

Ref: GREL-RJY/O&M/20/ 39

Date: 21/08/2020

**The Regional Environmental Engineer**  
Andhra Pradesh Pollution Control Board,  
2-532, Shanthinagar,  
Opp. DIC office, Ramanayyapeta,  
Kakinada- 533 005

**Sub: Submission of Environmental Audit report (Form-V) for 2019-2020**

Dear Sir,

We are here with submitting Environmental Audit Report (Form-V) for 2019-2020. Kindly acknowledge.

Thanking you,

Yours faithfully,

**For GMR Rajahmundry Energy Limited**



Mathews.P  
**COO, Gas Assets**

Encl: As above cc: APPCB, Vijayawada; MOEF, Chennai.

**ENVIRONMENTAL STATEMENT  
(FORM-V)**

**21<sup>st</sup> August 2020**

**GMR Rajahmundry Energy Limited  
Vemagiri Village  
Kadiyam Mandal  
East Godavari District  
Andhra Pradesh.**

**Form – V**  
**(See rule 14)**

**As per Rule –14 of Environmental [Protection] Rules, 1986 and amendments there of**

Environmental Audit report for the financial year ending the 31<sup>st</sup> March-2020

**PART – A**

i)	Name and address of the owner/occupier of the industry, operation or process	<b>Mr.NirjharSarkar GMR Rajahmundry Energy Limited, Vemagiri Village, Kadium Mandal, East Godavari District, Andhra Pradesh-533125. Phone No : 0883-2452313-316 Fax No : 0883-2452312</b>
ii)	Industry category Primary: (STC Code) Secondary: (STC Code)	-----
iii)	Production Capacity units	2X383.779 MW
iv)	Year of Establishment	Commercial Operation Date <b>22<sup>nd</sup> October 2015</b>
v)	Date of the last environmental audit report submitted	<b>09 September, 2019</b>

**PART – B**

<b>a) Water consumption</b>			
<b>Purpose of water consumption</b>		<b>Water consumption per day [m<sup>3</sup>/day]</b>	
		<b>During the previous financial year 2018-2019</b>	<b>During the current financial year 2019-2020</b>
i)	DM plant regeneration and back wash	0	0
ii)	Cooling make up	0	0
iii)	Domestic	6.6	5.0
iv)	HRSB Boiler feed	0	0

v)	PLF %	0	0
Name of the Product	Water consumption per unit of product [ m3/kWh]		
		During the previous financial year 2018-2019	During the current financial year 2019- 2020
Power generation		0.0	0
<b>b) Raw material consumption</b>			
Name of raw material	Name of products	Consumption of raw material per unit of energy output (Power – Sm3/ kWh)	
		During the previous financial year 2018-2019	During the current financial year 2019- 2020
Natural gas	Electric Power Generation	0.0	0

**Note:** Consumption of water during the year 2018-19 is given in Annexure – I.

**PART – C**

**Pollution Generated**  
(Parameters as specified in the consent issued)

<b>Pollutants</b>	<b>Quantity of pollutants discharged (mass/Day)</b>	<b>Concentration of pollutants discharged (mass/volume)</b>	<b>Percentage of variation from prescribed standards with reasons</b>
<b>a) Total 1.8 M<sup>3</sup>/Day of water is generated from ETP.</b>			
1. pH	6.94		
2. TSS	0.03357 kg/day	18.65 mg/l	
3. Iron as Fe	0.0003 kg/day	0.18 mg/l	
4. Phosphates	0.0 kg/day	0.0 mg/l	
5. Oil & Grease	BDL kg/day	BDL mg/l	
<b>Note :</b>			
<b>b) Stack gas emissions (Oxides of Nitrogen and SPM)</b>			
1	Stack	Oxides of Nitrogen(PPM)	NIS
		SPM	NIS
<b>c) Ambient Air Quality (AAQ)</b>			
<b>Note: Ambient Air Quality Monitoring Statement for the year 2019-20 is given In Annexure-VI</b>			
<b>d) Noise Level Monitoring</b>			
<b>Note: Noise Monitoring Statement for the year 2019-20 is given in Annexure – VII.</b>			

**PART – D**

**Hazardous Wastes**

[As specified under Hazardous Wastes (Management and Handling) rules, 1989]

<b>Hazardous Wastes</b>	<b>Total Quantity (kg)</b>	
	<b>During the previous financial year 2018– 2019</b>	<b>During the current financial year 2019 – 2020</b>
a) From process	0	0
b) From others	Nil	Nil
c) From pollution control facilities	Nil	Nil

**PART – E**

**Solid Wastes**

	<b>Total Quantity ( M.Tones / Year )</b>	
	<b>During the previous financial year 2018-2019</b>	<b>During the current financial year 2019-2020</b>
a) From process	Nil	Nil
b) From Pollution control Facilities	Nil	Nil
c) Quantity recycled or reutilized within the unit	Nil	Nil

**Note: No hazardous wastes are generated in the plant.**

### **FORM – 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**

Nil

### **FORM – G**

**Impact of pollution control measures on conservation of natural resources and consequently on the cost of production.**

Storm water pond is available to collect the rain water from entire plant(GVPGL&GREL). Over flow of this rain water is being used as feed water and gardening for our plant requirements. Due to which intake water from river is reduced and running hours of the river water pump is also reduced.

### **FORM – H**

**Additional investment proposal for environmental protection including abatement of pollution.**

All necessary investments for environment protection required are implemented.

### **FORM – I**

**Any other particulars for improving the quality of the environment**

1. Fully-fledged environmental laboratory was setup for continuous analysis of various streams of waste water, such that any deviations observed are corrected immediately.
2. Environment monitoring is being carried out through MOEF Approved laboratory during plant operation.

**ANNEXURE – I****RAW WATER CONSUMPTION (m3)****STATEMENT FOR THE FINANCIAL YEAR 2019- 2020**

<b>S.No</b>	<b>Month</b>	<b>DM Plant Regenerati on &amp; Back wash</b>	<b>Cooling Makeup</b>	<b>HRSG Boiler feed</b>	<b>Domestic</b>	<b>Total Consumption</b>
1	Apr-19	0	0	0	172	172
2	May-19	0	0	0	171	171
3	Jun-19	0	0	0	168	168
4	Jul-19	0	0	0	156	156
5	Aug-19	0	0	0	160	160
6	Sep-19	0	0	0	103	103
7	Oct-19	0	0	0	180	180
8	Nov-19	0	0	0	130	130
9	Dec-19	0	0	0	148	148
10	Jan-20	0	0	0	125	125
11	Feb-20	0	0	0	185	185
12	Mar-20	0	0	0	102	102
<b>Total / Year</b>		<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1820</b>
<b>Average/ day</b>		<b>0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>5.0</b>
<b>APPCB Limit KL/DAY</b>		<b>136</b>	<b>20736</b>	<b>768</b>	<b>10</b>	<b>21650</b>

Note: APPCB: Andhra Pradesh Pollution Control Board.



**ANNEXURE – II**

**NATURAL GAS AND POWER GENERATION STATEMENT FOR THE FINANCIAL YEAR 2019 – 2020**

<b>Month</b>	<b>Natural Gas Consumption</b>	<b>Gross Power Generation</b>
	<b>24 hrs basis</b>	
	<b>(SCM)</b>	<b>MU</b>
<b>Apr-19</b>	<b>0</b>	<b>0</b>
<b>May-19</b>	<b>0</b>	<b>0</b>
<b>Jun-19</b>	<b>0</b>	<b>0</b>
<b>Jul-19</b>	<b>0</b>	<b>0</b>
<b>Aug-19</b>	<b>0</b>	<b>0</b>
<b>Sep-19</b>	<b>0</b>	<b>0</b>
<b>Oct-19</b>	<b>0</b>	<b>0</b>
<b>Nov-19</b>	<b>0</b>	<b>0</b>
<b>Dec-19</b>	<b>0</b>	<b>0</b>
<b>Jan-20</b>	<b>0</b>	<b>0</b>
<b>Feb-20</b>	<b>0</b>	<b>0</b>
<b>Mar-20</b>	<b>0</b>	<b>0</b>
<b>Total / Year</b>	<b>0</b>	<b>0</b>
<b>Average/ day</b>	<b>0</b>	<b>0</b>

Note: SCM: Standard Cubic Meter  
MU: Million Unit

**ANNEXURE – III**

**TREATED EFFLUENT ANALYSIS STATEMENT FOR THE FINANCIAL YEAR 2019 – 2020**

Month	pH	Total residual Chlorine (mg/ltr)	Suspended solids (mg/ltr)	Dissolved Phosphates (mg/ltr)	Oil & Grease (mg/ltr)	Copper (mg/l)	Iron (mg/l)	BOD (mg/l)	COD (mg/l)	Temp.	
										Deg C	
April-19											
May-19											
June-19											
July-19											
August-19											
No sample as plant not in service											
September-19	7	BDL	20	0	BDL	BDL	0.15	11.75	16.25	0.13	0.13
October-19	7.05	BDL	17	0	BDL	BDL	0.16	14.5	17.5	0.13	0.13
November-19	6.89	BDL	14.5	0	BDL	BDL	0.15	16.5	19	0.13	0.13
December-19	7.18	BDL	21.28	0	BDL	BDL	0.15	10.5	18.5	0.13	0.13
January-20	7.03	BDL	19	0	BDL	BDL	0.24	16	30.5	0.21	0.21
February-20	6.95	BDL	20.5	0	BDL	BDL	0.15	16	32	0.21	0.21
March-20	6.58	BDL	18.25	0	BDL	BDL	0.27	14	34	0.29	0.29
Average	6.94		18.65	0			0.18	14.18	23.96	0.18	0.18
APPCB Limit	6.5 to 8.5	<1.0	<100	<5.0	<10	<3.0	<3.0	<30.0	<250	5°C	5°C

S.No	Month	Cooling Tower Blow Down	D.M.Plant Regeneration, Back Wash & Boiler Blow Down	Total Quantity Effluents Generated
1	Apr-19	0	0	0
2	May-19	0	0	0
3	Jun-19	0	0	0
4	Jul-19	0	0	0
5	Aug-19	0	0	0
6	Sep-19	0	0	0
7	Oct-19	0	0	0
8	Nov-19	0	0	0
9	Dec-19	0	0	0
10	Jan-20	0	0	0
11	Feb-20	0	0	0
12	Mar-20	0	0	0
Total / Year		0	0	0
Average KL/Day		0	0	0
APPCB Limit KL/Day		2064	136	

**ANNEXURE - V**

**STACK EMISSION STATEMENT FOR THE FINANCIAL YEAR 2018-2019**

**OXIDES OF NITROGEN (PPM) AND PM**

<b>S.No</b>	<b>Month</b>	<b>Oxides of Nitrogen in PPM</b>	<b>PM in mg/Nm<sup>3</sup></b>
1	Apr-19	0	0
2	May-19	0	0
3	Jun-19	0	0
4	Jul-19	0	0
5	Aug-19	0	0
6	Sep-19	0	0
7	Oct-19	0	0
8	Nov-19	0	0
9	Dec-19	0	0
10	Jan-20	0	0
11	Feb-20	0	0
12	Mar-20	0	0
<b>Average</b>		<b>0</b>	<b>0</b>
<b>APPCB Limit</b>		<b>50</b>	<b>100</b>

Note: APPCB: Andhra Pradesh Pollution Control Board.

**ANNEXURE – VI****AMBIENT AIR QUALITY (PLANT SITE)**

STATEMENT FOR THE FINANCIAL YEAR 2019-2020

Location: Main gate

S.No	Month	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	Nox
		[µg/m <sup>3</sup> ]	[µg/m <sup>3</sup> ]	[µg/m <sup>3</sup> ]	[µg/m <sup>3</sup> ]
1	Apr-19	28.38	4.25	3.83	3.75
2	May-19	29.08	3.96	3.88	3.88
3	Jun-19	28.73	4.11	3.85	3.81
4	Jul-19	28.73	4.11	3.85	3.81
5	Aug-19	29.85	4.68	4.00	3.78
6	Sep-19	30.58	4.35	3.98	3.88
7	Oct-19	30.58	4.35	3.98	3.88
8	Nov-19	30.25	4.53	3.98	3.88
9	Dec-19	31.30	4.95	3.93	3.90
10	Jan-20	31.25	4.75	4.03	3.95
11	Feb-20	30.83	4.60	4.00	3.88
12	Mar-20	31.25	4.75	3.85	3.68
Average		30.06	4.45	3.93	3.84
APPCB Limit		100	60	80	80

## ANNEXURE – VII

### NOISE LEVELS STATEMENT FOR THE FINANCIAL YEAR 2019-2020

#### AMBIENT NOISE LEVEL MEASUREMENTS dB [A]

S. No	Month	Plant site [Main Gate]	
		Day Equivalent	Night Equivalent
1	Apr-19	63	59.5
2	May-19	60.2	56.5
3	Jun-19	48.4	47.2
4	Jul-19	50.2	48.4
5	Aug-19	55.6	52.1
6	Sep-19	56.2	53.4
7	Oct-19	56.2	53.4
8	Nov-19	56.5	54
9	Dec-19	55.8	54.6
10	Jan-20	56.2	53.5
11	Feb-20	57.8	55.5
12	Mar-20	56.5	56.5
Average		56.05	53.72
APPCB Limit		75.0	70.0

Note: APPCB: Andhra Pradesh Pollution Control Board.

**FORM-4**

[See rules 5(6) and 22 (2)]

**FORM FOR FILLING ANNUAL RETURNS THE OCCUPIER OR OPERATOR OF FACILITY**[To be submitted by occupier/operator of disposal facility to State Pollution Control Board/Pollution Control Committee by 30<sup>th</sup> June of every year for the preceding period April to March]For the period : **April 2019-March 2020**Authorization No: **APPCB/VSP/RJY/10097/CFO/HO/2015 - 3548 Dt: 19/08/2015, valid till Aug 2020**

1.	Name and address of the Occupier and Operator Facility	GMR Rajahmundry Energy Limited Vemagiri Village Kadiyam Mandal East Godavari District Andhra Pradesh			
2.	Name of the authorized person and full address with telephone and fax number:	Mathews. P COO, Gas Assets GMR Rajahmundry Energy Limited Vemagiri Village Kadiyam Mandal East Godavari District Andhra Pradesh			
3.	Description of Hazardous wastes	Waste Oil	Used Oil Filters		
4.	Quantity of Hazardous wastes (in Lts)	Nil	Nil		
5.	Description of storage	NA			
6.	Description of Treatment	NA			
7.	Details of transportation	Name & address of consignee	Mode of packing	Mode of transportation	Date of transportation
8.	Detail of disposal of hazardous waste	Not applicable	Not applicable	Not applicable	Not applicable
9.	Quantity of useful materials sent back to the manufacturers* and others#	Not applicable			

Date: 29/06/2020  
Place: Vemagiri
  
 Signature:  
 Designation: COO, Gas Assets