



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2024

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000069730

Submitted Date

14-09-2024

PART A

Company Information

Company Name

GMR Warora Energy Ltd

Application UAN number

00000027850

Address

PLOT NO B1 TO B7, MOHBALA MIDC
GROWTH CENTER

Plot no

PLOT NO B1 TO B7

Taluka

Warora

Village

Warora

Capital Investment (In lakhs)

4189.15

Scale

Large

City

Warora

Pincode

442907

Person Name

Mr. Pramod Khandelwal

Designation

General Manager

Telephone Number

8390903524

Fax Number

07176267070

Email

Pramod.Khandelwal@gmrgroup.in

Region

SRO-Chandrapur

Industry Category

Red

Industry Type

R9 Power generation plant [except Wind and Solar
renewable power plants of all capacities and Mini
Hydel power plant of capacity <25MW]

Last Environmental statement submitted online

yes

Consent Number

Format1.0/CAC/UAN
No.0000140106/CR/2209001860

Consent Issue Date

2022-09-29

Consent Valid Upto

2024-12-31

Establishment Year

2014

Date of last environment statement submitted

Sep 29 2023 12:00:00:000AM

Industry Category Primary (STC Code) & Secondary (STC Code)

Product Information

Product Name

Electricity Generation

Consent Quantity

5270400

Actual Quantity

4365627

UOM

Mwh

By-product Information

By Product Name

NIL

Consent Quantity

0

Actual Quantity

0

UOM

MT/A

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

Water Consumption for Process	Consent Quantity in m3/day	Actual Quantity in m3/day
Cooling	44448	24009.82
Domestic	3408	1840.93
All others	480	259.29
Total	0	0.00
	48336	26110.04

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Trade Effluent	12446	643	CMD
Domestic Effluent	24	6.8	CMD

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
Electricity	2.35	2.30	Mwh

3) Raw Material Consumption (Consumption of raw material per unit of product)

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
Coal	0.662	0.645	MT/MWH

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Oil Consumption	25920	424.91	KL/A

Part-C

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

[A] Water

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons	Standard	Reason
TDS	0	714	0	2100	NA
TSS	0	8.3	0	100	NA
BOD	0	7.9	0	30	NA
COD	0	26.8	0	250	NA
O & G	0	2	0	10	NA

[B] Air (Stack)

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/NM3)	Percentage of variation from prescribed standards with reasons	Standard	Reason
Particulate Matter	0	35	0	50	NA

SOx	0	1123	0	600	NA
NOx	0	335	0	450	NA

Part-D

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
3.3 Sludge and filters contaminated with oil	0.71	0.65	MT/A
5.1 Used or spent oil	20.02	10.54	KL/A
5.2 Wastes or residues containing oil	0.39	0.12	MT/A
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	6.13	3.25	MT/A
35.2 Spent ion exchange resin containing toxic metals	0.0	0.54	MT/A
35.3 Chemical sludge from waste water treatment	1.37	4.00	MT/A
35.4 Oil and grease skimming	4.01	3.25	MT/A

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
Ash	930062	965562	MT/A
Food Waste	0.74	2.28	MT/A
Horticulture Waste	0	118.66	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
NA	0	0	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/A

Part-F

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

1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
3.3 Sludge and filters contaminated with oil	0.65	MT/A	Disposed by CHWTSDF as per CTO Condition

5.1 Used or spent oil	10.54	KL/A	Disposed by MPCB authorized Recycler as per CTO Condition
5.2 Wastes or residues containing oil	0.12	MT/A	Disposed by CHWTSDF as per CTO Condition
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	3.25	MT/A	Disposed by MPCB authorized Recycler as per CTO Condition
35.2 Spent ion exchange resin containing toxic metals	0.54	MT/A	Disposed by CHWTSDF as per CTO Condition
35.3 Chemical sludge from waste water treatment	4.00	MT/A	Disposed by CHWTSDF as per CTO Condition
35.4 Oil and grease skimming	3.25	MT/A	Disposed by CHWTSDF as per CTO Condition

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
Ash	965562	MT/A	Disposed as per Fly Ash Notification 2021
Food Waste	2.28	MT/A	Recycled through Organic Waste Convertor Machine and Generate Manure
Horticulture Waste	118.66	MT/A	Recycled through vermicompost unit

Part-G

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

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
Reduction of throttle Loss through Governing Valve Overhauling and replacement	0	0	485000	0	1.20	0
Phase II project on optimal operation of LED along with reduction in LED wattage.	0	0	0	194472	22.49	0
Mill Specific energy Optimization and PA fan current optimization through aero foil Replacement.	0	0	0	323608	16.80	0
Draft power Consumption by Flue gas duct & primary air duct ceramic tiles inspection & replacement.	0	0	0	1779843	19.58	0
Boiler Radiation loss & Draft Power Consumption optimisation through Refractory Inspection and replacement.	0	0	3242000	721820	8.06	0
Turbine Cycle Heat rate improvement through Unit 1 HPHs partition plate inspection & replacement.	0	0	22000	0	25.00	0
Implementation of CAVT recommendation in second pass of unit-1 for uniform distribution of flue gas	0	0	0	4279125	46.04	0
ID fan power consumption optimisation through APH Sector- plate & seal servicing and replacement.	0	0	1605000	318	0.72	0

APC optimisation through Three coal mill operation instead of four coal mill operation during partial load operation.	0	0	0	3559685	0	0
Installation of 70 kWp roof top Solar Plant to cater building power consumption from conventional energy sources.	0	0	0	9728	30.50	0
Condenser vacuum improvement through Cooling Tower Performance Improvement Program (Existing Cooling Tower Drift Eliminator, Nozzle & Fill Replacement, CW line modification etc.)	0	0	1271000	0	0	0
Condenser Performance Improvement through jet cleaning, helium Leak test & hydro test.	0	0	461000	0	2.55	0
Boiler Feed pump Performance Improvement through cartridge replacement & rectification of RC valve	0	0	0	2313472	52.62	0
Strengthening Energy Management system through Digitalization and Integration with AI based predictive analytics	0	0	0	3396000	50.0	0
Ash Handling Plant Transport Air Energy Consumption reduction using Ultrasound analyser for air leakage detection	0	0	0	509543	17.0	0
Mill Seal air Fan Power Consumption Optimisation through IGV auto operation.	0	0	0	242706	0	0
HVAC power consumption optimisation through Chiller Efficiency Improvement	0	0	0	81697	4.0	0

Part-H

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

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
Procurement of Fog Cannon to reduce the fugitive Dust Emission	Reduction of Fugitive Dust Emission	37
Installation Roof Top Solar Panels	Renewable Energy Source	30
Procurement of E - cart	Renewable Energy Source	5.50
Development of Fruit orchard with ultra high density plantation with drip irrigation around Water reservoir Regular Environmental Monitoring	Green Belt Development	7.12
Upgradation of CAAQMS Stations	Environmental Monitoring	62.0

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
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Upgradation of CAAQMS Stations	Environmental Monitoring	89
Refurbishment of Coal & Stacker Yard	Reduction of Fugitive Dust Emission	1800
Construction of RCC Floor of Bulker & Truck Yard	Scientific approach towards waste Management	300

Part-I

Any other particulars for improving the quality of the environment.

Particulars

As a Environment Conscious unit we always strive to protect the Environment

Name & Designation

Mr. Pramod Khandelwal, General Manager

UAN No:

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Submitted On:

14-09-2024