

**Registered Post with Acknowledgement Due**

ACL/DCW/ENV/2018-19/ 597

Date: 12/09/2019

The Member Secretary  
State Level Environment Impact Assessment Authority  
(SEIAA), Andhra Pradesh  
Ministry of Environment & Forest, Govt. Of India  
A-3, Industrial Estate, Sanathnagar  
Hyderabad-500018

**Sub: Submission of Environment statement for for the 30 MW Captive Power Plant of Durgā Cement Works, village- Durgapuram, Mandal-Dachepalli, Dist-Guntur (AP).**

**Ref: Consent Order no: APPCB/VJA/GTR/534/HO/2016 Dt. 07.05.2016, valid for the period up to Dt. 30.04.2021.**


Dear Sir,

With reference to your Consent to operate vide order no. APPCB/VJA/GTR/534/HO/2016 Dated 30.04.2016 of Durga Cement Works Captive Power Plant (30 MW) a unit of Andhra Cements limited, we hereby submit the Environment statement (Form-V) for the financial year 2018-2019.

This is for your kind information and acknowledgement please.

Thanking You

Yours faithfully,  
For **Durga Cement Works**  
(A Unit of Andhra Cements Limited)

  
(N.B Singh)  
Advisor (Technical)

Encl: a/a  
CC:

The Environmental Engineer  
Regional Office, Andhra Pradesh Pollution Control Board  
Door No.4-5-4/5C (EAST), Navbharatnagar, Ring Road,  
Guntur-522007, Andhra Pradesh

Additional Principal Chief Conservator of Forests,  
Ministry of Environment, Forest and Climate Change,  
Regional Office (SEZ),  
1st and 11nd Floor, Handloom Export Promotion Council,  
34, Cathedral Garden Road, Nungambakkam,  
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The Director  
Regional Office, (South Zone) MoEF, Govt. of India  
Kendriya sadan, 4th floor E&F wings, 11nd Blook, Karamangla  
Bengaluru-560034, Karnataka

Scientist & Incharge  
Central Pollution Control Board  
1st and 2nd Nisarga Bhavan, 7th D Main Road,  
Thimmaiah Rd, Shivanagar, A-Block, Bengaluru, Karnataka 560079

**ANDHRA CEMENTS LIMITED**

Regd. Office & : Durga Cement Works, Durgapuram, Srinagar (P.O),  
Factory Dachepalli - 522 414, Guntur Dt. Andhra Pradesh  
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# Environmental Statement Report

## Form-V

[Financial Year 2018-2019]



### **Durga Cement Works**

**(Captive Power Plant-30 MW)**

**A Unit of Andhra Cements Limited**

Gamalapadu (V), Dachepalli (M)

Guntur District, Andhra Pradesh

Pin Code - 522414

## FORM-V

See Rule-14

**Environmental Statement Report for the financial year ending the March 31, 2019**

### PART- A

i	Name and address of the owner /Occupier of Industry operation or process	Shri Naveen Kumar Singh Director Captive Power Plant 30 MW Durga Cement Works (A Unit of Andhra Cements Limited) Durgapuram, Gamalapadu (V), Dachepalli (M) Dist- Guntur, AP Pin-522414
ii.	Industry Category Primary (SIC CODE) Secondary (SIC CODE)	Red Category Primary (4991)
iii.	Production Capacity (Units)	30 MW
iv.	Year of establishment	2015
v.	Date of last Environmental Statement submitted	Letter. No.: ACL/DCW/ENV/2018/1596, Dated :25/08/2018

## PART- B

### Water and Raw material consumption

#### A. Water

(i) Water consumption m<sup>3</sup>/day

Process m<sup>3</sup>/day : 250.0 (Average during 2018-19)

Domestic m<sup>3</sup>/day : 5.2 (Average during 2018-19)

Name of the Product	Process Water Consumption per unit of Product Output (m <sup>3</sup> /Kwh)	
	During the Previous Financial Year (2017-2018)	During the Current Financial Year (2018-2019)
Electricity	0.00095	0.00083

#### B. Raw Material Consumption

Name of the Raw Material	Name of Product	Consumption of Raw Material per Unit Product Output (MT/Kwh)	
		During the Previous Financial Year (2017-2018)	During the Current Financial Year (2018-2019)
Coal	Electricity	0.00114	0.00122

#### Total Electricity Production (Kwh)

Name of Product	During the Previous Financial Year (2017-2018)	During the Current Financial Year (2018-2019)
Electricity(KWH)	39,79,000	18,14,000

## PART – C

### Pollutant discharge to environment/unit of output (Parameter as specified in the consent issued)

S. N	Pollutants	Quantity of pollutants discharged (Mass/day) (tone/day)	Concentrations of pollutants in discharged (mass/volume) (kg/m <sup>3</sup> )	Percentage of variation from prescribed standard with reason
a	Water	No waste water is generated from process due to CPP was not in operation. Domestic waste water treated in STP.		
b	Air			
<b>(a) Ambient Air monitoring</b>				
	PM <sub>10</sub>	8.328x10 <sup>-8</sup>	5.228x10 <sup>-8</sup>	12.87 % less
	PM <sub>2.5</sub>	6.901x10 <sup>-10</sup>	3.013x10 <sup>-8</sup>	24.69 % less
	SO <sub>2</sub>	1.294x10 <sup>-9</sup>	9.639x10 <sup>-9</sup>	80.72 % less
	NO <sub>2</sub>	1.800x10 <sup>-8</sup>	1.322x10 <sup>-8</sup>	66.95 % less

## **PART-D**

### **HAZARDOUS WASTES**

**(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016)**

Hazardous waste	Total Quantity (Kg)	
	During the previous financial year (2017-2018)	During the current financial year (2018-2019)
(a) From process	Nil	Used Oil 100 Liters
(b) From pollution control facility	Nil	Nil

## **PART-E**

### **SOLID WASTE**

S.N	Solid Waste	Total Quantity (Kg.)	
		During the previous financial year (2017-18)	During the current financial year (2018-19)
a	From Process	Nil	Nil
b	From Pollution control facility	Nil	Nil
c	(i)Quantity recycled or reused	Nil	Nil
	(ii) sold	Nil	Nil
	(iii) Disposed	Nil	Nil

## **PART –F**

**Please specify the characterizations (in terms of composition quantity and Quantum) of hazardous as well as solid waste and indicates disposal practice adopted for both these categories of wastes.**

Hazardous waste, used oil: 100 Liters

Solid waste: Nil

## **PART –G**

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

**Following measures have been adopted for abatement of pollution conservation of natural resource:-**

- 1. Fly Ash Utilization:** All the fly ash generated from 30 MW Captive Power Plant will be stored in closed silo from where it will be pneumatically conveyed to cement mill for the manufacturing process of cement in our plant.
- 2. Hazardous Waste Disposal:** The Waste oil generated at various source is being collected in leak proof barrels and then kept on an impervious floor with oil catch pit it is also ensured that the caps of barrels remain intact and horizontal . The storage area will be properly fenced and caution board displayed during transfer of waste oil to barrels, a trough is placed under neatly in order to prevent land contamination due to oil spillage.
- 3. Water Conservation :**

Company is adopting best possible approaches to conserve water, which can be Witnessed as:

No ground water will be used for power generation, rain water is being collected in Mine pits and the same will be utilized for Captive power plant.

The process water is used for machinery cooling and it is recycled to maintain Zero Waste Water Discharge.

Rain water harvesting is being carried out. All the Plant and colony drainage connected to Mines pit which is used as water reservoir to meet water demand of the plant. Collected rain water also recharges the ground water table of the surroundings areas.

Effluent Treatment Plant (300 KLD capacity) have been installed for the treatment of waste water generated in CPP. Treated water will reuse for coal handling system, Ash handling, and CPP makeup and dust suppression.



**Rain Water Harvesting in Mines pit**



**Industrial Water Consumption flow meter**



**Effluent Treatment Plant 300 KLD**

- 4. Good housekeeping practice adopted:** Following measures have been taken for good house keeping
- All the Raw materials are being stored in cover sheds & Silo.
  - The conveyor belts are fully covered and Water spraying system installed at coal hopper/crusher & transfer points for the control of dust emission.
  - Regular water sprinkling is being carried out on all roads of premises.
  - Road are concreted and green belt developed in plant and colony premises.
  - Schedule maintenance is being carried out of Pollution Control Devices.





**Pneumatic Silo**



**Fly Ash Silo**



**Coal Storage Shed**



**Covered material transfer Points**



**Coal Hopper**



**Coal Stacker belt**

**Covered raw material storage sheds & transfer points**



**DCW Colony entrance gate**



**Concreted road of factory entrance gate**



**Factory main road with greenbelt**



**DCW colony road**



**Water Sprinkling arrangements at Factory main gate**

**Greenbelt development and housekeeping in premises**



**5. Air Pollution Control Measures:**

Following measures have being taken for control of air pollution:

Air Pollution Control Devices installed in 30 MW Captive Power Plant							
S. N	APCD	Make	Equipment No.	Location	Gas volume m3/hr	Inlet dust load Gram/m <sup>3</sup>	Outlet dust load mg/Nm <sup>3</sup>
1	ESP	Thermax		Boiler	177405	70	<50
2	Bag filter	Ecomak	L92BF-1	TTA	6500	20	<50
3	Bag filter	Ecomak	L92BF-2	TTB	6500	20	<50
4	Bag filter	Ecomak	L92BF-3	At Bunker Top	6500	20	<50
5	Bag filter	Ecomak	L92BF-4	At Bunker Top	6500	20	<50
6	Bag filter	Baltech system	BSPL-81/9.3.06	(Above coal silo)	7000	50	<50
7	Bag filter	Baltech system	BSPL-476/34-3.06	Secondary coal crusher /Screen House (LIA BF-1)	40000	50	<50

- a) Schedule maintenance and monitoring of pollution control device: All the pollution control devices have been maintained as per scheduled maintenance by dedicated team and monitoring of all these is being carried out regularly as per APPCB Norms.




Air Pollution Control Equipment installed (ESP) along with stack, and Stack height is 77 meters.


- b) AAQM monitoring is being carried out to cross check the emission levels. The results show that the emissions like **PM<sub>10</sub>**, **PM<sub>2.5</sub>**, **SO<sub>2</sub>**, **NO<sub>2</sub>** and **Noise level** are well within limits.

Ambient Air Quality Monitoring Report								
Period : April, 2018 to March, 2019								
Parameter	PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Conc.	µg/m <sup>3</sup>							
Location	Near Mine Pit (Cross wind)				Near Naguleru River Pump House (Cross Wind)			
Max.	37.34	65.55	16.16	29.60	41.73	66.88	22.39	26.55
Min.	23.36	43.44	4.12	2.19	23.63	39.54	1.14	8.78
Ave.	29.32	53.10	10.11	13.42	30.57	53.12	10.57	14.53
Location	Near CPP (Towards Gamalapadu Village) UP Wind				Colony area (Towards Srinagar Village) Down Wind			
Parameter	PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>2.5</sub>	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Conc.	µg/m <sup>3</sup>							
Max.	40.80	69.54	15.27	18.52	35.85	61.91	32.86	19.74
Min.	25.03	40.83	1.26	4.50	23.23	37.86	0.58	8.28
Ave.	33.13	53.47	8.12	11.80	27.49	49.43	9.76	13.13


Ambient Noise Level Monitoring Report				
Period: April, 2018 to March, 2019				
Time	Day (6:00 am-10:00 pm)	Night (10:00 am-06:00 pm)	Day (6:00 am-10:00 pm)	Night (10:00 am-06:00 pm)
Concentration	dB(A)Leq			
Location	1. Near ESP		2. Near DM Plant	
Maximum	55.2	50.8	57.2	52.2
Minimum	40.3	37.4	40.6	39.1
Average	48.2	45.1	48.7	45.8
Location	3. Near Boiler		4. Near CPP Office	
Maximum	53.1	50.8	51.5	48.6
Minimum	40.4	38.4	40.5	38.4
Average	47.5	44.7	46.1	43.4




**Ambient Noise Level Monitoring**




1



2



3




4


Location –(1) Colony area ,  
Location –(2) Near Mines Pit-1,

Location –(3) Near CPP ,  
Location –(4) Nagularu River Pump House


**Ambient air Quality Manual Monitoring Stations**




1



2



3



4

(1)Sound Level Meter (2) Spectrophotometer (3) Stack Monitoring Kit (4) Respirable Dust Sampler (PM10 & PM2.5)

**Environmental Monitoring**

3. No's of On-line real time Continuous Ambient Air Quality Monitoring system have been installed in the plant premises. CAAQM data is being displayed at the main gate of the factory and the same data also transmitted to APPCB & CPCB website.



**CAAQM Station -1 (UP Wind)  
Towards Srinagar village**



**CAAQM Station -2 (Down Wind)  
Towards Gamalapadu village**



**CAAQM Station -3 (Cross Wind)  
Limestone Mines area**

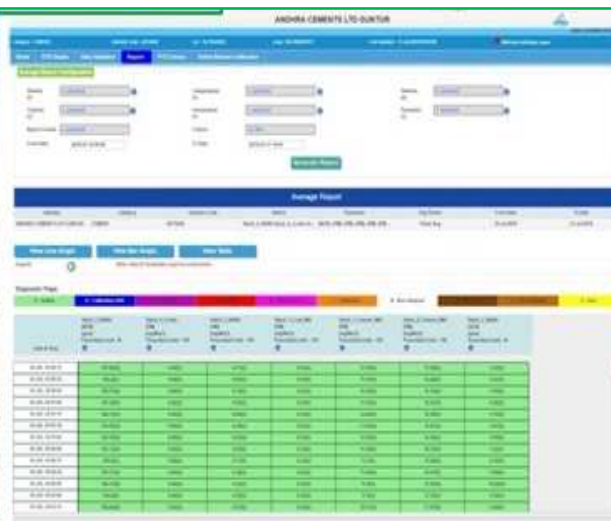


**On-line CAAQM parameters data is being displayed at the main gate of factory**



**Wind direction, Speed & Rainfall Monitors**

**3 Nos. of On-line CAAQMS have been installed and the real time monitoring data is being transmitted to APPCB & CPCB website**



**On-line Continuous Real Time Monitoring Data is being uploaded to CPCB & APPCB gensserver**

## 6. Green belt development:

M/s Durga cement Works has been taken a lot of interest in the greenery development around the mines. Greenbelt development in the form of above described manner will serve following purposes

a)	Mitigation of fugitive emissions.	b)	Noise pollution control
c)	Arresting the soil erosion.	d)	Aesthetics
e)	Optimum use of waste land		
f)	Increase in fresh Oxygen supply and acting as carbon sink thereby combating global warming through Reduction in CO <sub>2</sub> emissions		
g)	Improving microclimate, contributing to cooling effect and improve green cover in the surrounding areas, improving QOL (Quality of Life) with Increase in lung space and Promoting healthy lifestyle.		

Plantation is being developed in the following manner:

S. No.	Form of Plantation	Description
i	Shelter Belt plantation	All around the mine boundary 3 rows of saplings is being planted to form a greenbelt, Preference is being given to fast growing species including locally dominant species such as Neem, Pongamia, Alstronia etc
ii	Block plantation	Vacant land around facilities being developed in mines

Plantation Area:



Green belt development Status				
Total land area	Total Green belt area	Total plantation Nos.	Species Planted	Plantation in period April ,18- March 2019
3 Ha.	1.9 Ha (33%)	1500	Azardicta indica (Neem), Conocarpus (Dubai), Pongamia pinnata, (Kanuga), Pelchophorum (African tulip)	500 Nos. of Saplings have been planted at near CPP area.



## 7. Solid Waste Management

Following strategy is being implemented to handle solid waste of all kinds.

- Practicing principle of 2Rs i.e. Reduces & Reuse
- All the waste will be segregated on the basis on degradability/recyclability, than accordingly they will be disposed. Bio degradable waste from township & plant
- Area will be composted and the Manure will be used for horticulture purpose.
- All the hazarded waste will be disposed through the authorized recyclers.

## 8. Good house keeping

Following measures have been taken for good housekeeping at plant

- Regular roads sweeping is being carried out
- All the roads of plant and colony have been concreted as well as flowers and
- Plantation has been carried out both side of the roads for the beautification & development of plantation and greenery.

## 9. Socio-economic benefit

- Indirect employment to entrepreneurs
- Direct employment to local residents
- Growth of local market and development of nearby villages in terms of CSR

**PART –H**

**Additional Measures /investments proposed for environmental protection including abatement of pollution, prevention of pollution.**

<b>Durga Cement Works (A Unit of Andhra Cements Limited)</b>
<b>Captive Power Plant (1 X 30 MW)</b>

S. No.	Environmental protection Activities	Period April 2018 to March 2019	
		Recurring Cost (Lakhs)	Capital Cost (Lakhs)
1	<b>Air Pollution Control</b>		
	Maintenance of Air Pollution Control Devices	-	-
	Power Consumption on Air Pollution Control Devices	-	-
	Water Spray System	-	-
2	<b>Water Pollution Control</b>		
	Cost of Power Consumption on operation of Electromagnetic (Domestic, Industrial) water flow meters	0.014	-
3	<b>Pollution Monitoring</b>		
	Power Consumption for operation of online Pollution Monitoring CAAQMS & CEMS Stations	3.966	-
	CAAQMS (03 Nos.) repairs, maintenance & other service	5.010	12.890
	Annual Maintenance /Testing/Calibration of Manual AAQ monitoring equipment	0.660	-
4	<b>Green belt development (Plantation)</b>	-	-
5.	<b>House Keeping</b>	-	-
<b>Total Expenditure =</b>		<b>9.65</b>	<b>12.890</b>



**Various Measures of CSR Activities have been carried out in the surrounding Village.**

S. No.	Summarized CSR activities during the period Oct- 2018 to Mar- 2019	Amount (Lakhs)
1	Drinking Water Supply scheme for four village (Srinagar, Ramapuram, Gamalpadu, Batrupalem)	1.2
2	Drinking water supply scheme for village Srinagar & Dandivagu lift Irrigation Co. Society (Rs 60,000/-each). on 01/12/18	1.2
3	75 bags Cement supplied to Dachepalli village.	0.15
4	Providing Medical check ups to students at Durga Public school with free medical help and energy food to lower class (weekly twice)	0.8
5	Providing free R.O. water (including supply of regular water in times of power/water supply failure), emergency medical services and ambulance and fire services in surrounding villages like Madinapadu, Srinagar, Ramapuram, Gamalpadu, Batrupalem.	0.5
6	Cost of Temple renovation & maintenance work outside Andhra Cements Ltd , for uplift, security of temple area , temple coming under Gamalpadu panchayat area , Dachepalli Mandal, Distt. A.P -522414.	6.5
7	Maintenance work ( civil & steel work), providing cover to stage with steel tins to School Stage at Durga Public School for Children Function and other school activity.	0.5
8	Maintenance of Class room benches meant for students of Durga Public school..	0.55
9	Supply of 264Tons of filling material for Road making at Srinagar, in July 2018, Gamalpadu Panchayat, Guntur Distt.	0.37
10	Contribution to Temple/Church for Maintenance/Puja at Village Ramapuram (2000/-PM Srinagar(3000/-PM/ Gamalpadu 3000/-PM	0.48
11	Fire tender service provided during urgent requirement in Dachepalli/ Village Srinagar.	0.15
12	Extension of Five Class rooms , Construction & completion work at DPS School Dachepalli Mandal, Distt Guntur	6.5
13	Maintenance work, providing at DPS for children function and other school activities	0.5
14	Maintenance of class room benches for students of DPS.	0.55
15	Boarding & lodging arrangement for Kabaddi Team organized by National Kabaddi Sports Authority Dachepalli for 30 Nos. for 5days at Township Durgapuram Andhra Cements	0.75
16	200 bags donated for Sri Krishna Temple at Machavarum village, Distt Guntur on 7/11/18	0.6
17	200 bags donated for Church at Village: Julakallu, Distt Guntur	0.6
18	400 bags donated for Maddeliah Temple Dacheppali Mandal, Distt Guntur.	1.2
<b>Total Expenditure =</b>		<b>23.1</b>



**Purified RO water plant provided in Srinagar village**



**Street Light & Water supply pipeline provided in Srinagar Village**



**Eye checkup**



**Blood pressure test**



**Blood Sugar test**



**ECG test**



**Audiometry test**



**Pulmonary function test**

**Medical Health Checkup**

## **PART –I**

### **Any other particulars for improving the Quality of environment**

With compliance to the conditions of Environment Clearance obtained from MoEF Govt. of India the following monitoring is also being carried out on regular interval:

- 1) Checking of ground water level every season surrounding villages.
- 2) Checking of water quality surrounding areas on quarterly basis.
- 3) Meteorological data collection on daily basis.
- 4) Top soils conservation during excavation and utilized the soil for nursery development and tree plantation.
- 5) Regular maintenance of vehicles for emission & noise control of vehicles.
- 6) Constructed pneumatic fly ash handling system and fly ash silo.
- 7) Installation of new coal handling stacker reclaimer & lime stone stacker reclaimer.
- 8) Acoustic enclosures are provided at noise generating area to control of noise pollution
- 9) Use of personal protective Equipment: All employees are provided with personal protective Equipments(PPEs),as per the requirement, such as workers working in plant area are provided with dust masks and in noise pollution areas with Ear plugs/Ear muff ,safety boots gloves welding goggles, Goggles and safety helmet are also being provided as per the requirement.