GMR Kamalanga Energy Limited

Plant Office:
AT/PO: Kamalanga, PS: Kantabania,
VIA: Meramundali,
DIST: Dhenkanal - 759 121, Odisha
CIN U40101KA2007PLC044809
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09-09/24

Ref. No. GKEL/OSPCB/2024-25/8450
Dated – 24.09.2024

To
The Member Secretary
State Pollution Control Board, Odisha.
Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII
Bhubaneswar, Odisha-751012

Sub: Submission of Annual Environment Statement for the year: 2023-24

Dear Sir,

With reference to the subject above, we are submitting herewith the Annual Environment Statement in **Form-V** for the financial year 2023-24 for our Thermal Power Plant, GMR Kamalanga Energy Limited, (3x350 MW) Dhenkanal, Odisha.

This is for your kind perusal please.

Kindly acknowledge receipt of the same.

Thanking you.

Yours sincerely,
for **GMR Kamalanga Energy Limited**

Dhananjay V. Deshpande
Chief Operating Officer

Encl.: Annual Environment Statement

Copy for kind information to:
1. The Director, Eastern Regional Office, MoEF&CC, Bhubaneswar, Odisha.
2. The Regional Officer, State Pollution Control Board, Odisha, Angul.

Registered Office:
Skip House, 25/1, Museum Road,

GMR KAMALANGA ENERGY LTD.
Kamalanga, Dhenkanal.

ENVIRONMENT STATEMENT FORM - V

(See Rule 14)

ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING THE 2023-24

PART – A

(i) Name and address of the Owner/ Occupier of the industry : **Shri Dhananjay V. Deshpande**
Chief Operating Officer
GMR Kamalanga Energy Limited,
At/Po- Kamalanga, Via- Meramandali
P.S-Kantabania, Dist. - Dhenkanal
Odisha, Pin-759121

Operation or Process

(ii) Industry category
Primary - (STC Code)
Secondary - (SIC Code) : Large Scale industry (Thermal Power plant)

(iii) Production capacity : 1050 MW (3 x 350MW)

(iv) Year of establishment : 2013

(v) Date of the last environmental Statement submitted : 27th Sept' 2023

PART - B

WATER AND RAW MATERIALS CONSUMPTION:

(1) ***Water consumption m^3/d.*** **(Annual Average daily consumption)**

Process	:	2135
Cooling	:	41073
Domestic	:	375
Total	:	**43583**

Name of products	Specific Water consumption per unit of product output	
	During the previous financial year (2022-23)	During the current financial year (2023-24)
Electric Power	2.12 m^3/MW	2.10 m^3/MW

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(2) Raw Material Consumption

Name of Raw Materials	Name of Products	Consumption of Raw Material per unit of product output	
		During the current financial year (2022-23)	During the current financial year (2023-24)
Coal	Electric Power	0.71 kg/kWh	0.72 kg/kWh
Residual Oil (LDO)	Electric Power	0.07 ml/kWh	0.08 ml/kWh

* Industry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw materials used.

PART - C

POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT:

(Parameter as specified in the consent issued)

Pollutants	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	*Zero Liquid Discharge	-	No deviation
(b) Air		**Average annual result	
PM	5.20 tpd	37.84 mg/Nm^3	No deviation
SO_2	184.6 tpd	1332.34 mg/Nm^3	No deviation
NO_x	46.0 tpd	332.33 mg/Nm^3	No deviation
Hg	0.0023 tpd	0.016mg/Nm^3	No deviation
(c) Noise	• Daytime noise levels – 67.4 dBA max. and 45.7 dBA min. • Nighttime noise levels- 65.1 dBA max. and 43.5 dBA min.		No deviation

* Treated effluent water is being reused in various applications.

** Value as per 3rd party monitoring report, which were already submitted to the board on monthly basis.

PART – D

HAZARDOUS WASTES

(As specified u/d Hazardous & Other Wastes (Management & Transboundary Movement) Rules 2016)

Hazardous Wastes	Total Quantity (KG/KL)	
	During the previous financial year (2022-23)	During the current financial year(2023-24)
(a) From process • Used Oil • Waste containing oil • Empty Barrel/Drum • Spent Ion Exchange Resin • Used battery • E-waste	 11.34 KL 1.14 KL NIL NIL 10.63 MT 6.4 MT	 13.8 KL 9.4 KL 110 NIL 4.66 MT 6.85 MT
(b) From Pollution Control facilities	NIL	NIL

PART – E

SOLID WASTE

Solid Waste		Total Quantity (MT)	
		During the previous financial year (2022-23)	During the current financial year(2023-24)
a) From process	Bottom Ash	554820.05	622535.57
b) From pollution control facilities (ESP/STP)	Dry Fly Ash	1664460.793	1867601.63
	STP sludge	0.548	0.535
c) Quantity recycled or reutilized within the Unit.	*Fly Ash	873.00	970.00
	STP sludge	0.497	0.535
d) Sold			
e) Recycle/ Utilized	Fly Ash & Bottom Ash	*2516220	*2490137.20

*Including utilisation of Pond Ash of 296938.30 MT in FY: 2022-23. In-house brick making 873.00 MT.
* Including utilisation in-house brick making 970.00 MT in FY 2023-24.

PART - F

Please specify the characterizations (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Quantity of the hazardous as well as solid wastes is as per mentioned above Part-D and Part-E and characterizations and disposal practice of both wasted is given in below: -

Categories of wastes.	Characteristics	Mode of disposal
Solid waste- (Fly Ash)	Non Hazardous	Fly Ash (Bottom Ash, Dry Ash & Pond) is being utilised for fly ash bricks, cement, Road constructions etc. as per the fly ash notification. Unutilized ash has been disposed in Ash pond through HCSD mode.
STP - Sludge	Non-Hazardous, Organic waste	Sludge has been used in horticulture development as manure.
Used & Waste oil	Hazardous	Safe storage facility provided for temporary storage. Sold to SPCB, Odisha authorized recycler.
Empty Barrels		
Spent Ion Exchange Resin	Hazardous	Safe storage facility is provided for temporary storage. Further, it will be send to authorised cement plant/ TSDF Centre.
Used Battery	Hazardous	Used batteries has been return back to authorized dealer/recycler
E-waste	Hazardous	E-waste has been replace/return back to service provider or sold to recycler.
Domestic solid waste	Non-Hazardous,	▪ Domestic waste is segregated into organic biodegradable waste (vegetable, Food waste etc.) and in non-biodegradable waste (paper, plastic, glass etc.) and collected in separate bin. ▪ Organic biodegradable waste is converting into compost though in-house mechanical food bio-digester. Compost is being used in horticulture development. ▪ Other non-biodegradable material is being sent to recycler/municipality authorised vendor for disposal.

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PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

We have taken effective control measures, monitoring & green belt development for abatement of pollution & environmental protection. The recurring environmental expenditure per kWh of electrical power production is around 10.20 Paisa. At same time, we have also conserved natural resources by maintaining average CoC – 6.64; Specific water consumption was limited to 2.10 m^3/mw and Coal consumption 0.72 MT/MWh. Operational activities were also confirming to the quality standard of air, emission, noise level, water hence there is no significant adverse effect on the environment were observed. 100 % of fly ash has been utilised including pond ash as per the fly ash notification. The plantation has not only contributed to the aesthetics but also has been serving as a 'Sink' for the pollutants released from the station and thereby protecting the quality of ecology and environment in and around the projects site.

PART - H

Additional measures/investment proposed for environmental protection including abatement of pollution, prevention of pollution.

Capital and recurring investment on Environmental Protection Measures during 2023-24

Sl. No	Particulars	Capital Investment till March' 2024 (Rs. In Lakhs)	Recurring Investment for the year 2023-24 (Rs. In Lakhs)
1	Water Pollution Control System	6328.86	15.57
2	Air Pollution Control System	25501.1	484.38
3	Waste Management System (Fly Ash, Solid waste, Hazard waste etc. & Installation of Ash Brick making plant)	7511.79	6126.95
4	Green Belt development	508.76	173.57
5	Environmental Monitoring (Online & Manual)	195.84	43.05
6	Plant Housekeeping & Water sprinkling on Plant Roads	40.13	359.60
7	Environmental Studies /Consultancy Charges	-	1.65
8	Statutory Fee (CTO/CTE etc.)	-	0.00
9	Environmental Awareness Activities - WED, WWD, Earth Day etc.	-	1.07
10	Others (OHS & Fire management)	58.00	5.07
	Total (Amount in Lakh Rs.) =	**40144.48**	**7210.91**

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PART – I

Any other particulars for improving the quality of the environment.

We have planted 397668 nos. of saplings till March 2024 (including 2360 saplings (gap filling) during 2023-24) to cover more than 382 Acres of land area. In addition to that, saplings of fruit bearing trees also being distributed every year to community including different schools for increase green cover in around the plant area. These are also helping to abatement of air pollution, reduce thermal impact and attenuate of noise in and around the area.

Name & signature of the Occupier
Date: 24.09.2024

Dhananjay V. Deshpande
Chief Operating Officer

GMR KAMALANGA ENERGY LTD.