

### RATLE HYDROELECTRIC POWER CORPORATION LIMITED

(A Joint Venture of NHPC Limited and JKSPDC Limited)

### ANNEXURE-I

### 850MW RATLE HE PROJECT, DISTRICT KISHTWAR, UT JAMMU AND KASHMIR

### SIX MONTHLY COMPLIANCE REPORT ON ENVIRONMENTAL ASPECTS

(for the period April 2022 to Sept 2022)

1	Name of Project	Ratle Hydro-Electric Project (850MW)		
2	Type of Project	Hydro-Electric Project (Run of the River scheme		
3	Clearance letters OM No. and date			
	(a) Environment Clearance	(a) MoEF&CC letter No. J-12011/39/2010-IA.I dated 12.12.2012		
		MoEF&CC letter No. J-12011/39/2010-IA.I dated 27.09.2021 (approval accorded for transfer of EC in the name of RHPCL).		
	(b) Forest Clearance	(b) Order No. 234-FST of 2012 dated 27.04.2012 of GOJK (for diversion of 138.93 Ha Forest land) and No. 108-FST of 2014 dated 05.03.2014 of GOJK (for diversion of 29.13 Ha Forest land).  Vide communication No. 15-01/2021-Jammu dated 18.01.2022 and 08.03.2022, approval accorded by MoEF&CC, GOI for change of User Agency from JKSPDC to RHPCL.		
4	Locations			
	(a) District(s)	(a) Kishtwar		
	(b) State	(b) Jammu and Kashmir		
	(c) Latitude	(c) 33°10'43" N		
	(d) Longitude	(d) 75 °48'26" E		

कार्यालयः कमरा नंबर ०८, ब्लॉक नंबर ०२, एनएचपीसी क्षेत्रीय कार्यालय, जेडीए वाणिज्यिक परिसर नंबर ०१, नरवाल, जम्मू, (जम्मू और कश्मीर) - 180006 Office: Room No. 08, Block No. 02, NHPC Regional Office, JDA Commercial Complex No. 01, Narwal, Jammo (J&K) - 180006 Camp Office : NHPC Office Complex, Sector-33, Faridabad – 121003 (Haryana CIN: U40105JK2021GOI012380 E-mail id: rhpcl@nhpc.nic.in

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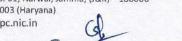
### RATLE HYDROELECTRIC POWER CORPORATION LIMITED

5	Address for Correspondence	
	(a) Address of concerned Project Head (with Pin code, Telephone/Fax no.)	(a) Chief Executive Officer Ratle Hydroelectric Power Corporation Ltd Ratle HE Project Shalimar Colony, Tehsil and District - Kishtwar, UT Jammu and Kashmir Pin code- 182 204 Telephone:- 01995-295171 email id: rhpcl@nhpc.nic.in
	(b) Address of concerned HOD in Corporate Office (with Pin code, Telephone/Fax no.)	(b) Regd. Office:  Chief Executive Officer  Ratle Hydroelectric Power Corporation Ltd Room No. 08, Block No. 02,  NHPC Regional Office,  JDA Commercial Complex No. 01,  Narwal, Jammu (UT J&K) - 180 006  email id: rhpcl@nhpc.nic.in
6	Details of Environmental Management Plan	Environmental Management Plans to be implemented at the Project as provided in the EMP Report are as follows:  SI.No.Environmental Management Plan  1 Biodiversity Management Plan  2 Catchment Area Treatment Plan  3 Fishery Development and Management Plan  4 Solid Waste Management Plan  5 Public Health Delivery System  6 Energy Conservation Measures  7 Muck Disposal Plan  8 Landscaping & Restoration of Quarry & Construction Areas  9 Air & Water Environment Management Plan  10 Reservoir Rim Treatment Plan  11 Compensatory Afforestation Plan



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		13 Dam Break Modelling & Disaster Management Plan		
		14 Local Area Development Plan		
		15 CSR Activities		
		16 Local Skill Development Plan		
		17 Environmental Monitoring Programme		
7	Breakup for Project area	Forest Land: 168.06 ha (138.93 ha + 29.13 ha)		
	(Land details)	Private Land : 55.52 ha		
		State Land : 233.96 ha		
		River Bed land : 138.81 ha		
		Total Land : 596.35 ha		
		Note:-Above details are as per GOJK Order No. 198-PDD of 2014 dated 15-10-2014 and No.108-FST of 2014 dated 05.03.2014		
8	Breakup of Project affected	Details of PAFs		
	population with enumerations of those losing house/dwelling units	Displaced PAFs : 80		
	only, agriculture land only, both	Non Displaced PAFs : 160		
	house and agriculture land and landless labours / artisians.	Total PAFs : 240		
	(a) SC/ST/Adivasis	a) Scheduled Tribe : 17 families		
	(b) Others	b) Rural Artisans/ Small Traders : 62 families		
9	Financial Details			
	(a) Project cost as originally planned and subsequent	a) Original TEA approved cost (2012): Rs. 5517.02 Cr (completion cost)		
	revised estimates and the year of price reference	Cabinet Investment sanction approved (2021): Rs.5281.94Cr (Nov 2018 PL)		
	(b) Actual expenditure incurred on the Project so far	b) Actual expenditure The cost of work done on the Project at the time of its taking over by JVC (as assessed by IIT, Delhi) : 120.86 Cr		





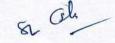
### RATLE HYDROELECTRIC POWER CORPORATION LIMITED

		Expenditure incurred by RHPCL : Rs. 99.60 Cr (till Sept 2022)		
	(c) Allocation made for Environment Management Plan	Allocations for EMP : Rs. 262.35 Cr (as approved by MoEF&CC)		
	(d) Actual expenditure incurred on EMP so far	Details of actual expenditure already incurred on EMP prior to 01.06.2021 shall be incorporated in the report as and when the records of the Project are handed over by JKSPDC to RHPCL.		
		However, the details of expenditure incurred on EMP upto Sept 2022 as available with the Project is given below:-		
		i)Payment released on account of Forest Clearance: 1773.07 Lakh		
		(including Rs.179.71 Lakh on account of Compensatory Afforestation Programme)		
		ii) Solid Waste Management Plan*: Rs.0.20 Lakh		
		iii)public health delivery system*: Rs. 24.52 Lakh		
		iv)Energy Conservation measure*: Rs.15.66 Lakh		
		v)Muck Disposal Plan*: Rs.5.20 Cr		
		vi)CSR Plan: Rs.10.55 Lakh		
		vii)Environmental Monitoring Programme*: Rs.5.91 Lakh		
		*also includes the expenditure incurred by Contractor as per the Contract agreement		
10	Forest Land Requirements  (a) Status of approval for diversion of Forest Land for non-forestry use	(a) Sanction accorded by GOJK for diversion of 138.93 Ha Forest land for use vide Order No. 234-FST of 2012 dated 27.04.2012 and for diversion of 29.13 Ha Forest land for use vide Order No. 108-FST of 2014 dated 05.03.2014. Vide communication No. 15-01/2021-Jammu dated 18.01.2022 and 08.03.2022, approval accorded by MoEF&CC, GOI for change of User Agency from JKSPDC to RHPCL.		



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	(b) The status of clear felling of	(b) Clear felling status:-Records yet to be
	trees in Forest Land	handed over by JKSPDC to RHPCL.
11	Status of Construction	The work for Turnkey Execution of Ratle HE Project has been awarded to M/s MEIL on
		18.01.2022.
	(a) Date of commencement (actual and/or planned)	(a) Date of commencement of major works of the Project (actual): 18.01.2022
	(b) Date of completion (actual and/or planned)	<ul><li>(b) Date of completion (planned): 10.02.2026</li><li>(60 months from the date of Investment approval).</li></ul>
12	Reasons for the delay (If the	Not Applicable.
	Project is yet to be started)	(As per Cabinet Investment sanction dated
		11.02.2021, Ratle HE Project is to be executed
		by JV of NHPC and JKSPDC with completion
		period of 60 months from the date of Investment approval)
13	Details of Site visits	
	(a) By Manitarian Committee	
	(a) By Monitoring Committee	
	(b) By Regional Office	(Previous records of Project yet to be handed
		over by JKSPDC to RHPCL).
14.	Brief note on the status of compliance of the conditions stipulated by MOEF&CC	Details enclosed as Appendix-I.
	Saparated by MOLI GOO	





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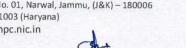
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### Appendix-I

### STATUS OF COMPLIANCE OF CONDITIONS STIPULATED BY MoEF&CC, GOVT OF INDIA

(Environment Clearance letter No. J-12011/39/2010-IA.I dated 12.12.2012 and No. J-12011/39/2010-IA.I dated 27.09.2021)

SI. No.		Spec	ific Co	onditio	ns		Compliance Status
i	The Catchment Area Treatment (CAT) Plan as proposed in the EIA/EMP Report shall be undertaken in consultation with the State Forest Department and major work shall be completed before impounding of reservoir.					- J&K Forest Department has been requested vide letter No. RATLE/CEO/Env/2022/271 dated 04.07.2022 to take up the implementation of CAT Plan for Ratle HE Project.	
	Item	l Year	II Year	III Year	IV Year	Total	- CAT Plan stands submitted to J&I
	Biological Meas	ures				TOPES	Forest Department vide letter date
	Afforestation (ha)	2243	1747	923		4913	29.09.2022 Subsequently, CAT Plan of Project
	Enrichment Plantation (ha)		112	79		191	discussed and reviewed by J&K Fores  Department.
	Pasture Development		376	195		591	
	Nursery Development (Nos)	3	-	•	- 1	3	<ul> <li>Updation of CAT Plan suggested by J&amp;K Forest Department as per site requirements and working Plan o</li> </ul>
	Watch & ward (Nos)	240	240	240	240	960	Forest Department.
	Engineering Mea	asures			Tyre		- After finalization, CAT Plan shall be
	Contour Bunding (ha)	434	409	324	171	1338	submitted to J&K Forest Departmen for approval and implementation
	(NOs)	50	25	30	20	125	thereof.
ii	All the com	All the commitments made during the public					ic - Shall be complied
	hearing shall	be fulf	filled co	omplet	ely.		<ul> <li>The R&amp;R Plan of the Project was approved by GOJK in 2013 afte consultations with all stakeholders and duly considering the aspirations and demands of local people.</li> </ul>
							- After obtaining approval of Board of Directors, the revised R&R Plan of Project stands submitted to JKPDD/JKPDC for approval by Standing Committee/ Administrative Council, UT Jammu and Kashmir.





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		- Approval of R&R Plan by GOJK awaited.	is
iii	The details of land holding of project affected persons whose land is being acquired shall be submitted to this ministry. The R&R benefits for the land losing households will be as per the National Rehabilitation and Resettlement Policy, 2007 (NRRP,2007) or as per the State Rehabilitation and Resettlement Policy.	<ul> <li>Previous records of Project yet to be handed over by JKSPDC to RHPCL.</li> <li>Rehabilitation &amp; Resettlement Package for Ratle HE Project was sanctioned be GOJK in 2013 vide Order No. 91-PD of 2013 dated 21.03.2013 for a total amount of Rs. 110.00 Crore.</li> </ul>	e y D
	Rehabilitation and Resettlement Policy, whichever is higher. Adequate publicity of the compensation package shall be made in the affected villages.	- The above R&R Package includes th Rehabilitation and Resettlement Pla (Rs. 20.00 Crore) prepared on th basis of NRRP 2007, Local Are Development Plan including Ski Development Plan (Rs. 60.00 Crore and Corporate Social Responsibilit Plan (Rs.30.00 Crore).	n e a 
		<ul> <li>A part of R&amp;R benefits as per the approved Plan stand already release to the beneficiaries however, the exact details of payment are awaited be RHPCL.</li> </ul>	d
		<ul> <li>As per R&amp;R Plan approved by GOJK in 2013, the Deputy Commissioner Kishtwar has been appointed a Commissioner R&amp;R for implementation of R&amp;R Plan.</li> </ul>	s,
		<ul> <li>Now, as per MoU, the estimate of previously approved R&amp;R Plan had been updated and submitted to JKPDD/ JKPDC and Department of DMRRR on 07.09.2021 and 05.11.2021 respectively for examination and approval thereof.</li> </ul>	s of d
		<ul> <li>Approval of BOD to the revised Cos Estimate of R&amp;R Plan stands conveyed to JKPDD/JKPDC vide letter dated 12.09.2022 for final approval of Plan by Standing Committee/ Administrative Council, UT Jammu and Kashmir.</li> </ul>	b b
		<ul> <li>Approval of R&amp;R Plan by GOJK is awaited.</li> </ul>	s -



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iv	A Monitoring Committee for R&R shall be constituted which must include representatives of project affected persons from SC/ST category and a women beneficiary.	The proposal for Monitoring Committee shall be submitted as soon as the R&R Plan is approved by GOJK.
V	Consolidation and compilation of muck shall be carried-out only in the designated muck dumping sites as submitted in the EIA/EMP report. As per the proposed muck disposal plan, out of 24.4 lakh m3 of muck to be generated due to excavation, about 50% (i.e.12.2 lakh m3) will be utilized for construction purpose and the remaining 12.2 lakh m3 will be dumped at the 3 designated areas in an allocated area of 30.59 ha. The identified muck dumping sites shall be at-least 30m horizontally away from the edge of the river corresponding to high flood level (HFL).	<ul> <li>The approach road to Muck Disposal area-II (left bank of river Chenab, d/s of Dam axis) has been developed by the Contractor.</li> <li>The approach road to Muck Disposal area-I (right bank of river Chenab, d/s of Dam axis) is under development.</li> <li>As intimated by Contractor, a part of excavated muck (approx. 22000CuM) has been utilized in construction of various approach roads and Tunnel works.</li> <li>The disposal of muck shall be carried out at designated muck dumping sites as per Muck Disposal Plan proposed in the EMP Report.</li> </ul>
vi	Muck dumping sites should be handed over to Forest Department only after restoration including plantations etc.	- The Muck dumping sites shall be handed over to Forest Department only after their restoration.
vii	A provision of an additional unit of 30 MW has been made in the project, which will be running for 24 hours continuously to maintain a minimum discharge of 33.43, cumecs/sec, during the lean season from November-February (About 27% of lean season) at the downstream, shall be strictly adhered-to. Monsoon flow shall be at least 30% of the Monsoon discharge.	The stipulated seasonal-flows shall be maintained during Project operation.
Viii	An Auto mechanism / by pass arrangement in dam design shall be made to ensure release of environmental flow water in event of the 30 MW turbine or when it is put under maintenance.	Shall be complied  - To ensure continuous release of environmental flow, the maintenance of 30MW turbine shall be planned only in Monseon season when all main Units are in operation 24X7.  - Also to ensure continuous release of environmental flow in the event of



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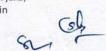
ix	Continuous Monitoring system for environmental	30MW turbine being under maintenance, the provision has been kept in Plant Control & Monitoring (SCADA) system for control of reservoir level and downstream release consideration for environmental flow.  Shall be complied
	flow measurement shall be installed and data shall be displayed at appropriate site for information of civil society, stake holders and regulators. Six monthly results shall be submitted to the regional Office of the Ministry and SPCB.	
х	Real time telemetry and data acquisition system including all weather hydro metrological stations shall be installed for in-flow monitoring and advance flood warning. Advance flood warning and advance communication systems shall be installed in consultation with the downstream District Authorities.	Shall be complied
xi	As proposed in the EMP, the compensatory Afforestation Programme on 277.84 ha of land with 13 plant species shall be undertaken in consultation with the State Forest Department. Native species should be preferred in plantation. The allocated grant of Rs.1467.59 lakhs for this purpose shall be fully utilized and not to be diverted for any other purpose.	<ul> <li>An amount of Rs.1773.07 Lakh has been paid to J&amp;K Forest Department towards diversion of Forest land for Ratle HE Project out of which Rs.179.71 Lakh has been paid towards Compensatory Afforestation Programme.</li> <li>The Kishtwar Forest Division, Doda Forest Division and Social Forestry Division, Kishtwar have been requested vide letter dated 17.05.2022 to provide the physical and financial progress of Compensatory Afforestation works carried out for Ratle HE Project, however, the details are yet to be received by RHPCL.</li> <li>The Utilization Certificate shall be taken from J&amp;K Forest Department to ensure that allocated grant is fully utilized and not diverted for any other purpose.</li> </ul>





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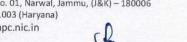
xii	Greenbelt development along the approach roads, residential areas, office complex, dam site and other working areas shall be undertaken. The allocated budget of Rs.73 lakhs for this purpose shall be fully utilized and not to be diverted to any other purpose.	<ul> <li>Matter under pursuance with J&amp;K Forest Department.</li> <li>Shall be undertaken through J&amp;K Forest Department as proposed in EMP.</li> </ul>
xiii	As proposed in the EMP, the Biodiversity Conservation and Wildlife Management Plans shall be taken up and implementation shall be included in the sixth monthly compliance report to be submitted to the Ministry, including its Regional Office.	<ul> <li>Biodiversity Conservation and Management Plan stands submitted to J&amp;K Forest Department vide letter No. RATLE/GM(C-I)/2022/62 dated 29.09.2022.</li> <li>Subsequently, matter discussed with J&amp;K Forest Department in review meeting</li> <li>After finalization of Biodiversity Conservation and Management Plan, the same shall be implemented through J&amp;K Forest Department as proposed in EMP.</li> </ul>
xiv	Indigenous plant species should be used for implementation of Biodiversity Management Plan and for Compensatory Afforestation. Expertise from R&D Centers may be used for propagation techniques. Provision should also be made to include researchers to implement these Plans and carrying out plantation.	Shall be complied
XV	Equipment likely to generate high noise levels shall meet the ambient noise standards as notified under the noise Pollution (Regulation and Control) Rules 2000, as amended in 2010 under Environment Protection Act (EPA), 1986. For this, necessary insulation arrangement etc. to be ensured.	Being complied





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xvi	A provision of Rs. 30 Crores earmarked towards the Local Area Development Activities (LADA) shall be fully utilized and not to be diverted for any other purpose. The implementation of activities as submitted to the Ministry shall be taken up as soon possible. In addition, a grant of Rs. 30 Crores earmarked for Corporate Social Responsibility (CSR) and Rs.30 Crores for skill development purpose shall also be duly utilized and not to be diverted for any other purpose.	Corporate Social Responsibility activities and Skill Development Plan
xvii	LADA activities may be undertaken by M/s Ratle Hydro Electric Project Pvt. Ltd to enhance delivery mechanism for operational point of view.	Implementation of LADA activities shall be ensured by Commissioner R&R/ District Administration in line with the approval of the R&R Package.
xviii	Tie-ups shall be made with existing city hospitals for disposal of Bio-medical waste in case district hospital at Kishtwar does not have the facility for handling biomedical waste as proposed in the report.	Shall be complied
xix	Any other clearance from other organization/department, if required, shall be obtained before commencement of the project	Shall be complied
SI. No.	General Conditions	Compliance status
ı	Adequate arrangement for providing free fuel like kerosene/wood/LPG shall be made at project cost for the labour engaged in the construction work so that indiscriminate felling of trees is prevented.	The LPG from Depot(s) at Drabshalla and Kishtwar is being used as fuel for labour colonies.
II	Medical facilities as well as recreational facilities shall also be provided to labourers.	- One Dispensary has been set up by Contractor at Project site which is being manned by One Doctor and 11 paramedical staff. Further, two Ambulances have also been deployed to cater to the medical requirements.





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		<ul> <li>One First Aid Centre cum Dispensary has also been established by Ratle Project at Shalimar Colony which is being manned by one Doctor and 2 paramedical staff.</li> </ul>
		<ul> <li>One Dispensary has been set up at Project site also by Project Authorities.</li> </ul>
		- Recreational facilities shall also be ensured by Contractor.
III	All the labourers to be engaged for construction works shall be thoroughly examined by health personal and adequately treated before issuing them work permit.	Being complied
iv	No fugitive dust emissions should be observed at the construction sites. Water sprinkling arrangements should be made to suppress the	<ul> <li>Regular water sprinkling at work sites is being carried out to supress the fugitive dust emissions.</li> </ul>
	fugitive emissions.	- Three water Tankers are deployed in fleet to cater to regular water sprinkling.
V	Potable drinking water and proper sanitary facilities shall be provided for the labour force and the local area people.	Being complied
vi	Restoration of construction area including dumping site of excavated materials shall be ensured by leveling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation.	Shall be complied
Vii	Environmental parameters shall be monitored regularly and six monthly reports shall be submitted to the regional Office of the Ministry and State Pollution Control Board for review.	- The sampling & monitoring of environmental quality parameters has been carried out at Project sites in August 2022. The test reports are enclosed herewith as <b>Appendix-II</b> .
viii	The project proponent shall also submit six monthly compliance reports of the stipulated EC conditions (both hard copies as well as by e-mail) to the respective Regional Office of MoEF and State Pollution Control Board. Monitoring report and compliance report shall be up-loaded on the web-site of project proponent.	- 06 monthly reports on the status of compliance of the stipulated EC conditions are being regularly submitted and the same are also being put on the website of RHPCL i.e. www.rhpcindia.com.





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	Other Conditions mentioned	in the EC Letter
5.	The Project Proponent shall provide full cooperation and all required documents, data and access to the Officials of Regional Office of MoEF who would be monitoring the implementation of environmental safeguards.	
6.	Besides the above stated conditions, M/s Ratle hydro Electric Project Pvt. Ltd and Government of Jammu & Kashmir shall also implement all other environmental safeguards, as proposed in the EIA/EMP report and other reports from time to time. The J&K Government may also like to monitor implementation of EMP at regular interval.	
7.	Any change in the scope of the project shall be intimated to the Ministry and fresh approval, if required, shall be taken from the Ministry.	- In case of requirement, the approval shall be taken from MoEF&CC, GOI.
10.	A Multi-disciplinary committee for monitoring the implementation of environmental safe guards during construction shall be constituted by the Project Proponent in consultation with the Ministry as early as possible. The Proponent shall suggest the members and their profile for approval of the Ministry. Proponent shall organize six monthly meetings of the committee and submit the monitoring report to the Ministry.	- Preparation of proposal under progress.
11.	A copy of the clearance letter shall be sent by the Proponent to local Panchayat, Zila parishad/Municipal Corporation, Urban local body and local NGO, if any, from whom suggestions / representations were received while processing the proposal. The clearance letter shall also be put on its web-sites by the project proponent.	Shall be complied  - Environment Clearance letter of Ratle HE Project has been put on the website of RHPCL i.e. www.rhpcindia.com.





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12.	The proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/committee and may also be seen at Website of the Ministry of Environment and Forests at http://www.envfor.nic.in.	HE Project has been put on the website of RHPCL i.e. www.rhpcindia.com.
13	After 5 years of the commissioning of the Project, a study shall be undertaken regarding impact of the project on the environment and downstream ecology. The study shall be undertaken by an independent agency, to be decided in consultation with the Ministry.	Shall be complied
14	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) including the respective Regional office of MoEF and Zonal Office of CPCB and SPCB.	- 06 monthly reports on the status of compliance of the stipulated EC conditions are being regularly submitted.

<sup>\*</sup>The previous records of Project regarding implementation of EMPs in compliance to the EC conditions are yet to be handed over by JKSPDC to RHPCL. The above information shall be suitably updated upon receipt of records and shall also be submitted to MoEF&CC for kind information.



# रतले हाइड्रोइलेक्ट्रिक पॉवरकॉरपोरेशन लिमिटेड

( एनएचपीसी लिमिटेड और जेकेएसपीडीसी लिमिटेड का एक संयुक्त उद्यम)

### RATLE HYDROELECTRIC POWER CORPORATION LIMITED

(A Joint Venture of NHPC Limited and JKSPDC Limited)

ANNEXURE-II

### Ratle HE Project (850 MW)

(Status Report as on 30.09.2022)

Ratle Hydro-Electric Project is a run-of-river scheme proposed on river Chenab in District Kishtwar of UT Jammu and Kashmir with installed capacity of 850MW. The Project envisages construction of 133mtr high (from deepest foundation level) Concrete Gravity Dam, an underground Power House to accommodate 4 units of capacity 205MW each and one Auxiliary Unit of capacity 30MW.

Initially, the construction of Project was taken up by J&K State Power Development Corporation through M/s GVK however the work was stopped in 2014. The plan for execution of Project was revived by Ministry of Power, GOI in 2018 in consultation with Govt. of Jammu and Kashmir. The MoU was signed on 03.02.2019 and subsequently, supplementary MoU was signed on 03.01.2021 between NHPC (51%) and JKSPDC (49%) for formation of new Joint Venture for execution of Ratle HE Project. The new JV with the name "Ratle Hydroelectric Power Corporation Ltd." was incorporated on 01.06.2021 for execution of 850MW Ratle HE Project.

### 1. Status of Clearances:

Clearance	Status
Appraisal by CEA	TEA accorded by CEA on 19.12.2012. TEA further transferred in the name of RHPCL vide communication No. CEA-SY-25-50/1/2019-PAC Division/438-43 dated 29.12.2021
Forest Clearance	Accorded by GOJK in favour of JKSPDC on 27.04.2012 (for diversion of 138.93 Ha Forest land) and on 05.03.2014 (for diversion of 29.13 Ha Forest land) respectively. Vide communication No. 15-01/2021-Jammu dated 18.01.2022 and 08.03.2022, approval accorded by MoEF&CC, GOI for change of User Agency from JKSPDC to RHPCL.
Environment Clearance	Accorded by MoEF&CC vide letter No. J-12011/39/2010-IA.I dated 12.12.2012. The EC was transferred by MoEF&CC in the name of RHPCL vide communication No. J-12011/39/2010-IA.I dated 27.09.2021.
Indus water Clearance	Accorded by MoWR (Indus Wing) on 16.08.2012. Vide letter dated 02.07.2021, MoWR (Indus Wing) has confirmed the validity of IWT Clearance of the Project in favour of RHPCL.
PIB/CCEA Clearance	Cabinet has accorded the Investment sanction of Rs. 5281.94Cr for implementation of 850MW Ratle HE Project communicated vide MoP letter dated 11.02.2021.





# रतले हाइड्रोइलेक्ट्रिक पॉवरकॉरपोरेशन लिमिटेड

( एनएचपीसी लिमिटेड और जेकेएसपीडीसी लिमिटेड का एक संयुक्त उद्यम)

### RATLE HYDROELECTRIC POWER CORPORATION LIMITED

(A Joint Venture of NHPC Limited and JKSPDC Limited)

### R&R Plan Approval

Vide Order No. 91-PDD of 2013 dated 21.03.2013, GOJK had accorded the sanction to R&R Package of the Project for a total amount of Rs. 110 Crore. As per MoU, the rates of R&R Plan are to be revised as per the rates provided in case of R&R Plan of Kishanganga HE Project of NHPC. Accordingly, the updated estimate of R&R Plan of Ratle HE Project was submitted by RHPCL to GOJK on 07.09.2021 and 05.11.2021 respectively for examination and approval.

Approval of BOD to the revised Cost Estimate of R&R Plan also stands conveyed to JKPDD/JKPDC vide letter dated 12.09.2022 for placing the proposal before Standing Committee/ Administrative Council, UT Jammu and Kashmir for accord of approval. Approval of R&R Plan by GOJK is awaited.

### 2. Award of construction works

The work for Turnkey Execution of Ratle HE Project has been awarded to M/s MEIL on 18.01.2022. The works of DT lining, excavation of MAT and CVT and other associated works are under progress by the Contractor. As per Investment sanction accorded to the Project by GOI, the Project is scheduled to be completed by February 2026.

### 3. Status of Land Acquisition and transfer of land to RHPCL

As per GOJK Order No. 55-JK (PDD) of 2022 dated 10-05-2022 (in terms of Administrative Council Decision No. 48/3/2022 dated 15-03-2022), State land measuring 233.96 Ha and Private land measuring 55.52 Ha has been acquired by JKSPDC through concerned Revenue Collectorate(s) of J&K Govt. for construction of Ratle HE Project in terms of Jammu and Kashmir State Land Acquisition Act. The Awarded amount on account of acquisition of land stands already deposited with concerned Revenue Collectorate(s) and after disbursement of compensation among the land Owners, the Land Awards have been issued by GOJK in favour of JKSPDC. Vide aforementioned Govt. Order, JKPDD has been authorized to lease out land acquired by JKPDC for development of 850MW Ratle HEP to Ratle Hydroelectric Power Corporation Limited (RHPCL). Further, sanction has also been accorded by GOJK for use of land measuring 138.81 Ha falling under river bed. The matter is under regular pursuance with JKSPDC for transfer of Project land to RHPCL. However, the formal lease deed is yet to be executed for transfer/leasing out of land to RHPCL.





# रतले हाइड्रोइलेक्ट्रिक पॉवरकॉरपोरेशन लिमिटेड

( एनएचपीसी लिमिटेड और जेकेएसपीडीसी लिमिटेड का एक संयुक्त उद्यम)

### RATLE HYDROELECTRIC POWER CORPORATION LIMITED

(A Joint Venture of NHPC Limited and JKSPDC Limited)

### 4. Status of R&R Plan Implementation

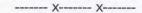
Vide Order No. 91-PDD of 2013 dated 21.03.2013 issued by GOJK in terms of Cabinet decision No. 44/7/2013 dated 15.03.2013, the sanction had been accorded to the R&R Package of 850MW Ratle HE Project for a total amount of Rs. 110.00 Crore. The above R&R Package sanctioned by GOJK includes the R&R Plan (Rs. 20.00 Crore), Local Area Development Plan including Skill Development Plan (Rs. 60.00 Crore) and Corporate Social Responsibility Plan (Rs.30.00 Crore). A part of R&R benefits as per the approved Plan stands already released to the beneficiaries however, exact details of payment shall be available only after the records of Project are handed over by JKSPDC to RHPCL.

Further, in compliance to Clause V(a) of the MOU signed for incorporation of RHPCL, the rates of the items of R&R Plan have been revised as per the rates provided in case of Kishanganga HE Project of NHPC and the revised R&R Plan of Ratle HE Project has been submitted to JKPDC / JKPDD and Department of DMRRR vide communication dated 07.09.2021 and 05.11.2021 for further examination and approval. On the request of JKPDD, the approval of BOD to the revised Cost Estimate of R&R Plan has also been obtained which stands communicated to JKPDD/JKPDC vide letter dated 12.09.2022 for placing the proposal before Standing Committee/ Administrative Council, UT Jammu and Kashmir for accord of approval. Approval of R&R Plan by GOJK is awaited.

### 5. Status of Infrastructure works

- Access roads leading to major structures like Dam, DT, Power House etc. are under construction / development.
- ii) The Colonies / residential structures have been partially constructed at two different sites which are being renovated for use.
- iii) A temporary Office setup has been developed at Project site, Drabshalla which has been connected with LT Distribution Network /Grid Power.
- iv) Construction Power: 33/11 KV receiving station for Ratle HE Project has been constructed (partially) through JKPDD and the same is not functional presently.
- v) Medical Dispensary: A Medical Dispensary has been set up at Project site and another at Shalimar Office which is being manned by one Doctor and two paramedical staff.
- vi) Construction of Security Barracks:The security posts have been constructed at work sites.
- vii) A Quality Control Lab has been established at site through Contractor and is operational.
- viii) Demarcation of land: The demarcation of Project land is under progress by District Revenue Authorities in association with Project Officials.

\*Note: The land records pertaining to Ratle HE Project are yet to be handed over by JKSPDC.







#### TEST REPORT

		ILOI ILLI OILI	And the second s				
Lab No.	120822N-E	-001		Page No. 1			
Customer		Megha Engineering & Infrastructures Limited					
		Ratle Hydroelectric project Vill- Drabshalla, Distt Kishtwar-182204 Jammu & Ka					
Type of Sample		Ambient Air					
Customer's Desc	cription of Sample	Ambient Air					
Quantity		1 No.					
Packing, Marking	gs	Thimble Packed in Polythene Pouch.					
Mode of Collection	de of Collection of Sample Sampling by Laboratories						
Work Order No.		NIL	Dated	12/08/2022			
Date of Receipt of	of Sample	12/08/2022					
Period of Analysi	is	12/08/2022 To 19/08/2022					
Sampling Team I	ldma	Idma Representative Team	Client	Mr. D.P. Shudhakar			
Sampling Location	n	Down Stream of Project Site					
Visual Observation	on	N/A					
Date of Sampling		10/08/2022					
Date of Reporting	9	19/08/2022					
Sampling Protoco	ol	IS: 5182					
Testing Protocol		NAAQS		Market of State State			
-							

#### RESULTS

	RESOLIS								
S.No.	Test Parameter	Units	Results	Specifications	Test Method				
	CHEMICAL TESTING (Ambient air)		-		7				
1	PM10	µg/m³	80.6	Max. 100	NAAQMS/36/2012-13(Gravimetric method)				
2	SO2	µg/m³	14.3	Max. 80	NAAQMS/36/2012-13(Improved West & Gaeke method)				
3	NO2	µg/m³	18.7	Max. 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)				
4	PM2.5	µg/m°	35.0	Max. 60	NAAQMS/36/2012-13(Gravimetric method)				
5	co	mg/m³	0.41	Max. 2	NAAQMS/36/2012-13 & IS 5182 Part 10:1999				
	The state of the s		The state of the s	A CONTRACTOR OF THE PARTY OF TH	A				

Authorised signatory

SUMAN

### Idma Laboratories Limited

Idma Corporate Park, 391, Industrial Area, Phase-I, Panchkula-134113,

Haryana (India)

Tel No. 0172-5064827, 5064830

Website: www.idmagroup.co.in Email: commercial@idmalab.co.in

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### **TEST REPORT**

Lab No.	120822N-E	-002	Page No. 1			
Customer		Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt Kishtwar-182204 Jammu & Kashmir				
Type of Sample		Ambient Air				
Customer's Descr	ription of Sample	Ambient Air				
Quantity		1 No.				
Packing, Marking	S	Thimble Packed in Polythene Pouch.				
Mode of Collectio	n of Sample	Sampling by Laboratories				
Work Order No.		NIL	Dated	12/08/2022		
Date of Receipt of	f Sample	12/08/2022				
Period of Analysis		12/08/2022 To 19/08/2022				
Sampling Team Id	dma	Idma Representative Team	Client	Mr. D.P. Shudhakar		
Sampling Location	1	Up Stream of Project Site		Name of the last o		
Visual Observatio	n	N/A				
Date of Sampling		10/08/2022				
Date of Reporting		19/08/2022				
Sampling Protoco	(manufacture and manufacture a	IS: 5182				
Testing Protocol		NAAQS	Part Debrasida			

### RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method			
	CHEMICAL TESTING (Ambient air)							
1	PM10	µg/m³	78.5	Max 100	NAAQMS/35/2012-13(Gravimetric method)			
2	SO2	µg/m³	13.9	Max 80	NAAQMS/36/2012-13(Improved West & Gaeke method)			
3	NO2	µg/m³	18.2	Max 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)			
4	PM2.5	µg/m³	32.6	Max 60	NAAQMS/36/2012-13(Gravimetric method)			
5	co	mg/m³	0.41	Max. 2	NAAQMS/36/2012-13 & IS 5182 Part 10:1999			
	Total Hermanian and American State of the Control o	THE PARTY OF THE P						

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### **TEST REPORT**

Lab No.	120822N-E	-003		Page No. 1		
Customer		Megha Engineering & Infrastructures Limit Ratle Hydroelectric project Vill- Drabshalla		4 Jammu & Kashmir		
Type of Sample		Ambient Air				
Customer's Desc	cription of Sample	Ambient Air				
Quantity		1 No.				
Packing, Marking	gs	Thimble Packed in Polythene Pouch.				
Mode of Collection	on of Sample	Sampling by Laboratories				
Work Order No.		NIL	Dated	12/08/2022		
Date of Receipt of	of Sample	12/08/2022				
Period of Analysi	S	12/08/2022 To 19/08/2022		armonestro semilento.		
Sampling Team I	ldma	Idma Representative Team	Client	Mr. D.P. Shudhakar		
Sampling Locatio	on .	Camp Area				
Visual Observation	on	N/A	The second secon			
Date of Sampling		10/08/2022				
Date of Reporting	9	19/08/2022				
Sampling Protoco	ol	IS: 5182				
Testing Protocol		NAAQS	an and the second			
	The second secon					

#### RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method		
	CHEMICAL TESTING (Ambient air)						
1	PM10	µg/m³	78.2	Max 100	NAAQMS/36/2012-13(Gravimetric method)		
2	SO2	µg/m³	14.5	Max. 80	NAAQMS/36/2012-13(Improved West & Gaeke method)		
3	NO2	ha/w <sub>3</sub>	18.2	Max 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)		
4	PM2.5	µg/m³	33.9	Max. 60	NAAQMS/36/2012-13(Gravimetric melhod)		
5	co	mg/m³	0.42	Max. 2	NAAQMS/36/2012-13 & IS 5182 Part 10:1999		

Reviewed by

Kartar Tech .

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		ILOI KLI OKI			
Lab No.	120822N-E	-004		Page No. 1	
Customer		Megha Engineering & Infrastructures Limit Ratle Hydroelectric project Vill- Drabshalla		4 Jammu & Kashmir	
Type of Sample		NOISE LEVEL (AMBIENT)			
Customer's Desc	ription of Sample	NOISE LEVEL (AMBIENT)			
Quantity		1 No.			
Packing, Marking	ļs .	Instrument at Site.			
Mode of Collection	on of Sample	Sampling by Laboratories			
Work Order No.		NIL	Dated	12/08/2022	
Date of Receipt of	of Sample	12/08/2022			
Period of Analysi	s	12/08/2022 To 19/08/2022			
Sampling Team I	dma	Idma Representative Team	Client	Mr. D.P. Shudhakar	
Sampling Locatio	n	Tunnel Face Portal Area, Down Stream Pro	oject.		
Visual Observation	on	N/A			
Date of Sampling		10/08/2022			
Date of Reporting		19/08/2022			
Sampling Protoco	ol	CPCB			
Testing Protocol		EPA/CPCB			

#### RESULTS

S.No.	Test Parameter	Units	Results	Limits, Day	Test Method
	CHEMICAL DISCIPLINE (Ambient Noise Levels)				
1	Lday	dB(A)	72.5	Max 75	EPA Guideline Manual July 2008
2	LNight	dB(A)	69.9	Max 70	EPA Guideline Manual July 2008

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  In case of any disperse, the terms & confirm of the text and entering a text angular prevail.



### **TEST REPORT**

Lab No. 120822N-E		-005		Page No. 1			
Customer		Megha Engineering & Infrastructures Limited					
		Ratle Hydroelectric project Vill- Drabshalla	, Distt Kishtwar-18220	4 Jammu & Kashmir			
Type of Sample		NOISE LEVEL (AMBIENT)					
Customer's Descr	ription of Sample	NOISE LEVEL (AMBIENT)					
Quantity 1 No.							
Packing, Marking	S	Instrument at Site.					
Mode of Collectio	n of Sample	Sampling by Laboratories					
Work Order No.		NIL Date		12/08/2022			
Date of Receipt of	f Sample	12/08/2022					
Period of Analysis	3	12/08/2022 To 19/08/2022					
Sampling Team Id	dma	Idma Representative Team	Client	Mr. D.P. Shudhakar			
Sampling Location	n	Up Stream of Project Site.					
Visual Observation	n	N/A					
Date of Sampling		10/08/2022					
Date of Reporting		19/08/2022					
Sampling Protoco		СРСВ					
Testing Protocol		EPA/CPCB	mengers are supported and appropriate of				

### RESULTS

S.No.	Test Parameter	Units	Results	Limits, Day	Test Method
	CHEMICAL DISCIPLINE (Ambient Noise Levels)	*		•	-
1	Lday	dB(A)	71.4	Max 75	EPA Guideline Manual July 2008
2	LNight	dB(A)	51.8	Max 70	EPA Guideline Manual July 2008

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Tech Mgr

nchk

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### **TEST REPORT**

Lab No.	120822N-E	-006 Page No.					
Customer		Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt Kishtwar-182204 Jammu & Kashmir					
Type of Sample		NOISE LEVEL (AMBIENT)					
Customer's Descr	ription of Sample	NOISE LEVEL (AMBIENT)					
Quantity		1 No.					
Packing, Marking	S	Instrument at Site.					
Mode of Collection	n of Sample	Sampling by Laboratories					
Work Order No.		NIL	Dated	12/08/2022			
Date of Receipt of	f Sample	12/08/2022					
Period of Analysis		12/08/2022 To 19/08/2022					
Sampling Team Id	dma	Idma Representative Team	Client	Mr. D.P. Shudhakar			
Sampling Location	1	Camp Area					
Visual Observation	n	N/A					
Date of Sampling		10/08/2022					
Date of Reporting		19/08/2022	19/08/2022				
Sampling Protocol		CPCB					
Testing Protocol		EPA/CPCB					

### RESULTS

				Control of the State of the Control	
S.No.	Test Parameter	Units	Results	Limits, Day	Test Method
	CHEMICAL DISCIPLINE (Ambient Noise Levels)	*		*	-
1	Lday	dB(A)	60.7	Max 75	EPA Guideline Manual July 2008
2	LNight	dB(A)	58.6	Max 70	EPA Guideline Manual July 2008

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### **TEST REPORT**

Lab No.	120822N-E-	007	007 Page N					
Customer		Megha Engineering & Infrastructures Limited						
		Ratle Hydroelectric project Vill- Drabshall	a, Distt Kishtwar-18220	4 Jammu & Kashmir				
Type of Sample		Surface Water						
Customer's Descr	ription of Sample	Surface Water						
Quantity		5 Ltr.						
Packing, Marking	s, Seal & Quantity	Plastic Can.						
Mode of Collectio	n of Sample	Sampling by Laboratories						
Work Order No.		NIL	Dated	12/08/2022				
Date of Receipt of	f Sample	12/08/2022						
Period of Analysis		12/08/2022 To 19/08/2022						
Sampling Team Id	dma	Idma Representative Team	Client	Mr. D.P. Shudhakar				
Sampling Location	n	Down Stream Chenab River		The second of th				
Visual Observatio	n	N/A						
Date of Sampling		10/08/2022						
Date of Reporting		19/08/2022						
Sampling Protoco	1	IS: 3025 (P-1) 1987						
Testing Protocol IS: 3025								

#### RESULTS

			the state of the s	
S.No.	Test Parameter	Units	Results	Test Method
	Chemical Testing (Water)			•
1	pH		7.36	APHA 4500H+B 23rd Edition, 2017
2	Chloride as CI	mg/L	10.3	APHA 4500Cl- B 23rd Edition, 2017
3	Hardness Total (as CaCO3)	mg/L	51	APHA 2340C 23rd Edition, 2017
4	Oil & Grease	mg/L	<2.5	APHA 5500 B 23rd Edition, 2017
5	Total Dissolved Solids	mg/L	95	APHA 2540 C 23rd Edition, 2017
6	Sulphate as SO4	mg/L	7.3	APHA 4500-SO <sup>2</sup> -4 E 23rd Edition, 2017
7	Iron as Fe	mg/L	0.036	APHA 3125 B 23rd Edition 2017
8	Lead as Pb	mg/L	0.001	APHA 3125 B 23rd Edition 2017
9	Total Coliform Bacteria	/100ml		IS 15185:2016

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### TEST REPORT

Lab	No. 120822N-E-007		The Control of the Control	
Lan	12002214-E-007			Page No. 2/2
S.No.	Test Parameter	Units	Results	Test Method
10	Faecal Coliforms			
11	Biochemical Oxygen Demand (3-days at 27 °C)	mg/L	<2	CPCB Guide Manual:Water & waste water Analysis
12	Chemical Oxygen Demand	mg/L	3.92	CPCB Guide Manual:Water & waste water Analysis

End of Report\*\*

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### **TEST REPORT**

Lab No.	120822N-E	-008		Page No. 1/2		
Customer		Megha Engineering & Infrastructures Limited Rafle Hydroelectric project Vill- Drabshalla, Distt Kishtwar-182204 Jammu & Kashmir				
Type of Sample		Surface Water				
Customer's Descr	ription of Sample	Surface Water				
Quantity		5 Ltr.				
Packing, Marking:	s, Seal & Quantity	y Plastic Can.				
Mode of Collection	n of Sample	Sampling by Laboratories				
Work Order No.		NIL	Dated	12/08/2022		
Date of Receipt of	f Sample	12/08/2022				
Period of Analysis	- constant and a second	12/08/2022 To 19/08/2022				
Sampling Team Id	ima	Idma Representative Team	Client	Mr. D.P. Shudhakar		
Sampling Location	)	Up-Stream Chenab River.				
Visual Observation	n	N/A				
Date of Sampling		10/08/2022				
Date of Reporting		19/08/2022				
Sampling Protocol		IS: 3025 (P-1) 1987				
Testing Protocol		IS: 3025				

#### RESILITS

-	The second secon		KLOOLIO	
S.No.	Test Parameter	Units	Results	Test Method
	Chemical Testing ( Water )			
1	pH	- 1	7.38	APHA 4500H+B 23rd Edition, 2017
2	Chloride as Ci	mg/L	10.5	APHA 4500Cl- B 23rd Edition, 2017
3	Hardness Total (as CaCO3)	mg/L	53	APHA 2340C 23rd Edition, 2017
4	Oil & Grease	mg/L	<2.5	APHA 5500 B 23rd Edition, 2017
5	Total Dissolved Solids	mg/L	91	APHA 2540 C 23rd Edition, 2017
6	Sulphate as SQ4	mg/L	8.5	APHA 4500-SO3-4 E 23rd Edition, 2017
7	Iron as Fe	mg/L	0.035	APHA 3125 B 23rd Edition 2017
8	Lead as Pb	mg/L	0.001	APHA 3125 B 23rd Edition 2017
9	Total Coliform Bacteria	/100ml		IS 15185:2016

Reviewed by

Kartar Singt Tech. Nigr. Authorised signatory

Tech Mgr

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Idma Laboratories Limited

Idma Corporate Park, 391, Industrial Area, Phase-I.

Panchkula-134113, Haryana (India)

Tel No. 0172-5064827, 5064830

Website: www.idmagroup.co.in Email: come a 1415 dinalabas in Disolaimer

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### TEST REPORT

Lab	No.	120822N-E-008			Pa	ge No. 2/2
S.No.	Test Paramet	Test Parameter		Results	Test Method	
10	Faecal Coliforms					-
11	Biochemical Oxygen Demand (3-days at 27 °C)		mg/L	<2	CPCB Guide Manual:Water & waste wast	ater
12	Chemical Oxygen D	emand	mg/L	4.3	CPCB Guide Manual:Water & waste wa Analysis	aler

"End of Report" Reviewed by

Authorised signatory

#### Idma Laboratories Limited

Idma Corporate Park, 391, Industrial Area, Phase-I, Panchkula-134113, Haryana (India) Tel No. 0172-5064827, 5064830 Website: www.idmagroup.co.in

Email: com recla@frinet hillo in

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#### TEST REPORT

Lab No.	120822N-E-0	009		Page No. 1/3		
Customer		Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt Kishtwar-182204 Jammu & Kashmir				
Type of Sample		Drinking Water				
Customer's Desc	cription of Sample	Drinking Water				
Quantity		5 Ltr.+250 ml				
Packing, Marking	rkings, Seal & Quantity Plastic Can+ Glass Bottle.					
Mode of Collecti	on of Sample	Sampling by Laboratories				
Work Order No.		NIL	Dated	12/08/2022		
Date of Receipt	of Sample	12/08/2022				
Period of Analys	is	12/08/2022 To 19/08/2022				
Sampling Team	Idma	Idma Representative Team	Client	Mr. D.P. Shudhakar		
Sampling Location	on	Camp Area				
Visual Observati	on	N/A				
Date of Sampling	g	10/08/2022				
Date of Reportin	g	19/08/2022				
Sampling Protoc	col	IS: 3025 (P-1) 1987				
Testing Protocol		IS 10500: 2012				

#### RESULTS

				The second secon		
S.No.	Test Parameter	Units	Results	Limit of IS	: 10500-2012	Test Method
				Requirement (Acceptable Limit)	Permissible Limit in absence of alternate Source	
				MARKON - III		
	Chemical Testing ( Water)					
1	Color	Hazen	1	Max. 5	Max. 15	APHA 2120 B&C 23rd Edition, 2017
2	Odour	Qualitative	Agreeable	Agreeable	Agreeable	APHA 2150 B 23rd Edition, 2017
3	pH		7.19	6.5-8.5	No Relaxation	APHA 4500H+B 23rd Edition, 2017
4	Alkalinity as CaCO3	mg/L	72	Max. 200	Max. 600	APHA 2320 B 23rd Edition, 2017
5	Boron	mg/L	BLQ (LOQ-0.01)	Max. 0.5	Max. 2.4	APHA 3125 B 23rd Edition, 2017
6	Calcium as Ca	mg/L	14.4	Max. 75	Max. 200	APHA 3500-Ca B 23rd Edition, 2017

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SUMAN SHARMA

Tech Mg

Idma Laboratories Limited

Idma Corporate Park, 391, Industrial Area, Phase-I,

Panchkula-134113, Haryana (India)

Tel No. 0172-5064827, 5064830 Website: www.idmagroup.co.in

Email: commercial@idmalab.co.in



### **TEST REPORT**

Lab I	No. 120	822N-E-009				distribution of the second	Page No. 2/3
S.No.	Test Parameter	Units	Results	Limit of IS: 10500-2012		Te	st Method
				Requirement (Acceptable Limit)	Permissible Limit in absence of alternate Source		
7	Chloride as CI	mg/L	21.9	Max 250	Max. 1000	APHA 4500CI- B 23rd	Edition, 2017
8	Magnesium as Mg	mg/L	7.05	Max 30	Max. 100	APHA 3500 Mg B 231	d Edition 2017
9	Cyanide as CN	mg/L	BLQ (LOQ-0.01)	Max. 0.05	No Relaxation	APHA 4500CN-C&F	23rd Edition, 2017
10	Fluoride as F	mg/L	0.04	Max. 1	Max. 1.5	CPCB Guide Manual: Analysis	Water & waste water
11	Hardness Total (as CauO3)	mg/L	65	Max 200	Max 600	APHA 2340C 23rd Ed	lition, 2017
12	Total Dissolved Solids	mg/L	123	Max. 500	Max. 2000	APHA 2540 C 23rd E	dition, 2017
13	Sulphate as SO4	mg/L	10.2	Max. 200	Max. 400	APHA 4500-SO2-4 E	23rd Edition, 2017
14	Turbidity	NTU	<1	Max. 1	Max. 5	APHA 3130 B 23rd Edition, 2017	
15	Taste	Qualitative	Agreeable	Agreeable	Agreeable	APHA 2160 B 23rd E	dition, 2017
16	Residual Free chlorine	mg/L	0.21	Min. 0.2	1	APHA 4500Cl B 23rd Edition, 2017	
17	Cadmium	mg/L	BLQ (LOQ-0.0005	Max. 0.003	No Relaxation	APHA 3125 B 23rd Edition 2017	
18	Copper as Cu	mg/L	BLQ (LOQ-0 0005	Max. 0.05	Max 1.5	APHA 3125 B 23rd E	dition 2017
19	Iron as Fe	mg/L	0.035	Max. 1.0	No Relaxation	APHA 3125 B 23rd E	dition 2017
20	Manganese as Mn	mg/L	BLQ (LOQ-0.0005	Max. 0.1	Max 0.3	APHA 3125 B 23rd E	fition 2017
21	Nickel as Ni	mg/L	BLQ (LOQ-0.0005 )	Max 0.02	No Relaxation	APHA 3125 B 23rd Edition 2017	
22	Zinc as Zn	mg/L	0.080	Max. 5	Max 15	APHA 3125 B 23rd E	dition 2017
23	Aluminum as Ai	mg/L	2LQ (LOQ-0.0005)	Max. G.03	Max. 0.2	APHA 3125 B 23rd E	dilion 2017
24	Selenium as Se	mg/L	BLQ (LOG-0.0005	Max. 0,01	No Relaxation	APHA 3125 B 23rd E	dition 2017

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