ground Level	:	**12.5m**
Height from Roof Level	:	**-**
Height at Which Sampling Port	:	**6m**
Product Manufacturing	:	**Construction Works**
Type of Fuel Used	:	**HSD**
Normal Operating Schedule	:	**As per requirement**
Duration of Monitoring	:	**45 min.**
Emission Control (if any)	:	**Nil**

Observations

Ambient Temperature(°C)	:	**30**
Stack Temperature (°C)	:	**356**
Velocity (m/s)	:	**15.43**
Quantity of emission ($Nm^3/hr.$)	:	**1811.48**

S. No.	Test Parameters	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	42.9	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	194.5	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	52.3	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	28.6	100	AAL/SOP/ENV/032-2022

CPCB-Central Pollution Control Board

****End of Report****

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Report No. AAL ENV-20250313047

Date of Reporting: 20/03/2025

Sample Description: **D G Stack Emission**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**2000 KVA - D G No.4**
Type of Stack	:	**Metal**
Diameter of Stack	:	**12"**
Height of Stack from Ground Level	:	**12.5m**
Height from Roof Level	:	-
Height at Which Sampling Port	:	**6m**
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	**45 min.**
Emission Control (if any)	:	**Nil**

Observations

Ambient Temperature(°C)	:	**30**
Stack Temperature (°C)	:	**342**
Velocity (m/s)	:	**15.02**
Quantity of emission ($Nm^3/hr.$)	:	**1803.72**

S. No.	Test Parameters	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	45.1	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	186.7	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	55.2	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	34.5	100	AAL/SOP/ENV/032-2022

CPCB= Central Pollution Control Board

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20250313048

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **D G Stack Emission**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**1010 KVA - D G No.5**
Type of Stack	:	**Metal**
Diameter of Stack	:	**12"**
Height of Stack from Ground Level	:	**12.5m**
Height from Roof Level	:	-
Height at Which Sampling Port	:	**6m**
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	**45 min.**
Emission Control (if any)	:	Nil

Observations

Ambient Temperature(°C)	:	30
Stack Temperature (°C)	:	316
Velocity (m/s)	:	14.70
Quantity of emission ($Nm^3/hr.$)	:	1843.10

S. No.	Test Parameters	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	46.8	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	184.2	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	57.5	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	31.9	100	AAL/SOP/ENV/032-2022

(CPCB-Central Pollution Control Board)

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20250313054

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **Boiler Stack Emission**

Date of Monitoring: 10/03/2025

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**Boiler Section**
Stack Identification	:	Stack attached to Boiler
Source of Emission	:	Boiler Stack
Capacity	:	**850 Kg/Hr.**
Type of Stack	:	Metal
Diameter of Stack	:	0.5m
Height of Stack from Ground Level	:	30m
Height from Roof Level	:	-
Height at Which Sampling Port	:	10m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	-

Observations

Ambient Temperature(℃)	:	30
Stack Temperature (℃)	:	154
Average Stack Velocity (m/s)	:	10.90
Quantity of emission (Nm^3/sec.)	:	1.45

S. No.	Test Parameters	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM)	mg/Nm^3	49.6	500	IS 11255(P-1)-1985
2	Sulphur Dioxide (as SO_2)	mg/Nm^3	18.5	NS	IS 11255(P-2)-1985
3	Oxide of Nitrogen (as NO_x)	mg/Nm^3	92.3	NS	IS 11255(P-7)-2005
4	Carbon Monoxide (as CO)	%v/v	BLQ (LOQ=0.1)	1.0	IS 13270-1992

NS: Not Specified,
BLQ: Below Limit of Quantification, LOQ: Limit of Quantification

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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INDOOR

AIR

QUALITY

MONITORING



ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



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INDOOR AIR

ARIHANT ANALYTICAL LABORATORY (P) LTD. AUTH. SIGN

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PLOT NO.272, PHASE-IV, SECTOR-57, HSIIDC,
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Website : www.aalkundli.com

TEST REPORT

Report No. AAL/ENV-20250313056

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location : **Inside MAT Tunnel**

Actual Time of Sampling (Hrs.) : 08.00

Average flow Rate for particulate matter (LPM) : 1.0

Total Volume of air sampled for particulate matter (L) : 480.0

S. No.	Test Parameters	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.682	NS	NIOSH Manual 900-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.026	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.039	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.28	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	1034	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	10.2	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

NIOSH - National Institute for Occupational Safety and Health
ND=Not Detected, NS=Not Specified

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL:ENV-20250313057

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL.

TEST RESULTS

Sampling Details:

Sampling Location	:	**Inside TRT Adit Tunnel**
Actual Time of Sampling (Hrs.)	:	08:00
Average flow Rate for particulate matter (LPM)	:	1.0
Total Volume of air sampled for particulate matter (L)	:	480.0

S. No.	Test Parameters	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.845	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.022	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.038	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.25	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	1024	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	11.5	(50 Max.-As per OSHA)	By Air API1A
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

NIOSH- National Institute for Occupational Safety and Health
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****End of Report****

ASHUTOSH SRIVASTAVA
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Authorised Signatory

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TEST REPORT

Report No. AAL ENV-20250313058

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location	:	**Inside Ventilation Tunnel**
Actual Time of Sampling (Hrs.)	:	08:00
Average flow Rate for particulate matter (LPM)	:	1.0
Total Volume of air sampled for particulate matter (L)	:	480.0

S. No.	Test Parameters	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.728	NS	NIOSH Manual 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.023	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.046	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.30	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	1048	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	12.4	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL:ENV-20250313059

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 09/03/2025

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location	:	**Inside Adit To HRT Tunnel**
Actual Time of Sampling (Hrs.)	:	08:00
Average flow Rate for particulate matter (LPM)	:	1.0
Total Volume of air sampled for particulate matter (L)	:	480.0

S. No.	Test Parameters	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.545	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.021	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.035	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.18	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	986	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	9.4	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

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****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Report No. AAL ENV-20250313060

Date of Reporting: 20/03/2025

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 09/03/2025

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location : **Inside DT Tunnel**

Actual Time of Sampling (Hrs.) : 08:00

Average flow Rate for particulate matter (LPM) : 1.0

Total Volume of air sampled for particulate matter (L) : 480.0

S. No.	Test Parameters	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.814	NS	NIOSH Manual 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.019	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.032	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.24	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	968	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	11.3	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

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****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL ENV-20250313061

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 11/03/2025

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location	:	**Inside Desilting Chamber (DC-03) Tunnel**
Actual Time of Sampling (Hrs.)	:	08:00
Average flow Rate for particulate matter (LPM)	:	1.0
Total Volume of air sampled for particulate matter (L)	:	480.0

S. No.	Test Parameters	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.714	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.021	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.038	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.18	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	1049	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	10.7	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

NIOSH- National Institute for Occupational Safety and Health
ND-Not Detected, NS-Not Specified

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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AIR EMISSION

STONE CRUSHER

MONITORING

(POWER HOUSE)



ARIHANT ANALYTICAL LABORATORY PVT. LTD.

AN ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 CERTIFIED LABORATORY

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250313055
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Air Emission (Stone Crusher)**		
Date of Monitoring:	09/03 /2025	**Sampling Done By:**	AAL

TEST RESULT

Sampling Details:

Sampling Location	:	**Power House**	
Type of Sample	:	Air Emission (Stone Crusher- Inward & Outward)	
Average flow Rate for particulate matter (m^3/minute)	:	**Inward**	**Outward**
		1.17	1.19
Total Volume of air sampled for particulate matter (m^3)	:	70.2	71.4
Sampling Duration, Minutes	:	60	60
Wind Direction	:	NNE (31°C)	NE (55°C)

S. No.	Test Parameter	Unit	Results			Standard Limits	Test Methods
			Inward	Outward	Final Result		
1	Suspended Particulate Matter (SPM)	µg/m³	1274.5	1792.9	518.4	600	IS-5182(P-4) 1999

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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NOISE

LEVEL

MONITORING



ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



AMBIENT NOISE



AMBIENT NOISE

ARIHANT ANALYTICAL LABORATORY (P) LTD.
AUTH. SIGN.

CONDUCTED BY
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PLOT NO.272, PHASE-IV, SECTOR-57, HSIIDC,
KUNDLI, SONIPAT, HARYANA
E. Mail- aalkundi@gmail.com

ENVIRONMENTAL MONITORING PHOTOGRAPHS

SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



WORKZONE NOISE



WORKZONE NOISE

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20250313022

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **D G Noise**

Capacity of DG Set: **2000 KVA - D G No.1**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	100.2	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	72.5	-
	Insertion Loss	dB(A) Leq.	27.7	25 Min

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL ENV-20250313023

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **D G Noise**

Capacity of DG Set: **2000 KVA - D G No.2**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	99.8	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	72.6	-
	Insertion Loss	dB(A) Leq.	27.2	25 Min.

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20250313024

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **D G Noise**

Capacity of DG Set: **2000 KVA - D G No.3**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	100.8	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	73.6	-
	Insertion Loss	dB(A) Leq.	27.2	25 Min.

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20250313025

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **D G Noise**

Capacity of DG Set: **2000 KVA - D G No.4**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL.

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open,	dB(A) Leq.	99.7	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	73.5	-
	Insertion Loss	dB(A) Leq.	26.2	25 Min.

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Report No. AAL/ENV-20250313026

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **D G Noise**

Capacity of DG Set: **1010 KVA - D G No.5**

Date of Monitoring: 08/03/2025

Sampling Done By: AAL.

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	99.4	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	72.8	-
	Insertion Loss	dB(A) Leq.	26.6	25 Min.

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250313062
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	07/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Siyasin Colony	40.5	52.3	47.2
	Standards Limit (As per CPCB for Residential Area)			**55 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

		Report No.	AAL ENV-20250313063
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	07/03/2025	**Sampling Done By:**	AAL.

TEST RESULT

S/N	**Test Parameters & Unit→**	**Noise Level - dB(A)**		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Haat/Harsari Village	38.2	52.7	46.4
	Standards Limit (As per CPCB for Residential Area)			**55 Max.**

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL:ENV-20250313064

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **Noise Level Monitoring – Ambient Noise**

Sampling Duration: 24 Hrs.

Date of Sampling: 07/03/2025

Sampling Done By: AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Batula Village	37.2	51.6	46.8
	Standards Limit (As per CPCB for Residential Area)			**55 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20250313065
		Date of Reporting:	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	07/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Work Shop	48.6	64.5	57.8
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

		Report No.	AAL ENV-20250313066
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project. Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	08/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near HRT & D C Tunnel	51.4	62.8	56.9
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250313067
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project. Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	09/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Crusher Area	54.3	63.2	58.7
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL ENV-20250313068

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 20/03/2025

Sample Description: **Noise Level Monitoring – Ambient Noise**

Sampling Duration: 24 Hrs.

Date of Sampling: 09/03/2025

Sampling Done By: AAL.

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Batching Plant	58.4	71.7	66.5
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

		Report No.	AAL ENV-20250313069
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	09/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Boiler Section	54.2	63.5	59.8
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20250313070
		Date of Reporting:	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	09/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	**Test Parameters & Unit→**	**Noise Level - dB(A)**		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Main Office (Haat Village)	50.8	64.3	59.7
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250313071
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	11/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Main Office (Dam Site)	59.6	70.2	65.1
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250313072
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	11/03/2025	**Sampling Done By:**	AAL.

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Camp Helong	53.8	68.3	62.7
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

		Report No.	AAL ENV-20250313073
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	11/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Main Office (Power House)	51.6	65.9	61.8
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20250313074
		Date of Reporting:	20/03/2025
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	11/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Haul Road	52.7	68.5	63.9
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250313075
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Work-zone Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	08/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Inside TRT Tunnel	75.9	82.4	79.1
	Standards Limit (As per OSHA, No. - 1910.95)			**90 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

		Report No.	AAL ENV-20250313076
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project. Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Work-zone Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	08/03/2025	**Sampling Done By:**	AAL.

TEST RESULT

S/N	**Test Parameters & Unit→**	**Noise Level - dB(A)**		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Inside MAT Tunnel	71.4	81.2	76.3
	Standards Limit (As per OSHA, No. - 1910.95)			**90 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
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TEST REPORT

		Report No.	AAL ENV-20250313077
Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Date of Reporting:**	20/03/2025
Sample Description:	**Noise Level Monitoring – Work-zone Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	08/03/2025	**Sampling Done By:**	AAL

TEST RESULT

S/N	**Test Parameters & Unit→**	**Noise Level - dB(A)**		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Inside Ventilation Tunnel	72.9	81.5	76.9
	Standards Limit (As per OSHA, No. - 1910.95)			**90 Max.**

****End of Report****

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WASTE

WATER

SAMPLES



ENVIRONMENTAL MONITORING PHOTOGRAPHS

SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



WASTE WATER



ARIHANT ANALYTICAL LABORATORY (P) LTD.
AUTH. SIGN.

WASTE WATER

CONDUCTED BY

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Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 08/03/2025

Sample Location: **Batching Plant Power House**

Report No. AAL WQT-20250313018

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.39	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	20.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	18.6	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	93.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL. WQT-20250313019

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 08/03/2025

Sample Location: **Batching Plant Near Casting Yard**

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.49	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	25.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	19.0	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	87.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Report No. AAL WQT-20250313020

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

Sample Description: **Waste Water**

Sample Collection Date: 08/03/2025

Sample Location: **Sedimentation Tank – Power House**

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.57	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	42.6	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	25.0	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	127.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
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Authorised Signatory

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TEST REPORT

Report No. AAL WQT-20250313021

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 08/03/2025

Sample Location: **Sedimentation Tank - Crusher Plant**

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.48	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	37.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	21.0	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	98.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project.
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 08/03/2025

Sample Location: **WTP Plant - Inlet**

Report No. AAL WQT-20250313022

Date of Receiving: 13/03/2025

Date of Starting: 13/03/2025

Date of Completion: 20/03/2025

Date of Reporting: 20/03/2025

Sample Quantity: 2 Litre

Sample Packing Condition: Plastic Bottle

Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Test Methods
1	Odour	-	Odourful	IS 3025(P-5)-2018
2	pH Value	-	7.44	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	124.0	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	3.6	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	122.0	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	376.0	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
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TEST REPORT

Report No. AAL WQT-20250313023

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli - 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 08/03/2025

Sample Location: **WTP Plant - Outlet**

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.73	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	27.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	20.5	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	102.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Report No. AAL/WQT-20250313024

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

Sample Description: **Waste Water**

Sample Collection Date: 08/03/2025

Sample Location: **D P Mess Outlet Power House**

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.45	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	35.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	26.0	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	132.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL WQT-20250313025

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 11/03/2025

Sample Location: **Batching Plant Dam Site**

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.40	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	22.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	17.5	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	78.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Report No. AAL WQT-20250313026

Sample Description: **Waste Water**

Sample Collection Date: 11/03/2025

Sample Location: **D P Mess Outlet Dam Site**

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.49	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	30.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	23.0	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	127.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL. WQT-20250313027
		Date of Receiving:	13/03/2025
		Date of Starting:	13/03/2025
		Date of Completion:	20/03/2025
Sample Description:	**Waste Water**	**Date of Reporting:**	20/03/2025
		Sample Quantity:	2 Litre
Sample Collection Date:	11/03/2025	**Sample Packing Condition:**	Plastic Bottle
Sample Location:	**Sedimentation Tank – Dam Site**	**Sample Collected By:**	AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.57	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	35.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	24.0	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	119.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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DRINKING

WATER

SAMPLES



ENVIRONMENTAL MONITORING PHOTOGRAPHS

SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



DRINKING WATER



ARIHANT ANALYTICAL LABORATORY (P) LTD.
AUTH. SIGN.

DRINKING WATER

CONDUCTED BY

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 09/03/2025

Sample Location: **DP Mess Power House**

Report No. AAL/WQT-20250313012

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.15	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	159.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ-0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ-0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ-0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ-0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ-0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	13.2	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	11.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	5.5	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ-0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	2.5	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	52.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	56.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ-0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ-0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ- Below Limit of Quantification, LOQ- Limit of Quantification

End of Report

Vijay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL WQT-20250313013

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 09/03/2025

Sample Location: **Office Pantry Power House**

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	6.96	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	116.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ=0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ=0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ=0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ=0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ=0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	8.8	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	9.6	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	7.9	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ=0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ=0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	2.0	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	51.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	55.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ=0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ=0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ=0.02)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ=0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ=0.07)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ=0.05)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ= Below Limit of Quantification, LOQ= Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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(36)

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TEST REPORT

Report No. AAL WQT-20250313014

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 09/03/2025

Sample Location: **Mess Power House**

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.21	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	173.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ-0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ-0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ-0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ-0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ-0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	16.0	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	15.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	8.2	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ-0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	5.7	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	65.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	74.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ-0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ-0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ=Below Limit of Quantification, LOQ=Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli - 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 09/03/2025

Sample Location: **PRWA Camp (Batula-2)**

Report No. AAL/WQT-20250313015

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL.

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.13	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	161.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ-0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ-0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ-0.2)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ-0.7)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ-0.5)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	15.6	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	11.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ-0.05)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	6.7	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ-0.1)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	2.1	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	63.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	67.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ-0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ-0.07)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ-0.05)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ=Below Level of Quantification, LOQ=Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 11/03/2025

Sample Location: **Dam Site Mess (B-2)**

Report No. AAL WQT-20250313016

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.23	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	144.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ-0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ-0.1)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ-0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ-0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ-0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	15.0	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	14.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	6.4	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ-0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C6H5OH)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	2.6	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	62.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	64.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ-0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ-0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ-Below Level of Quantification, LOQ-Limit of Quantification

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

Vinay Dixit
(Microbiologist)

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TEST REPORT

Report No. AAL/WQT-20250313017

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 11/03/2025

Sample Location: **Near Office Dam Site**

Date of Receiving: 13/03/2025
Date of Starting: 13/03/2025
Date of Completion: 20/03/2025
Date of Reporting: 20/03/2025
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.19	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	162.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ-0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ-0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ-0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ-0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ-0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	17.0	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	16.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	6.6	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ-0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	4.0	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	68.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	70.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ-0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ-0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ-Below Limit of Quantification, LOQ-Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

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DATA AQMS From Jan. 2025 to March 2025

Site Ref.	Date & Time	PM 2.5	PM 10	CO	O3	NO2	SO2	A.Q.I	Battery Voltage
	DD/MM/YYYY - HH:MM	µg/mtr³	µg/mtr³	PPM	PPM	PPM	PPM		Volts
A	01/01/ 2025 - 00:00	24	26	0.5	0.02	0.03	0	67	13.2
A	02/01/ 2025 - 00:00	28	32	0.5	0.02	0.03	0	75	13.2
A	03/01/ 2025 - 00:00	31	34	0.5	0.02	0.03	0	81	13.2
A	04/01/ 2025 - 00:00	24	26	0.5	0.02	0.03	0	67	13.2
A	05/01/ 2025 - 00:00	42	47	0.5	0.02	0.03	0	103	13.2
A	06/01/ 2025 - 00:00	19	22	0.5	0.02	0.03	0	57	13.1
A	07/01/ 2025 - 00:00	18	19	0.5	0.02	0.03	0	55	13.2
A	08/01/ 2025 - 00:00	25	27	0.5	0.02	0.03	0	69	13.2
A	09/01/ 2025 - 00:00	28	32	0.5	0.02	0.03	0	75	13.2
A	10/01/ 2025 - 00:00	31	34	0.5	0.02	0.03	0	81	13.2
A	11/01/ 2025 - 00:00	41	46	0.5	0.02	0.03	0	101	13.2
A	12/01/ 2025 - 00:00	32	36	0.5	0.02	0.03	0	83	13.2
A	13/01/ 2025 - 00:00	22	24	0.5	0.02	0.03	0	63	13.2
A	14/01/ 2025 - 00:00	31	34	0.5	0.02	0.03	0	81	13.2
A	15/01/ 2025 - 00:00	35	39	0.5	0.02	0.03	0	89	13.2
A	16/01/ 2025 - 00:00	33	37	0.5	0.02	0.03	0	85	13.1
A	17/01/ 2025 - 00:00	34	38	0.5	0.02	0.03	0	87	13.1
A	18/01/ 2025 - 00:00	30	33	0.5	0.02	0.03	0	79	13.1
A	19/01/ 2025 - 00:00	34	38	0.5	0.02	0.03	0	87	13.1
A	20/01/ 2025 - 00:00	32	35	0.5	0.02	0.03	0	83	13
A	21/01/ 2025 - 00:00	33	37	0.5	0.02	0.03	0	85	13
A	22/01/ 2025 - 00:00	30	33	0.5	0.02	0.03	0	79	13.1
A	23/01/ 2025 - 00:00	40	45	0.5	0.02	0.03	0	99	13.2
A	24/01/ 2025 - 00:00	53	60	0.5	0.02	0.03	0	125	13.2
A	25/01/ 2025 - 00:00	47	53	0.5	0.02	0.03	0	113	13.2
A	26/01/ 2025 - 00:00	45	49	0.5	0.02	0.03	0	109	13.2
A	27/01/ 2025 - 00:00	54	61	0.5	0.02	0.03	0	127	13.2
A	28/01/ 2025 - 00:00	57	64	0.5	0.02	0.03	0	133	13.1
A	29/01/ 2025 - 00:00	53	59	0.5	0.02	0.03	0	125	13.2
A	30/01/ 2025 - 00:00	86	97	0.5	0.02	0.03	0	162	13.2
A	31/01/ 2025 - 00:00	54	61	0.5	0.02	0.03	0	127	13.2
A	01/02/ 2025 - 00:00	79	88	0.5	0.02	0.03	0	158	13.2
A	02/02/ 2025 - 00:00	24	26	0.5	0.02	0.03	0	67	13.2
A	03/02/ 2025 - 00:00	19	22	0.5	0.02	0.03	0	57	13.1
A	04/02/ 2025 - 00:00	24	26	0.5	0.02	0.03	0	67	13.2
A	05/02/ 2025 - 00:00	27	31	0.5	0.02	0.03	0	73	13.2
A	06/02/ 2025 - 00:00	27	30	0.5	0.03	0.03	0	73	13.2
A	07/02/ 2025 - 00:00	24	26	0.5	0.04	0.03	0	67	13.2
A	08/02/ 2025 - 00:00	19	22	0.5	0.02	0.03	0	57	13.1
A	09/02/ 2025 - 00:00	18	19	0.5	0.02	0.03	0	55	13.2
A	10/02/ 2025 - 00:00	25	27	0.5	0.02	0.03	0	69	13.2
A	11/02/ 2025 - 00:00	28	32	0.5	0.02	0.03	0	75	13.2
A	12/02/ 2025 - 00:00	31	34	0.5	0.02	0.03	0	81	13.2
A	13/02/ 2025 - 00:00	41	46	0.5	0.02	0.03	0	101	13.2
A	14/02/ 2025 - 00:00	32	36	0.5	0.02	0.03	0	83	13.2
A	15/02/ 2025 - 00:00	22	24	0.5	0.02	0.03	0	63	13.2

A	16/02/ 2025 - 00:00	31	34	0.5	0.02	0.03	0	81	13.2
A	17/02/ 2025 - 00:00	35	39	0.5	0.02	0.03	0	89	13.2
A	18/02/ 2025 - 00:00	33	37	0.5	0.02	0.03	0	85	13.1
A	19/02/ 2025 - 00:00	34	38	0.5	0.02	0.03	0	87	13.1
A	20/02/ 2025 - 00:00	30	33	0.5	0.02	0.03	0	79	13.1
A	21/02/ 2025 - 00:00	34	38	0.5	0.02	0.03	0	87	13.1
A	22/02/ 2025 - 00:00	32	35	0.5	0.02	0.03	0	83	13
A	23/02/ 2025 - 00:00	33	37	0.5	0.02	0.03	0	85	13
A	24/02/ 2025 - 00:00	30	33	0.5	0.02	0.03	0	79	13.1
A	25/02/ 2025 - 00:00	40	45	0.5	0.02	0.03	0	99	13.2
A	26/02/ 2025 - 00:00	53	60	0.5	0.02	0.03	0	125	13.2
A	27/02/ 2025 - 00:00	47	53	0.5	0.02	0.03	0	113	13.2
A	28/02/ 2025 - 00:00	45	49	0.5	0.02	0.03	0	109	13.2
A	01/03/ 2025 - 00:00	54	61	0.5	0.02	0.03	0	127	13.2
A	02/03/ 2025 - 00:00	57	64	0.5	0.02	0.03	0	133	13.1
A	03/03/ 2025 - 00:00	53	59	0.5	0.02	0.03	0	125	13.2
A	04/03/ 2025 - 00:00	19	22	0.5	0.02	0.03	0	57	13.1
A	05/03/ 2025 - 00:00	24	26	0.5	0.02	0.03	0	67	13.2
A	06/03/ 2025 - 00:00	27	31	0.5	0.02	0.03	0	73	13.2
A	07/03/ 2025 - 00:00	27	30	0.5	0.03	0.03	0	73	13.2
A	08/03/ 2025 - 00:00	24	26	0.5	0.04	0.03	0	67	13.2
A	09/03/ 2025 - 00:00	35	39	0.5	0.02	0.03	0	89	13.2
A	10/03/ 2025 - 00:00	33	37	0.5	0.02	0.03	0	85	13.1
A	11/03/ 2025 - 00:00	34	38	0.5	0.02	0.03	0	87	13.1
A	12/03/ 2025 - 00:00	30	33	0.5	0.02	0.03	0	79	13.1
A	13/03/ 2025 - 00:00	34	38	0.5	0.02	0.03	0	87	13.1
A	14/03/ 2025 - 00:00	32	35	0.5	0.02	0.03	0	83	13
A	15/03/ 2025 - 00:00	33	37	0.5	0.02	0.03	0	85	13
A	16/03/ 2025 - 00:00	30	33	0.5	0.02	0.03	0	79	13.1
A	17/03/ 2025 - 00:00	40	45	0.5	0.02	0.03	0	99	13.2
A	18/03/ 2025 - 00:00	53	60	0.5	0.02	0.03	0	125	13.2
A	19/03/ 2025 - 00:00	47	53	0.5	0.02	0.03	0	113	13.2
A	20/03/ 2025 - 00:00	45	49	0.5	0.02	0.03	0	109	13.2
A	21/03/ 2025 - 00:00	54	61	0.5	0.02	0.03	0	127	13.2
A	22/03/ 2025 - 00:00	57	64	0.5	0.02	0.03	0	133	13.1
A	23/03/ 2025 - 00:00	53	59	0.5	0.02	0.03	0	125	13.2
A	24/03/ 2025 - 00:00	18	19	0.5	0.02	0.03	0	55	13.2
A	25/03/ 2025 - 00:00	25	27	0.5	0.02	0.03	0	69	13.2
A	26/03/ 2025 - 00:00	28	32	0.5	0.02	0.03	0	75	13.2
A	27/03/ 2025 - 00:00	31	34	0.5	0.02	0.03	0	81	13.2
A	28/03/ 2025 - 00:00	41	46	0.5	0.02	0.03	0	101	13.2
A	29/03/ 2025 - 00:00	32	36	0.5	0.02	0.03	0	83	13.2
A	30/03/ 2025 - 00:00	22	24	0.5	0.02	0.03	0	63	13.2
A	31/03/ 2025 - 00:00	31	34	0.5	0.02	0.03	0	81	13.2

M/S HINDUSTAN CONSTRUCTION CO. LTD

Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO Mayapur (Pipal Koti)

Distt. Chamoli, Uttarakhand-246472

Environmental Monitoring

(OCTOBER TO DECEMBER-2024)

Submitted By

ARIHANT ANALYTICAL LABORATORY PVT. LTD.
272, Phase-IV, Sec-57, HSIIDC, Kundli
Sonipat-131028 (Haryana)

Certificate

This is to certify that Environmental monitoring work carried out by M/S Arihant Analytical Laboratory Pvt. Ltd. for M/S Hindustan Construction co. ltd.(October to December 2024). In reference to work order no. **16066669.**

The Environmental Monitoring Report is meant for internal use of your organization and to submit concern government department for official use only.

Date:
04-01-2025

For Arihant Analytical Laboratory Pvt. Ltd.

ARIHANT ANALYTICAL LABORATORY (P) LTD. AUTH. SIGN.

(Authorized Signatory)

S N	TITLE
1.	Executive summary
2.	Drinking Water Sample
3.	Stack Emission
4.	Waste Water Sample
5.	Ambient Air Quality Monitoring
6.	Indoor Air Quality Monitoring
7.	Noise Level Monitoring
8.	Crusher Monitoring

EXECUTIVE

SUMMARY

EXECUTIVE SUMMARY REPORTS FOR ENVIRONMENTAL MONITORING

(OCTOBER TO DECEMBER 2024)

DISCUSSION OF RESULTS & CONCLUSION

1.0 Drinking Water:

Drinking water Quality was analysed and parameters were found as per IS 10500:2012 Drinking water specification. Drinking water was monitored at following 6 locations:

- Dam Sites Mess (B-2)
- Near Office (Dam Site)
- DP Mess Power House
- Office Pantry (Power House)
- PR WA Camp (Batula-2)
- Mess (Power House)

2.0 Stack Emission (DG & Boiler):

Stack Emission was monitored for DG Sets & Boiler Stack. All the results were found with the prescribe limits as per CPCB Guidelines.

- DG No. 1(2000 KVA)
- DG No. 2(2000 KVA)
- DG No. 3(2000 KVA)
- DG No. 4(2000 KVA)
- DG No. 5(1010 KVA)
- Boiler Stack (850 kg/hr.)

3.0 Waste water (ETP Outlet):

Effluent water Quality was analysed and all parameters were found under to limits as per CPCB. Location as mentioned below.

- Sedimentation Tank Batching Plant Dam Site
- Sedimentation Tank Batching Plant Near Crusher
- Sedimentation Tank Batching Plant Power House
- DP Mess Outlet Dam Site
- DP Mess Outlet Power House
- Sedimentation Tank- Crusher Plant
- Sedimentation Tank-Dam Site
- Sedimentation Tank-Power House
- WTP Plant-Inlet
- WTP Plant-Outlet

4.0 Ambient Air Quality Monitoring

Ambient Air Quality was monitored at Four Locations for one month for parameters Respirable Suspended Particulate Matter (PM_{10}), Fine Particulate Matter ($PM_{2.5}$), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), and Found within the CPCB limits.

- Near Crusher Area (Dam Site)
- TRT Road/Colony at Siyasin
- Power House at Haat/Harsari
- Dam Site (Near Office)
- Near HRT/TBM Portal

5.0 Indoor Air Quality Monitoring

Indoor air quality was monitoring parameters Suspended Particulate Matter (SPM), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Carbon Dioxide (CO_2), Carbon Monoxide (CO), Silica Contents (SiO_2), Formaldehyde (HCHO), Methane (CH_4) and Found within the limits at 6 Locations.

- Inside Adit to HRT
- Inside TRT Adit Tunnel
- Inside MAT Tunnel
- Inside DT Tunnel
- Inside to Desilting Chamber (DC-3) Tunnel
- Inside Ventilation Tunnel

6.0 Noise Monitoring:

Noise Level was monitored according to CPCB standards parameters Leq and found within the limits at 21 Locations:

- 2000 KVA-DG No.1
- 2000 KVA-DG No.2
- 2000 KVA-DG No.3
- 2000 KVA-DG No.4
- 1010 KVA-DG No.5
- Inside TRT Tunnel
- Inside Ventilation Tunnel
- Inside MAT Tunnel
- Near Batula Village
- Near Siyasin Colony
- Near Haat/Harsari Village
- Near HRT & DC Tunnel
- Near Crusher Area
- Near Main Office (Haat Village)
- Near Main Office (Dam Site)
- Near Camp Helong
- Near Boiler Section
- Near Workshop

- Near Main Office (Power House)
- Near Batching Plant
- Near Haul Road

7.0 Crusher Monitoring

Crusher Monitoring was done according to CPCB Standard and all the parameters were within the limits.

- Air Emission (Stone Crusher-Power House)

Drinking Water Sample

ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



DRINKING WATER



DRINKING WATER

CONDUCTED BY
ARIHANT ANALYTICAL LABORATORY PVT. LTD.
PLOT NO.272, PHASE-IV, SECTOR-57, HSIIDC,
KUNDLI, SONIPAT, HARYANA
E. Mail- aalkundi@gmail.com

ARIHANT ANALYTICAL LABORATORY PVT. LTD.

AN ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 CERTIFIED LABORATORY

272, Phase-IV, Sec-57, HSIIDC, Kundli, Sonepat-131028 (Haryana)
Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 14/12/2024

Sample Location: **Dam Site Mess (B-2)**

Report No. AAL WQT-20241219005

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.19	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	128.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ-0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ -0.3)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ -0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ-0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ-0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	13.6	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	12.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	7.3	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ-0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ -0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	5.2	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	51.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	54.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ-0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ -0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ-0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ=Below Limit of Quantification, LOQ=Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

Note: 1. The Result Indicated above refer to the tested sample and listed test parameters only, endorsement of products is neither inferred not implied.
2. Total liability of our laboratory is limited to the invoice amount.
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4. This report shall not be used in any advertising media or as evidence in the court of law without prior written consent of the laboratory.
5. The non-perishable sample received shall be destroyed after one month and perishable sample shall be destroyed after one week from the date of issue of report unless specified.

ARIHANT ANALYTICAL LABORATORY PVT. LTD.

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 14/12/2024

Sample Location: **Near Office (Dam Site)**

Report No. AAL WQT-20241219006

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.16	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	177.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ=0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ=0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ=0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ=0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ=0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	20.0	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	14.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	8.0	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ=0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ=0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	10.0	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	82.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	86.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ=0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ=0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ=0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ=0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ=Below Limit of Quantification, LOQ=Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 15/12/2024

Sample Location: **Mess (Power House)**

Report No. AAL WQT-20241219007

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.19	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	153.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ=0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ =0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ =0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ=0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ=0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	11.0	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	10.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	5.2	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ=0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ =0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	3.6	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	51.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	57.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ=0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ=0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ =0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ=0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ=Below Limit of Quantification, LOQ=Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 15/12/2024

Sample Location: **Office Pantry (Power House)**

Report No. AAL WQT-20241219008

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.13	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	110.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ=0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ =0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ =0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ=0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ=0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	6.7	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	8.4	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	3.4	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ=0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ =0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	1.5	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	38.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	43.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ=0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ=0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ =0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ=0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ=Below Limit of Quantification, LOQ=Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 15/12/2024

Sample Location: **PR WA Camp (Batula-2)**

Report No. AAL WQT-20241219009

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.16	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	152.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ-0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ-0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ-0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ-0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ-0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	14.0	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	12.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	5.2	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ-0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	3.2	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	59.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	64.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ-0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ-0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ-0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ-0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ-0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ-0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ=Below Limit of Quantification, LOQ=Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Drinking Water**

Sample Collection Date: 15/12/2024

Sample Location: **DP Mess Power House**

Report No. AAL WQT-20241219010

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 5 Litre
Sample Packing Condition: Sterilized Bottle
Sample Collected By: AAL

TEST RESULTS

S. No.	Test Parameters	Unit	Results	Requirements As per IS: 10500-2012		Test Methods
				Acceptable Limit	Permissible Limit	
1	Colour	Hazen	<5.0	5 Max.	15 Max.	IS 3025(P-4)-2021
2	Odour	-	Agreeable	Agreeable	Agreeable	IS 3025(P-5)-2018
3	pH Value	-	7.13	6.5-8.5	No relaxation	IS 3025(P-11)-2022
4	Taste	-	Agreeable	Agreeable	Agreeable	IS 3025(P-8)-2023
5	Turbidity	NTU	<1.0	1 Max.	5 Max.	IS 3025(P-10)-2023
6	Total Dissolved Solids	mg/l	146.0	500 Max.	2000 Max.	IS 3025(P-16)-2023
7	Aluminium (as Al)	mg/l	BLQ (LOQ=0.01)	0.03 Max.	0.2 Max.	IS 3025(P-2)-2019
8	Ammonia (as total ammonia-N)	mg/l	BLQ (LOQ=0.5)	0.5 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
9	Anionic Detergent (as MBAS)	mg/l	BLQ (LOQ=0.1)	0.2 Max.	1.0 Max.	APHA 5540 C 24th Ed-2023
10	Barium (as Ba)	mg/l	BLQ (LOQ=0.01)	0.7 Max.	No relaxation	IS 3025(P-2)-2019
11	Boron (as B)	mg/l	BLQ (LOQ=0.01)	0.5 Max.	2.4 Max.	IS 3025(P-2)-2019
12	Calcium (as Ca)	mg/l	12.5	75 Max.	200 Max.	IS 3025(P-2)-2019
13	Chlorides (as Cl)	mg/l	14.0	250 Max.	1000 Max.	IS 3025(P-32)-1988
14	Copper (as Cu)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	1.5 Max.	IS 3025(P-2)-2019
15	Fluoride (as F)	mg/l	<0.1	1 Max.	1.5 Max.	APHA 4500 F D 24th Ed-2023
16	Iron (as Fe)	mg/l	<0.1	1.0 Max.	No relaxation	IS 3025(P-2)-2019
17	Magnesium (as Mg)	mg/l	8.0	30 Max.	100 Max.	IS 3025(P-2)-2019
18	Manganese (as Mn)	mg/l	BLQ (LOQ=0.01)	0.1 Max.	0.3 Max.	IS 3025(P-2)-2019
19	Nitrate (as NO_3)	mg/l	<1.0	45 Max.	No relaxation	IS 3025(P-34/Sec-1)-2023
20	Phenolic Compound (as C_6H_5OH)	mg/l	BLQ (LOQ=0.001)	0.001 Max.	0.002 Max.	IS 3025(P-43/Sec-1)-2022
21	Selenium(as Se)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-56)-2003
22	Sulphate (as SO_4)	mg/l	3.7	200 Max.	400 Max.	IS 3025(P-24/Sec-1)-2022
23	Total Alkalinity (as $CaCO_3$)	mg/l	48.0	200 Max.	600 Max.	IS 3025(P-23)-2023
24	Total Hardness (as $CaCO_3$)	mg/l	60.0	200 Max.	600 Max.	IS 3025(P-21)-2009
25	Zinc (as Zn)	mg/l	BLQ (LOQ=0.01)	5 Max.	15 Max.	IS 3025(P-2)-2019
26	Cadmium (as Cd)	mg/l	BLQ (LOQ=0.003)	0.003 Max.	No relaxation	IS 3025(P-2)-2019
27	Lead (as Pb)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
28	Nickel (Ni)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-2)-2019
29	Mercury (as Hg)	mg/l	BLQ (LOQ=0.001)	0.001 Max.	No relaxation	IS 3025(P-48)-1994
30	Molybdenum (as Mo)	mg/l	BLQ (LOQ=0.01)	0.07 Max.	No relaxation	IS 3025(P-2)-2019
31	Total Arsenic (as As)	mg/l	BLQ (LOQ=0.01)	0.01 Max.	No relaxation	IS 3025(P-37)-2022
32	Total Chromium (as Cr)	mg/l	BLQ (LOQ=0.01)	0.05 Max.	No relaxation	IS 3025(P-2)-2019
33	E.Coli	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016
34	Total Coliform	Per 100ml	Absent	Shall not be detectable in any 100 ml sample		IS 15185-2016

BLQ=Below Limit of Quantification, LOQ=Limit of Quantification

****End of Report****

Vinay Dixit
(Microbiologist)

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Deputy Technical Manager
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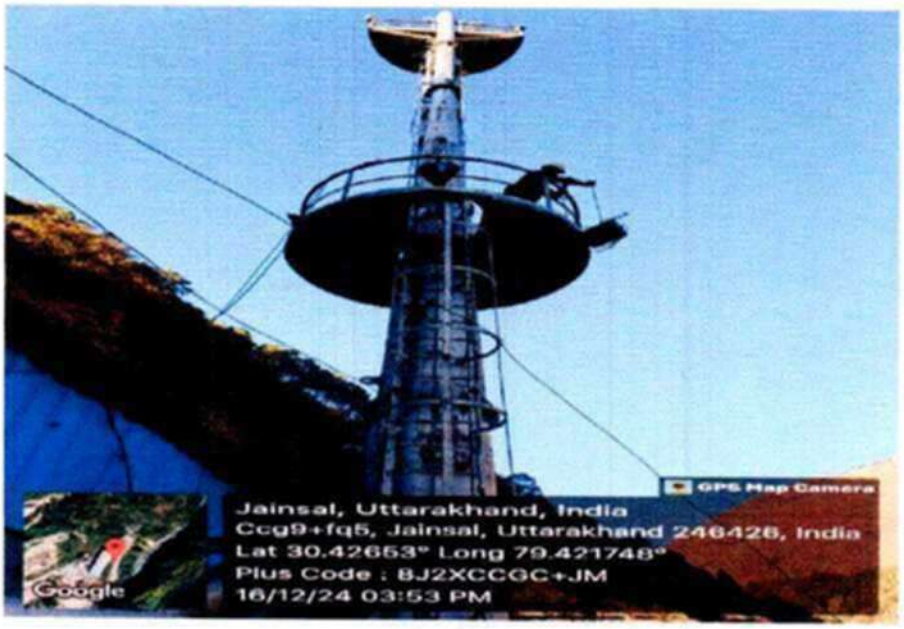
Stack Emission Monitoring

ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



STACK EMISSION



STACK EMISSION

CONDUCTED BY
ARIHANT ANALYTICAL LABORATORY PVT. LTD.
PLOT NO.272, PHASE-IV, SECTOR-57, HSIIDC,
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272, Phase-IV, Sec-57, HSIIDC, Kundli, Sonepat-131028 (Haryana)
Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20241219017

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Stack Emission**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**2000 KVA - D G No.1**
Type of Stack	:	Metal
Diameter of Stack	:	12"
Height of Stack from Ground Level	:	12.5m
Height from Roof Level	:	-
Height at Which Sampling Port	:	6m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	Nil

Observations

Ambient Temperature(°C)	:	21
Stack Temperature (°C)	:	345
Velocity (m/s)	:	15.83
Quantity of emission ($Nm^3/hr.$)	:	1891.67

S. No.	Test Parameter	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	45.6	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	178.5	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	54.6	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	30.2	100	AAL/SOP/ENV/032-2022

CPCB=Central Pollution Control Board

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL ENV-20241219018

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Stack Emission**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**2000 KVA - D G No.2**
Type of Stack	:	Metal
Diameter of Stack	:	12"
Height of Stack from Ground Level	:	12.5m
Height from Roof Level	:	-
Height at Which Sampling Port	:	6m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	Nil

Observations

Ambient Temperature(°C)	:	21
Stack Temperature (°C)	:	356
Velocity (m/s)	:	15.43
Quantity of emission ($Nm^3/hr.$)	:	1811.48

S. No.	Test Parameter	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	41.8	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	165.4	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	47.6	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	27.4	100	AAL/SOP/ENV/032-2022

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TEST REPORT

Report No. AAL ENV-20241219019

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Stack Emission**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**2000 KVA - D G No.3**
Type of Stack	:	Metal
Diameter of Stack	:	12"
Height of Stack from Ground Level	:	12.5m
Height from Roof Level	:	-
Height at Which Sampling Port	:	6m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	Nil

Observations

Ambient Temperature(°C)	:	22
Stack Temperature (°C)	:	362
Velocity (m/s)	:	15.27
Quantity of emission ($Nm^3/hr.$)	:	1775.09

S. No.	Test Parameter	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	47.6	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	186.8	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	58.3	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	32.4	100	AAL/SOP/ENV/032-2022

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TEST REPORT

Report No. AAL ENV-20241219020

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Stack Emission**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**2000 KVA - D G No.4**
Type of Stack	:	Metal
Diameter of Stack	:	12"
Height of Stack from Ground Level	:	12.5m
Height from Roof Level	:	-
Height at Which Sampling Port	:	6m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	Nil

Observations

Ambient Temperature(°C)	:	21
Stack Temperature (°C)	:	349
Velocity (m/s)	:	15.11
Quantity of emission ($Nm^3/hr.$)	:	1793.54

S. No.	Test Parameter	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	48.8	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	195.3	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	57.2	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	30.8	100	AAL/SOP/ENV/032-2022

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Report No. AAL ENV-20241219021

Date of Reporting: 26/12/2024

Sample Description: **D G Stack Emission**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**D G Section**
Stack Identification	:	Stack Attached to D G
Source of Emission	:	D G Set
Capacity	:	**1010 KVA - D G No.5**
Type of Stack	:	Metal
Diameter of Stack	:	12"
Height of Stack from Ground Level	:	12.5m
Height from Roof Level	:	-
Height at Which Sampling Port	:	6m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	Nil

Observations

Ambient Temperature(°C)	:	21
Stack Temperature (°C)	:	310
Velocity (m/s)	:	14.86
Quantity of emission ($Nm^3/hr.$)	:	1881.58

S. No.	Test Parameter	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM) At 15% O_2	mg/Nm^3	51.6	75	IS 11255(P-1)-1985
2	Oxide of Nitrogen (as NO_x) At 15% O_2	ppmv	198.2	710	IS 11255(P-7)-2005
3	Carbon Monoxide (as CO) At 15%O_2	mg/Nm^3	59.4	150	IS 13270- 1992
4	Non Methane Hydrocarbon (as C) At 15% O_2	mg/Nm^3	35.2	100	AAL/SOP/ENV/032-2022

CPCB=Central Pollution Control Board

****End of Report****

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TEST REPORT

Report No. AAL ENV-20241219027

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **Boiler Stack Emission**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

Plant/Section	:	**Boiler Section**
Stack Identification	:	Stack attached to Boiler
Source of Emission	:	Boiler Stack
Capacity	:	**850 Kg/Hr.**
Type of Stack	:	Metal
Diameter of Stack	:	0.5m
Height of Stack from Ground Level	:	30m
Height from Roof Level	:	-
Height at Which Sampling Port	:	10m
Product Manufacturing	:	Construction Works
Type of Fuel Used	:	HSD
Normal Operating Schedule	:	As per requirement
Duration of Monitoring	:	45 min.
Emission Control (if any)	:	-

Observations

Ambient Temperature(°C)	:	22
Stack Temperature (°C)	:	161
Average Stack Velocity (m/s)	:	11.21
Quantity of emission (Nm^3/sec.)	:	1.47

S. No.	Test Parameter	Unit	Results	Limits as per CPCB Guidelines	Test Methods
1	Particulate Matter (as PM)	mg/Nm^3	53.8	500	IS 11255(P-1)-1985
2	Sulphur Dioxide (as SO_2)	mg/Nm^3	15.4	NS	IS 11255(P-2)-1985
3	Oxide of Nitrogen (as NO_x)	mg/Nm^3	87.8	NS	IS 11255(P-7)-2005
4	Carbon Monoxide (as CO)	%v/v	<0.2	1.0	IS 13270-1992

NS=Not Specified.

****End of Report****

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Waste Water Sample

ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE
M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



WASTE WATER



WASTE WATER

CONDUCTED BY
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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 14/12/2024

Sample Location: **Sedimentation Tank Batching Plant Dam Site**

Report No. AAL WQT-20241219013

Date of Receiving:	19/12/2024
Date of Starting:	19/12/2024
Date of Completion:	26/12/2024
Date of Reporting:	26/12/2024
Sample Quantity:	2 Litre
Sample Packing Condition:	Plastic Bottle
Sample Collected By:	AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.42	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	25.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	19.3	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	83.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

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Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 15/12/2024

Sample Location: **Sedimentation Tank Batching Plant Near Crusher**

Report No. AAL WQT-20241219014

Date of Receiving:	19/12/2024
Date of Starting:	19/12/2024
Date of Completion:	26/12/2024
Date of Reporting:	26/12/2024
Sample Quantity:	2 Litre
Sample Packing Condition:	Plastic Bottle
Sample Collected By:	AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.48	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	29.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	22.0	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	106.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

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TEST REPORT

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Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Report No. AAL WQT-20241219015

Sample Description: **Waste Water**

Sample Collection Date: 15/12/2024

Sample Location: **Sedimentation Tank Batching Plant Power House**

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.32	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	24.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	16.3	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	82.0	250 Max.	IS 3025(P-58)-2023

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Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 14/12/2024

Sample Location: **D P Mess Outlet Dam Site**

Report No. AAL WQT-20241219016

Date of Receiving:	19/12/2024
Date of Starting:	19/12/2024
Date of Completion:	26/12/2024
Date of Reporting:	26/12/2024
Sample Quantity:	2 Litre
Sample Packing Condition:	Plastic Bottle
Sample Collected By:	AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.35	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	27.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	20.5	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	112.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL WQT-20241219017

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Receiving:	19/12/2024
Date of Starting:	19/12/2024
Date of Completion:	26/12/2024
Date of Reporting:	26/12/2024
Sample Quantity:	2 Litre
Sample Packing Condition:	Plastic Bottle
Sample Collected By:	AAL

Sample Description: **Waste Water**

Sample Collection Date: 15/12/2024

Sample Location: **D P Mess Outlet Power House**

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.39	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	31.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	24.0	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	128.0	250 Max.	IS 3025(P-58)-2023

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Deputy Technical Manager
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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 15/12/2024

Sample Location: **Sedimentation Tank - Crusher Plant**

Report No. AAL WQT-20241219018

Date of Receiving:	19/12/2024
Date of Starting:	19/12/2024
Date of Completion:	26/12/2024
Date of Reporting:	26/12/2024
Sample Quantity:	2 Litre
Sample Packing Condition:	Plastic Bottle
Sample Collected By:	AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.44	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	36.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	18.4	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	92.0	250 Max.	IS 3025(P-58)-2023

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 14/12/2024

Sample Location: **Sedimentation Tank – Dam Site**

Report No. AAL WQT-20241219019

Date of Receiving:	19/12/2024
Date of Starting:	19/12/2024
Date of Completion:	26/12/2024
Date of Reporting:	26/12/2024
Sample Quantity:	2 Litre
Sample Packing Condition:	Plastic Bottle
Sample Collected By:	AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.53	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	38.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	19.3	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	98.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Report No. AAL WQT-20241219020

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 15/12/2024

Sample Location: **Sedimentation Tank – Power House**

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.51	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	40.0	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	22.3	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	110.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
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Website : www.aalkundli.com

TEST REPORT

Report No. AAL WQT-20241219021

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 15/12/2024

Sample Location: **WTP Plant - Inlet**

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Test Methods
1	Odour	-	Odourful	IS 3025(P-5)-2018
2	pH Value	-	7.31	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	136.0	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	4.2	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	135.0	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	392.0	IS 3025(P-58)-2023

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Sample Description: **Waste Water**

Sample Collection Date: 15/12/2024

Sample Location: **WTP Plant - Outlet**

Report No. AAL WQT-20241219022

Date of Receiving: 19/12/2024
Date of Starting: 19/12/2024
Date of Completion: 26/12/2024
Date of Reporting: 26/12/2024
Sample Quantity: 2 Litre
Sample Packing Condition: Plastic Bottle
Sample Collected By: AAL

TEST RESULT

S. No.	Test Parameters	Unit	Results	Limits as per Environment (Protection) Rules,1986 Schedule-VI General Standards for Discharge Inland Surface Water	Test Methods
1	Odour	-	Odourless	-	IS 3025(P-5)-2018
2	pH Value	-	7.83	5.5 - 9.0	IS 3025(P-11)-2022
3	Total Suspended Solids	mg/l	30.5	100 Max.	IS 3025(P-17)-2022
4	Oil & Grease	mg/l	<2.0	10 Max.	IS 3025(P-39)-2021
5	Biochemical Oxygen Demand (BOD - 3 days at 27°C)	mg/l	19.3	30 Max.	IS 3025(P-44)-2023
6	Chemical Oxygen Demand (COD)	mg/l	93.0	250 Max.	IS 3025(P-58)-2023

****End of Report****

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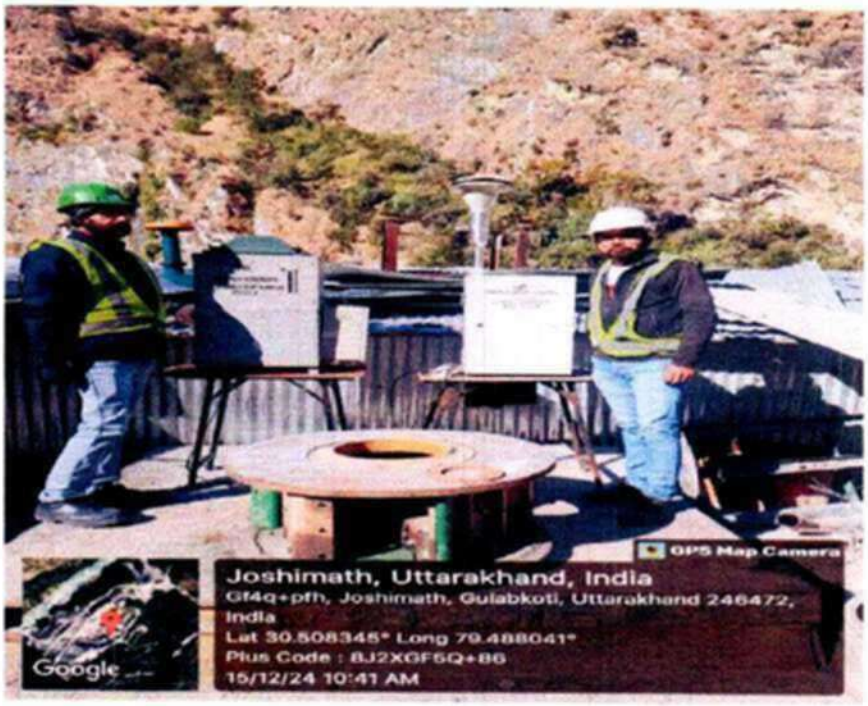
Ambient Air Quality Monitoring

ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



AMBIENT AIR



AMBIENT AIR

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E. Mail- aalkundi@gmail.com

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241231002
		Date of Reporting:	04/01/2025
Sample Description:	**Ambient Air Quality Monitoring** (24 Hrs for the Quarter of October to December 2024)	**Sampling Duration:**	24 Hrs.
Sampling Location:	**TRT Road/Colony at Siyasin**	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m³)	Particulate Matter $PM_{2.5}$ (µg /m³)	Sulphur Dioxide SO_2 (µg /m³)	Nitrogen Dioxide NO_2 (µg /m³)
1	05/12/2024	63.5	34.7	10.5	18.5
2	08/12/2024	66.8	36.3	12.8	22.4
3	12/12/2024	65.4	35.4	11.5	19.3
4	15/12/2024	69.2	40.7	12.4	21.8
5	19/12/2024	64.9	32.9	13.2	23.7
6	22/12/2024	65.1	36.8	14.9	19.5
7	26/12/2024	68.3	39.2	13.6	18.9
8	29/12/2024	66.2	35.1	12.7	20.4
	Minimum	**63.5**	**32.9**	**10.5**	**18.5**
	Maximum	**69.2**	**40.7**	**14.9**	**23.7**
	Average	**66.2**	**36.4**	**12.7**	**20.6**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

****End of Report****

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241231003
		Date of Reporting:	04/01/2025
Sample Description:	**Ambient Air Quality Monitoring** (24 Hrs for the Quarter of October to December 2024)	**Sampling Duration:**	24 Hrs.
Sampling Location:	**Power House at Haat/Harsari**	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m^3)	Particulate Matter $PM_{2.5}$ (µg /m^3)	Sulphur Dioxide SO_2 (µg /m^3)	Nitrogen Dioxide NO_2 (µg /m^3)
1	04/12/2024	70.9	40.2	12.8	25.3
2	07/12/2024	69.5	39.6	12.4	24.8
3	11/12/2024	71.6	40.5	11.3	24.2
4	14/12/2024	72.3	41.4	11.6	23.6
5	18/12/2024	71.9	41.0	10.8	23.2
6	21/12/2024	73.4	42.3	10.7	22.8
7	25/12/2024	72.8	41.8	12.5	25.5
8	28/12/2024	71.4	40.9	11.2	23.9
	Minimum	**69.5**	**39.6**	**10.7**	**22.8**
	Maximum	**73.4**	**42.3**	**12.8**	**25.5**
	Average	**71.7**	**41.0**	**11.7**	**24.2**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241231004
		Date of Reporting:	04/01/2025
Sample Description:	**Ambient Air Quality Monitoring** (24 Hrs for the Quarter of October to December 2024)	**Sampling Duration:**	24 Hrs.
Sampling Location:	**Near Crusher Area (Dam Site)**	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m³)	Particulate Matter $PM_{2.5}$ (µg /m³)	Sulphur Dioxide SO_2 (µg /m³)	Nitrogen Dioxide NO_2 (µg /m³)
1	05/12/2024	72.5	38.9	16.4	29.5
2	08/12/2024	78.8	40.5	14.7	26.1
3	12/12/2024	74.9	43.2	18.8	25.9
4	15/12/2024	72.8	41.3	17.3	21.4
5	19/12/2024	79.3	45.6	16.5	20.3
6	22/12/2024	75.2	43.4	12.2	23.2
7	26/12/2024	76.8	46.3	14.9	27.5
8	29/12/2024	74.7	42.8	15.7	24.2
	Minimum	**72.5**	**38.9**	**12.2**	**20.3**
	Maximum	**79.3**	**46.3**	**18.8**	**29.5**
	Average	**75.6**	**42.8**	**15.8**	**24.8**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241231005
		Date of Reporting:	04/01/2025
Sample Description:	**Ambient Air Quality Monitoring** (24 Hrs for the Quarter of October to December 2024)	**Sampling Duration:**	24 Hrs.
Sampling Location:	**Dam Site (Near Office)**	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m³)	Particulate Matter $PM_{2.5}$ (µg /m³)	Sulphur Dioxide SO_2 (µg /m³)	Nitrogen Dioxide NO_2 (µg /m³)
1	04/12/2024	69.8	37.2	13.3	21.5
2	07/12/2024	65.3	35.4	15.4	23.4
3	11/12/2024	68.4	36.9	14.8	21.9
4	14/12/2024	70.2	39.5	16.7	23.8
5	18/12/2024	65.7	34.8	14.1	24.3
6	21/12/2024	67.5	35.1	16.3	20.8
7	25/12/2024	68.9	38.4	12.5	17.9
8	28/12/2024	63.1	34.7	11.8	22.7
	Minimum	**63.1**	**34.7**	**11.8**	**17.9**
	Maximum	**70.2**	**39.5**	**16.7**	**24.3**
	Average	**67.4**	**36.5**	**14.4**	**22.0**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241231006
		Date of Reporting:	04/01/2025
Sample Description:	**Ambient Air Quality Monitoring** (24 Hrs for the Quarter of October to December 2024)	**Sampling Duration:**	24 Hrs.
Sampling Location:	**Near HRT/TBM Portal**	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters → Unit→ Date of Sampling↓	Particulate Matter PM_{10} (µg /m^3)	Particulate Matter $PM_{2.5}$ (µg /m^3)	Sulphur Dioxide SO_2 (µg /m^3)	Nitrogen Dioxide NO_2 (µg /m^3)
1	02/12/2024	69.2	38.5	14.3	22.9
2	06/12/2024	66.5	36.2	12.6	20.5
3	09/12/2024	70.8	40.6	15.5	21.3
4	13/12/2024	65.3	39.1	13.7	23.8
5	16/12/2024	67.2	37.7	10.2	19.6
6	20/12/2024	69.8	38.9	12.8	22.2
7	23/12/2024	64.7	35.1	11.4	19.2
8	27/12/2024	65.9	37.9	13.4	24.8
	Minimum	**64.7**	**35.1**	**10.2**	**19.2**
	Maximum	**70.8**	**40.6**	**15.5**	**24.8**
	Average	**67.4**	**38.0**	**13.0**	**21.8**
	Standards Limit (As per NAAQ)	**100 Max.**	**60 Max.**	**80 Max.**	**80 Max.**
	Protocol/Method	IS-5182(P-23) 2006	IS-5182(P-24)-2019	IS 5182(P-2/Sec-1)-2023	IS-5182(P-6) 2006

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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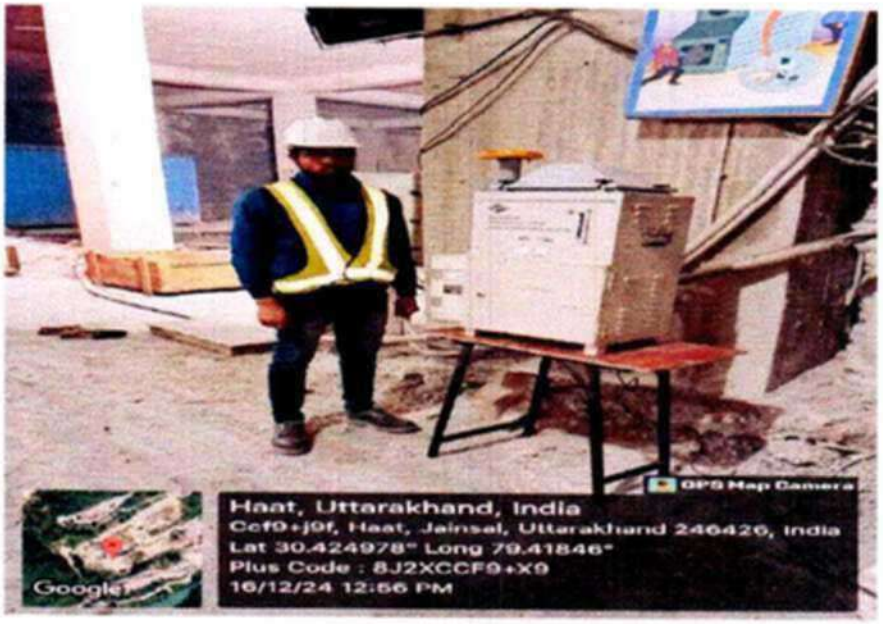
Indoor Air Quality Monitoring

ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



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Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20241219028

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 16/12/2024

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location	:	**Inside MAT Tunnel**
Actual Time of Sampling (Hrs)	:	08:00 Hrs.
Average flow Rate for particulate matter (m^3/minute)	:	1.18
Total Volume of air sampled for particulate matter (m^3)	:	566.4

S. No.	Test Parameter	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.735	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.024	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.043	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.15	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	1055	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	10.8	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

NIOSH- National Institute for Occupational Safety and Health
ND=Not Detected, NS=Not Specified

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Report No. AAL ENV-20241219029

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 16/12/2024

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location	:	**Inside Adit To HRT**
Actual Time of Sampling (Hrs)	:	08:00 Hrs.
Average flow Rate for particulate matter (m^3/minute)	:	1.20
Total Volume of air sampled for particulate matter (m^3)	:	576.0

S. No.	Test Parameter	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.615	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.019	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.039	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.05	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	1006	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	8.7	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

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TEST REPORT

Report No. AAL ENV-20241219030

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location	:	**Inside Ventilation Tunnel**
Actual Time of Sampling (Hrs)	:	08:00 Hrs.
Average flow Rate for particulate matter (m^3/minute)	:	1.21
Total Volume of air sampled for particulate matter (m^3)	:	580.8

S. No.	Test Parameter	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.786	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.021	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.041	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.25	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	1015	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	11.5	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

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****End of Report****

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TEST REPORT

Report No. AAL ENV-20241219031

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 16/12/2024

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location : **Inside TRT Adit Tunnel**

Actual Time of Sampling (Hrs) : 08:00 Hrs.

Average flow Rate for particulate matter (m^3/minute) : 1.20

Total Volume of air sampled for particulate matter (m^3) : 576.0

S. No.	Test Parameter	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.817	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.020	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.036	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.20	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	995	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	10.8	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

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TEST REPORT

Report No. AAL ENV-20241219032

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location	:	**Inside DT Tunnel**
Actual Time of Sampling (Hrs)	:	08:00 Hrs.
Average flow Rate for particulate matter (m^3/minute)	:	1.21
Total Volume of air sampled for particulate matter (m^3)	:	580.8

S. No.	Test Parameter	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.737	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.017	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.028	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.15	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	945	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	11.7	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

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****End of Report****

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TEST REPORT

Report No. AAL ENV-20241219033

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **Indoor Air Quality Monitoring**

Date of Monitoring: 15/12/2024

Sampling Done By: AAL

TEST RESULTS

Sampling Details:

Sampling Location : **Inside Desilting Chamber (DC-03) Tunnel**

Actual Time of Sampling (Hrs) : 08:00 Hrs.

Average flow Rate for particulate matter (m^3/minute) : 1.18

Total Volume of air sampled for particulate matter (m^3) : 566.4

S. No.	Test Parameter	Unit	Results	Limit as per Factory Act 1948, Schedule-II, Section-41F	Test Methods
1	Suspended Particulate Matter (SPM)	mg/m^3	1.684	NS	NIOSH Manual: 500-1994
2	Sulphur Dioxide (as SO_2)	mg/m^3	0.018	5	IS-5182 (P-2/Sec-1)-2023
3	Oxide of Nitrogen (as NO_2)	mg/m^3	0.035	6	IS-5182(P-6)-2006
4	Carbon Monoxide (as CO)	mg/m^3	1.12	40	IS-5182(P-10)-1999
5	Carbon Dioxide (as CO_2)	mg/m^3	1025	NS	AAL/SOP/ENV/027-2017
6	Formaldehyde (HCHO)	mg/m^3	ND	NS	NIOSH-3500:1994
7	Silica Content	$\mu g/m^3$	10.2	(50 Max.-As per OSHA)	By Air APHA
8	Methane	mg/m^3	ND	(736 Max.-As per OSHA)	By GC

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****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
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Noise Level Monitoring

ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



AMBIENT NOISE



AMBIENT NOISE

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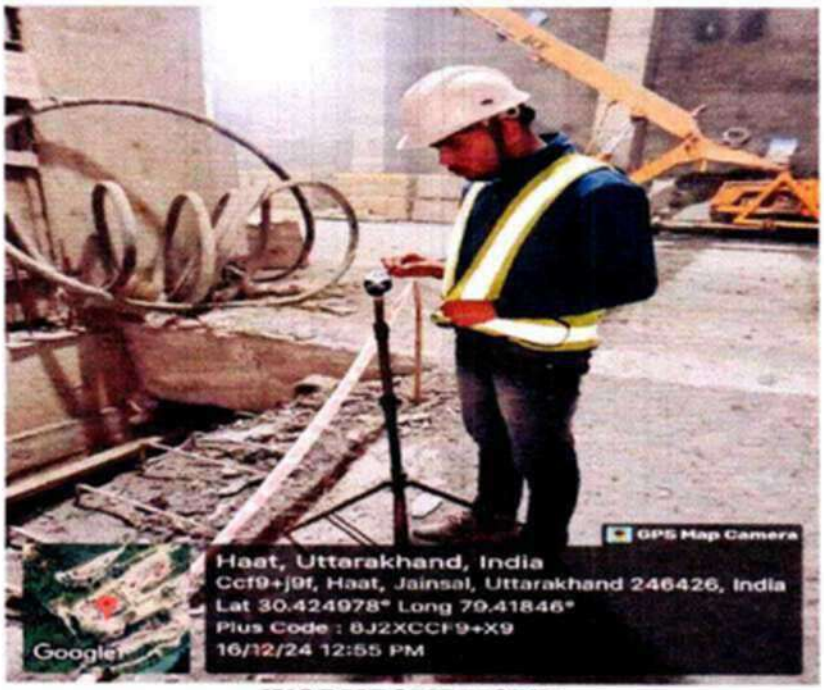
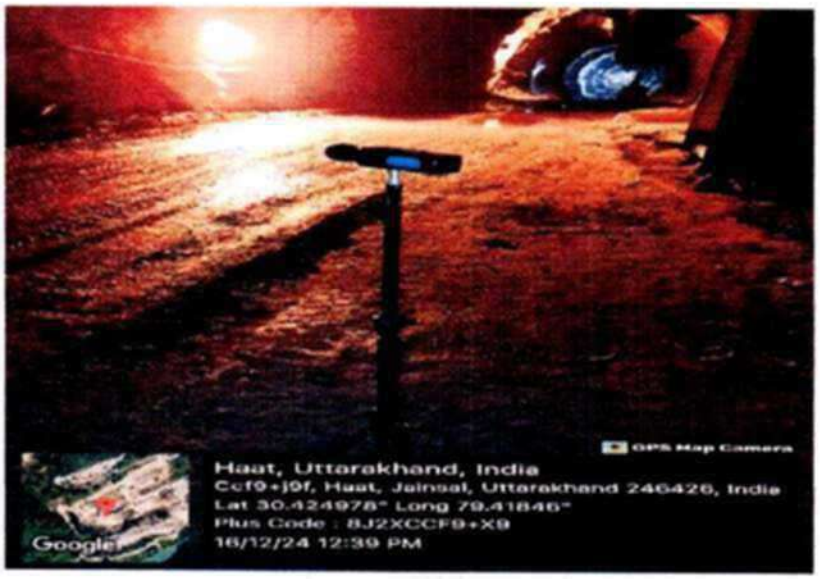
ENVIRONMENTAL MONITORING PHOTOGRAPHS
SITE

M/s Hindustan Construction Co. Ltd.
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand



WORKZONE NOISE



WORKZONE NOISE

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Website : www.aalkundli.com

TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219002
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	15/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Siyasin Colony	41.7	53.9	48.2
	Standards Limit (As per CPCB for Residential Area)			**55 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219003
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	15/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Work Shop	54.8	70.3	65.2
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219004
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	14/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Haul Road	53.6	69.9	64.7
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219005
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	18/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Haat/Harsari Village	42.5	57.4	49.2
	Standards Limit (As per CPCB for Residential Area)			**55 Max.**

****End of Report****

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219006
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	18/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Main Office (Haat Village)	51.9	65.5	61.4
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219007
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	15/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Batula Village	40.4	58.2	49.7
	Standards Limit (As per CPCB for Residential Area)			**55 Max.**

****End of Report****

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Deputy Technical Manager
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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219008
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	16/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near HRT & D C Tunnel	58.9	70.5	64.8
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219009
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	17/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Crusher Area	61.7	73.6	70.4
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219010
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	17/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Boiler Section	62.3	71.6	68.5
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219011
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	14/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Main Office (Power House)	52.7	66.6	62.7
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219012
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	17/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Batching Plant	59.7	72.3	67.8
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219013
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	18/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Camp Helong	54.6	69.8	63.6
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219014
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Ambient Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	14/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Near Main Office (Dam Site)	60.8	71.4	66.5
	Standards Limit (As per CPCB for Industrial Area)			**75 Max.**

****End of Report****

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TEST REPORT

Report No. AAL ENV-20241219022

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Noise**

Capacity of DG Set: **2000 KVA - D G No.1**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	100.5	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	73.8	-
	Insertion Loss	dB(A) Leq.	26.7	25 Min.

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager

Authorised Signatory

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TEST REPORT

Report No. AAL ENV-20241219023

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Noise**

Capacity of DG Set: **2000 KVA - D G No.2**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	100.7	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	74.1	-
	Insertion Loss	dB(A) Leq.	26.6	25 Min.

****End of Report****

ASHUTOSH SRIVASTAVA
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TEST REPORT

Report No. AAL ENV-20241219024

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Noise**

Capacity of DG Set: **2000 KVA - D G No.3**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	100.3	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	73.5	-
	Insertion Loss	dB(A) Leq.	26.8	25 Min.

****End of Report****

ASHUTOSH SRIVASTAVA
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TEST REPORT

Report No. AAL ENV-20241219025

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Noise**

Capacity of DG Set: **2000 KVA - D G No.4**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	100.8	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	73.2	-
	Insertion Loss	dB(A) Leq.	27.6	25 Min.

****End of Report****

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ARIHANT ANALYTICAL LABORATORY PVT. LTD.

AN ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 CERTIFIED LABORATORY

272, Phase-IV, Sec-57, HSIIDC, Kundli, Sonepat-131028 (Haryana)
Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20241219026

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **D G Noise**

Capacity of DG Set: **1010 KVA - D G No.5**

Date of Monitoring: 17/12/2024

Sampling Done By: AAL

TEST RESULT

S. No.	Location	Unit	Result	Permissible Limit dB(A) Leq.
1.	Noise level when acoustic enclosure is open.	dB(A) Leq.	99.7	-
2.	Noise level when acoustic enclosure is closed at a distance of 0.5 meter.	dB(A) Leq.	73.2	-
	Insertion Loss	dB(A) Leq.	26.5	25 Min.

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219034
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Work-zone Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	16/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Inside TRT Tunnel	76.7	83.5	79.6
	Standards Limit (As per OSHA, No. - 1910.95)			**90 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager

Authorised Signatory

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TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219035
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Work-zone Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	16/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Inside Ventilation Tunnel	73.5	81.8	77.4
	Standards Limit (As per OSHA, No. - 1910.95)			**90 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager

Authorised Signatory

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Website : www.aalkundli.com

TEST REPORT

Issued To:	**M/s Hindustan Construction Co. Ltd.** Vishnugad Pipal Koti Hydro Electric Project, Mayapur, PO-Mayapur (Pipal Koti) Dist. Chamoli – 242 472, Uttarakhand	**Report No.**	AAL ENV-20241219036
		Date of Reporting:	26/12/2024
Sample Description:	**Noise Level Monitoring – Work-zone Noise**	**Sampling Duration:**	24 Hrs.
Date of Sampling:	16/12/2024	**Sampling Done By:**	AAL

TEST RESULT

S/N	Test Parameters & Unit→	Noise Level - dB(A)		
	Sampling Location↓	**Lmin**	**Lmax**	**Leq**
1	Inside MAT Tunnel	72.5	81.9	77.8
	Standards Limit (As per OSHA, No. - 1910.95)			**90 Max.**

****End of Report****

ASHUTOSH SRIVASTAVA
Deputy Technical Manager
Authorised Signatory

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Crusher Monitoring

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Ph. : 7082301442, 9250014551 Email : aalkundli@gmail.com
Website : www.aalkundli.com

TEST REPORT

Report No. AAL ENV-20241219001

Issued To: **M/s Hindustan Construction Co. Ltd.**
Vishnugad Pipal Koti Hydro Electric Project,
Mayapur, PO-Mayapur (Pipal Koti)
Dist. Chamoli – 242 472, Uttarakhand

Date of Reporting: 26/12/2024

Sample Description: **Air Emission (Stone Crusher)**

Date of Monitoring: 17/12 /2024

Sampling Done By: AAL

TEST RESULT

Sampling Details:

Sampling Location	:	Power House	
Type of Sample	:	Air Emission (Stone Crusher- Inward & Outward)	
Average flow Rate for particulate matter (m^3/minute)	:	**Inward**	**Outward**
		1.18	1.16
Total Volume of air sampled for particulate matter (m^3)	:	70.8	69.6
Sampling Duration, Minutes	:	60	60
Wind Direction	:	NNE (32°C)	NE (54°C)

S. No.	Test Parameter	Unit	Results			Standard Limits	Test Methods
			Inward	Outward	Final Result		
1	Suspended Particulate Matter (SPM)	µg/m^3	1310.2	1824.5	514.3	600	IS-5182(P-4) 1999

****End of Report****

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Deputy Technical Manager
Authorised Signatory

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