



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2021

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000037527

Submitted Date

28-09-2021

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)

392694

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

BO/CAC-Cell/UAN No
00000027850-18/CAC1803000697

Consent Issue Date

14/03/2018

Consent Valid Upto

31/08/2022

Establishment Year

2014

Date of last environment statement submitted

Jan 1 1900 12:00:00:000AM

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

Product Information

Product Name

Electricity Generation

Consent Quantity

600

Actual Quantity

3934826

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	21623.53
Domestic	3408	2698.71
All others	480	268.34
Total	0	0.00
	48336	24590.58

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Trade Effluent	12436	546.58	CMD
Domestic Effluent	384	16.65	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	2.17	2.36	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	0.635	0.634	MT/MWH

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Oil Consumption	25920	584.71	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	355.82	651	0	2100	NA
TSS	11.47	21	0	100	NA
BOD	7.65	14	0	30	NA
COD	24.04	44	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	1003.20	38.0	0	50	NA

SOx	29304.00	1110.0	0	600	NA
NOx	6864.00	260.0	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	1.02	0.540	MT/A
5.1 Used or spent oil	98.91	11.22	KL/A
5.2 Wastes or residues containing oil	0.640	1.040	MT/A
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	7.43	2.88	MT/A
35.2 Spent ion exchange resin containing toxic metals	0.0	0.103	MT/A
35.4 Oil and grease skimming	0.307	2.3	MT/A
35.4 Oil and grease skimming	3.40	2.0	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	882429	834198	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	0.485	MT/A	0
5.1 Used or spent oil	10.295	KL/A	0
5.2 Wastes or residues containing oil	0.653	MT/A	0

33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	3.239	MT/A	0
35.2 Spent ion exchange resin containing toxic metals	0.033	MT/A	0
35.3 Chemical sludge from waste water treatment	2.3	MT/A	0
35.4 Oil and grease skimming	2.39	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)
Reduction in Fresh Water Consumption & minimization of Waste Water Generation by Improvement in RO recovery from 59 % to 72%	297.83	0	0	0	1.5	11.88
Reduction in domestic water usage by Installation of Sensor based Automatic Water Taps at all locations	8.64	0	0	0	0.68	0.35
Cooling Tower Drift loss reduction by replacement of existing Drift Eliminators of drift loss 0.02% with latest Design Drift Eliminator with drift loss 0.005%	30.4	0	0	0	3.50	1.21
Optimization of DM Water consumption by Reducing Blowdown time during start-up from 11 Hrs to 8 Hrs by adopting high phosphate range strategy	9.48	0	0	0	0	0.52
Reduction in Fresh Water consumption by Utilization of CT Blowdown Water for Baby Chlorinator instead of Service Water	432.0	0	0	0	1.0	17.23
Reduction in water consumption by Recycling of RO-I reject for MGF Backwash	266.66	0	0	0	1.0	10.64
Re-utilization of Water Treatment Process Drain water in reservoir	52.0	0	0	0	2.0	1.52
Auxiliary Power Consumption reduction & reliability improvement through removal of short Column Pipe in River Water Pump	0	0	0	61706	0.01	2.16

Power Consumption Optimization through 3 Mill Operation during low load operation	0	0	0	264005	0	7.92
Installation of Airtron-AC Energy Saver for energy conservation in Air Conditioner	0	0	0	29134	1.3	1.31
Water Treatment Plant Power Consumption Optimization by improving RO Recovery	0	0	0	30800	2.0	1.39
Plant Performance Improvement during Flexible load Operation	0	0	6158000	0	0	20.438
Energy Conservation through Installation of Wind Driven Exhaust fan in RO-DM building Roof Top	0	0	0	18396	0.48	0.64
Ash Handling Plant Power Consumption reduction by Optimizing Operational Performance	0	0	0	164705	0	4.94
Unit-2 LVS Screen Replacement with LED Technology	0	0	0	15039	0.75	0.60
BFP Power Consumption Optimization by Replacement of Existing Valve with Modified RC Valve	0	0	0	1786220	28.72	53.59
Heat Rate Improvement Through CT Fills Replacement	0	0	15291660	0	204.5	507.53
Heat Rate Improvement Through CT Nozzels Replacement	0	0	1019440	0	14.0	33.84
Reduction in Diesel Consumption in CHP by adopting best operational practices	0	0.062	0	0	0	1.862
Boiler Efficiency improvement by CAVT Test & Attending Duct Leakages	0	0	4077780	0	10.0	135.34
Improvement in Yard GCV losses by 48 Kcal by adopting best operational strategies	0	0	23187000	0	10	76.58
To provide CT make up by gravity without CT make up pump pumping	0	0	0	880130	7.85	26.40
Optimization of CW/ACW Pump & CT Fan running hours	0	0	0	4127079	0	12.38
Optimization of Pump & Fan output through VFD	0	0	0	1698612	0	5.096
Optimization of ESP Power through Power Saver Mode	0	0	0	8109982	0	23.33

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	195
Efficient Ash Handling System	Proper Handling and utilization of ash by sending the same to cement plants	635
Maintenance of Green Belt	Proper maintenance of the green covering and plantation	155
Regular Environmental Monitoring	Monitoring & Measurement	22.5

[B] Investment Proposed for next Year

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	200
Efficient Ash Handling System	Proper Handling and utilization of ash by sending the same to cement plants	640
Maintenance of Green Belt	Proper maintenance of the green covering and plantation	162
Regular Environmental Monitoring	Monitoring & Measurement	25

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-0000037527

Submitted On:

28-09-2021