



रतले हाइड्रोइलेक्ट्रिक पावर कॉर्पोरेशन 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-I

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

SIX MONTHLY COMPLIANCE REPORT ON ENVIRONMENTAL ASPECTS
(for the period October 2022 to March 2023)

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.1 dated 12.12.2012 MoEF&CC letter No. J-12011/39/2010-IA.1 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 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



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5	<p>Address for Correspondence</p> <p>(a) Address of concerned Project Head (with Pin code, Telephone/Fax no.)</p> <p>(b) Address of concerned HOD in Corporate Office (with Pin code, Telephone/Fax no.)</p>	<p>(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</p> <p>(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</p>																										
6	<p>Details of Environmental Management Plan</p>	<p>Environmental Management Plans to be implemented at the Project as provided in the EMP Report are as follows:</p> <table border="1" data-bbox="889 1213 1417 1782"><thead><tr><th>Sl.No.</th><th>Environmental Management Plan</th></tr></thead><tbody><tr><td>1</td><td>Biodiversity Management Plan</td></tr><tr><td>2</td><td>Catchment Area Treatment Plan</td></tr><tr><td>3</td><td>Fishery Development and Management Plan</td></tr><tr><td>4</td><td>Solid Waste Management Plan</td></tr><tr><td>5</td><td>Public Health Delivery System</td></tr><tr><td>6</td><td>Energy Conservation Measures</td></tr><tr><td>7</td><td>Muck Disposal Plan</td></tr><tr><td>8</td><td>Landscaping & Restoration of Quarry & Construction Areas</td></tr><tr><td>9</td><td>Air & Water Environment Management Plan</td></tr><tr><td>10</td><td>Reservoir Rim Treatment Plan</td></tr><tr><td>11</td><td>Compensatory Afforestation Plan</td></tr><tr><td>12</td><td>Rehabilitation & Resettlement Plan</td></tr></tbody></table>	Sl.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	12	Rehabilitation & Resettlement 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 (Land details)	Forest Land : 138.93 ha Private Land : 55.52 ha State/Govt. Land : 233.96 ha River Bed land : 138.81 ha Total Land : 567.22 ha		
		Note:- i) Above land details are as per GOJK Order No. 55-JK(PDD) of 2022 dated 10-05-2022. ii) Vide GOJK Order No.108-FST of 2014 dated 05.03.2014, sanctioned has been accorded for diversion of 29.13ha social forestry land, which is part of 233.96ha State land mentioned above.		
8	Breakup of Project affected population with enumerations of those losing house/dwelling units only, agriculture land only, both house and agriculture land and landless labours / artisans. (a) SC/ST/Adivasis (b) Others	Details of PAFs Displaced PAFs : 80 Non Displaced PAFs : 160 Total PAFs : 240 a) Scheduled Tribe : 17 families b) Rural Artisans/ Small Traders : 62 families		
9	Financial Details (a) Project cost as originally planned and subsequent revised estimates and the year of price reference (b) Actual expenditure incurred on the Project so far	a) Original TEA approved cost (2012): Rs. 5517.02 Cr (completion cost) Cabinet Investment sanction approved (2021): Rs.5281.94Cr (Nov 2018 PL) 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		



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	<p>(c) Allocation made for Environment Management Plan</p> <p>(d) Actual expenditure incurred on EMP so far</p>	<p>Expenditure incurred by RHPCL : Rs. 259.93 Cr (till March 2023)</p> <p>Allocations for EMP : Rs. 262.35 Cr (as approved by MoEF&CC)</p> <p>Details of expenditure already incurred on EMP prior to formation of RHPCL i.e. 01.06.2021 shall be incorporated in the report as and when the records of the Project are handed over by JKSPDC.</p> <p>The details of expenditure incurred on EMP upto March 2023 as available with the Project is given below:-</p> <p>i)Payment released on account of Forest Clearance: Rs.1773.07 Lakh (including Rs.179.71 Lakh on account of Compensatory Afforestation Programme)</p> <p>ii) Solid Waste Management Plan* : Rs.3.84 Lakh</p> <p>iii)Public health delivery system* : Rs.84.60 Lakh</p> <p>iv)Energy Conservation measure* : Rs.35.59 Lakh</p> <p>v)Muck Disposal Plan* : Rs.5.50 Cr</p> <p>vi)CSR Plan : Rs.44.14 Lakh</p> <p>vii)Air & Water Environment Management Plan*: Rs. 43.20 Lakh</p> <p>viii)Environmental Monitoring Programme*: Rs.6.58 Lakh</p> <p>*also includes the expenditure incurred by Contractor as per the Contract Agreement</p>
10	<p>Forest Land Requirements</p> <p>(a) Status of approval for diversion of Forest Land for non-forestry use</p>	<p>(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 use of 29.13 Ha Social Forestry land vide Order No. 108-FST of 2014 dated 05.03.2014. Vide communication No. 08.03.2022, approval accorded by MoEF&CC, GOI for change of User Agency from JKSPDC to RHPCL.</p>



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	(b) The status of clear felling of trees in Forest Land	(b) Clear felling status:- The status shall be suitably updated upon receipt of records from JKSPDC.
11	Status of Construction (a) Date of commencement (actual and/or planned) (b) Date of completion (actual and/or planned)	The work for Turnkey Execution of Ratle HE Project has been awarded to M/s MEIL on 18.01.2022. (a) Date of commencement of major works of the Project (actual): 18.01.2022 (b) Date of completion (planned): 10.02.2026 (60 months from the date of Investment approval).
12	Reasons for the delay (If the Project is yet to be started)	Not Applicable. (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 Monitoring Committee (b) By Regional Office	----- The status shall be suitably updated upon receipt of records from JKSPDC.
14.	Brief note on the status of compliance of the conditions stipulated by MOEF&CC	Details enclosed as Appendix-I .



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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)

Sl. No.	Specific Conditions	Compliance Status																																																												
i	<p>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.</p> <table border="1"><thead><tr><th>Item</th><th>I Year</th><th>II Year</th><th>III Year</th><th>IV Year</th><th>Total</th></tr></thead><tbody><tr><td colspan="6">Biological Measures</td></tr><tr><td>Afforestation (ha)</td><td>2243</td><td>1747</td><td>923</td><td>-</td><td>4913</td></tr><tr><td>Enrichment Plantation (ha)</td><td>-</td><td>112</td><td>79</td><td>-</td><td>191</td></tr><tr><td>Pasture Development</td><td>-</td><td>376</td><td>195</td><td>-</td><td>591</td></tr><tr><td>Nursery Development (Nos)</td><td>3</td><td>-</td><td>-</td><td>-</td><td>3</td></tr><tr><td>Watch & ward (Nos)</td><td>240</td><td>240</td><td>240</td><td>240</td><td>960</td></tr><tr><td colspan="6">Engineering Measures</td></tr><tr><td>Contour Bunding (ha)</td><td>434</td><td>409</td><td>324</td><td>171</td><td>1338</td></tr><tr><td>Check Dams (N0s)</td><td>50</td><td>25</td><td>30</td><td>20</td><td>125</td></tr></tbody></table>	Item	I Year	II Year	III Year	IV Year	Total	Biological Measures						Afforestation (ha)	2243	1747	923	-	4913	Enrichment Plantation (ha)	-	112	79	-	191	Pasture Development	-	376	195	-	591	Nursery Development (Nos)	3	-	-	-	3	Watch & ward (Nos)	240	240	240	240	960	Engineering Measures						Contour Bunding (ha)	434	409	324	171	1338	Check Dams (N0s)	50	25	30	20	125	<p>- 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.</p> <p>- CAT Plan again submitted to J&K Forest Department vide letter dated 29.09.2022.</p> <p>- In order to review and finalize the CAT Plan, following meetings were held by the J&K Forest Department:</p> <ul style="list-style-type: none">by Nodal Officer(FCA)/CCF, J&K on dated 25.11.2022.by Director, Department of Soil and Water Conservation, J&K on dated 30.01.2023.by Additional PCCF, Jammu on dated 01.02.2023. <p>- It has been suggested by the J&K Forest Department to make the CAT Plan site specific as per the relevant working Plans and to justify the area to be treated with respect to the catchment. Further updation of CAT Plan along with ground truthing also required.</p> <p>- Proposal is under preparation for microplanning.</p> <p>- The finalized CAT Plan shall be submitted to J&K Forest Department for approval and implementation thereof.</p>
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CIN: U40105JK2021GOI012380 E-mail id: rhpc@nhpc.nic.in



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ii	All the commitments made during the public hearing shall be fulfilled completely.	<ul style="list-style-type: none">- Shall be complied- The R&R Plan of the Project was approved by GOJK in 2013 after consultations with all stakeholders and duly considering the aspirations and demands of local people.- As per provisions of MoU, the R&R Plan of Project has been updated in line with the rates provided in case of Kishanganga HE Project, J&K.- The revised R&R Plan has been submitted to GOJK which was discussed the meeting of the Standing Committee, J&K held on 11.01.2023 under the chairmanship of Chief Secretary, UT J&K.- The updated R&R Plan of Project shall be implemented as may be approved by Standing Committee/ Administrative Council, UT Jammu and Kashmir.
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, whichever is higher. Adequate publicity of the compensation package shall be made in the affected villages.	<ul style="list-style-type: none">- R&R Package for Ratle HE Project was sanctioned by GOJK in 2013 vide Order No. 91-PDD of 2013 dated 21.03.2013 for a total amount of Rs. 110.00 Crore.- The above R&R Package includes the Rehabilitation and Resettlement Plan (Rs. 20.00 Crore) prepared on the basis of NRRP 2007, Local Area Development Plan including Skill Development Plan (Rs. 60.00 Crore) and Corporate Social Responsibility Plan (Rs.30.00 Crore).- As per R&R Plan approved by GOJK in 2013, the Deputy Commissioner, Kishtwar has been appointed as Commissioner R&R for implementation of R&R Plan.- A part of R&R benefits as per approved Plan stand already released to the beneficiaries however, the exact details of payment are awaited from JKSPDC.



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		<ul style="list-style-type: none">- Now, as per MoU, the previously approved R&R Plan has 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.- In September 2022, BOD of RHPCL has accorded approval to the revised Cost Estimate of R&R Plan.- The R&R Plan of Ratle HE Project came up for discussion in the meeting of the Standing Committee held on dated 11.01.2023 under the Chairmanship of Chief Secretary, UT J&K, however, the approval of R&R Plan by GOJK is yet awaited.- JKPDD and Department of DMRRR, J&K have been requested for expediting the approval of R&R Plan by GOJK so that R&R benefits could be timely released to the beneficiaries.
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.	<ul style="list-style-type: none">- The proposal for constitution of Monitoring Committee shall be submitted shortly in line with approval of the R&R Plan 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 style="list-style-type: none">- The approach road to Muck Disposal area-II (left bank of river Chenab, d/s of Dam axis) has been developed by the Contractor.- The approach road to Muck Disposal area-I (right bank of river Chenab, d/s of Dam axis) is under development.- As per the details provided by the Contractor, most of the excavated muck has been utilized in processing of aggregates, Tunnel works, construction of approach roads, protection works (Crate walls, RR Masonry walls etc.).- The disposal of muck shall be carried out at designated muck dumping sites as per Muck Disposal Plan proposed in the EMP Report.



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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 complete 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 Monsson season when all main Units are in operation 24X7. - Also to ensure continuous release of environmental flow in the event of 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.
ix	Continuous Monitoring system for environmental 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.	Shall be complied
x	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 - Case is under process for purchase of Automatic Water Level Recorder (AWLR) for its installation on river Chenab (upstream of Dam site), as part of Early Flood Warning System.



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xi	<p>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.</p>	<ul style="list-style-type: none">- An amount of Rs.1773.07 Lakh has been paid to J&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.- The Kishtwar Forest Division, Doda Forest Division and Social Forestry Division, Kishtwar have been requested to provide the physical and financial progress of Compensatory Afforestation works carried out for Ratle HE Project, however, the details from Forest Department are awaited.- The Utilization Certificate shall be taken from J&K Forest Department to ensure that allocated grant is fully utilized and not diverted for any other purpose.
xii	<p>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.</p>	<ul style="list-style-type: none">- Matter under pursuance with J&K Forest Department.- Shall be undertaken through J&K Forest Department as proposed in EMP Report.
xiii	<p>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.</p>	<ul style="list-style-type: none">- Biodiversity Conservation and Management Plan stands submitted to J&K Forest Department vide letter No. RATLE/GM(C-1)/2022/62 dated 29.09.2022.- Vide letter dated 14.11.2022, J&K Forest Department has been requested to expedite the approval of said Plan.- Subsequently, the matter was discussed with J&K Forest Department in review meeting held by Nodal Officer (FCA)/Chief Conservator of Forests, UT J&K on dated 25.11.2022.- The matter was again discussed in a meeting chaired by Conservator of

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10



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		Forests, Chenab Circle, Doda at Kishtwar on 15.03.2023. - J&K Forest Department has been requested for an early approval of Biodiversity Conservation and Management Plan and its timely implementation.
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
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.	- Implementation of Local Area Development Activities, Corporate Social Responsibility activities and Skill Development Plan shall be ensured by Commissioner R&R / Deputy Commissioner, Kishtwar in line with approval of R&R Package by GOJK.
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 R&R Package by GOJK.

कार्यालय: कमरा नंबर 08, ब्लॉक नंबर 02, एनएचपीसी क्षेत्रीय कार्यालय, जेडीए वाणिज्यिक परिसर नंबर 01, नरवाल, जम्मू, (जम्मू और कश्मीर) - 180006

Office : Room No. 08, Block No. 02, NHPC Regional Office, JDA Commercial Complex No. 01, Narwal, Jammu, (J&K) - 180006

Camp Office : NHPC Office Complex, Sector-33, Faridabad - 121003 (Haryana)

CIN: U40105JK2021GOI012380 E-mail id: rhpci@nhpc.nic.in

11



रतले हाइड्रोइलेक्ट्रिक पावर कॉर्पोरेशन लिमिटेड

(एनएचपीसी लिमिटेड और जेकेएसपीडीसी लिमिटेड का एक संयुक्त उद्यम)

RATLE HYDROELECTRIC POWER CORPORATION LIMITED

(A Joint Venture of NHPC Limited and JKSPDC Limited)

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
Sl. No.	General Conditions	Compliance status
i	Adequate arrangement for providing free fuel like kerosene/wood/LPG shall be made at project cost for the labour engaged in the construction work so that indiscriminate felling of trees is prevented.	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.	<ul style="list-style-type: none">- One Dispensary has been set up by Contractor at Project site which is being manned by One Doctor and 15 paramedical staff. Further, two Ambulances have also been deployed to cater to the health requirements of their staff and labour force.- One Dispensary has been set up at Project site by Project Authorities also.- In addition, one First Aid Centre cum Dispensary has been established by Ratle Project at Shalimar Colony which is being manned by one Doctor and 2 paramedical staff.- Recreational facilities shall also be ensured by the 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.	Required health measures being taken up.



रतले हाइड्रोइलेक्ट्रिक पावर कॉरपोरेशन लिमिटेड

(एनएचपीसी लिमिटेड और जेकेएसपीडीसी लिमिटेड का एक संयुक्त उद्यम)

RATLE HYDROELECTRIC POWER CORPORATION LIMITED

(A Joint Venture of NHPC Limited and JKSPDC Limited)

iv	No fugitive dust emissions should be observed at the construction sites. Water sprinkling arrangements should be made to suppress the fugitive emissions.	- Regular water sprinkling at work sites is being carried out to suppress the fugitive dust emissions. - Fleet of three water Tankers is in service 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 levelling, filling up of burrow pits, landscaping etc. The area should be properly treated with suitable plantation.	- Restoration of construction areas with proper treatment and plantation of suitable species shall be taken up upon completion of construction activities.
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 March 2023. The test reports are enclosed herewith as Appendix-II .
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 .
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.	Being complied



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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.	Being complied
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.	- Proposal for constitution of multi-disciplinary committee; shall be submitted shortly.
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.	- Environment Clearance letter of Ratle HE Project has been put on the website of RHPCL i.e. www.rhpcindia.com .
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 .	- Environment Clearance letter of Ratle HE Project has been put on the website of RHPCL i.e. www.rhpcindia.com .

कार्यालय: कमरा नंबर 08, ब्लॉक नंबर 02, एनएचपीसी क्षेत्रीय कार्यालय, जेडीए वाणिज्यिक परिसर नंबर 01, नरवाल, जम्मू (जम्मू और कश्मीर) - 180006

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CIN: U40105JK2021GOI012380 E-mail id: rhpccl@nhpc.nic.in



रतले हाइड्रोइलेक्ट्रिक पावर कॉर्पोरेशन लिमिटेड
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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.

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

----- x----- x-----



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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 31.03.2023)

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.
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



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RATLE HYDROELECTRIC POWER CORPORATION LIMITED

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amount of Rs. 110 Crore. As per provisions of MoU, the R&R Plan of Project has been updated in line with the rates provided in case of Kishanganga HE Project, J&K and submitted to GOJK for approval. The 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, Dam stripping, excavation of MAT, CVT and other associated components 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 mentioned in 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 dated 10.05.2022, JKPDD has been authorized to lease out land acquired by JKPDC for development of 850MW Ratle HEP to RHPCL. The sanction has also been accorded by GOJK for use of land measuring 138.81 Ha falling under river bed. The land acquired for Ratle HE Project has been physically taken over by RHPCL from JKSPDC. However, the formal lease deed for Project land is yet to be executed for which the matter is being regularly pursued with JKSPDC/JKPDD.

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, the exact details of payment are awaited from JKSPDC.

In compliance to provisions of the MoU signed for incorporation of RHPCL, the rates of various provisions have been updated as per the rates provided in case of Kishanganga HE Project of NHPC and the updated R&R Plan of Ratle HE Project has



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RATLE HYDROELECTRIC POWER CORPORATION LIMITED

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been submitted to JKPDC / JKPDD and Department of DMRRR vide communication dated 07.09.2021 and 05.11.2021 for further examination. In September 2022, BOD of RHPCL has accorded approval to the revised Cost Estimate of R&R Plan for placing the proposal before Standing Committee/ Administrative Council, UT J&K. The R&R Plan of Ratle HE Project was discussed in the meeting of the Standing Committee held on dated 11.01.2023 under the Chairmanship of Chief Secretary, UT J&K, however, the approval of R&R Plan by GOJK is yet awaited. JKPDD and Department of DMRRR, J&K have been requested for expediting the approval of R&R Plan by GOJK so that R&R benefits could be timely released to the beneficiaries.

5. Status of Infrastructure works

- i) The construction of access roads leading to major structures like Dam, DT, Power House etc. have been completed.
- ii) The layout for the Project colony at Drabshalla is being finalized by the team of Architects hired by RHPCL.
- iii) A temporary Office setup has been developed at Project site, Drabshalla and the same is under use by the Project.
- iv) 33/11 KV receiving station for Ratle HE Project has been constructed (partially) through JKPDD. The matter is being taken up with concerned Department of J&K Govt. for bringing the same into functional stage.
- v) A 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) The security posts have also been constructed at work sites.
- vii) A Quality Control Lab has been established at site through Contractor and is operational.
- viii) The demarcation of Project land is under progress by District Revenue Authorities in association with Project Officials.

----- X----- X-----



Idma Laboratories Limited

Appendix-II

TEST REPORT

Lab No.	010423N-E-020		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 Description of Sample	Ambient Air			
Quantity	1 No.			
Packing, Markings	Filter Paper Packed in polythene Pouch.			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL	Dated	20/03/2023	
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team		Client	Mr. DP Sudhakar
Sampling Location	Camp Area			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	NAAQMS/36/2012 13 USEPA:2013			
Testing Protocol	NAAQS			

RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method
	CHEMICAL TESTING (Ambient air)	-	-	-	-
1	PM10	µg/m ³	77.8	Max. 100	NAAQMS/36/2012-13(Gravimetric method)
2	SO2	µg/m ³	13.6	Max. 80	NAAQMS/36/2012-13(Improved West & Gaeke method)
3	NO2	µg/m ³	18.5	Max. 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)
4	PM2.5	µg/m ³	34.1	Max. 60	NAAQMS/36/2012-13(Gravimetric method)
5	CO	mg/m ³	0.44	Max. 2	NAAQMS/36/2012-13



Idma Laboratories Limited

Idma Corporate Park,
391, Industrial Area, Phase - 1,
Panchkula - 134113,
Haryana (India)

Tel No. 0172 - 5064827, - 5064830

Website : www.idmagroup.co.in

Email : commercial@idmalab.co.in

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Idma Laboratories Limited

TEST REPORT

Lab No.	010423N-E-021		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 Description of Sample	Ambient Air			
Quantity	1 No.			
Packing, Markings	Filter Paper Packed in polythene Pouch.			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL	Dated	20/03/2023	
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team	Client	Mr. DP Sudhakar	
Sampling Location	Up Stream of Project Site.			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	NAAQMS/36/2012 13 USEPA:2013			
Testing Protocol	NAAQS			

RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method
	CHEMICAL TESTING (Ambient air)	-	-	-	-
1	PM10	µg/m ³	78.3	Max. 100	NAAQMS/36/2012-13(Gravimetric method)
2	SO ₂	µg/m ³	14.3	Max. 80	NAAQMS/36/2012-13(Improved West & Gaeke method)
3	NO ₂	µg/m ³	18.5	Max. 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)
4	PM2.5	µg/m ³	32.5	Max. 60	NAAQMS/36/2012-13(Gravimetric method)
5	CO	mg/m ³	0.42	Max. 2	NAAQMS/36/2012-13

Reviewed by
Dipti Jain
Tech Mgr
05/04/23

Authorised signatory
05/04/23

Idma Laboratories Limited

Idma Corporate Park,
391, industrial Area, Phase - 1,
Panchkula - 134113,
Haryana (India)
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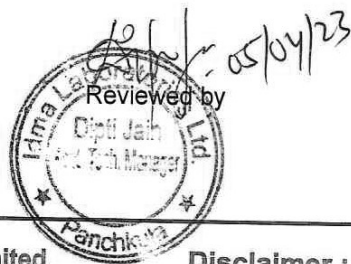
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TEST REPORT

Lab No.	010423N-E-022		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 Description of Sample	Ambient Air			
Quantity	1 No.			
Packing, Markings	Filter Paper Packed in polythene Pouch.			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL	Dated	20/03/2023	
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team	Client	Mr. DP Sudhakar	
Sampling Location	Down Stream of Project Site.			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	NAAQMS/36/2012 13 USEPA:2013			
Testing Protocol	NAAQS			

RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method
	CHEMICAL TESTING (Ambient air)	-	-	-	-
1	PM10	µg/m ³	81.1	Max. 100	NAAQMS/36/2012-13(Gravimetric method)
2	SO2	µg/m ³	15.4	Max. 80	NAAQMS/36/2012-13(Improved West & Gaeke method)
3	NO2	µg/m ³	19.2	Max. 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)
4	PM2.5	µg/m ³	36.4	Max. 60	NAAQMS/36/2012-13(Gravimetric method)
5	CO	mg/m ³	0.48	Max. 2	NAAQMS/36/2012-13



Shweta
05/04/23
Authorised signatory



Idma Laboratories Limited

Idma Corporate Park,

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Idma Laboratories Limited

TEST REPORT

Lab No.	010423N-E-023		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 Description of Sample	Ambient Air			
Quantity	1 No.			
Packing, Markings	Filter Paper Packed in polythene Pouch.			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL	Dated	20/03/2023	
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team	Client	Mr. DP Sudhakar	
Sampling Location	Dam Site Ground Area			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	NAAQMS/36/2012 13 USEPA:2013			
Testing Protocol	NAAQS			

RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method
	CHEMICAL TESTING (Ambient air)	-	-	-	-
1	PM10	µg/m ³	78.8	Max. 100	NAAQMS/36/2012-13(Gravimetric method)
2	SO2	µg/m ³	14.9	Max. 80	NAAQMS/36/2012-13(Improved West & Gaeke method)
3	NO2	µg/m ³	19.4	Max. 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)
4	PM2.5	µg/m ³	34.6	Max. 60	NAAQMS/36/2012-13(Gravimetric method)
5	CO	mg/m ³	0.47	Max. 2	NAAQMS/36/2012-13

Reviewed by
[Signature] 05/04/23


[Signature] 05/04/23
Authorised signatory



Idma Laboratories Limited

Idma Corporate Park,

391, industrial Area, Phase - 1,

Panchkula - 134113,

Haryana (India)

Tel No. 0172 - 5064827, - 5064830

Website : www.idmagroup.co.in

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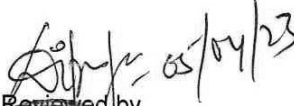

Idma Laboratories Limited



TEST REPORT

Lab No.	010423N-E-024		Page No. 1	
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir			
Type of Sample	NOISE LEVEL (AMBIENT)			
Customer's Description of Sample	NOISE LEVEL (AMBIENT)			
Quantity	1 No.			
Packing, Markings	Instrument at Site			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No:	NIL	Dated	20/03/2023	
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team	Client	Mr. DP Sudhakar	
Sampling Location	Camp Area			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	CPCB Protocol:2015			
Testing Protocol	EPA/CPCB			

RESULTS

S.No.	Test Parameter	Units	Results	Limits	Test Method
	CHEMICAL DISCIPLINE (Noise Levels)	-	-	-	-
1	Lday	dB(A)	70.3	Max 75	EPA Guideline Manual July 2008
2	LNight	dB(A)	65.4	Max 70	EPA Guideline Manual July 2008

Reviewed by 


Authorised signatory 

Ms. Suman Sharma
Tech Mgr

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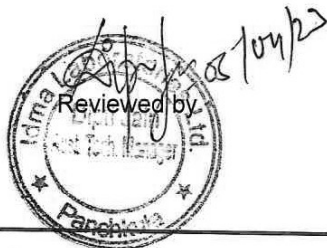
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TEST REPORT

Lab No.	010423N-E-025		Page No. 1.	
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir			
Type of Sample	NOISE LEVEL (AMBIENT)			
Customer's Description of Sample	NOISE LEVEL (AMBIENT)			
Quantity	1 No.			
Packing, Markings	Instrument at Site			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL	Dated	20/03/2023	
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team	Client	Mr. DP Sudhakar	
Sampling Location	Up Stream of Project Site			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	CPCB Protocol:2015			
Testing Protocol	EPA/CPCB			

RESULTS

S.No.	Test Parameter	Units	Results	Limits	Test Method
	CHEMICAL DISCIPLINE (Noise Levels)	-	-	-	-
1	Lday	dB(A)	71.2	Max 75	EPA Guideline Manual July 2008
2	LNight	dB(A)	63.8	Max 70	EPA Guideline Manual July 2008




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Idma Laboratories Limited

TEST REPORT

Lab No.	010423N-E-026	Page No. 1.
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir	
Type of Sample	NOISE LEVEL (AMBIENT)	
Customer's Description of Sample	NOISE LEVEL (AMBIENT)	
Quantity	1 No.	
Packing, Markings	Instrument at Site	
Mode of Collection of Sample	Sampling by Laboratories	
Work Order No.	NIL	Dated 20/03/2023
Date of Receipt of Sample	01/04/2023	
Period of Analysis	01/04/2023 To 05/04/2023	
Sampling Team Idma	Idma Representative Team	Client Mr. DP Sudhakar
Sampling Location	Down Stream of Project Site.	
Visual Observation	N/A	
Date of Sampling	30/03/2023	
Date of Reporting	05/04/2023	
Sampling Protocol	CPCB Protocol:2015	
Testing Protocol	EPA/CPCB	

RESULTS

S.No.	Test Parameter	Units	Results	Limits	Test Method
	CHEMICAL DISCIPLINE (Noise Levels)	-	-	-	-
1	Lday	dB(A)	71.7	Max 75	EPA Guideline Manual July 2008
2	LNight	dB(A)	60.4	Max 70	EPA Guideline Manual July 2008

Reviewed by
[Signature] 05/04/23
Dipti Jain
Test Tech Manager
Idma Laboratories Ltd
Panchkula

Authorised signatory
[Signature] 05/04/23
Idma Laboratories Ltd
Panchkula

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Idma Laboratories Limited

TEST REPORT

Lab No.	010423N-E-027		Page No. 1.	
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir			
Type of Sample	NOISE LEVEL (AMBIENT)			
Customer's Description of Sample	NOISE LEVEL (AMBIENT)			
Quantity	1 No.			
Packing, Markings	Instrument at Site			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL		Dated	20/03/2023
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team		Client	Mr. DP Sudhakar
Sampling Location	Dam Site Ground Area			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	CPCB Protocol:2015			
Testing Protocol	EPA/CPCB			

RESULTS

S.No.	Test Parameter	Units	Results	Limits	Test Method
	CHEMICAL DISCIPLINE (Noise Levels)	-	-	-	-
1	Lday	dB(A)	72.4	Max 75	EPA Guideline Manual July 2008
2	LNight	dB(A)	59.7	Max 70	EPA Guideline Manual July 2008

Dipti Jain
05/04/23
Reviewed by

Dipti Jain
Tech Manager

Ms. Suman Sharma
05/04/23
Authorised signatory

Ms. Suman Sharma
Tech. Mgr

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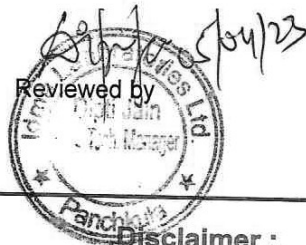
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TEST REPORT

Lab No.	010423N-E-028		Page No. 1/2	
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir			
Type of Sample	Surface Water			
Customer's Description of Sample	Surface Water			
Quantity	5 Ltr.			
Packing, Markings, Seal & Quantity	Plastic Can.			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL		Dated	20/03/2023
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team		Client	Mr. DP Sudhakar
Sampling Location	Surface Water -Up Stream			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	IS:17614(P-1):2021			
Testing Protocol	-			

RESULTS

S.No.	Test Parameter	Units	Results	Test Method
	Chemical Testing (Water)	-	-	-
1	pH	-	7.28	APHA 4500H+B 23rd Edition, 2017
2	Chloride as Cl	mg/L	11.3	APHA 4500Cl- B 23rd Edition, 2017
3	Hardness Total (as CaCO3)	mg/L	59	APHA 2340C 23rd Edition, 2017
4	Oil & Grease	mg/L	<2.5	APHA 5500 B 23rd Edition, 2017
5	Total Dissolved Solids	mg/L	98	APHA 2540 C 23rd Edition, 2017
6	Sulphate as SO4	mg/L	8.1	APHA 4500 SO2- 4E 23rd Edition, 2017
7	Iron as Fe	mg/L	0.028	APHA 3125 B 23rd Edition 2017
8	Lead as Pb	mg/L	0.0009	APHA 3125 B 23rd Edition 2017
9	Faecal Coliforms	MPN/100ml	90	APHA 9221 B & C 23rd Edition



Authorised signatory



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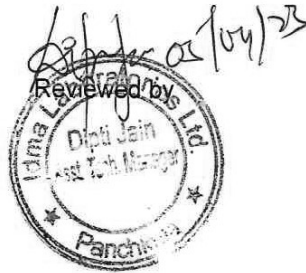
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TEST REPORT

Lab No.		010423N-E-028		Page No. 2/2
S.No.	Test Parameter	Units	Results	Test Method
10	Total Coliform	MPN/100ml	170	APHA 9221 B & C 23rd Edition
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	4	CPCB Guide Manual:Water & waste water Analysis

Opinion :

End of Report



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Idma Laboratories Limited

TEST REPORT

Lab No.	010423N-E-029		Page No. 1/2
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir		
Type of Sample	Surface Water		
Customer's Description of Sample	Surface Water		
Quantity	5 Ltr.		
Packing, Markings, Seal & Quantity	Plastic Can.		
Mode of Collection of Sample	Sampling by Laboratories		
Work Order No.	NIL	Dated	20/03/2023
Date of Receipt of Sample	01/04/2023		
Period of Analysis	01/04/2023 To 05/04/2023		
Sampling Team Idma	Idma Representative Team	Client	Mr. DP Sudhakar
Sampling Location	Surface Water -Down Stream.		
Visual Observation	N/A		
Date of Sampling	30/03/2023		
Date of Reporting	05/04/2023		
Sampling Protocol	IS:17614(P-1):2021		
Testing Protocol	-		

RESULTS

S.No.	Test Parameter	Units	Results	Test Method
	Chemical Testing (Water)	-	-	-
1	pH	-	7.22	APHA 4500H+B 23rd Edition, 2017
2	Chloride as Cl	mg/L	11.7	APHA 4500Cl- B 23rd Edition, 2017
3	Hardness Total (as CaCO3)	mg/L	61	APHA 2340C 23rd Edition, 2017
4	Oil & Grease	mg/L	<2.5	APHA 5500 B 23rd Edition, 2017
5	Total Dissolved Solids	mg/L	101	APHA 2540 C 23rd Edition, 2017
6	Sulphate as SO4	mg/L	7.6	APHA 4500SO2- 4E 23rd Edition, 2017
7	Iron as Fe	mg/L	0.024	APHA 3125 B 23rd Edition 2017
8	Lead as Pb	mg/L	0.001	APHA 3125 B 23rd Edition 2017
9	Faecal Coliforms	MPN/100ml	70	APHA 9221 B & C 23 Edition



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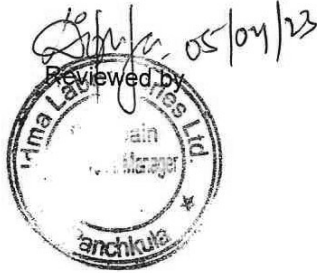
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TEST REPORT

Lab No.		010423N-E-029			Page No. 2/2
S.No.	Test Parameter	Units	Results	Test Method	
10	Total Coliform	MPN/100ml	170	APHA 9221 B & C 23 Edition	
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	<4	CPCB Guide Manual:Water & waste water Analysis	

Opinion :

End of Report



Shruti
Authorised signatory



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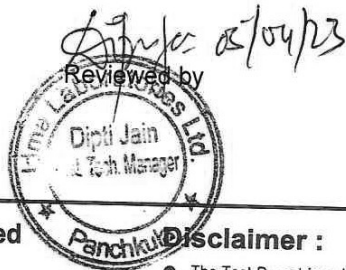
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TEST REPORT

Lab No.	010423N-E-030		Page No. 1.	
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir			
Type of Sample	Waste Water (RO Outlet)			
Customer's Description of Sample	Waste Water (RO Outlet)			
Quantity	5 Ltr.			
Packing, Markings	Plastic Can.			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL		Dated	20/03/2023
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team		Client	Mr. DP Sudhakar
Sampling Location	RO Plant Camp Area			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	IS:17614(P-1):2021			
Testing Protocol	CPCB			

RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method
	CHEMICAL TESTING (Waste Water)	-	-	-	-
1	pH	-	7.74	5.5-9.0	APHA4500-H+ B23rd Edition 2017
2	Chemical Oxygen Demand (COD)	mg/L	48	Max 250	CPCB Guide Manual:Water & waste water Analysis
3	Biochemical Oxygen Demand (BOD), 3-days at 27 °C	mg/L	8	Max 30	CPCB Guide Manual:Water & waste water Analysis
4	Oil & Grease	mg/L	<2.5	Max 10	EPA Method 1664
5	Total Dissolved Solids (TDS)	mg/L	289	-	APHA2540 C23rd Edition 2017
6	Total Suspended Solids (TSS)	mg/L	22	Max 100	APHA2540 D23rd Edition 2017



Ms. Suman Sharma
05/04/23
Authorised signatory



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Idma Laboratories Limited

TEST REPORT

Lab No.	010423N-E-031		Page No. 1.	
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir			
Type of Sample	Waste Water (RO Outlet)			
Customer's Description of Sample	Waste Water (RO Outlet)			
Quantity	5 Ltr.			
Packing, Markings	Plastic Can.			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL		Dated	20/03/2023
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team		Client	Mr. DP Sudhakar
Sampling Location	Camp Area			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	IS:17614(P-1):2021			
Testing Protocol	CPCB			

RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method
	CHEMICAL TESTING (Waste Water)	-	-	-	-
1	pH	-	7.52	5.5-9.0	APHA4500-H+ B23rd Edition 2017
2	Chemical Oxygen Demand (COD)	mg/L	53.4	Max 250	CPCB Guide Manual:Water & waste water Analysis
3	Biochemical Oxygen Demand (BOD), 3-days at 27 °C	mg/L	12	Max 30	CPCB Guide Manual:Water & waste water Analysis
4	Oil & Grease	mg/L	2.6	Max 10	EPA Method 1664
5	Total Dissolved Solids (TDS)	mg/L	301	-	APHA2540 C23rd Edition 2017
6	Total Suspended Solids (TSS)	mg/L	27	Max 100	APHA2540 D23rd Edition 2017

Reviewed by
[Signature]
Dipti Jain
Tech. Manager
Idma Laboratories Ltd.
Panchkula

[Signature]
Authorised signatory



Idma Laboratories Limited

Idma Corporate Park,
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Idma Laboratories Limited

TEST REPORT

Lab No.	010423N-E-032		Page No. 1/3	
Customer	Megha Engineering & Infrastructures Limited Ratle Hydroelectric project Vill- Drabshalla, Distt.- Kishtwar-182204 Jammu & Kashmir			
Type of Sample	Drinking Water (RO)			
Customer's Description of Sample	Drinking Water (RO)			
Quantity	5 Ltr.			
Packing, Markings, Seal & Quantity	Plastic Can.			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL		Dated	20/03/2023
Date of Receipt of Sample	01/04/2023			
Period of Analysis	01/04/2023 To 05/04/2023			
Sampling Team Idma	Idma Representative Team		Client	Mr. DP Sudhakar
Sampling Location	Camp Area			
Visual Observation	N/A			
Date of Sampling	30/03/2023			
Date of Reporting	05/04/2023			
Sampling Protocol	IS:17614(P-1):2021			
Testing Protocol	IS: 10500:2012			

RESULTS

S.No.	Test Parameter	Units	Results	Limit of IS: 10500-2012		Test Method
				Requirement (Acceptable Limit)	Permissible Limit in absence of alternate Source	
	Chemical Testing (Water)	-	-	-	-	-
1	Color	Hazen	2	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	-	7.21	6.5-8.5	No Relaxation	APHA 4500H+B 23rd Edition, 2017
4	Alkalinity as CaCO3	mg/L	81	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	15.3	Max. 75	Max. 200	APHA 3500-Ca B 23rd Edition, 2017
7	Chloride as Cl	mg/L	22.1	Max. 250	Max. 1000	APHA 4500Cl- B 23rd Edition, 2017

Reviewed by
Dipti Jain
Dipti Jain
Tech. Manager
Idma Laboratories Ltd.
Panchkula

Authorised signatory
Ms. San Sharma
Ms. San Sharma
Tech. Mgr
Idma Laboratories Ltd.
Panchkula

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Idma Laboratories Limited

TEST REPORT

Lab No.		010423N-E-032				Page No. 2/3
S.No.	Test Parameter	Units	Results	Limit of IS: 10500-2012		Test Method
				Requirement (Acceptable Limit)	Permissible Limit in absence of alternate Source	
8	Magnesium as Mg	mg/L	7.9	Max. 30	Max. 100	APHA 3500 Mg B 23rd Edition 2017
9	Cyanide as CN	mg/L	BLQ(LOQ-0.05)	Max. 0.05	No Relaxation	APHA 4500CN-C&F 23rd Edition, 2017
10	Fluoride as F	mg/L	0.08	Max. 1	Max. 1.5	CPCB Guide Manual:Water & waste water Analysis
11	Hardness Total (as CaCO ₃)	mg/L	71	Max. 200	Max. 600	APHA 2340C 23rd Edition, 2017
12	Total Dissolved Solids	mg/L	119	Max. 500	Max. 2000	APHA 2540 C 23rd Edition, 2017
13	Sulphate as SO ₄	mg/L	10.8	Max. 200	Max. 400	APHA 4500-SO ₄ -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 Edition, 2017
16	Residual Free chlorine	mg/L	0.22	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 Edition 2017
19	Iron as Fe	mg/L	0.041	Max. 1.0	No Relaxation	APHA 3125 B 23rd Edition 2017
20	Manganese as Mn	mg/L	BLQ(LOQ-0.0005)	Max. 0.1	Max. 0.3	APHA 3125 B 23rd Edition 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	0.122	Max. 5	Max. 15	APHA 3125 B 23rd Edition 2017
23	Aluminum as Al	mg/L	BLQ(LOQ-0.0005)	Max. 0.03	Max. 0.2	APHA 3125 B 23rd Edition 2017
24	Selenium as Se	mg/L	BLQ(LOQ-0.0005)	Max. 0.01	No Relaxation	APHA 3125 B 23rd Edition 2017
	Biological Testing (Water)	-	-	-	-	-
25	E. Coli	/100ml	Absent	Shall not be detectable in any 100ml sample	--	IS 15185:2016
26	Total Coliform Bacteria	/100ml	Absent	Shall not be	--	IS 15185:2016



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TEST REPORT

Lab No.		010423N-E-032			Page No. 3/3	
S.No.	Test Parameter	Units	Results	Limit of IS: 10500-2012		Test Method
				Requirement (Acceptable Limit)	Permissible Limit in absence of alternate Source	
26				detectable in any 100ml sample		

Opinion :

BLQ: Below Limit of Quantification; LOQ: Limit of Quantification

End of Report



Authorised signatory



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