



# Environmental Monitoring Report

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Project Number: 41627-043  
August 2018

Period: January 2018 – March 2018

## IND: MFF - Himachal Pradesh Clean Energy Development Investment Program - Tranche 3

Submitted by

Himachal Pradesh Power Corporation Limited, Shimla

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**Asian Development Bank**

RES



Sainj Hydro-Electric Project (100)MW

General Manager

Sarabai complex Bhunter -175125

Distt. Kullu (H.P)

for logging p's  
GM/VRK.

01902-265191

No. HPPCL/SHEP/DB-2 /2018- 715

Dated: 11-06-2018

To

The Chief Environment Specialist,  
HPPCL, Himfed Building  
Near BCS, New Shimla-9

Sub: Sainj HEP (100MW): 1<sup>st</sup> quarter (w.e.f. 01.01.18 to 31.03.18)  
Environment Monitoring Report.

Sir,

Enclosed please find herewith hard copy of the 1<sup>st</sup> quarter (w.e.f. 01.01.18 to 31.03.18) Environment Monitoring Report of Sainj HEP (100MW) for information and further necessary action please.

DA:- As above

*[Signature]* 28/5/18

General Manager  
Sainj Hydroelectric Project  
HPPCL, Sarabai, Distt. Kullu

ASIAN DEVELOPMENT BANK  
INRM  
27 AUG 2018  
4285  
RECEIVED

ASIAN DEVELOPMENT BANK  
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Self copy and 28/08/18



***SAINJ***  
***HYDRO ELECTRIC PROJECT***  
***(100 MW)***

Environment Monitoring Report  
(First Quarter (Q1) Report 2018)

### List of abbreviations and colloquial terms used

ADB	Asian Development Bank
AY	Academic Year
Bigha	Unit for measuring land (One Bigha = about 800 sq mtr)
Biswa	Unit for measuring land (One Biswa = about 40 sq mtr)
CA	Compensatory Afforestation
CAMPA	Compensatory Afforestation Management and Planning Agency
CAT	Catchment Area Treatment
CBO	Community Based Organization
CES	Chief Environment Specialist
CMO	Chief Medical Officer
CSR	Corporate Social Responsibility
DC	Deputy Commissioner
DFO	Divisional Forest Officer
DGM	Deputy General Manager
distt.	District
DPR	Detailed Project Report
EIA	Environment Impact Assessment
EMP	Environment Management Plan
GoHP	Government of Himachal Pradesh
GoI	Government of India
HCC	Hindustan Construction Company (Ltd)
HDPE	High-Density Poly-Ethylene
HEP	Hydro-Electric Project
HFL	Highest Flood Level
HoP	Head of Project
HP	Himachal Pradesh
HPCEDIP	Himachal Pradesh Clean Energy Development Investment Programme
HPFD	Himachal Pradesh Forest Department
HPPCL	Himachal Pradesh Power Corporation Limited
HPPWD	Himachal Pradesh Public Works Department
HPSEB	Himachal Pradesh State Electricity Board
HPSFDC	Himachal Pradesh State Forest Development Corporation
ITI	Industrial Training Institute
LADA	Local Area Development Agency

LADC	Local Area Development Committee
LADF	Local Area Development Fund
LWSS	Lift Water Supply Scheme
M	Meter
MoEF	Ministry of Environment & Forests
MW	Megawatt
NPV	Net Present Value
NRRP	National Rehabilitation and Resettlement Plan
PAA	Project Affected Area
PAF	Project Affected Family
Panchayat	Lower most tier (at cluster of village level) of governance in India
Parivar	Family
PAZ	Project Affected Zone
PCC	Project Construction Circle
PHC	Primary Health Centre
R&R	Resettlement and Rehabilitation
RoR	Run-of-the-River
Rs.	Indian Rupees/INR
SC	Scheduled Caste
SDM	Sub Divisional Magistrate
SE	Superintending Engineer
SPCB	State Pollution Control Board
Sq kms	Square Kilometer
Sq Mtr	Square Meter
ST	Scheduled Tribe

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**SAINJ (100MW) HYDRO-ELECTRIC PROJECT**  
**ENVIRONMENT SAFEGUARDING AND MANAGEMENT REPORT**

The Sainj (100 MW) Hydro-Electric Project is being funded by the Asian Development Bank, which is covered under HPCEDIP Tranche3.

I	Name of Project	Sainj Hydro Electric Project (100 MW)
II	Name of Monitoring/Reporting Agency and address	Internal Monitoring report of HPPCL, General Manager, Sainj Hydroelectric Project, HPPCL, Sarabai (Bhuntar), Distt. Kullu (H.P)-175125
III	Monitoring Period ( season/month)	Jan to March 2018
IV	Report No.	<b>HPPCL-ESMU-Sainj-Env.Comp.Rprt-2018/(Q1)</b>
V	Report for the period	Upto 31.03.18
VI	Date of reporting	23.05.2018.

## 1. Status of Implementation of Environment Management Plan

The abstract of various provisions in the approved EMP of Sainj HEP along with their implementation status is tabulated below.

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
1.	<b>Compensatory Afforestation and Biodiversity Conservation Plan</b>				
	<ul style="list-style-type: none"> <li>Afforestation of 96.00 ha</li> </ul>	Forest Department, Director GHNP	For Compensatory Afforestation (CA) over 96 ha land i.e. twice the area of forestland diverted (47.993 ha) in lieu of diversion of forestland for the Project, Rs 92.50 lacs have been deposited during Sept., 2009 with Himachal Pradesh Forest Department.	No funds have been diverted against compensatory afforestation so far.	Additional principal Chief conservator of Forest (CAT Plan) has been requested by Chief Environment Specialist vide his office letter no. HPPCL/ESMU-1/Sainj HEP/2015-530-32 dated 28.05.2015 to release the funds on account of compensatory afforestation to DFO Great Himalyan National Park Shamshi but no funds have been diverted against CA so far.
	<ul style="list-style-type: none"> <li>In situ relocation of <i>Betula alnoides</i></li> </ul>	State Forest Department/ HPPCL	The matter has been taken up with Forest Department.	-	Principal Chief Conservator of Forest (Wild Life HP) has been requested by Chief Environment



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					Specialist vide his office letter no. HPPCL/ESMU-2/Sainj HEP/2014-533-35 dated 20.08.2015 for in Situ conversation measures of the Betula alnoids of EMP of Sainj HEP which is still awaited.
	<ul style="list-style-type: none"> <li>Ex situ conservation measures (seed collection in vitro seed germination and nursery establishment, including setting up of lab. and offices etc and 5 year maintenance)</li> </ul>		The matter has been taken up with G.B. Pant Institute of Himalayan Environment & Development, Kullu. In which HPPCL has been paid an amount of Rs. 34,23,000/- upto 31.03.18 for Ex-situ conservation measures.	A comprehensive proposal was received from G.B. Pant Institute of Himalayan Environment and Deployment, Mohal for Ex-situ conversation measures and the work agreement for the ex-situ conversation measures has been signed with the institute and the work is in progress.	Study for Ex-situ conversation measures is in progress.
	<ul style="list-style-type: none"> <li>Conservation of fauna: restrictions on noise levels during March-June and Oct-Dec shall be followed and this information should be included in tender documents for contractors.</li> </ul>	HPPCL/ Contractor	Machinery used during the construction work was fully mollified and regular checks were made to limit the noise level as per the permissible limits. After the completion of construction work the use of machinery has been discarded so now there are no chances of noise pollution.	Construction work completed.	
	<ul style="list-style-type: none"> <li>Conservation of fauna: labourers should be made</li> </ul>	HPPCL/ Contractor	Labours were made aware of conservation during the various celebrations of Environment Day, World Water Day etc. in construction phase. Three Nos. of	Construction work completed.	

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	aware of conservation, notice boards near labour camps, no firearms allowed in the Sainj valley, strict restrictions on laborers to ensure no they do not harvest any products from the forests		check posts were also maintained near the project site. Fifteen Nos. of Home Guards were deployed in these check posts. The main duty of those home guards was to check the all illegal activities in the GHNP area. As on the completion to construction work all the labourers have been moved.		
	<ul style="list-style-type: none"> <li>Fuel for laborers should be provided from plantations or provision should be made for free kerosene/LPG</li> </ul>	HPPCL/ Contractors	Fuel arrangement (LPG) was made by the contractor for its labour during construction phase. Construction work is completed so now no free fuel is provided after June 2017.	Work Completed	-
	<ul style="list-style-type: none"> <li>Creation and funding of a Sainj Valley Conservation Cell; which will monitor and enforce regulatory provisions to protect the existing biodiversity</li> </ul>	Forest Department, Director GHNP	Four No. computers and one no. Vehicle was provided to Forest Department under this plan. Fifteen No. Home guard were also deployed in Great Himalayan National Park at the project cost w.e.f Oct, 2012 to Sept 2017 for 5years as per EMP to ensure regulatory provisions to protect the existing biodiversity. As per the provisions contained in EMP of Sainj HEP, the funding support for SVCC would be provided by the project authorities for a period of Five years which are completed on Oct 2017. So no funding support is provided to SVCC after October.	-	

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	<ul style="list-style-type: none"> <li>Environmental Awareness for Conservation – development of educational awareness packages, workshops. The project authorities will bring out a monthly publication in local language with progress and future programme.</li> </ul>	Support to existing state government agencies	Provided financial support to :- <ul style="list-style-type: none"> <li>Greenson, A social, Environment Tourism &amp; Development Concern organization, Manali during a workshop on Environment protection,</li> <li>H.P.Forest Deptt for publication of a Wildlife souvenir.</li> </ul>	-	
	<ul style="list-style-type: none"> <li>Anti-poaching measures: one check post to be constructed near the intake and one near the powerhouse site. Each check post shall have 3 guards and adequate communication equipment.</li> </ul>		Three no. of check posts were maintained to regulate movement of forest produce as suggested by Forest Deptt. 15 No. Home Guard were also deployed at Ropa Complex, Barishisharan and Bah Complex during Oct, 2012 in Great Himalayan National Park at the project cost . Bed & Beddings and kitchen utensils were provided for the Home Guards. An amount of Rs. 48, 07,000/- has been deposited with DFO, Shamshi for maintenance of labour shed, construction of kitchen, toilet bath and water supply fitting etc. during August, 2012 for the execution of check posts. Emergency light, High Beam torches, Search light has been provided to the forest department for the working of check posts.  As per the provisions contained in EMP of Sainj HEP, the funding support for SVCC was to be provided by the project authorities for a period of Five years which has been completed on Oct 2017. So no funds were transferred to the account of Home Guards	-	

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks																				
			under SVCC after October 2017.																						
2	<b>Catchment Area Treatment Plan</b>																								
	<ul style="list-style-type: none"> <li>• Biological measures:               <ul style="list-style-type: none"> <li>○ 101 ha afforestation</li> <li>○ 195ha gap plantation</li> <li>○ 150 ha pasture development</li> <li>○ 40 ha fuel wood plantation</li> <li>○ 40 ha fodder plantation</li> <li>○ 90 ha social forestry</li> <li>○ 5 new nurseries</li> </ul> </li> <li>• Engineering measures:               <ul style="list-style-type: none"> <li>○ 401ha contour bunding</li> <li>○ 105 Rmt stepped drain</li> <li>○ 15 check dams</li> </ul> </li> <li>• Wildlife improvement and development:               <ul style="list-style-type: none"> <li>○ Survey of flora &amp; fauna in catchment</li> <li>○ Incentives to local communities for fire prevention</li> <li>○ Incentives to local communities</li> </ul> </li> </ul>	Forest Department	<p>The funds in phased manner (in five years) have been released to HP Forest Deptt. (CAMPAs account) for implementing CAT Plan. The total provision allocated for CAT Plan is Rs 111.54 million.</p> <p>Following payment has been done in favour of Forest Deptt:-</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>S N</th> <th>Amount Deposited (in Rs.)</th> <th>Date</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>5,20,75,000/-</td> <td>3/04/2010</td> <td>Rs. 185.14 lakh for 0 year and Rs. 335.61 lakh for 1<sup>st</sup> year.</td> </tr> <tr> <td>2</td> <td>2,75,86,000/-</td> <td>30/03/2012</td> <td>2<sup>nd</sup> year implementation of CAT Plan.</td> </tr> <tr> <td>3</td> <td>2,42,98,000/-</td> <td>29/03/2013</td> <td>3<sup>rd</sup> year implementation of CAT Plan.</td> </tr> <tr> <td colspan="4" style="text-align: center;"><b>Total: 10,39,59,000/-</b></td> </tr> </tbody> </table>	S N	Amount Deposited (in Rs.)	Date	Remarks	1	5,20,75,000/-	3/04/2010	Rs. 185.14 lakh for 0 year and Rs. 335.61 lakh for 1 <sup>st</sup> year.	2	2,75,86,000/-	30/03/2012	2 <sup>nd</sup> year implementation of CAT Plan.	3	2,42,98,000/-	29/03/2013	3 <sup>rd</sup> year implementation of CAT Plan.	<b>Total: 10,39,59,000/-</b>					As per intimated by GHNP circle Shamshi (H.P. Forest Department) an amount of Rs. 1,53,88,250/- had been utilized under the CAT Plan of Sainj HEP upto March 2018.
S N	Amount Deposited (in Rs.)	Date	Remarks																						
1	5,20,75,000/-	3/04/2010	Rs. 185.14 lakh for 0 year and Rs. 335.61 lakh for 1 <sup>st</sup> year.																						
2	2,75,86,000/-	30/03/2012	2 <sup>nd</sup> year implementation of CAT Plan.																						
3	2,42,98,000/-	29/03/2013	3 <sup>rd</sup> year implementation of CAT Plan.																						
<b>Total: 10,39,59,000/-</b>																									
		GHNP will prepare detailed action plan																							

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	for wildlife protection o Incentives to local communities to regulate local and migratory grazers o Habitat improvement in Sainj WLS o Wildlife census o Capacity building of staff and community o Support for communication o Nursery establishment and maintenance o Soil & moisture conservation o Monitoring, evaluation and impact assessment study o Support for vermin-compost development o Support for intro of LPG for poor household o Socio-economic survey o Ex-situ support for Himalayan Thar	Forest Department			

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	breeding/ conservation of GHNP				
	• Joint Forest Management Process, training and awareness	Forest Department			
	• Silt observatory	Forest Department			
	• Promotion of eco-tourism, payment for environmental services, monitoring				
3	<b>Fisheries Management Plan</b>				
	• Provision of fish ladder in the barrage	HPPCL/ Contractor	Provision of fish ladder has been made in the barrage of Sainj HEP. Some biological data of fish of Sainj river required for fish ladder design, but the data was not available with the Fisheries Deptt. as intimated by Deputy Director of Fisheries, Patlikulah vide his office letter No. TFP-5-202-D-I-1989 dated 21/09/2012. Due to non availability of the biological data the design of fish ladder has been prepared as per IS Code 13877.	Construction work of fish ladder has been completed	
	• Construction of additional rearing space for trout hatchlings at Hamini farm	Fisheries Deptt.	First and Second installment of Rs. 5.0 million each (total Rs 10 million) has been released to HP Fisheries Department during April,2010 and June,2017.	A joint Spot inspection was conducted by HPPCL, Sr. Audit officer & Fishery Officer at Hamini farm on dated 11.05.2018. During the inspection it was observed that a weir dam is constructed on Tirthan river from where Water is channelized to hatcheries.	
	• Construction of angling lake at Nagini	Fisheries Deptt.			
4	<b>Public Health Delivery System</b>				
	• Construction of	HPPCL/	HPPCL has maintained dispensary during		

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	one Dispensary, including staffing, hospital equipment and supplies	Contractor	construction phase with one No. Doctor and one No. Pharmacists were posted in the dispensary. Health checkups were carried out by the Doctor posted in the dispensary and various camps were organized in the project area. As on the completion of construction work the Dispensary was closed on Dated 01.06.2017	-	
	• A first-aid post at each of the major construction sites (two in total), including staffing, equipment and supplies	Contractor	Two no. First aid posts had been constructed by the contractor near Barrage and Power House sites.	-	
	• Two ambulances	Contractor	During the construction work two numbers of fully Equipped Ambulances were provided at Project Site which were used for the betterment of Workmen and Local Villagers.	-	
5	<b>Environmental Management in Labor Camps</b>			-	
	• Provision of heating (chapter does not have clear measures; please describe what source of heating is used)	Contractor	The contractor had provided heater and coal to labors during winter during construction phase of the project which was completed on 30.06.2017	-	
	• Provision of water supply	Contractor	Water purifiers were provided by the Contractor in all messes during construction phase.		
	• Sanitation and sewage facilities:	Contractor	During Construction stage of the Project community toilets were provided in the labor camp and septic tank was also maintained for the sewage coming from		

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	<p>please describe current status per camp, and the periodic monitoring results of the quality of effluent from the oxidation ditches, to ensure that the sewage from the labor camps does not pollute the river water (measure pH, BOD, COD, TSS and TDS as per EMP chapter 14).</p>		<p>the toilets. Waste Water, Drinking Water, Ambient Air Quality, Noise Levels were also monitored periodically at the Project Site by the External party and records were maintained.</p>	<p>--</p>	
	<p><b>• Solid waste management:</b></p> <ul style="list-style-type: none"> <li>○ Report progress on the location, construction and use of the designated landfill site according to international good practice.</li> <li>○ Report progress on the disposal of biodegradable waste: preferably through the use of composting pits. Disposal of biodegradable waste at the muck</li> </ul>	<p>Contractors/ HPPCL</p>	<p>Waste material generated from the labour camps has been carried by contractor own vehicle and disposed after in scientific manner. The process of Composting was also established by the contractor. The bio-degradable waste from labour camp has been disposed off in four composting pits and later it is used as Fertilizer to plants. As on the completion of construction work the labourers from the labour camp has been moved and no waste is generated after that.</p>	<p>-</p>	



S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	disposal sites, as mentioned in the EMP, should be discouraged). o Commissioning and use of a waste collection truck				
6	<b>Muck Management Plan</b>	Contractor/ HPPCL	The Muck dumping sites are being prepared/constructed as per norms of H.P. State Pollution Control Board for dumping. The muck was dumped in five dumping sites only and protection works has been provided at these dumping sites during construction stage.	Excavation work is completed.	
	<b>D1:</b> max. quantity to be dumped = <b>116864 cum</b>		76.24 % dumped to date; Retaining wall has been provided to the dumping site all along the river.	D1: Excavation work completed No muck is being generated.	
	<b>D2:</b> max. quantity to be dumped = <b>113226 cum</b>		43.72% dumped to date; Retaining wall has been provided to the dumping site all along the Kartaul Nallah. A stone crusher has been set up at this site.	D2: -----do-----	
	<b>D3:</b> max. quantity to be dumped = <b>41439 cum</b>		This site is not being used so far.	-	
	<b>D4:</b> max. quantity to be dumped = <b>231306 cum</b>		39.95% muck dumped so far. A stone crusher (20TPH) has been set up at this site and crushing of muck from site no. 7 is being carried out.	D4: Excavation work completed No muck is being generated.	
	<b>D5:</b> max. quantity to be dumped = <b>507035 cum</b>		17.62% muck dumped so far; proper protection is being provided to this dumping site.	D5: -----do-----	
	<b>D6:</b> max. quantity to be dumped = <b>42323 cum</b>		This site is not being used so far.	-	
	<b>D7:</b> max. quantity		100% muck dumped Proper protection has already	-	

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	to be dumped = <b>42323 cum</b>		provided to this dumping site.		
<b>7.</b>	<b>Restoration and Landscaping of Construction Sites</b>				
	• Use & restoration of quarry sites	HPPCL/ Contractor	Quarry site is not being used so far.	-	
	• Beautification of the barrage site, power house complex and the colony area	HPPCL	Beautification of the barrage site, power house complex and the colony area is being taken up.	-	
<b>8.</b>	<b>Environmental Management in Road Construction.</b>				
	• 4 km: 5/7 m wide road from Neuli to Barrage		Cutting road from Neuli to Barrage has been completed. Breast wall and retaining walls has been provided wherever required. Drainage system has been provided to the entire road length.	Final Metalling & Taning of road is being carried out by HPPCL which is to be handed over to HPPWD(Neuli to Sambha).	
	• 0.5 km: 5/7 m wide road to Desanding basin and intake		-		
	• 2 km: 5/7 m wide road from Sambha to deflushing tunnel & HRT adit-I at Kartaul nallah		Cutting of road from Sambha to Adit-I has been completed.	Road from Sambha to Adit-I, is in the process of handing over to HPPWD	
	• 7 km: 5/7 m wide road from Suind to bottom of surge shaft		Cutting of 4.15 km road from MAT to junction, 0.86 km from junction to Adit-II and 0.67 km from junction to common Adit to top & bottom of surge shaft has been completed. Common adit will be used for construction of surge shaft so the road length is reduced. Breast wall and retaining walls has been provided wherever required.	Repair & maintenance work of the road is being done by HPPCL after completion of construction work.	
	• 2.5 km: 5/7 m wide road from bottom of the surge				

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	shaft to top of surge shaft				
	<ul style="list-style-type: none"> <li>1.5 km: 7/10 m wide road from Suind to MAT and tail race</li> </ul>		Cutting of 0.400 km road from Suind to MAT and tail race has been completed. Breast wall and retaining walls has been provided wherever required	-----do-----	
	<ul style="list-style-type: none"> <li>2 km: 5/7 m wide road from quarry sites, dumping areas &amp; colony etc.</li> </ul>		Quarry site is not being used so far no road construction for quarry sites had been carried out.		
	<ul style="list-style-type: none"> <li>8 km: Widening of existing road from Suind to Neuli (from 2.75/5m to 5/7m)</li> </ul>	HPPWD/HPPCL	Rs. 1 Crore as advance was released to HPPWD on 08.04.2009 & Utilization Certificate amounting to Rs. 92.84 lacs up to Dec., 11 received from HPPWD. Due to local agitation a meeting with HPPWD held on 28.02.2012 and it was agreed that balance work from Suind to Neuli shall be done by HPPCL after taking over site from HPPWD. Revised utilization certificate amounting to Rs. 81.82 lacs up to May, 2012 has been received from HPPWD. Secretary, PWD has accorded his consent for handing over of road from Suind to Neuli road to HPPCL. The balance work of improvement of road has been taken up by HPPCL work is completed now .	Final Metalling & Taning of road is being carried out by HPPCL which is to be handed over to HPPWD(Neuli to Sambha).	
9	Greenbelt Development Plan: 40 ha. Around reservoir area. This includes nursery creation, advance works, plantation and maintenance	Forest Deptt. /HPPCL	The contractor has implanted 3000 plants in the area of 3hac.	-	
10	Control of Air Pollution (for	Contractors,	During the construction phase Ambient air samples were carried out by Environment Engineer, H.P. State	-	

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
	monitoring requirements see chapter 14 of EMP: once every season at major construction sites, SPM, RPM, SO2 and NOx):	/HPPCL	Pollution Control Board, Kullu once in every three months at the major construction sites.  On the completion of construction work the Ambient Air Samples does not monitored.		
	Control of emissions of equipment, vehicles and generators;		Every vehicle has been checked up for pollution under control certificate regularly.		
	Dust control: sprinkling, covering stockpile, effective traffic management		<ul style="list-style-type: none"> <li>➤ Sprinkling of water has been done on regular basis along the PWD roads.</li> <li>➤ Effective traffic management is being maintained at site.</li> <li>➤ Truck hauling soil, sand &amp; other loose material is being maintained at least two feet of freeboard.</li> </ul>		
11	Measures for Noise Control: see chapter 11. Monitoring as per EMP chapter 14: once every three months, at the major construction sites.	Contractors / HPPCL	<ul style="list-style-type: none"> <li>➤ Ear plug /ear muff has been provided to the labourers during the construction work.</li> </ul>	-	
12	Water Pollution Control	Contractors/ HPPCL	The sedimentation/ settling tanks have been provided for the batching plant near Power House, Adit -1 and Adit-3, in all the tunnels and also for vehicle washing ramps.	Regular cleaning and maintenance of these settling tanks has been carried out.	

S N	Component of EMP	Institutional responsibility	Status upto date 31.03.2018	Activities done / developments during reporting period (Jan to March, 2018)	Remarks
13	Environmental Monitoring Programme: • Water quality • Air quality and meteorology • Noise	H.P. Pollution Control Board	<ul style="list-style-type: none"> <li>➤ An amount of Rs. 3.05 lacs, 5 lacs and 5.24 lacs was released in the year 2010-11, 2011-12 and 2012-13 respectively to HP State Pollution Control Board under Environmental Monitoring Plan.</li> <li>➤ An amount of Rs. 15 lacs have been deposited with Environment Department, GoHP for EMP monitoring during March, 2012.</li> </ul>	Quarterly monitoring of water quality level is being carried out by H.P. State Pollution Control Board, Kullu. Monitoring for the 4th quarter 2017-18 has been carried out in the month of March 2018 and the report is attached as <b>EMR-I</b>	
	• Soil erosion and siltation		Yet to be done	-	
	• Ecology		Yet to be done	-	
	• Incidence of water-related diseases		Yet to be done	-	
	• Land use pattern		Yet to be done	-	



**H.P. STATE POLLUTION CONTROL BOARD**

Regional Office: HIMUDA, Shopping Complex Hall No-5, Beasa More-  
Kullu Distt-Kullu, Pin-175101 (Phone: 01902-223149)

Website: <http://hppcb.nic.in> e-mail: [pcborkullu@gmail.com](mailto:pcborkullu@gmail.com)

No. PCB/RO Kullu/Sainj HEP/EMP/2015

569

Dated: 25.05.2018

To

✓ **The General Manager,**

M/s Sainj Hydro Electric Project,

HPPCL, Sarabai (Bhunter),

Distt. - Kullu-175125 (H.P.)

**Sub: - Analysis Report and bill for the analysis of Water Samples of EMP 4<sup>th</sup> Qtr.  
2017-18.**

Sir,

Please find enclosed herewith the sample analysis Report No. 8554 to 8559 dated 27.04.2018 of the sample (s) of river water of your project site Sainj HEP (100MW) collected on 28.03.2018. The comparative statement showing Parameters with results are also enclosed.

Bill (s) No. 11064 dated 09.04.2018, amounting to Rs. 5400/- (Five thousand four hundred only) as per revised rates on account of sample testing charges of the above mentioned sample (s) is/are also enclosed herewith. You are requested to arrange the payment against the above referred bill and updated the previous bills online within one month and submit the HIM XGN generated payment receipt to this office for office record please.

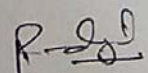
Note: - Please download the said Report/Bill from the official website i.e. [www.hppcb.nic.in](http://www.hppcb.nic.in).

Encl:- A/A

(Er. Pradeep Moudgil)  
Assistant Environmental Engineer  
Regional Office, Kullu

**COMPARITIVE STATEMENT OF WATER SAMPLES OF  
HPPCL SAINJ, 4<sup>th</sup> Qtr. 2017-18**

Sr. No.	Sampling Point	Report No.	Parameters						Remarks
			TSS (mg/l)	Cond. (us/cm)	DO (mg/l)	O&G (mg/l)	pH	BOD (mg/l)	
1	River Sainj 1 Km of TRI outlet	8554	11.0	109.8	8.8	Nil	7.42	----	As per water quality criteria; this confirms class A. It is suitable for drinking without conventional treatment but after disinfection.
2	River Sainj at diversion Structure Site	8555	12.0	96.78	9.0	Nil	7.38	----	As per water quality criteria; this confirms class A. It is suitable for drinking without conventional treatment but after disinfection.
3	River Sainj 500m U/s of Barrage Site	8556	9.0	88.64	9.0	Nil	7.36	----	As per water quality criteria; this confirms class A. It is suitable for drinking without conventional treatment but after disinfection.
4	U/s Labour colony, Adit-1 (Katrol Nallah)	8557	12.0	190.0	8.7	Nil	7.83	----	As per water quality criteria; this confirms class A. It is suitable for drinking without conventional treatment but after disinfection.
5	D/s Labour colony, Adit-1 (Katrol Nallah)	8558	7.0	198.0	8.7	Nil	8.06	----	As per water quality criteria; this confirms class A. It is suitable for drinking without conventional treatment but after disinfection.
6	Handpump at Matla Village	8559	18.0	235.9	----	Nil	8.11	----	As per water quality criteria; this confirms class A. It is suitable for drinking without conventional treatment but after disinfection.
7	Water Source at Ropa								Sample not collected

  
 (Er. Pradeep Moudgil)  
 Assistant Environmental Engineer,  
 Regional Office, Kullu