



Government of India Ministry of Environment, Forest and Climate Change (Impact Assessment Division)

To.

The AGM GREENKO ENERGIES PRIVATE LIMITED Plot No. 1071, Road No-44, Jubilee Hills,

Hyderabad,, Hyderabad, Telangana-500033

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/MP/RIV/124890/2019 dated 20 Jul 2021. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No. EC21A003MP159461 J-12011/22/2019-IA-I (R) 2. File No.

3. **Project Type** 4. Category

5. Project/Activity including 1(c) River Valley projects Schedule No.

MP 30 Gandhi Sagar Standalone Pumped 6. Name of Project

Storage Project

Name of Company/Organization **GREENKO ENERGIES PRIVATE** 7. LIMITED

8. **Location of Project** Madhya Pradesh 9. **TOR Date** 28 Feb 2020

The project details along with terms and conditions are appended herewith from page no 2 onwards.

(e-signed) Yogendra Pal Singh Scientist E Date: 02/12/2021 IA - (River Valley and Hydroelectric **Projects sector)**



Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH.Please quote identification number in all future correspondence.

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F. No. J-12011/22/2019-IA.I (R) Government of India Ministry of Environment, Forests & Climate Change (Impact Assessment Division) ****

Indira Paryavan Bhavan 2nd Floor, Vayu Wing Aliganj, Jor Bagh Road New Delhi – 110003

To,

Dated: 01st December, 2021

M/s Greenko Energies Private Limited

Plot no-1071, Road No-44, Jubilee Hills, Hyderabad - 500 033 (Telangana)

Email: envifor.gandhisagar@greenkogroup.com

Sub: MP30 Gandhi Sagar Off Stream Pumped Storage Project (1440 MW) in an area of 402.50 ha by M/s Greenko Energies Private Limited in village Khemla Block, Tehsil Rampur, District Neemuch, Madhya Pradesh - Environmental Clearances

Sir,

This has reference to your online Proposal No. IA/MP/RIV/124890/2019 dated 20th July, 2021 submitted to the Ministry for Environmental Clearance to the project cited in the

- The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance to MP30 Gandhi Sagar Off Stream Pumped Storage Project (1440 MW) in an area of 402.50 ha by M/s Greenko Energies Private Limited in village Khemla Block, Tehsil Rampur, District Neemuch (Madhya Pradesh).
- 3. The proposal was considered by the Expert Appraisal Committee (EAC) for River Valley & Hydroelectric Projects in its 15th EAC Meeting held on 27th July 2021. The comments and observations of EAC on the project may be seen in the Minutes of the meeting which are available on the web-site of this Ministry.
- The details of the project submitted by project proponent and ascertained from the document submitted are mentioned below:
- MP 30 Gandhi Sagar Off-Stream Pumped Storage Project is located in Neemuch (i) District of Madhya Pradesh. It envisages creation of upper reservoir which is located away from all existing natural systems. The project is about 78 Kms from district headquarters Neemuch via MP SH 31A. Nearest railhead and airport are located at Neemuch and Udaipur respectively. The nearest village to the project is Khemla block about 0.5Km, which comes under, Rampura Tehsil, Neemuch district. (ii)

The MoEF&CC approved the ToR for the proposed project vide F. No. J-12011/22/2019-IA-I (R) dated 28th February, 2020.

This project envisages non-consumptive re-utilization of 1.22 TMC of water of the Gandhi Sagar reservoir by recirculation. The water in the Gandhi Sagar reservoir (existing lower reservoir) will be pumped up and stored in the proposed Pumped

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- Storage component of MP30 Gandhi Sagar (upper Reservoir) and will be utilized for power generation.
- (iv) The Geographical coordinates of the proposed MP30 Gandhi Sagar Off-Stream Pumped Storage Project component of upper reservoir is at latitude 24°31'6.89"North and Longitude is 75°30'56.12"East and that of Gandhi Sagar lower reservoir (existing) are 24°31'5.40" North and 75°32'5.28"East. Proposed rating of Off-Stream Pumped Storage Project is 1440MW.
- (v) The Off-Stream Pumped Storage Project of MP 30 Gandhi Sagar, herein after referred as MP 30 Gandhi Sagar Off-Stream PSP, envisages construction of upper reservoir (proposed) located in Rampura Tehsil of Neemuch District. The Gandhi Sagar reservoir (existing) is under operation with a gross storage capacity of 258.47 TMC and MP 30 Gandhi Sagar Off Stream PSP is proposed for the live storage capacity of 1.22 TMC.

(vi) Project Components details:

- The project will involve construction of rock fill embankment of maximum height of 35m for creation of MP 30 Gandhi Sagar Off-Stream PSP upper reservoir of 1.80TMC gross storage and 1.22TMC live storage.
- The upper reservoir is located at EL 491m and the FRL and MDDL of this reservoir is at EL 523.00m & EL 508.00m, respectively.
- 6 nos. each of 683.48m long and 7.5m dia. surface circular steel lined Penstock / Pressure Shaft (i.e., consisting of 181.52m long surface penstock, 140.97m long vertical pressure shaft and 360.99m long Horizontal pressure shaft) in which 5 nos. will feed 5 units each of 240 MW and 1 no. will get bifurcated in to two of 5.3m dia. to feed 2 units each of 120 MW.
- A surface Powerhouse having an installation of Five nos. Reversible Francis turbine each of 240MW capacity (All units are fixed speed turbines) operating under a rated head of 121.70m in generating mode and 127.90m in pumping mode and Two nos. Reversible Francis turbine each of 120 MW capacity (All are variable speed turbines) operating under a rated head of 121.00m in generating mode and 128.70m in pumping mode.
- 85m wide and FSD of 6.0m Tail race channel of about 860.00m long connecting to the Existing Gandhi Sagar reservoir.
- The existing Gandhi Sagar reservoir will be utilized as a lower reservoir to enable MP 30 Gandhi Sagar Off-Stream PSP to operate as a peak station. The FRL & MDDL of existing Gandhi Sagar reservoir is at EL 400.00m & EL 381.00m, respectively. The Gross storage capacity of existing reservoir is 258.47 TMC. Water will be pumped to the proposed upper reservoir through TRC.
- (vii) Salient features of MP 30 Gandhi Sagar Off-Stream PSP

S. No.		NAME OF THE PROJECT	MP30 GANDHI SAGAR OFF-STREAM PSP				
1	19:337.7	Location					
	а	Country	India				
	b	State	Madhya Pradesh				
	С	District	Neemach				
	d	Tehsil	Rampura				
	е	Village near Power House	Khemla Block				
2		Geographical Co-Ordinates					
	а	MP30 GANDHI SAGAR OFF- STREAM PSP Upper Reservoir - (Now Proposed)					
		Latitude	24°31'6.89"N				

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	Cred Am Allo	Longitude	75°30'56.12"E				
	b	Sugar reservoir - Lower	. 0 00 00.12 E				
		(Existing)					
		Latitude	24°31'5.4"N				
		Longitude	75°32'5.28"E				
3	3	Access To Project Site					
	а		Udaipur, 171Km from project site.				
	b	Railhead	Neemach, 67Km from project site				
	С	Road	Khemla block, around 5km from SH31A				
	d	Port	Mandavi				
4		Project					
	а	Туре	Off-Stream Pumped Storage Project				
I	b	Storage Capacity	10411.20MWH				
	С	Rating	1440MW				
	d	Peak operation duration	7.23Hours daily				
5		MP30 GANDHISAGAR OFF-	7.2011ours daily				
		STREAM PSP - Upper Reservoir					
	a	Live Storage	1.22TMC				
	b	Dead Storage	0.58TMC				
	С	Gross Storage	1.80TMC				
			1.001WC				
	d	Full Reservoir Level (FRL)	EL +523.00 m				
	e	Minimum Draw Down Level (MDDL)	EL +508.00m				
	f	Top Bund Level (TBL)	EL +526.00m				
	g	Foundation Level	EL +491.00 m				
	h	Max Height of Embankment	35.00 m				
	i	Length of Embankment	5561.131 m				
6		Gandhi Sagar Reservoir - Lower	3001.131 III				
		Reservoir – (Existing)					
	a	Type of Dam	Masonry Gravity Dam				
	b	Full Reservoir Level (FRL)	EL 400.00 m				
	С	Minimum Draw Down Level (MDDL)	EL 381.00 m				
	d	Height of Dam above deepest bed level	63.70 m				
	е	Length of Dam	514.00m				
	f	Gross Storage Capacity	258.47 TMC				
7		RCC intake Structure					
	a	Type	Diffuser Type				
	b	Elevation of Intake centre line	EL +495.50 m				
	С	Elevation of bell mouth bottom	EL +491.05 m				
3		Penstock / Pressure Shafts	22.00 M				
	a	Type	Finished steel lined - circular				
	b	Number of Penstocks	6 Nos. wherein 1 No. Independent				
			Pressure shaft bifurcated in to 2 for smaller units				
		Diameter of Penstock					

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			5.3 m – Branch Penstock		
	d	Length of penstock/Pressure Shaft	For 5 nos. – 683.48 m each (Main Penstock) for 5 larger units For 1 no. – 607.23m long (Main Penstock) and 76.25m each Branch Penstock for 2 smaller units		
9		Powerhouse	remote and a smaller diffe		
	а	Туре	Surface Powerhouse		
	b	Dimensions (Excluding Service Bay)	181.20m (L) x 25.50m (W) x 56.10m (H)		
10		Tail Race Channel			
	а	Type & Shape	Concrete lined & Trapezoidal		
	Ъ	Length of the channel	860.00 m		
	С	Bed Width	85.00 m		
	d	Full supply depth	6.0 m		
	е	Bed slope	1 in 7000		
11		Tailrace Outlet Structure			
	a	Type	Diffuser Type		
	b	Elevation of outlet Centre line	EL +370.71 m		
12		Hydro-Mechanical Equipment	22 0,0.71 11		
12	а	RCC Intake Structure			
	i	Trash Rack	Vertical with inclination of 15°		
	ii	No. of Trash racks	6 nos.		
	iii	No. of bays in each trash rack	2 nos. of 7.75m(W) x 10.97m(H) & 1 no. of 8.5m(W) x 10.97m(H) for each unit		
	iv	Intake Service Gate	Size – 6.20m (W) x 7.50 m (H) – 6 Nos. With Rope Drum Hoist		
	V	Intake Stop log Gate	Size – 6.20m (W) x 7.50 m (H) – 1 No. with Moving Gantry		
	b	Draft Tube Gates	High pressure steel type slide gates		
	i	No. of Service gates per unit	5 Nos 7.0 m (W) x 8.5 m (H) for Larger Units & 2 Nos 5.1 m (W) x 6.2 m (H) for Smaller Units with Independent Hydraulic Hoist		
	ii	No. of Stoplog gates per unit	1 No 7.0 m (W) x 8.5 m (H) for Larger Units & 1 No 5.1 m (W) x 6.2 m (H) for Smaller Units with Moving Gantry Crane		
	С	Tailrace Outlet Structure			
******	i	No. of Trash racks	7 nos.		
	ii	No. of bays in each trash rack	2 nos. of 6.65m(W) x 10.87m(H) & 1 no. of 6.70m(W) x 10.87m(H) for each larger unit & 2 nos. of 5.20m(W) x 6.73m(H) + 1 no. of 6.60m(W) x 6.73m(H) for each smaller unit		
13		Electro Mechanical Equipment	onitalion willie		



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	i	Pump Turbine	Francis type, vertical shaft reversible pump turbine				
	ii	Total No of units	7 no's (5 X 240MW & 2 X 120 MW)				
	iii	Total Design Discharge (Turbine Mode)	1326.75 Cumec				
	iv	Rated Head in Turbine mode	121.70 m for larger unit & 121.00m for smaller unit				
	A	240 MW Turbines	Tor orience unit				
	i	Total No of units	5 Units (Fixed speed)				
	ii	Turbine Design Discharge	220.91 Cumec				
	iii	Rated Head in Turbine Mode	121.70m				
	iv	Pump Capacity	251 MW				
	V	Rated Pumping Head	127.90 m				
	Vi	Rated Pump Discharge	183.86 Cumec				
	vii	Synchronous speed	136.36 rpm				
	I	Generator-Motor					
	а	Туре	Three (3) phase, alternating current synchronous generator motor semi umbrella type with vertical shaft				
	b	Number of units	5 Units				
-	С	Rated Capacity	Generator – 240 MW; Pump Input – 251 MW				
	d	Rated Voltage	18.00 KV				
	II	Main Power Transformer					
	а	Туре	Three Single Phase Power transformers with Off- Circuit tap changer (OCTC)				
	b	Number of units	15 Numbers (ie. 3 Nos./Unit)				
	С	Rated Capacity of each unit	Single Phase, 18KV/400 KV, 100 MVA				
	d	Rated Voltage	Primary – 18 kV; Secondary - 400 adjustable range of the secondary voltage: - 10% to +10% (3kV/tap)				
	В	120 MW Turbines	σ το το (οπτ / ταρ)				
	i	Total No of units	2 Units (Variable speed)				
	ii	Turbine Design Discharge	111.10 Cumec				
	iii	Rated Head in Turbine Mode	121.00 m				
	iv	Pump Capacity	135 MW				
	V	Rated Pumping Head	128.70 m				
	vi	Rated Pump Discharge	98.16 Cumec				
	vii	Synchronous speed	187.50 rpm				
	I	Generator-Motor					
3	a	Туре	Three(3) phase, alternating current asynchronous generator motor semi umbrella type with vertical shaft				
	b	Number of units	2 Units				
			, A				
The control of the co	С	Rated Capacity	Generator – 120 MW Pump Input – 135 MW				
	d	Rated Voltage	18 KV				

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	II	Main Power Transformer				
	а	Туре	Indoor, 3-Ph transformers with Off-Circuit tap changer (OCTC)			
	b	Number of units	2 Units			
	С	Rated Capacity of each unit	2 Units Each 160 MVA, 18KV/400 KV rating power transformers. Primary – 18 KV; Secondary - 400 kV adjustable range of the secondary voltage: -10% to +10% (3kV/tap) Indoor Type One No. Inside GIS Building above ground Double Busbar Arrangement with bus coupler			
	d	Rated Voltage	Primary – 18 KV; Secondary - 400 kV adjustable range of the secondary voltage: -10% to +10% (3kV/tap)			
14		400 KV Gas Insulated Switchgear				
	а	Type of GIS	Indoor Type			
w	b	No. of GIS units	One No.			
	С	Location	Inside GIS Building above ground			
	d	Scheme	Double Busbar Arrangement with bus coupler			
15		Power Evacuation				
	а	Voltage Level (KV)	400 KV			
	b	No. of Transmission lines	One 400 KV transmission line with double circuit.			
	С	Total Length	400 KV Double Circuit Transmission Lines with Moose conductor of length 81 Kms (app) from PSP will be connected to 400/ 220 KV PGCIL substation at Kota of Rajasthan State for evacuation of generated Power and for Supply of power during pumping mode			
16		ESTIMATED COST				
	а	Civil Works	2797.67 Cr.			
	b	E&M Works incl. Transmission line	1930.50 Cr.			
	С	IDC & Others	2263.08 Cr.			
		Total Project Cost with IDC	6991.25 r.			

- (viii) **Ambient Air Quality:** Ambient Air Quality Monitoring was carried out at 6 locations in the study area. The level of pollutant observed at various sampling stations sites are well within the Residential & Rural area permissible limits of the National Ambient Air Quality Standard notified by CPCB.
- (ix) **Ambient Noise Levels:** The sound levels on an average value of 45.0 59.8 dB (day time observations), 34.1 45.1 db (Night time observation), 44.7 –57.2 db (day and night time observation) at residential area, 58.8 60.3 dB (day time observations), 44.4 45.5 db (Night time observation), 57.6 60.3 db (day and night time observation) at Residential/ Commercial area which are within the Ambient Noise Standards ranging from 55 dB(A) during day time in residential area to 65 dB(A) during day time in commercial area.
- (x) **Water:** Ground Water samples were collected 6 locations & Surface Water samples were collected 3 locations in the study area. According to WQI all the ground water samples fall in excellent ground water quality class and surface Water quality of Gandhi Sagar Reservoir is under Class 'B' i.e., Outdoor bathing (Organised) & Besala Pond sample falls in Class 'D' i.e., Propagation of Wildlife and Fisheries according to Water Quality Criteria of Central Pollution Control Board, Based upon CPCB guidelines

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as well the WQI calculated above the water of Gandhi Sagar Reservoir and water bodies in the study area is safe for drinking only after conventional treatment and

(xi) Flora: Quadrat sampling was undertaken at 6 different locations for carrying out phyto- sociological surveys of the vegetation in the study area. Total numbers of plant species recorded were 207 including 53 species of trees, 60 species of shrubs, and 94 species of herb and grasses, according to the IUCN Redlist of Threatened Species (Version 2020-2), none of the plant species found in the study area falls under any Threatened category. Ziziphus jujuba is the only species recorded from most of the sampling sites in the study area .Lantana camara, Calotropis gigantea, Carissa spinarum, Murrayakoenigii, Ipomoea carnea and Ziziphus nummulariawere the dominant shrub species found in the area.

(xii) Fauna: As per IUCN Red list of Threatened Species (Version 2018.2) all the mammalian and avifaunal species reported from the area are under Least Concern (LC) category. During field surveys Boselaphustragocamelu (Blue bull), Semnopithecus entellus (Common Langur), Herpestesedwardsii (Indian Grey Mongoose), Canis aureus (Jackal), and Funambuluspennantii (Five-striped Palm Squirrel) and a total of 46 species of bird belonging to 14 orders was compiled based upon sighting during the

(xiii) As per secondary Survey and information gathered from the officials of the Neemuch Forest Division and their forest working plan following faunal/avifaunal species were listed under Schedule-I of the Indian WildlifeProtection Act (1972), viz. Leopard (Panthera pardus), Crocodile (Crocodylus palustris), Indian Peafowl (Pavocristatus), (Gyps bengalensis), bengalensis), and Indian Rock Python (Python molurusmolurus). PCCF-Cum-Chief Wildlife Warden, Bhopal has approved Bio-diversity Conservation and Wildlife Management Plan vide letter dated 21.06.2021 with a budgetary provision of Rs

(xiv) Land Requirement: The total land requirement for the project is 402.50 Ha, out of which 301.96 Ha land would be forest land and 100.54 Ha is Non-Forest Land

(71.96Ha - Private & 28.58Ha - Government).

(xv) Ecological Sensitive Area: Gandhi Sagar Wildlife Sanctuary is the nearest protected area located about 4km from the Project site. Chief Wildlife Warden, Govt of Madhya Pradesh has issued NOC vide dated 12-02-2021 that all project components are located outside the Sanctuary and also away from eco-sensitive zone.

(xvi) Muck Disposal Areas: The total quantity of muck generated from soil and rock excavation is about 4.56Mcum. About 2.28Mcum of excavated muck are expected to be utilized for Rockfill and aggregate for construction. It is proposed to dispose of remaining quantity, considering 40% swell factor of 3.19Mcum at a pre-identified

(xvii) Rehabilitation and Resettlement Plan: The entire private land identified for the project falls in one revenue village namely Khemla Block, under Tehsil Rampura, District Neemuch. The private land proposed for procurement belongs to a total of 138 land owners. All the 138 families will be losing their agricultural land only and none of the families will be losing any house or any other assets. None of them is getting displaced due to the project from the above land procurement. The private land to be procured is un-irrigated agriculture land. The R&R Plan has been prepared in line with The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RFCT_LARR) and The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Madhya Pradesh)

(xviii) Environmental Management Plan: An amount of Rs. 11944.74 lakhs have been

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allocated for the implementation of Environmental Management Plan and Local Area Development Plan for the project is summarized in table as below:

S. No.		Capital Cost (Rs. in lakh)	Recurring Cost (Rs. in lakh)				
	Component of EMP		Yr 1	Yr 2	Yr 3	Yr 4	Total Cost (Rs. in lakh)
1	Compensatory Afforestation	7376.89					7376.89
2	Biodiversity Conservation & Wildlife Conservation Plan		72.60	39.20	31.80	23.30	166.90
3	Muck Dumping and Management Plan		221.8	223.8	168.75	26.5	640.99
4	Landscaping, Restoration of Quarry and Construction Sites		14.00	27.00	24.00	15.00	80.00
5	Sanitation and Solid Waste Management Plan	190.00	27.14	28.14	29.14	27.14	301.56
6	Public Health Delivery System	70.00	39.00	39.00	39.00	39.00	226.00
7	Energy Conservation Measures	67.00	42.00	42.00	42.00	42.00	235.00
8	Labour Management Plan	55.00	8.00	18.00	18.00	18.00	117.00
9	Green Belt Development Plan		14.30	16.30	6.80	4.00	41.40
10	Pollution Mitigation Measures	,	12.50	12.50	12.50	12.50	50.00
11	Environmental Monitoring Program		31.25	31.25	31.25	31.25	125.00
12	Rehabilitation and Resettlement Plan	809.00					809.00
13	Local Area Development Plan		350.0 0	400.0 0	400.00	350.0 0	1500.00
14	Disaster Management Plan	200.00	15.00	20.00	20.00	20.00	275.00
	Total	8767.89	847.6 6	897.2 6	823.2 4	608. 69	11944.74

(xix) Project benefit: The Project is a renewable green source of energy and helps to reduce carbon foot print and create direct and In-direct economic opportunities. It is estimated that project would employ a workforce of about 4800 persons during the 3.5 years construction period and thereafter during project operation, permanent staff of about 200 persons will be employed. The project will create opportunities for skill development, education, better medical and health care, improved local infrastructure, etc. In addition, there are proposals for green belt development, restoration and greening of the project and surrounding area.

(xx) Public hearing: Public Hearing was conducted by the Madhya Pradesh State Pollution Control Board, on 30.01.2021 at Panchayat Parisar, Village: Khemla Block, Tehsil:

Rampura, District: Neemuch, Madhya Pradesh.

(xxi) Status of other statutory clearances: For diversion of 301.96 ha of forest land, online application has been submitted to MoEF&CC vide proposal No.: FP/MP/HYD/116943/2020 dated 24.12.2020. The Diversion proposal has been recommended by State Govt. and forwarded the same to MOEF&CC vide 28.06.2021 for FAC recommendations and grant of Stage I approval.

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- 5. The sectoral Expert Appraisal Committee after detailed deliberations in its 15th meeting held on 27th July 2021 through Video conferencing on the information submitted and as presented **recommended** the proposal for Environmental Clearance. Based on recommendation of EAC, Ministry, hereby accords approval for grant of Environmental Clearance to MP30 Gandhi Sagar Off Stream Pumped Storage Project (1440 MW) in an area of 402.50 ha by M/s Greenko Energies Private Limited in village Khemla Block, Tehsil Rampur, District Neemuch, Madhya Pradesh, under the provisions of EIA Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of applicable standard EC conditions and the following additional terms & conditions/specific conditions for environmental safeguards:
- (i) Safe and secured passage to empty the reservoir in case of leakage or any catastrophic events shall be carried out.
- (ii) Rain water harvesting shall be carried out. Surplus water and harvested rain water shall be used as irrigation in area
- (iii) Compensatory afforestation done by Forest Department, the survival rate of plants shall maintain more than 95%.
- (iv) PP shall ensure the Ambient Air Quality Monitoring Stations for real time data display and regularly submit to respective Ro, MoEF&CC.
- (v) The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP report. The budgetary provisions for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the project cost or due to price level change, the cost of EMP shall also be updated proportionately.
- (vi) The status of compliance will be submitted to the regional Office of the Ministry along with six monthly compliance report.
- (vii) A multi-specialty hospital to cater the need of people living within 10 km radius of the project shall be established.
- (viii) Solar lights and associated solar panels be provided to the families living in rural areas within 10 km radius of project
- (ix) Computer labs with internet facility shall be established in primary schools within 10 km radius of project.
- (x) Sport complex with multi- sport facility shall be established. The children's from economically weaker section shall be given free of cost sport facility.
- (xi) The Multi-Disciplinary Committee needs to be constituted and the meeting needs to be held at regular interval.
- (xii) PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis.
- (xiii) After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment. The study shall be undertaken by an independent agency.
- (xiv) Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.
- (xv) Necessary permission to be obtained for quarrying construction materials, if any required, for the project as per the EIA Notification, 2006 and as amended thereof.
- (xvi) Disposal of the excavated muck and its filling on the low-lying area with proper measures for the stabilization and greenery to minimize the impacts of the generated construction muck shall be taken up paripassu with construction work.

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- (xvii) After detailed geological study of muck, re-utilization of muck during the construction of dam is to be carried out.
- (xviii) A detailed ecological monitoring and survey covering forestry, fisheries, wildlife and its habitat shall be done once in two years. Monitoring report shall be uploaded on the Parivesh Portal and a copy of the same be submitted to the Regional Office of MoEF&CC.
- (xix) Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines. Private land shall be acquired as per provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
- 6. This issues with the approval of the Competent Authority.

Yours faithfully,

(Yogendra Pal Singh) Scientist 'E'

Email id: <u>yogendra78@nic.in</u> Tele fax: 01124695365

Copy to:

- 1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi -110 001.
- 2. The Secretary, Ministry of Water Resources, RD & GR, Shram Shakti Bhawan, Rafi Marg, New Delhi 110 001.
- 3. The Principal Secretary (Water Resources Department), Government of Madhya Pradesh, Secretariat, Bhopal 462 016.
- 4. The Secretary, Department of Environment, Government of Madhya Pradesh, Secretariat, Bhopal 462 016.
- 5. The Chief Engineer, Project Appraisal Directorate, Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi 110 066.
- 6. The DDG, Regional Office (WR), Ministry of Environment, Forest & Climate Change, Kendriya Paryavaran Bhavan, Link Raoad No-3, Ravi Shanker Nager, Bhopal 462 016.
- 7. The Member Secretary, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal 462 016.

8. Guard File

(Yogendra Pal Singh) Scientist 'E'