



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2023

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000061161

Submitted Date

29-09-2023

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)

418915

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 2022 12:00:00:000AM

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

Product Information

Product Name

Electricity Generation

Consent Quantity

600

Actual Quantity

493

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	25911.23
Domestic	3408	3398.24
All others	480	408.35
Total	0	0.00
	48336	29717.82

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Trade Effluent	12446	743	CMD
Domestic Effluent	24	13.1	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	2.39	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	0.639	MT/MWH

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Oil Consumption	25920	332.9	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
	Quantity	Concentration	%variation		
TDS	675.3	908	0	2100	NA
TSS	6.68	9	0	100	NA
BOD	6.9	9.31	0	30	NA
COD	22.5	30.3	0	250	NA
O & G	00	00	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
	Quantity	Concentration	%variation		
Particulate Matter	830	36.2	0	50	NA

SOx	25708	1121	0	600	NA
NOx	6971	304	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	0.440	0.71	MT/A
5.1 Used or spent oil	11.0	20.02	KL/A
5.2 Wastes or residues containing oil	0.360	0.39	MT/A
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	9.270	6.13	MT/A
35.2 Spent ion exchange resin containing toxic metals	0.0	0.0	MT/A
35.3 Chemical sludge from waste water treatment	2.120	1.37	MT/A
35.4 Oil and grease skimming	2.790	4.01	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	820808	930062	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	0.733	MT/A	0
5.1 Used or spent oil	20.035	KL/A	0
5.2 Wastes or residues containing oil	0.39	MT/A	0

33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	6.74	MT/A	0
35.2 Spent ion exchange resin containing toxic metals	0.0	MT/A	0
35.3 Chemical sludge from waste water treatment	1.45	MT/A	0
35.4 Oil and grease skimming	4.24	MT/A	0

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
NA	0	set/month	0

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)
Efficiency Improvement through Unit-2 COH in Aug-2022 Condenser parting plate leakage arrestation. Condenser jet cleaning, hydro test & tube plugging as per requirement. HPH partition plate leakage ar	0	0	0	6629040	400	1074.2
Efficiency Improvement through Unit-1 AOH in Jul-2022 Condenser jet cleaning, hydro test & tube plugging as per requirement HPH partition plate leakage arrestation GV insopection & rectification IDF a	0	0	11728800	5559840	300.00	618.00
AI & ML based Predictive Analytics for Plant Performance & Reliability Improvement	0	0	0	1260000	42.50	44.10
Cooling Tower Performance Improvement Programme (Existing Cooling Tower Drift Eliminator, Nozzle & Fill Replacement, CW line modification etc.)	0	0	35832387.68	0	348.00	1293.50
Utilisation of fluidized air for hopper instead of hopper heater in ESP	0	0	0	295680.00	7.30	10.30
Installation of Vibro Feeder in Second Stream Conveyor-BCN-2A	0	0.05	0	14490.60	25.00	16.20
'Unit 2 HP Heater-6,7 & 8 partition plates replacement	0	0	988625.19	0	22.60	35.70
Optimal Operation of LED along with conversion of Conventional Lights with LED along with reduction in LED wattage.	0	0	0	2401800	11.70	84.10

Reduction in Start-up Oil consumption by 10% by adopting various operational strategies using six sigma methodology.	0	0.16	0	0	0	47.70
Implementation of CFD & CAVT Test recommendation at flue gas duct in boiler second pass	0	0	0	596000.00	3.00	20.90
Application of Anti-erosion Coating in ID fan-1A and 1B Impeller	0	0	0	559671.55	4.00	19.60
'Optimization of CW/ACW Pump & CT Fan running hours	0	0	0	391564.32	0	13.70
Intelligent flow controller (IFC) installation in Compressed Air System.	0	0	0	232505.00	23.00	8.10
Water Treatment Plant Power Consumption Optimization by using the CW return line water instead of Effluent Recirculation feed pump.	0	0	0	30800.00	2.00	1.10
MRHS System Power saver mode logic modification for energy conservation.	0	0	0	23760.00	0	0.80
Optimization of Economiser and ESP deashing period by reducing the number of operation cycles.	0	0	0	24000.00	0	0.80
CCCW Pump-2A & 2B Overhauling & PHE Jet cleaning	0	0	0	156625.73	12.30	5.50
Reduction in water consumption by 5%	1408.07	0	0	358950	0	9.53
Reduction in Fresh Water consumption by Utilization of CT Blowdown Water for Baby Chlorinator instead of Service Water	432.00	0	0	0	0	17.23
UF MB and RO Backwash regenerated Water Reuse	52.00	0	0	0	0	1
Reduction in Cooling Tower Drift Losses	90.72	0	0	0	0	4.10
Reduction in DM water consumption through Boiler Blowdown Optimization	26.86	0	0	0	0	2.00
Reduction in DM water consumption through Soot Blower Optimization	3.42	0	0	0	0	1.00

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)

Efficient and smooth House Keeping in side the plant to take care of fugitive emission and proper waste segregation, collection and disposal	Housekeeping and waste Management	210
Efficient Ash Handling System	Proper Handling and utilization of ash by sending the same to cement plants	650
Maintenance of Green Belt	Proper maintenance of the green covering and plantation	173
Regular Environmental Monitoring	Monitoring & Measurement	26

[B] Investment Proposed for next Year

<i>Detail of measures for Environmental Protection</i>	<i>Environmental Protection Measures</i>	<i>Capital Investment (Lacks)</i>
Efficient and smooth House Keeping in side the plant to take care of fugitive emission and proper waste segregation, collection and disposal	Housekeeping and waste Management	215
Efficient Ash Handling System	Proper Handling and utilization of ash by sending the same to cement plants	655
Maintenance of Green Belt	Proper maintenance of the green covering and plantation	175
Regular Environmental Monitoring	Monitoring & Measurement	30

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:

MPCB-ENVIRONMENT_STATEMENT-0000061161

Submitted On:

29-09-2023