

Chenab Valley Power Projects [P] Ltd.

[A Joint Venture of NHPC (A Govt. of India Enterprise),
JKSPDC (A Govt. of J&K Undertaking) and PTC India Ltd]
CIN: U40105JK2011PTC003321

Kiru HE Project

DSB Colony, Chenab Nagar II,
Distt. Kishtwar -182206 (J&K)
Ph: 01995-259505

No. : CVPPPL/Kiru/Env/2021/527

Dated : 31-05-2021

Deputy Director General of Forests (Central)
Integrated Regional Office,
MoEF&CC (Govt. of India),
Chandigarh- 160 030

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singhbharat6989@gmail.com

Sub: Kiru HE Project (624 MW) in District Kishtwar, UT J&K: 06 monthly report on compliance of conditions stipulated in the Environment Clearance (EC) letter for the period October 2020 to March 2021

Ref: Environment Clearance granted to Kiru HE Project vide letter No. J-12011/32/2008-IA.I dated 24.06.2016

Sir,

In reference to Environment Clearance accorded to 624 MW Kiru Hydro-Electric Project vide MoEF&CC's communication No. J-12011/32/2008-IA.I dated 24.06.2016, kindly find enclosed herewith 06 monthly progress report on the compliance of various conditions stipulated in the EC letter, for the period October 2020 to March 2021.

Thanking you,

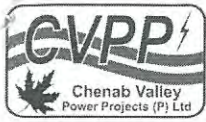
Yours faithfully,


General Manager (I/c)
Kiru HE Project

email id: gmkkcvpp@gmail.com

Copy for kind information to:-

- 1. Dr. S. Kerketta, Director, Impact Assessment Division-1,
Ministry of Environment, Forests & Climate Change,
Indira Paryavaran Bhawan, Jor Bagh Road, Ali Ganj,
New Delhi- 110003
email id: s.kerketta66@gov.in, suna1466@rediffmail.com**
- 2. Member Secretary, J&K Pollution Control Committee,
Parivesh Bhawan, Forest Complex, Gladini, Narwal, Transport Nagar, Jammu (J&K)
email id: membersecretaryjkspcb@gmail.com**
- 3. General Manager (Planning), CVPPPL Corporate Office, Jammu.**



Kiru H E Project (624 MW)

Kiru Hydro-Electric Project is a run-of-river scheme located in District Kishtwar of UT Jammu and Kashmir. With installed capacity of 624 MW, the Project has been planned on river Chenab and envisages construction of 123 mtr high (above river bed level) Concrete Gravity Dam and an underground Power House to accommodate 4 units of 156 MW each.

1. Status of Clearances:

Clearance	Status
Appraisal by CEA	TEA accorded by CEA vide letter no. 2/NHPC/54/CEA/2006-PAC/652-86 dated 13.06.2016
Forest Clearance (by J&K State Govt.)	Forest Clearance has been accorded by Govt. of J&K on 19.05.2016 for diversion of 82.05 Ha Forest land
Environment Clearance	Accorded by MoEF&CC vide letter No. J-12011/32/2008-IA-1 dated 24.06.2016
Indus water Clearance	IWT clearance has been accorded by MOWR (RD&GR), Indus Wing on 24.10.2016
PIB/CCEA Clearance	The Investment Approval for construction of 624MW Hydro-Electric Project was conveyed by MOP vide letter dated 08.03.2019
R&R Plan Approval	R&R Plan of the Project has been approved by Govt. of Jammu and Kashmir vide Order No. 11-DMRR&R of 2019 dated 07.03.2019

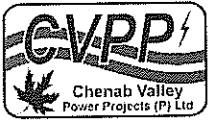
2. Status of construction activities

All the three packages for major construction works of Kiru HE Project have been awarded and the construction activities have commenced in Sept 2020, as detailed below:-

Civil Works Package (Lot I) : Awarded to M/s Patel Engineering Ltd. vide letter dated 24.02.2020 and Contract Agreement signed on 15.06.2020. Construction activities related to major Civil Components viz. Diversion Tunnel, Power House and Dam Stripping works are under progress.

Hydro-Mechanical Package (Lot II) : Awarded to M/s PES Engineers Pvt. Ltd. vide letter dated 24.02.2020 and Contract Agreement signed on 11.06.2020. Design review and manufacturing works are under progress.

Electro-Mechanical Package (Lot III) : Awarded to M/s Andritz Hydro Pvt. Ltd. vide letter dated 24.02.2020 and Contract Agreement signed on 22.06.2020. Initial design review is under progress.



3. Status of Land Acquisition

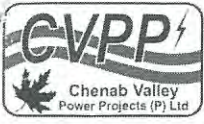
Final Award for acquisition of land measuring 1750 Kanal 17 Marla (87.54Ha) for construction of the Project has been issued by Collector, Land Acquisition, Kishtwar on 01.07.2017 and the Award for Trees and Structures involved therein has been issued on 11.06.2019. An amount of Rs 32.47Crore (Rs. 26.94 Crore for land + Rs. 5.53 Crore for trees and structures) has been deposited with Collector, Land acquisition, Kishtwar for disbursement to the land Owners out of which an amount of Rs. 30.70 Crore has been disbursed so far. Further, land measuring 108 Kanal 06 Marla (5.41 Ha) falling under PMGSY link road has also been taken over by the Project from PMGSY Division, Kishtwar for which payment amounting to Rs. 2.61 Crore has been made to the Revenue Collectorate, Kishtwar.

4. Status of R&R Plan Implementation

R&R Plan has been approved by GoJK vide Government Order No. 11-DMRR&R of 2019 dated 07.03.2019 for a total amount of Rs. 9956.22 lacs. An amount of Rs 30.00 Crore has been deposited so far with the Office of Commissioner R&R out of which an amount of Rs.23.50 Crore has been disbursed among the Project Affected Families. Further disbursement of compensation to PAFs is under progress.

5. Status of Infrastructure works

- i) Roads leading to major structures like Dam, DT, Power House, TRT have been completed.
- ii) Construction of temporary Office building near Dam site - Two blocks of site Office are completed and are under use. The construction work of other two blocks is near completion.
- iii) Construction Power- The work is being carried out through J&K Power Development Department as deposit work. The construction of control room building and gantry erection & foundation work for 33/11 KV receiving station has been completed while as the Pole Erection work for 33 KV line is near completion.
- iv) For conducting Hydraulic Model Studies of the Project, LOA has been issued to CWPRS on 08.12.2016. 2D Hydraulic Model Studies of the Project have been completed while as 3D Model studies are in progress.
- v) Construction of temporary residential infrastructure (field hostel) near Dam site is in progress and one block of field hostel is near completion.
- vi) Power supply for site Offices - Laying of LT Distribution Network has been completed and existing site Office has been connected to Grid Power however, providing of local connectivity to remaining buildings is under progress.



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- vii) Construction of Security Barracks- The foundation / concreting work of barracks and the fabrication of trusses and columns have been completed along with the erection work. The inner frame work for lining is in progress.
- viii) Construction of Quality Control Laboratory- The Quality Control Laboratory at Project site has been established by M/s PEL to check the results for major works and is under use.
- ix) Barbed wire fencing of acquired land from Pathernaki to Singhad Nallah (along Kishtwar-Paddar road)- Erection work of Angle Iron Posts completed along with fixing of barbed wire / concertina coil except some stretches.
- x) The construction work of water tank having capacity 75000 ltr near colony area is under progress.


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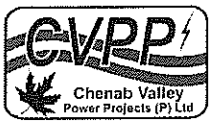
ANNEXURE-I

624 MW KIRU HE PROJECT, DISTRICT KISHTWAR, JAMMU AND KASHMIR

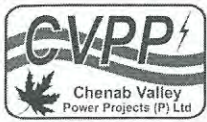
SIX MONTHLY COMPLIANCE REPORT ON ENVIRONMENTAL ASPECTS

(for the period October 2020 to March 2021)

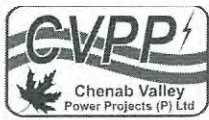
1	Name of Project	Kiru Hydro-Electric Project (624 MW)
2	Type of Project	Hydro-Electric Project
3	Clearance letters OM No. and date (a) Environment Clearance (b) Forest Clearance	(a) Letter No. J-12011/32/2008-IA.I dated 24.06.2016 (b) Order No. 143-FST of 2016 dated 19.05.2016 of Govt. of Jammu and Kashmir (for 82.05 Ha land)
4	Locations (a) District (s) (b) State (c) Latitude (d) Longitude	(a) Kishtwar (b) Jammu and Kashmir (c) 33°20'37"N (d) 75°57'34"E
5	Address for Correspondence (a) Address of concerned Project Head (with Pin code, Telephone/Fax no.) (b) Address of concerned HOD in Corporate Office (with Pin code, Telephone/Fax no.)	(a) General Manager (I/c) Kiru HE Project, Chenab Valley Power Projects (P) Ltd., Chenab Nagar-II, District Kishtwar, UT Jammu and Kashmir Pin code- 182 206 Telephone:- 01995-259505 email id: gmkkcvpp@gmail.com (b) Managing Director, Chenab Valley Power Projects (P) Ltd., Chenab Jal Shakti Bhavan, Opposite Saraswati Dham, Rail Head Complex, Jammu (UT J&K); Pin code 180 012 Phone/ Fax: 0191 2479826/ 2479835



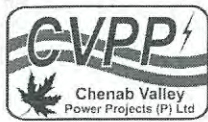
6	Details of Environmental Management Plan	Environmental Management Plans to be implemented at the Project are: <table border="1" data-bbox="726 291 1460 963"> <thead> <tr> <th>Sl. No.</th> <th>EMP</th> </tr> </thead> <tbody> <tr><td>1.</td><td>Biodiversity Conservation & Management Plan</td></tr> <tr><td>2.</td><td>Catchment Area Treatment Plan</td></tr> <tr><td>3.</td><td>Fisheries Development 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 Plan</td></tr> <tr><td>9.</td><td>Air & Water 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> <tr><td>13.</td><td>Environmental Monitoring Programme</td></tr> <tr><td>14.</td><td>Disaster Management Plan</td></tr> <tr><td>15.</td><td>Skill Mapping and Development Plan</td></tr> </tbody> </table>	Sl. No.	EMP	1.	Biodiversity Conservation & Management Plan	2.	Catchment Area Treatment Plan	3.	Fisheries Development Plan	4.	Solid Waste Management Plan	5.	Public Health Delivery System	6.	Energy Conservation Measures	7.	Muck Disposal Plan	8.	Landscaping & restoration Plan	9.	Air & Water Management Plan	10.	Reservoir Rim treatment Plan	11.	Compensatory Afforestation plan	12.	Rehabilitation & Resettlement Plan	13.	Environmental Monitoring Programme	14.	Disaster Management Plan	15.	Skill Mapping and Development Plan
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7	Breakup for Project area (Land details)	Forest Land: 82.05 ha Private Land: 36.27 ha State Land: 51.27 ha River Bed land (State land): 61.00 ha Total Land: 230.59 ha 5.41 Ha land falling under PMGSY link road also taken over by the Project																																
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	No of affected villages : 3 Displaced PAFs : 93 Non Displaced PAFs : 66 Total PAFs : 159 (a) Scheduled Tribe : 140 families																																
9	Financial Details (a) Project cost as originally planned and subsequent revised estimates and the year of price reference	TEA approved cost : Rs. 4640.88 Cr (Sept 2014 PL) CCEA approved cost : Rs. 4287.59 Cr (July 2018 PL)																																



	<p>(b) Actual expenditure incurred on the Project so far</p> <p>(c) Allocation made for Environment Management Plan</p> <p>(d) Actual expenditure incurred on EMP so far</p>	<p>Actual expenditure: Rs. 502.29 Crore (till March 2021)</p> <p>Allocations for EMP: Rs. 162.43 Crore (as approved by MoEF&CC)</p> <p>Actual expenditure incurred on EMP (till March 2021):</p> <p>i) Payment released on account of Forest Clearance: : Rs 9.44 Crore (including Rs. 1.15 Crore on account of Compensatory Afforestation Programme)</p> <p>Payment released towards extraction of Forest Trees: : Rs. 52.99 Lakh</p> <p>ii) Implementation of R&R Plan : Rs.30.00 Crore (deposited with Commissioner R&R)</p> <p>iii) Public Health Delivery System* : Rs. 7.15 Lakh</p> <p>iv) Energy Conservation Measures* : Rs. 5.52 Lakh</p> <p>v) Muck Disposal Plan* : Rs. 0.69 Lakh</p> <p>vi) Air & Water Management Plan* : Rs. 0.30 Lakh</p> <p>vii) Skill Mapping and Development : Rs. 4.06 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 diversion of Forest Land for non-forestry use</p> <p>(b) The status of clear felling of trees in Forest Land</p>	<p>(a) Forest clearance for diversion of 82.05 Ha forest land accorded by Govt. of Jammu and Kashmir vide Order No. 143- FST of 2016 dated 19.05.2016.</p> <p>(b) Clear felling status:- Tree felling at site has been completed by J&K Forest Corporation. The diverted forest land has been taken over from Forest Department on 14.03.2018.</p>
11	<p>Status of Construction</p> <p>(a) Date of commencement (actual and/or planned)</p> <p>(b) Date of completion (actual and/or planned)</p>	<p>(a) Date of commencement of major works of the Project : 24.02.2020</p> <p>(b) Date of completion (planned): 54 months from the start of major works i.e. 23.08.2024</p>



12	Reasons for the delay (If the Project is yet to be started)	After Investment approval from GOI in March 2019 and subsequent sanction of Subordinate loan and Equity Contribution, the major Project works have been awarded in February 2020 and the construction activities are in progress.
13	Details of Site visits (a) By Monitoring Committee (b) By Regional Office	Nil Nil
14.	Brief note on the status of compliance of the conditions stipulated by MOEF&CC	Details are enclosed as Annexure-II.

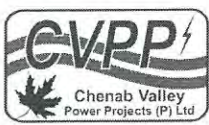


ANNEXURE-II

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

(Environment Clearance letter No. J-12011/32/2008-IA-1 dated 24.06.2016 and Corrigendum to EC dated 29.07.2016)

S. No.	Specific Conditions	Compliance Status
i	The Catchment Area Treatment Plan (CAT) as has been proposed in the EMP shall be strictly implemented in consultation with the J&K State Forest Department. Major works of CAT shall be completed before impounding of reservoir. The CAT plan will be implemented in 5 years. Financial allocation of Rs. 1883.82 lakhs for CAT plan implementation shall be fully utilized and the same shall not be diverted for any other purpose.	<ul style="list-style-type: none">- The matter was taken up with J&K Soil & Water Conservation Department for micro-planning and finalization of the CAT Plan vide letter No. CVPP/Kiru/GM/2020/472 dated 07.03.2020 and No. CVPP/Kiru/GM(C)/2020/268-271 dated 13.08.2020.- For expediting the implementation of CAT Plan, the matter was further taken up with PCCF (HoFF), J&K vide letter No. CVPPPL/Kiru/Env-05/2020-21/909 dated 14.10.2020. In response to this, a Committee was constituted by J&K Forest Department vide communication No. PCCF/FCA/1226-II/2942-51 dated 02.11.2020 under the Chairmanship of Principal Chief Conservator of Forests (HoFF), J&K for reviewing the progress of implementation of CAT Plan.- The first meeting of said Committee was held on 09.11.2020 at Van Bhavan, Jammu under the Chairmanship of PCCF(HoFF), J&K and subsequently, another meeting was held at Jammu on 21.12.2020 by Chief Conservator of Forests, Jammu to review the CAT Plan of Project.- The J&K Forest Department has advised the Project Authorities to update the CAT Plan as per existing rate schedule and resubmit the updated Plan for its approval.- The CAT Plan of Project is under updation and the matter is being regularly pursued with J&K Forest Department for timely implementation of CAT measures.



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<p>ii</p>	<p>R&R benefits for the land losing households will be as per NRRP-2007 & J&K state Govt. Adequate publicity of the compensation package should be circulated in the affected villages. However, this is to be compared with the state Rehabilitation and Resettlement policy, and the more beneficial policy is to be adopted for the PAF's. All R&R issues shall be completed before commissioning of the project.</p>	<ul style="list-style-type: none">- The R&R Plan of Kiru HE Project was submitted to DC Kishtwar on 12.07.2016 which was further forwarded by DC Kishtwar to Divisional Commissioner, Jammu on 17.03.2017 for approval of Government. Empowered Committee for implementation of R&R Plan of Kiru HE Project was constituted by GoJK vide G.O. No. 1088-GAD of 2017 dated 24.08.2017.- CVPPPL timely requested the GoJK (vide letter dated 12.06.2017) to enhance the cost provision for displaced PAFs pertaining to "Land for House and House Construction Assistance" from Rs. 18 lacs to Rs. 33 lacs per displaced family in line with the provision approved for Kishanganga HE Project. The request was duly considered by Empowered Committee in its meeting held on 06.10.2017 and revision was advised. Accordingly, the plan was revised by DC Kishtwar and resubmitted. The revised plan was forwarded by Divisional Commissioner, Jammu to Commissioner / Secretary Revenue Deptt. on 30.01.2018 for approval of GoJK.- The Plan was discussed in the meeting of Empowered Committee held on 06.04.2018 wherein the plan was recommended for approval of GoJK. The decision was conveyed through Minutes of Meeting issued on 21.05.2018.- The R&R Plan of Project has been approved by the State Administrative Council (SAC) as per Govt. Order No. 11-DMRR&R of 2019 dated 07.03.2019 as recommended by Empowered Committee.- The R&R Plan is under implementation and will be completed before commissioning of the Project. Till date, an amount of Rs. 23.50 Crore has been disbursed to the PAFs by the Commissioner R&R out of Rs.30.00 Crore deposited by Project.
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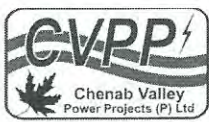
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iii	Implementation of R&R plan shall have to be closely monitored by the state authority and is to be ensured that all PAF's shall get adequate & timely compensation.	As per the approved R&R Plan, Deputy Commissioner, Kishtwar has been appointed as the Commissioner for implementation of R&R Plan.
iv	A Monitoring Committee for R&R should be constituted which shall include representatives of project affected persons from SC/ST category and a woman beneficiary.	Monitoring Committee for R&R was constituted in the Empowered Committee Meeting held under the Chairmanship of Chief Secretary, J&K on 06.04.2018. The Committee shall include apart from the Officers of the State Govt. as one of its members:- <ol style="list-style-type: none">1. A representative of a woman residing in the area,2. A representative each of SC & ST residing in the area,3. A representative of a voluntary organization,4. A representative of the lead bank,5. Chairperson(s) of the Panchayats and municipalities located in the affected area, or their nominee(s),6. Members of Parliament and members of Legislative Assembly of the area included in the affected area,7. The land acquisition officer of the Project, and8. A representative of the requiring body. Formal Govt. Order for constitution of the Committee is awaited.
v	All the commitments made during the public hearing should be fulfilled completely by project proponent and record maintained.	- District Administration prepared the R&R plan for Govt. approval after consultations with all stake holders and duly considering the aspirations and demands of local people. - The R&R Plan as approved by GoJK is under the process of implementation.



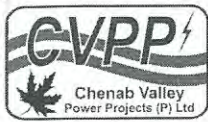
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vi	A minimum environmental flow of 16.33 cumec (20%) during lean season (December to March), 73.37 cumec (10%) during monsoon season (June to September) and 16.62 cumec (10%) during remaining four months (October – November & April – May) shall have to be maintained. Continuous monitoring system for the flow measurement shall be installed and data be displayed at appropriate site for civil society and stake holders. Six monthly results shall be submitted to the Regional office of the Ministry.	Shall be complied Continuous monitoring system for flow measurement shall be installed and further, six monthly results/ data shall be submitted to Regional Office of the Ministry.
vii	Dumping and consolidation/compaction of the muck shall be carried-out in the designated muck dumping sites as submitted in the EIA/EMP report. As per the proposed muck disposal plan given in EMP, out of the 25.78 lakh cubic meter of muck to be generated, 8.36 lakh cubic meter will be utilized for construction purpose and remaining 17.42 lakh cubic meter will be dumped at four designated disposal sites in an allocated area of 28.22 ha. The dumping sites shall be more than 30m away from the HFL of the river & the toe walls for muck disposal sites shall be constructed at least 30m away from HFL of river. Allocated grant of Rs. 1697.57 lakhs shall be fully utilized and not to be diverted for any other purpose.	Being complied - The approach road to designated muck disposal site D1 is almost completed and crate wall / slope protection work is under progress to avoid any spillage of muck/ debris into the river. Initially, the muck deposal site D1 is being utilized by the Contractor for disposal of unused muck. Approach road to muck disposal sites D3 and D4 is also being constructed by the Contractor and these muck dumping sites shall also be utilized accordingly. - The suitable portion of excavated muck is being utilized by the Contractor in the construction activities as proposed in the EMP. Part of excavated muck is also being utilized in the construction of retaining structures and approach road etc. The disposal of unused muck at designated muck dumping sites shall be carried out as per the Muck Disposal Plan proposed in the EMP.



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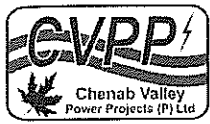
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viii	<p>Proposed Compensatory Afforestation Programme in 164.10 ha of degraded forest area shall be undertaken in consultation with State Forest Department. Allocated grant of Rs. 1036 lakh shall be fully utilized and not to be diverted for any other purpose.</p>	<ul style="list-style-type: none">- An amount of Rs 9.446 Crore was deposited with J&K Forest Department for diversion of 82.05 Ha of Forest land including Rs. 1.1487 Crore towards Compensatory Afforestation.- Vide letter No. CVPPPL/Kiru/Env./2021/518 dated 01.03.2021, J&K Forest Department had been requested to provide the physical and financial progress w.r.t. Compensatory Afforestation.- DFO, Kishtwar Forest Division has intimated that during 2020-21, Compensatory Afforestation has been carried out for Kiru HE Project covering an area of 158 Ha (12 Units).- It has been conveyed to Project that CA works viz. fencing, plantation (PB/NR), silvi-pasture work (sowing/dibbling patches) and DRSM works have been carried out for Kiru HE Project with total expenditure of Rs. 67.81 Lakh upto March 2021.
ix	<p>To enhance the quality of environment of project site, green belt, as proposed in EMP report, shall be developed. The proposed green belt along the project appurtenances shall be undertaken in consultation with State Forest Department. The allocated budget of Rs 28.78 lakhs shall be fully utilized for this purpose and not to be diverted for any other purpose.</p>	<p>Shall be undertaken in consultation with J&K Forest Department</p>
x	<p>Proposed Biodiversity Conservation & Management plan as outlined in the EMP shall be implemented with State Forest Department. The allocated budget of Rs. 139.80 lakhs for this purpose shall be fully utilized and shall not be diverted for any other purpose.</p> <p>Proposed Reservoir Rim Treatment Plan with both biological and engineering measures shall be implemented strictly. Allocated amount of Rs. 620.17 lakhs should be fully utilized and shall not be diverted for any other purpose.</p>	<ul style="list-style-type: none">- J&K Forest Department has been requested vide letter No. CVPP/Kiru/Env/2020/215 dated 29.09.2020 and CVPP/Kiru/Env/2021/517 dated 01.03.2021 for an early accord of approval of Biodiversity Conservation and Management Plan for ensuring its timely implementation.- The matter is under regular pursuance with J&K Forest Department however, the approval of Plan is yet awaited. <p>Shall be complied</p>



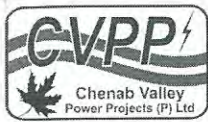
xi	<p>The Fisheries Development Plan as proposed in the EMP shall be implemented completely in consultation with the State Fisheries Department. As proposed, a fish hatchery shall be developed in 2 ha of area for development of fingerlings for stocking of reservoir and river. The budget of Rs. 798.59 lakhs provided for fisheries development plan should be fully utilized for this purpose and shall not be diverted for any other purpose.</p>	<ul style="list-style-type: none"> - Vide letters No. CVPPPL/Kiru/SM(C) /2019/906 dated 12.10.2019 and CVPPPL/Kiru/HoPSectt/2021/266 dated 17.03.2021, the matter regarding implementation of Fisheries Development Plan for Kiru HE Project has been taken up with J&K Fisheries Department - In this regard, the site inspection of identified land at Kiru HE Project has already been carried out by the Officials of J&K Fisheries Department for development of Composite fish farm and other allied structures as per Fisheries Development Plan provided under EMP. - The matter is being constantly followed up with J&K Fisheries Department for implementation of the Plan however, the approval of Plan is yet awaited.
xi(a)	<p>The total project cost is Rs. 4640.88 crores and EMP budget is Rs 147.32 crores is about 3.2%. The overall EMP budget should be raised to 3.5% (i.e 162.43 crores) of the project cost.</p>	<p style="text-align: center;">Complied</p> <p>MoEF&CC itself increased the EMP budget from Rs. 147.32 Crores to Rs. 162.43 Crores by provisioning additional amount of Rs. 15.1073 Crores for Skill Mapping and Development Plan (as per the minutes of 91st meeting of EAC).</p>
xii	<p>As mentioned in EIA, 15 coldwater fish species have been identified in the river stretches including 2 exotic species, therefore, e- flow to be maintained for the downstream river depth, wetter perimeter, water quality and minimize fluctuation in ambient temperature during extreme conditions.</p>	<p style="text-align: center;">Shall be complied</p> <p>The stipulated seasonal e-flows shall be maintained during Project operation.</p>
xiii	<p>To maintain flourishing fish population/communities in the river, the river must witness all seasonal changes including low flow levels during lean season to maximum during monsoon/floods/high rains.</p>	<p>Shall be complied with release of the stipulated e-flows during Project operation.</p>
xiv	<p>Skill mapping of the area to be conducted, mentioning the skills inherent of the local people, skill requirement of the project and the best ways to develop the skills in the local people so that the locals can be employed in the project.</p>	<p style="text-align: center;">Being complied</p> <ul style="list-style-type: none"> - Skill mapping of the Project Affected Families has been carried out and accordingly, the Skill Development Plan has been formulated in Sept. 2019. The report on Skill Mapping and



		<p>Development Plan has been submitted to Commissioner R&R, Kiru HEP / Deputy Commissioner, Kishtwar on 28.09.2019 for further action in the matter.</p> <ul style="list-style-type: none">- The said Report has been forwarded by Deputy Commissioner, Kishtwar to Divisional Commissioner, Jammu vide letter No. DCK/LA/2019/355-59 dated 10.02.2020 for further approval from Government.- Vide letter No. CVPP/Kiru/Env/2021 /576 dated 30.03.2021, Commissioner R&R has been requested by Kiru Project Authorities for expediting the approval of the Plan by the Committee constituted in the matter by J&K Govt.- The matter is being constantly followed up with Commissioner R&R, however, the approval of J&K Government in this regard is awaited.
xv	Use of 82.05 ha of forest land for construction of Kiru HEP by CVPP has been granted by Govt. of J&K vides no. 143-FST of 2016 dated 19.05.2016. The project proponent shall adhere to terms and conditions of this Government order strictly.	Conditions stipulated in Forest Clearance letter are being complied
xvi	Any other clearances required from any other concerned authorities should be obtained before commencement of works and commissioning of the project, as applicable.	Being complied
General Conditions		
i	Adequate arrangements for ensuring availability of fuel like kerosene/LPG shall be provided at the project cost for the labourers to be engaged during construction work so that Indiscriminate felling of trees is prevented. The energy conservation measures as provided in EMP shall be fully implemented.	<p style="text-align: center;">Being complied</p> <ul style="list-style-type: none">- Common mess facilities are being provided by the Contractor to the labourers wherein LPG is being used as fuel.- Further, the major Contractor is providing free fuel (LPG) to the labour force to prevent any use of fire wood. The supply of LPG to the labourers is being met from LPG Depots at Galhar and Kishtwar. The energy conservation measures as provided in the EMP shall be implemented.



ii	Medical facilities as well as recreational facilities shall also be provided to the labourers.	Being complied - At present, one dispensary has been established at Project site by the major Contractor to cater to the health requirements of the work force while as another dispensary has also been set up by the Project at site for providing the medical facilities. These dispensaries are being manned by the paramedical staff. - One No. Mobile Medical Van facility has also been provided to cope up with the medical requirements. - With the development of infrastructure, the required recreational facilities shall also be provided to the labourers.
iii	The labourers to be engaged for construction works shall be thoroughly examined by health personnel and adequately treated before issuing them work permit. Periodic health check up during construction period may also be taken up.	Being complied At present, the health check of the work force is being carried out mainly for the risk of COVID-19 infection. The periodic health check up of the labourers shall be ensured through the Health Department as provided in the EMP.
iv	Water sprinkling arrangements shall be made to suppress fugitive emissions/ dust.	Being complied
v	Potable drinking water and proper sanitary facilities shall be provided for the labour force. Also proper disposal facilities for solid waste are to be ensured.	Being complied At present, the temporary infrastructure for the labour force with required facilities is being developed at Project site. Proper drinking water facilities, sanitary facilities and solid waste disposal facilities are being established for providing the same to the work force/ labourers.
vi	Restoration of construction area including muck dumping sites shall be ensured by leveling, filling up of borrow pits, landscaping, etc. The area should be properly planted to develop good greenery in the area.	Shall be complied



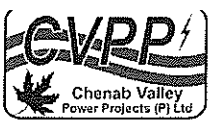
Chenab Valley Power Projects [P] Ltd.

[A Joint Venture of NHPC (A Govt. of India Enterprise),
JKSPDC (A Govt. of J&K Undertaking) and PTC India Ltd]
CIN: U40105JK2011PTC003321

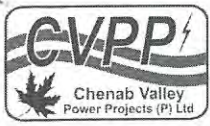
Kiru HE Project

DSB Colony, Chenab Nagar II,
Distt. Kishtwar -182206 (J&K)
Ph: 01995-259505

vii	Environmental parameters shall be monitored and "Six monthly monitoring reports" shall be submitted to the Ministry of Environment, Forest & Climate change, New Delhi including its Regional office for their review.	Shall be complied - Vide letter No.CVPPPL/Kiru/Env-05/2020-21/912 dated 16.10.2020, Project Authorities had requested J&K Pollution Control Committee to convey their consent for carrying out the sampling & monitoring of Environmental parameters through their laboratory or to provide the list of labs authorized by J&K Pollution Control Committee for carrying out the said job. - As such, the sampling & monitoring of environmental quality parameters at Project sites for Ambient Air quality, Water quality and Noise levels has been carried out through laboratory accredited by J&K Pollution Control Committee for SMR. The test reports of environmental quality parameters are enclosed herewith as Annexure-III.
viii	Solid waste management & sanitation facility will have to be provided for the labour force.	Being complied The temporary infrastructure for labour force is under development. Proper facilities of sanitation and solid waste management are being developed for the work force.
ix	Disaster management plan as provided in EMP shall be implemented in consultation with the District Authorities and early warning system shall be installed.	Shall be complied in consultation with District Disaster Management Authority.
x	An Environmental Management Cell (EMC) shall be constituted at the project level with sufficient manpower. The head of the EMC shall report directly to the head of the project for speedy implementation of EMP & related issues.	Complied EMC has been constituted on 25.05.2018
Other Conditions mentioned in the EC Letter:		
5.	The project proponent shall provide full cooperation and provide all requisite documents/data to the officials from concerned Regional Office of the Ministry who would be monitoring the implementation of environmental safeguards and to undertake inspection.	Shall be complied
7.	Besides the above stated conditions, the project proponent shall also implement all other environmental safeguards, as proposed in the EIA/EMP report and other reports from time to time.	Shall be complied



8.	The EMP shall be strictly adhered to and a sum of Rs. 162.43 Crores, the budgetary provisions for the implementation of EMP, shall be fully utilized and shall not be diverted for any other purpose.	Shall be complied
9.	In case of change in the scope of the Project, the same may be intimated to the Ministry and a fresh approval, if required, shall be taken from the Ministry.	Shall be complied (in case of requirement)
12.	A copy of clearance letter shall be marked to concerned Panchayat/Zila Parishad/Municipal Corporation, Urban Local Body and local NGO, if any, from whom any suggestion/representations were received while processing the proposal.	Complied
14.	The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of the clearance letters are available with State Pollution Control Board/Committee and may also be seen at website of MoEF&CC.	Complied. Advertisement was published in two news papers viz: 1. Daily Excelsior (English) dated 30.06.2016 and 2. Daily Udaan (Urdu) dated 30.06.2016.
15.	The project proponent shall also submit six monthly reports on the status of compliance of stipulated EC conditions including the results of monitored data (both in hard copies as well as by e-mail) to respective Regional Office of MoEF&CC.	Being Complied. 06 monthly reports regarding compliance of the EC conditions are being timely submitted.
16.	After five years of commissioning of the project, a study shall be undertaken regarding impact of the project on the environment and over the downstream ecology of the project. The study shall be undertaken by independent agency to be decided in consultation with the Ministry.	Shall be complied
17.	A Multi Disciplinary Committee for monitoring the implementation of environmental safeguards during construction shall be constituted by the project proponent in consultation with the MoEF&CC, New Delhi within six weeks of the issue of the EC letter. The committee shall meet every six month to review the status of implementation of EC conditions in general and monitoring of E-flow and stability and effectiveness of muck dumping sites in particular.	Being Complied - The proposal for constitution of Multi Disciplinary Committee was submitted to MoEF&CC on 12.07.2016. Revised proposal along with nomination letters of proposed committee members was submitted to MoEF&CC on 24.05.2017. - Approval for constitution of committee has been granted by MoEF&CC vide letter no. J-12011/32/2008-IA.1 dated 09.07.2018. - However, vide letter dated 25.03.2019, MoEF&CC was requested for minor



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amendment in the approval letter for clarity which was granted by MoEF&CC vide letter no. J-12011/32/2008-IA-I dated 02.05.2019.

- An intimation letter has been sent to all the members of the Multi-Disciplinary Committee for scheduling the meeting of the Committee for monitoring the implementation of environmental safeguard measures for Kiru HE Project. However, the meeting of Committee could not be held due to outbreak of COVID-19 Pandemic.

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TEST REPORT

Ref. No. IL/D- 22616	Date 23.02.21	Lab No. 170221N-E-001	Page No. 1
Customer	Patel Engineering Limited Kiru Hydroelectric Project Kiru, Distt. Kishtwar J&K		
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	12/02/2021
Date of Receipt of Sample	17/02/2021		
Period of Analysis	17/02/2021 To 22/02/2021		
Sampling Team Idma	Idma Representative Team	Client	Mr. Reshi Sharma
Sampling Location	Inlet-Dam Site		
Visual Observation	N/A		
Date of Sampling	15/02/2021		
Date of Reporting	22/02/2021		
Sampling Protocol	IS 5182		
Testing Protocol	NAAQS		

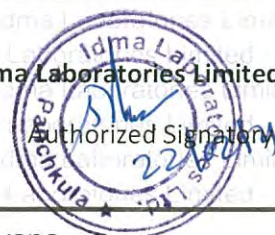
RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method
	CHEMICAL TESTING (Ambient air)	-	-	-	-
1	PM10	µg/m ³	74.2	Max. 100	NAAQMS/36/2012-13(Gravimetric method)
2	SO ₂	µg/m ³	14.7	Max. 80	NAAQMS/36/2012-13(Improved West & Gaeke method)
3	NO ₂	µg/m ³	19.3	Max. 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)
4	NH ₃	µg/m ³	26.2	Max. 400	NAAQMS/36/2012-13(Indophenol method)
5	PM _{2.5}	µg/m ³	33.9	Max. 60	NAAQMS/36/2012-13(Gravimetric method)
6	CO	mg/m ³	0.3	Max. 2	NAAQMS/36/2012-13 & IS 5182 Part 10:1999
7	Ozone	µg/m ³	20	Max. 100	NAAQMS/36/2012-13(Chemical method)
8	Benzene	µg/m ³	<0.5	Max. 5	NAAQMS/36/2012-13(GC method)
9	Benzo-a-Pyrene(BaP) - Particulate phase	ng/m ³	Not Detected	Max. 1	NAAQMS/36/2012-13(GC method)
10	Arsenic	ng/m ³	Not Detected	Max. 6	NAAQMS/36/2012-13(AAS method)
11	Nickel	ng/m ³	Not Detected	Max. 20	NAAQMS/36/2012-13(AAS method)
12	Lead	µg/m ³	<0.1	Max. 1	NAAQMS/36/2012-13(AAS method)

Analyst
22/02/2021

End of Report

For Idma Laboratories Limited



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

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TEST REPORT

Ref. No. IL/D- 22617	Date 23.02.21	Lab No.	170221N-E-002	Page No. 1
Customer	Patel Engineering Limited Kiru Hydroelectric Project Kiru, Distt. Kishtwar J&K			
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	12/02/2021	
Date of Receipt of Sample	17/02/2021			
Period of Analysis	17/02/2021 To 22/02/2021			
Sampling Team Idma	Idma Representative Team	Client	Mr. Reshi Sharma	
Sampling Location	Outlet-Power House Site			
Visual Observation	N/A			
Date of Sampling	15/02/2021			
Date of Reporting	22/02/2021			
Sampling Protocol	IS 5182			
Testing Protocol	NAAQS			

RESULTS

S.No.	Test Parameter	Units	Results	Specifications	Test Method
	CHEMICAL TESTING (Ambient air)	-	-	-	-
1	PM10	µg/m ³	80.5	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	19.6	Max. 80	NAAQMS/36/2012-13(Modified Jacob & Hochheiser method)
4	NH3	µg/m ³	26.8	Max. 400	NAAQMS/36/2012-13(Indophenol method)
5	PM2.5	µg/m ³	36.2	Max. 60	NAAQMS/36/2012-13(Gravimetric method)
6	CO	mg/m ³	0.35	Max. 2	NAAQMS/36/2012-13 & IS 5182 Part 10:1999
7	Ozone	µg/m ³	20	Max. 100	NAAQMS/36/2012-13(Chemical method)
8	Benzene	µg/m ³	<0.5	Max. 5	NAAQMS/36/2012-13(GC method)
9	Benzo-a-Pyrene(BaP) - Particulate phase	ng/m ³	Not Detected	Max. 1	NAAQMS/36/2012-13(GC method)
10	Arsenic	ng/m ³	Not Detected	Max. 6	NAAQMS/36/2012-13(AAS method)
11	Nickel	ng/m ³	Not Detected	Max. 20	NAAQMS/36/2012-13(AAS method)
12	Lead	µg/m ³	<0.1	Max. 1	NAAQMS/36/2012-13(AAS method)

Analyst
22/02/2021

End of Report

For Idma Laboratories Limited

Authorized Signatory



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

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TEST REPORT

Ref. No. IL/D- 22618	Date 23-02-21	Lab No.	170221N-E-003	Page No. 1/1
Customer	Patel Engineering Limited Kiru Hydroelectric Project Kiru, Distt. Kishtwar J&K			
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	12/02/2021	
Date of Receipt of Sample	17/02/2021			
Period of Analysis	17/02/2021 To 20/02/2021			
Sampling Team Idma	Idma Representative Team	Client	Mr. Reshi Sharma	
Sampling Location	Inlet-Dam Site			
Visual Observation	N/A			
Date of Sampling	15/02/2021			
Date of Reporting	20/02/2021			
Sampling Protocol	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)	66.2	Max 75	EPA Guidline Manual July 2008
2	LNight	dB(A)	57.5	Max 70	EPA Guidline Manual July 2008

End of Report

Analyst
20/02/21

For Idma Laboratories Limited

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TEST REPORT

Ref. No. IL/D- 22619	Date 23.02.21	Lab No. 170221N-E-004	Page No. 1/1
Customer	Patel Engineering Limited Kiru Hydroelectric Project Kiru, Distt. Kishtwar J&K		
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	12/02/2021
Date of Receipt of Sample	17/02/2021		
Period of Analysis	17/02/2021 To 20/02/2021		
Sampling Team Idma	Idma Representative Team	Client	Mr. Reshi Sharma
Sampling Location	Outlet-Power House Site		
Visual Observation	N/A		
Date of Sampling	15/02/2021		
Date of Reporting	20/02/2021		
Sampling Protocol	CPCB		
Testing Protocol	EPA/CPCB		

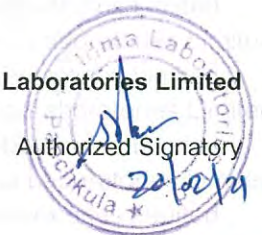
RESULTS

S.No.	Test Parameter	Units	Results	Limits, Day	Test Method
	CHEMICAL DISCIPLINE (Ambient Noise Levels)	-	-	-	-
1	Lday	dB(A)	57.4	Max 75	EPA Guidline Manual July 2008
2	LNight	dB(A)	51.8	Max 70	EPA Guidline Manual July 2008

End of Report

For Idma Laboratories Limited

Authorized Signatory



Analysis
20/02/21



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

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TEST REPORT

Ref. No. IL/D- 22620	Date 23.02.21	Lab No. 170221N-E-005	Page No. 1/2
Customer	Patel Engineering Limited Kiru Hydroelectric Project Kiru, Distt. Kishtwar J&K		
Type of Sample	Surface Water		
Customer's Description of Sample	Surface Water		
Quantity	5 Ltr+250 ml		
Packing, Markings, Seal & Quantity	Plastic Can & Sterilized Glass Bottle		
Mode of Collection of Sample	Sampling by Laboratories		
Work Order No.	NIL	Dated	12/02/2021
Date of Receipt of Sample	17/02/2021		
Period of Analysis	17/02/2021 To 22/02/2021		
Sampling Team Idma	Idma Representative Team	Client	Mr. Reshi Sharma
Sampling Location	U/S-Dam Site, Chenab River		
Visual Observation	N/A		
Date of Sampling	15/02/2021		
Date of Reporting	22/02/2021		
Sampling Protocol	IS 3025:1987 & ILL/SOP/MB/034		
Testing Protocol	-		

RESULTS

S.No.	Test Parameter	Units	Results	Test Method
	Chemical Testing (Water)	-	-	-
1	pH	-	7.43	APHA 4500H+B 23rd Edition, 2017
2	Alkalinity as HCO ₃	mg/L	110	APHA 2320 B 23rd Edition, 2017
3	Calcium as Ca	mg/L	24	APHA 3500-Ca B 23rd Edition, 2017
4	Chloride as Cl	mg/L	21.5	APHA 4500Cl- B 23rd Edition, 2017
5	Conductivity	uS/cm	269	USEPA Method 120.1
6	Dissolved Oxygen (DO)	mg/L	7.0	CPCB Guide Manual:Water & waste water Analysis
7	Fluoride as F	mg/L	0.06	CPCB Guide Manual:Water & waste water Analysis
8	Hardness Total (as CaCO ₃)	mg/L	88	APHA 2340C 23rd Edition, 2017
9	Total Dissolved Solids	mg/L	173	APHA 2540 C 23rd Edition, 2017
10	Sulphate as SO ₄	mg/L	10.4	APHA 4500-SO ²⁻ 4 E 23rd Edition, 2017
11	Temperature	°C	16	APHA 2550 B 23rd Edition, 2017
12	Turbidity	NTU	1	APHA 3130 B 23rd Edition, 2017
13	Residual Free chlorine	mg/L	<0.1	APHA 4500Cl B 23rd Edition, 2017
14	Potassium	mg/L	1.1	APHA 3125 B 23rd Edition 2017
15	Sodium	mg/L	4.6	APHA 3125 B 23rd Edition 2017



Handwritten signature and date: 22/02/21

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TEST REPORT

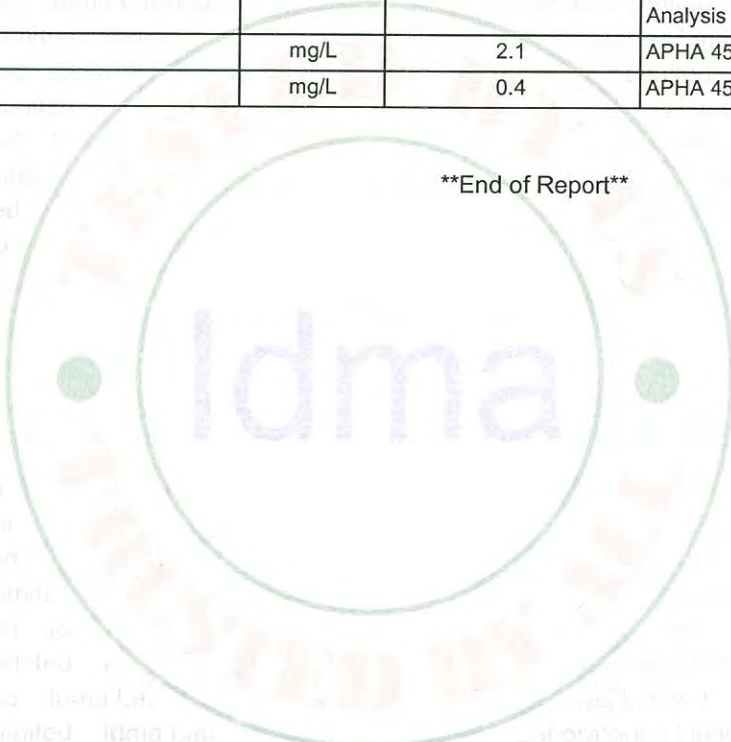
Ref. No. IL/D- 22620		Date	23.02.21	Lab No.	170221N-E-005	Page No.	2/2
S.No.	Test Parameter	Units	Results	Test Method			
16	Iron as Fe	mg/L	0.05	APHA 3125 B 23rd Edition 2017			
17	Magnesium as Mg	mg/L	6.72	APHA 3125 B 23rd Edition 2017			
	Biological Testing (Water)	-	-	-			
18	E. Coli	MPN/100ml	<1.8	APHA 9221 B & C 23rd Edition 2017			
19	Total Coliform Bacteria	MPN/100ml	50	APHA 9221 B & C 23rd Edition 2017			
20	BOD	mg/L	<2	CPCB Guide Manual:Water & waste water Analysis			
21	COD	mg/L	8	CPCB Guide Manual:Water & waste water Analysis			
22	Nitrate	mg/L	2.1	APHA 4500 NO3 23rd Edition 2017			
23	Total Phosphate	mg/L	0.4	APHA 4500 P 23rd Edition 2017			

Opinion :

End of Report

Anand G
Analyst
22/02/2021

For Idma Laboratories Limited



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TEST REPORT

Ref. No. IL/D- 22621	Date 23.02.21	Lab No.	170221N-E-006	Page No. 1/2
Customer	Patel Engineering Limited Kiru Hydroelectric Project Kiru, Distt. Kishtwar J&K			
Type of Sample	Surface Water			
Customer's Description of Sample	Surface Water			
Quantity	5 Ltr+250 ml			
Packing, Markings, Seal & Quantity	Plastic Can & Sterilized Glass Bottle			
Mode of Collection of Sample	Sampling by Laboratories			
Work Order No.	NIL	Dated	12/02/2021	
Date of Receipt of Sample	17/02/2021			
Period of Analysis	17/02/2021 To 22/02/2021			
Sampling Team Idma	Idma Representative Team	Client	Mr. Reshi Sharma	
Sampling Location	D/S-Power House Site, Chenab River			
Visual Observation	N/A			
Date of Sampling	15/02/2021			
Date of Reporting	22/02/2021			
Sampling Protocol	IS 3025:1987 & ILL/SOP/MB/034			
Testing Protocol	-			

RESULTS

S.No.	Test Parameter	Units	Results	Test Method
	Chemical Testing (Water)	-	-	-
1	pH	-	7.46	APHA 4500H+B 23rd Edition, 2017
2	Alkalinity as HCO ₃	mg/L	110	APHA 2320 B 23rd Edition, 2017
3	Calcium as Ca	mg/L	24	APHA 3500-Ca B 23rd Edition, 2017
4	Chloride as Cl	mg/L	20.9	APHA 4500Cl- B 23rd Edition, 2017
5	Conductivity	uS/cm	271	USEPA Method 120.1
6	Dissolved Oxygen (DO)	mg/L	7.0	CPCB Guide Manual:Water & waste water Analysis
7	Fluoride as F	mg/L	0.06	CPCB Guide Manual:Water & waste water Analysis
8	Hardness Total (as CaCO ₃)	mg/L	90	APHA 2340C 23rd Edition, 2017
9	Total Dissolved Solids	mg/L	171	APHA 2540 C 23rd Edition, 2017
10	Sulphate as SO ₄	mg/L	10	APHA 4500-SO ₄ -E 23rd Edition, 2017
11	Temperature	°C	16	APHA 2550 B 23rd Edition, 2017
12	Turbidity	NTU	1	APHA 3130 B 23rd Edition, 2017
13	Residual Free chlorine	mg/L	<0.1	APHA 4500Cl B 23rd Edition, 2017
14	Potassium	mg/L	1.1	APHA 3125 B 23rd Edition 2017
15	Sodium	mg/L	4.5	APHA 3125 B 23rd Edition 2017

Anand
22/02/2021



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TEST REPORT

Ref. No. IL/D- 22621		Date 23.02.21	Lab No. 170221N-E-006		Page No. 2/2
S.No.	Test Parameter	Units	Results	Test Method	
16	Iron as Fe	mg/L	0.05	APHA 3125 B 23rd Edition 2017	
17	Magnesium as Mg	mg/L	7.2	APHA 3125 B 23rd Edition 2017	
	Biological Testing (Water)	-	-	-	
18	E. Coli	MPN/100ml	<1.8	APHA 9221 B & C 23rd Edition 2017	
19	Total Coliform Bacteria	MPN/100ml	60	APHA 9221 B & C 23rd Edition 2017	
20	BOD	mg/L	<2	CPCB Guide Manual:Water & waste water Analysis	
21	COD	mg/L	8	CPCB Guide Manual:Water & waste water Analysis	
22	Nitrate	mg/L	2.2	APHA 4500 NO3 23rd Edition 2017	
23	Total Phosphate	mg/L	0.38	APHA 4500 P 23rd Edition 2017	

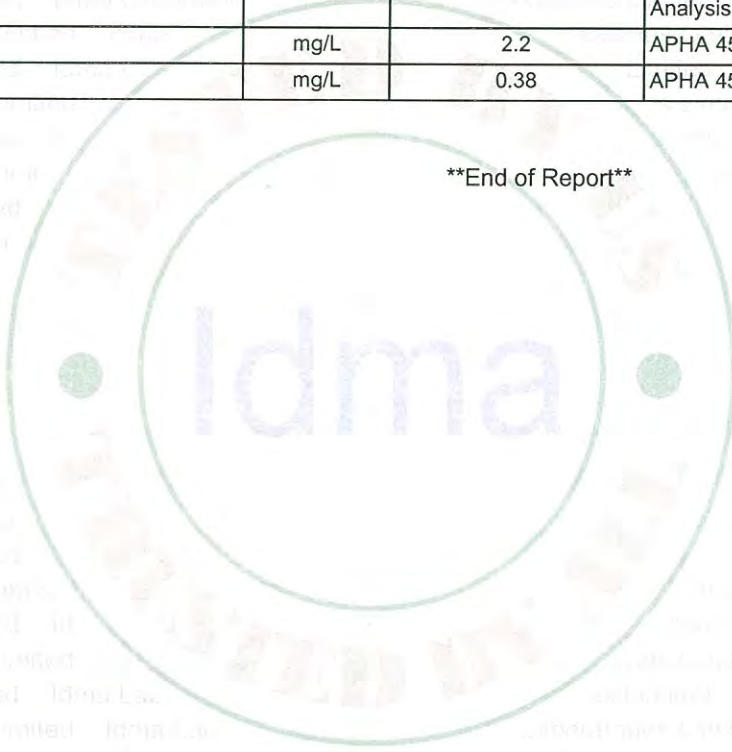
Opinion :

End of Report

Anurika
Analyst
22/02/2021

For Idma Laboratories Limited

Authorized Signatory





Idma Laboratories Limited

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TEST REPORT

Ref. No. IL/D- 22622	Date 23.02.21	Lab No. 170221N-E-007	Page No. 1/2
Customer	Patel Engineering Limited Kiru Hydroelectric Project Kiru, Distt. Kishtwar J&K		
Type of Sample	Drinking Water		
Customer's Description of Sample	Drinking Water		
Quantity	5 Ltr+250 ml		
Packing, Markings, Seal & Quantity	Plastic Can & Sterilized Glass Bottle		
Mode of Collection of Sample	Sampling by Laboratories		
Work Order No.	NIL	Dated	12/02/2021
Date of Receipt of Sample	17/02/2021		
Period of Analysis	17/02/2021 To 22/02/2021		
Sampling Team Idma	Idma Representative Team	Client	Mr. Reshi Sharma
Sampling Location	Staff Canteen		
Visual Observation	N/A		
Date of Sampling	15/02/2021		
Date of Reporting	22/02/2021		
Sampling Protocol	IS 3025:1987 & ILL/SOP/MB/034		
Testing Protocol	IS: 10500:2012 Amdt 1 & 2		

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	<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	-	7.31	6.5-8.5	No Relaxation	APHA 4500H+B 23rd Edition, 2017
4	Alkalinity as HCO ₃	mg/L	102	Max. 200	Max. 600	APHA 2320 B 23rd Edition, 2017
5	Boron	mg/L	<0.01	Max. 0.5	Max. 1.0	APHA 3125 B 23rd Edition, 2017
6	Calcium as Ca	mg/L	24.8	Max. 75	Max. 200	APHA 3500-Ca B 23rd Edition, 2017
7	Chloride as Cl	mg/L	17	Max. 250	Max. 1000	APHA 4500Cl- B 23rd Edition, 2017
8	Hardness Total (as CaCO ₃)	mg/L	85	Max. 200	Max. 600	APHA 2340C 23rd Edition, 2017
9	Total Dissolved Solids	mg/L	142	Max. 500	Max. 2000	APHA 2540 C 23rd Edition, 2017
10	Sulphate as SO ₄	mg/L	5.9	Max. 200	Max. 400	APHA 4500-SO ²⁻ 4 E 23rd Edition, 2017
11	Turbidity	NTU	<1	Max. 1	Max. 5	APHA 3130 B 23rd Edition, 2017
12	Taste	Qualitative	Agreeable	Agreeable	Agreeable	APHA 2160 B 23rd Edition, 2017
13	Residual Free chlorine	mg/L	0.2	Min. 0.2	1	APHA 4500Cl B 23rd Edition, 2017
14	Cadmium	mg/L	<0.001	Max. 0.003	No Relaxation	APHA 3125 B 23rd Edition 2017

Reshi Sharma
22/02/2021

Reshi Sharma
22/02/2021



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TEST REPORT

Ref. No. IL/D- 22622		Date 23.02.21	Lab No. 170221N-E-007		Page No. 2/2	
S.No.	Test Parameter	Units	Results	Limit of IS: 10500-2012		Test Method
				Requirement (Acceptable Limit)	Permissible Limit in absence of alternate Source	
15	Selenium	mg/L	<0.001	Max. 0.01	No Relaxation	APHA 3125 B 23rd Edition 2017
16	Silver	mg/L	<0.001	Max. 0.1	No Relaxation	APHA 3125 B 23rd Edition 2017
17	Mercury	mg/L	<0.0001	Max. 0.001	No Relaxation	APHA 3125 B 23rd Edition 2017
18	Magnesium as Mg	mg/L	6.2	Max. 30	Max. 100	APHA 3125 B 23rd Edition 2017
19	Total Arsenic	mg/L	<0.001	Max. 0.01	No Relaxation	APHA 3125 B 23rd Edition 2017
20	Total Chromium	mg/L	<0.001	Max. 0.05	No Relaxation	APHA 3125 B 23rd Edition 2017
	Biological Testing (Water)	-	-	-	-	-
21	E. Coli	/100ml	Absent	Shall not be detectable in any 100ml sample	--	IS 15185:2016
22	Total Coliform Bacteria	/100ml	Absent	Shall not be detectable in any 100ml sample	--	IS 15185:2016

End of Report

Anonika
Analyst
22/02/21

For Idma Laboratories Limited



Authorized Signatory

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