ANDHRA CEMENTS LIMITED
DURGA CEMENT WORKS

REGISTERED POST

Date: 01.06.2015

ACL/DCW/CFO/PLANT/2014-15/

To
The Member Secretary,
A.P. Pollution Control Board
Paryavaran Bhavan, A-III, IE, Sanath Nagar
Hyderabad-500018

Sub: Half yearly CFO Compliance report of Durga Cement works (Cement Plant), granted by A.P Pollution Control Board Vide Consent Order No: APPCB/VJA/GTR/10023/HO/CFO /2014- Dated: 23.01.2014.

Dear Sir,

With reference to above, please find enclosed half yearly compliance report for Consent for Operation (CFO) of Durga Cement works (Cement Plant), a unit of Andhra Cements Limited for the period of October 2014 to March 2015 for your kind information and record please.

Thanking you.

Yours faithfully
For **DURGA CEMENT WORKS**
A Unit of Andhra Cements Limited

(Anjani Kumar)
Sr. GM (P&QC)

Encl: As above

Copy to:

The Environmental Engineer
Regional Office, A.P Pollution Control Board
102 Raghava Apartment, Brundavan garden
Guntur, Andhra Pradesh
Pin-522007

JAYPEE GROUP

ANDHRA CEMENTS LIMITED
Regd. Office & : Factory
Durga Cement Works, Durgapuram, Srinagar (P.O),
Dachepalli - 522 414. Guntur Dt. Andhra Pradesh
Ph : +91-8649-257428-29, Fax : +91-8649-257449

DURGA CEMENT WORKS

A Unit of Andhra Cements Limited

(CEMENT PLANT)

Durgapuram Village, Dachepalli Mandal

Guntur District-522414 (A.P)

HALF YEARLY COMPLIANCE REPORT OF CONSENT FOR OPERATION (CFO) OF DURGA CEMENT WORKS FROM OCTOBER 2014 TO MARCH 2015

CONSENT ORDER NO. APPCB/VJA/GTR/10023/HO/CFO/2014: DATED: 23.01.2014

	SCHEDULE-A	
S. N	**CONSENT ORDER CONDITIONS**	**COMPLIANCE STATUS**
1	The applicant shall make **applications online** for renewal of Consent (under Water and Air acts) and Authorization under HWM Rules **at least 120 days before the date of expiry of this order**, along with prescribed fee under Water and Air Acts for obtaining Consent & HW Authorization of the Board and detailed compliance report.	Agreed.
2	Any person aggrieved by an order made by the State Board under Section 25,Section 26,Section 27 of Water Act,1974 or Section 21 of Air Act,1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules,1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of the Water (Prevention and Control of Pollution) Act,1974 and Section 31 of the Air (Prevention and Control of pollution) Act 1981.	Agreed.
3	All other conditions stipulated in the schedule –A of the earlier combined CFO&HWA order No. Consent Order No. APPCB/VJA/GTR/534/HO/2012-2449 dated 01.09.2012 remain same. The industry shall ensure consistent compliance of each condition of Schedule-A	All other conditions stipulated in Consent Order Dated 01-09-2012 are being complied.
4	The industry may explore the possibility of tapping the solar energy for their energy requirements.	Possibility of solar energy is being explored.

SCHEDULE B

<table>
<tr><td>1</td><td>The effluents discharged shall not contain constituents in excess of the tolerance limits mention below:
<table><tr><th>Outlet</th><th>Parameter</th><th>Limiting Standards</th></tr><tr><td rowspan="5">1</td><td>pH</td><td>5.50-9.0</td></tr><tr><td>TSS(103-105^{0}C)</td><td>200 mg/l</td></tr><tr><td>TDS</td><td>2100 mg/l</td></tr><tr><td>Oil & Grease</td><td>10 mg/lit</td></tr><tr><td>BOD (at 27^{0}C)</td><td>100 mg/l</td></tr></table></td><td>There are no effluents generated from the plant. Quality of domestic STP product is meeting the prescribed norms.</td></tr>
<tr><td>2</td><td>The industry shall take steps to reduce water consumption to the extant possible and consumption shall NOT exceed the quantities mentioned below:
<table><tr><th>S. No</th><th>Effluents</th><th>Quantity in KLD</th></tr><tr><td>1</td><td>Process (in Raw mil & Cement Mill)</td><td>172</td></tr><tr><td>2</td><td>Cooling make up</td><td>228</td></tr><tr><td>3</td><td>Domestic including plant and township</td><td>250</td></tr><tr><td></td><td>Total</td><td>650</td></tr></table></td><td>Following Initiatives are being taken to reduce water consumption:
1. Dry Cement manufacturing process.
2. Construction of STP to maintain Zero Waste water discharge. Treated water is being reused in dust suppression & green belt development.
3. Installation of air cooled condenser in place of conventional large size cooling towers.
4. All the drainage leading to mine pit to conserve the rain water.
Water consumption shall not exceed the allowed quantity.</td></tr>
<tr><td></td><td>The industry shall maintain separate water meters for the above areas and maintain records.</td><td>Separate water meters provided for industrial & domestic water consumption and records are maintained. Photographs are attached as per Annexure-1.</td></tr>
<tr><td>3</td><td>The Industry shall file the water cess returns in Form-1 as required under section (5) of Water (Prevention and Control of Pollution) Cess Act,1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along with water meter reading. The industry shall remit water cess as per the assessment orders as and when issued by Board.</td><td>Being complied. Regular water Cess returns in Form-1 submitted to APPCB Hyderabad and APPCB Regional office, Guntur on monthly basis as per Annexure-2</td></tr>
<tr><td>4</td><td>The Industry shall provide separate water meters with necessary pipeline for assessing the quantity of water used for each of the purposes mentioned below.
a. Industrial Cooling ,boiler feed
b. Domestic Purposes
c. Processing, whereby water gets polluted and pollutants are easily biodegradable.
d. Processing, whereby water gets polluted and pollutants are not easily biodegradable.</td><td>Complied with. Separate water meter provided for Industrial & domestic use as shown above.</td></tr>
<tr><td>5</td><td>The emissions shall not contain constituents in excess of the prescribed limits mentioned below:
<table><tr><td>Chimney No.</td><td>Parameter</td><td>Emission Standards</td></tr><tr><td>1 to 10</td><td>Particulate Matter</td><td>50 mg/Nm^3</td></tr></table></td><td>Being complied. On line Continuous monitoring system to monitor stack emissions has been working and data are being transmitted to APPCB Server and Display board at factory gate. Photographs attached as per Annexure-3. Air pollution control equipments like RABH installed in Kiln & raw mill, ESP provided in Cooler section, Bag filter provided in coal mills, Cement mills and packing plant. The above pollution control equipments are capable to control the PM within 50 mg/Nm^3.</td></tr>
<tr><td>6</td><td>The industry shall comply with emission limits for DG sets</td><td>Being complied as per the norms.</td></tr>
</table>

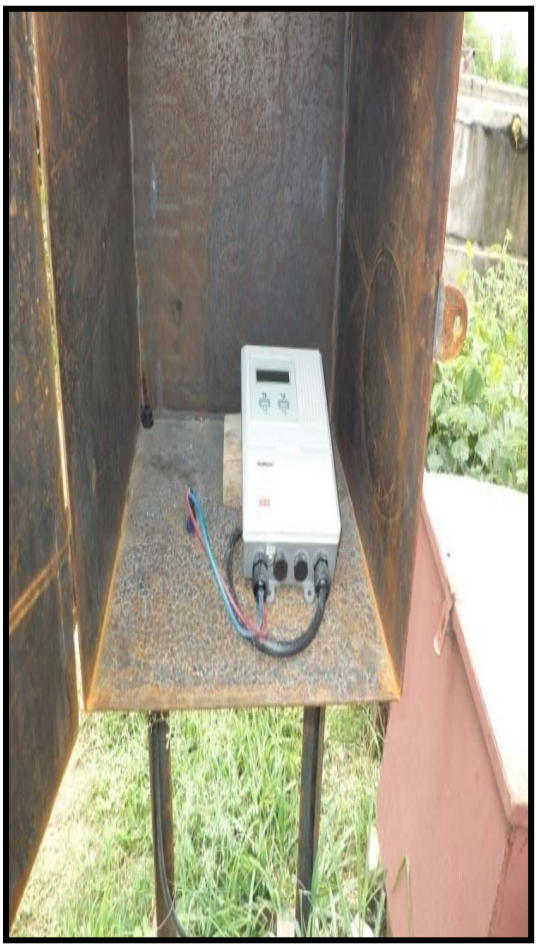
	of capacity upto 800 KW as per the Notification G.S.R.520 (E),dated 01.07.2003 under the Environment (Protection) Amendment Rule 2003 and G.S.R. 448 (E),dated 12.07.2004 under the Environment (Protection) Second Amendment Rule,2004 , In case of DG sets of capacity more than 800 KW shall comply with emission limits as per the Notification G.S.R.489(E),Dated 09.07.2002 at serial no,96 under the Environment (Protection) Act,1986	
7	The industry shall comply with ambient air quality standards of PM_{10} (Particulate Matter size less than 10µm)-100 µg/m^3, $PM_{2.5}$ (Particulate Matter size less than 2.5µm)-60 µg/m^3,SO_2-80 µg/m^3,NOx-80 µg/m^3,outside the factory premises at the periphery of the industry. Standard for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCL-1,dated 18.11.2009. **Noise Levels**: Day time (6 AM to 10 PM)-75 dB(A) Night time (10 PM to 6 AM)-70 dB(A)	On line Continuous Ambient Air Quality Monitoring is being done at 3 nos of Stations. Real time CAAQM data is being transmitted to APPCB Server and to the Display Board at factory gate .In addition to CAAQMS , 4 nos of manual AAQMS have also been working. Noise level is also being monitored. Parameters are within the prescribed limits. Ambient Air, Stack emission & Noise level report attached as per **Annexure- 4.**
8	The Industry shall not manufacture any product, other than those mentioned in this order, without CFE&CFO of the Board. The industry shall not increase the capacity beyond the permitted capacity mentioned in this order, without obtaining CFE&CFO of the Board.	Agreed, We shall not manufacture any other product, nor increase the capacity beyond the permitted capacity mentioned in this order, without obtaining CFE & CFO of the Board
9	The STP under construction shall be commissioned by March, 2014 for treatment and use of treated domestic waste water for recycling and for green belt, etc and report the status to regional office, Guntur.	STP of 300 KLD is in working condition. Treated water is well within the norms of AP Pollution Control Board. Treated waste water is being used in green belt development and dust suppress in plant area .STP photographs and Analysis test results attached as per **Annxure-5.**
10	The industry shall submit action plan for installing 3rd CAAQM station in cross wind direction of mines area to regional office, Guntur.	3rd CAAQM station installed at the cross, wind direction of the Mines, with the consultation of Regional office AP Pollution Control Board Guntur. Photographs attached as per **Annexure -6.**
11	The industry shall earmark an amount of Rs.125.0 lakhs per annum for 10 years towards the Enterprise Social Responsibility (ESR) activities. The industries shall earmark amount towards the Enterprise Social Responsibility (ESR) activities and spend the amount under ESR activities through ESR/CSR cell in the office of the district collector.	CSR/ESR activities being taken by the company. CSR report for the year of 2014-15 attached as per **Annexure-7.**
12	The Industry shall maintain online monitoring equipments for the major stacks i.e Raw mill /Kiln/clinker cooler etc.	Being complied. Details given above.
13	The applicant shall maintain THREE Ambient Air Quality monitoring stations for monitoring of relevant critical parameters mentioned as per the CPCB guidelines and submit monthly reports.	Being Complied. Photographs are attached as per **Annexure -8**
14	The industry shall maintain closed storage facilities in respect of Fly Ash, coal, clinker gypsum, additives, etc. and shall maintained good house keeping.	Silos provided for the storage of fly ash & clinker. Covered sheds provided for the storage of Coal, Gypsum, and other Additives. Good house keeping maintained all around the plant. Photo-graphs are attached as per **Annexure-9**
15	The Industry shall control fugitive emissions generated due to handling, conveyance and storage of crushed limestone, additives, coal, clinker and gypsum with	Dust collection and extraction system (Bag filters) have been installed to control fugitive dust emissions at various transfer points i.e raw mill

	required water spraying systems and dust suppression system.	handling (unloading, conveying, transporting stacking) bagging and packing areas etc. Crusher has been provided with high efficiency bag filters. All conveyers are covered. Covered sheds are provided for storage of raw material such as laterite, coal, gypsum. Cement ,clinker and fly ash are stored in silos. . List of the APCDs are given in **Annexure-10.** Regular water sprinkling is being carried out using water tankers at all pollution prone areas, conforming the air quality norms.
16	The industry shall maintain the records on captive consumption of clinker produced, fly ash utilization & cement production etc. and the consolidated record shall be furnished to R.O Guntur.	The consolidated record of captive consumption of clinker produced, fly ash utilization & cement production etc. is being maintained & regularly submitted to APPCB on monthly basis.
17	The industry shall maintain inter locking system for air pollution control equipments provided with raw materials feeding system so that the feeding of raw materials stopped incase the air pollution control equipments fails.	Air Pollution control equipments like Bag House, ESP and Bag filters are part of Pyro processing systems. Feeding Systems are Interlocked with the Air Pollution Control equipments. Equipments automatically stopped when pollution control equipments fails. Interlocking system with APCD flow sheet attached as per **Annexure- 11.**
18	All the roads in the plant area shall be asphalted /concreted and water shall be sprayed to reduce fugitive dust emission	Plant area roads are concreted and water spray is being done. Photographs are attached as per **Annexure-12.**
19	The Industry shall maintain and submit the records of daily operating hours of kiln, ESP and reasons for ESP tripping to RO, Guntur on monthly basis.	Being complied. Kiln & ESP daily running hours reports regularly submitted to APPCB on monthly basis
20	The industry before commencing the operation of the plant, ensure that the APC system (Bag Filter) to the primary & Secondary coal crushers are provided.	Bag filters provided in coal crusher, Coal mill-1 & 2. Photographs are attached as per **Annexure-13.**
21	Green belt of adequate width and density shall be maintained along the boundary of the industry with minimum area of 33% of total area.	Complied with. Thick Green belt developed at the boundary of the industry. Total green belt in the plant area more than 33%. Tree plantation report attached as per **Annexure-14.**
22	The industry shall comply with the directions of the Board issued from time to time.	Agreed.
23	The industry shall establish appropriate RWH structure on the available up-stream portion of the plant site.	Rain water is collected in Mines pit.
24	The applicant shall submit Environment statement in Form V before 30th September of every year as per rule No.14 of E(P) Rule,1986 & amendments.	Complied with. Last Environment Statement in Form-V sent vide our letter no. ACL/DCW/ENV/2014/4023 dated 20-09-2014.
25	The conditions are without prejudice to the rights and contentions of this Board in any Hon,ble court of law.	Agreed.

	SCHEDULE –C **[See rule 5(4)]**	
	CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTE]	
1	The Industry shall give top priority for waste minimization and cleaner production practices.	Complied with. All the waste being segregated on the basis on degradability/recyclability and accordingly disposed. Bio degradable waste from township & plant area is being composted and the manure is used for horticulture purpose. All the hazarded waste are being disposed through the authorized recycler. Fly ash shall be used in cement manufacturing.
2	The industry shall not store hazardous waste for more than 90 days as per the Hazardous Waste (Management Handling and Transboundary Movement) Rules, 2008 and amendments thereof.	Agreed.
3	The industry shall store Used /Waste oil and Used Lead Acid Batteries in a secured way in their premises till its dispose.	Hazardous waste store provided for storage of hazardous waste and used lead acid batteries in secured way.
4	The industry shall not dispose Waste oils to the traders and the same shall be disposed to the authorized Reprocessors / Recyclers	Agreed
5	The industry shall dispose Used Lead Acid Batteries to the manufacturers /dealers only.	Noted for compliance.
6	The industry shall take necessary practical steps for prevention of oil spillages and carry over of oil from the premises.	All necessary precautions are being taken.
7	The Industry shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to the Board office and concern Regional office.	Noted for compliance
8	The industry shall maintain good house keeping & maintain proper record for Hazardous waste stated in authorization.	Noted for compliance
9	The industry shall maintain proper records for hazardous waste stated in authorization in form-3 i.e, quantity of incinerable waste, land disposal waste, recyclable waste etc, and file annual return in Form-4 as per Rule 22(2) of the Hazardous Wastes (Management, Handling &Transboundary Movement) Rule, 2008 and amendment thereof.	Being complied. Last annual return in Form -4 as per Rule of Hazardous waste (Management, Handling & Transbounday Movement) Rule 2008 submitted vide our letter no, ACL/DCW/ENV/HW/3412 dated 25.06.2014.
10	The industry shall submit the condition wise compliance report of the conditions stipulated in Schedule B&C of this Order on half yearly basis to Board office, Hyderabad and concerned Regional Office.	Being complied. Half yearly CFO compliance report is being regularly submitted to AP Pollution Control Board Hyderabad and its regional office AP Pollution Control Board Guntur. Last CFO Compliance report sent vide our letter no ACL/DCW/CFO/PLANT/2014-15/4696 dated 29.12.2014.
11	The industry shall dispose of e-waste to the authorized recycler only.	Agreed.
12	The industry shall conform to the co-processing guidelines of CPCB in sending waste to co-processing for cement plants.	Noted for compliance

Annexure-1

Colony Water meter,



Industrial Water meter

Annexure-2

REGISTERED POST

DCW/P&QC/ENV/03-15/ 5503

Date: 17.04.2015

The Member Secretary,
AP Pollution Control Board
Paryavaran Bhavan
A III, I.E., Sanath Nagar
HYDERABAD- 500 018

Dear Sir,

Subject: Monthly Monitoring Report for the Cement Plant of M/s Andhra Cements Limited at village Durgapuram, Mandal- Dachepalli, Dist-Guntur, (AP)

Ref: CFO vide order no: APPCB/VJA/GTR/10023/HO/CFO/2014,Dt.23.01.2014

Dear Sir,

Please find enclosed following reports of Durga Cement Works of Cement Plant, a unit of Andhra Cements limited for the month of March 2015.

1. Monthly water consumption report of plant.
2. Kiln, RABH & ESP running hours report.
3. Ambient air quality monitoring report.
4. Stack emission report.
5. Noise level report.
6. Raw material consumption report.

This is for your kind information and records.

Thanking You

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

(Anjani Kumar)
Sr GM (P&QC)

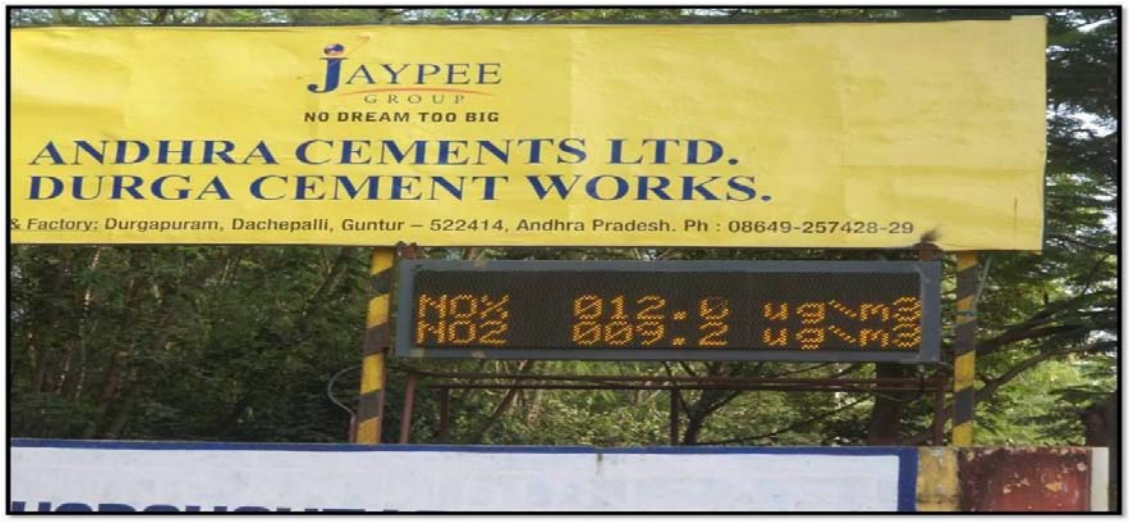
Encl: a/a

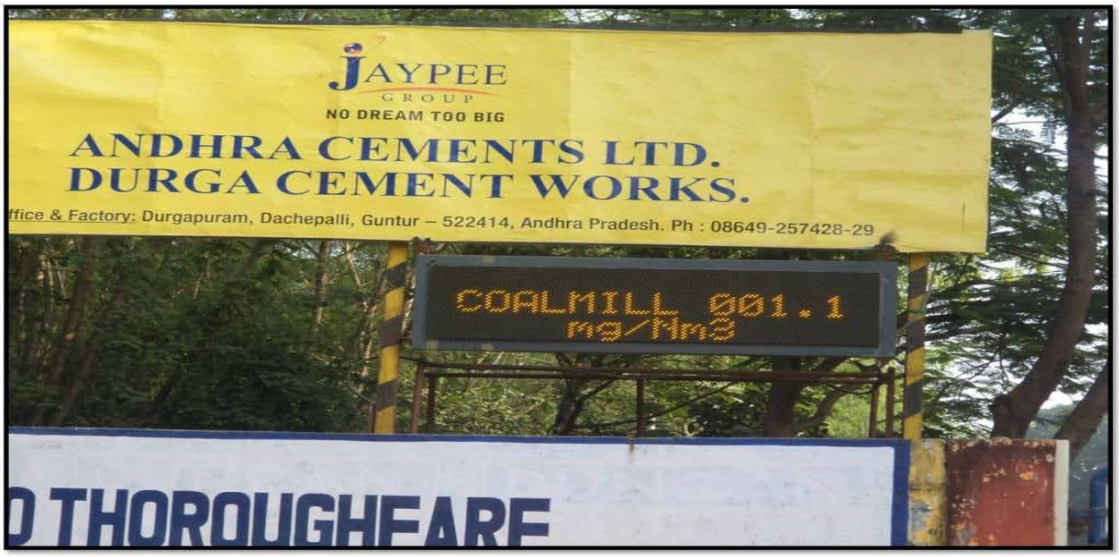
CC: The Environmental Engineer
AP Pollution Control Board, Regional Office
102, Raghava Apartments, Brundavan Gardane,
GUNTUR – 522 007

o/c

Annexure-3

Emission data displayed at factory main gate





Annexure- 4

DURGA CEMENT WORKS

A Unit of Andhra Cements Limited
Gamalapadu(V), Dechepalli(M),Dist- Guntur
Andhra Pradesh

AMBIENT AIR QUALITY MONITORING REPORT OF DCW PLANT
OCTOBER 2014 TO MARCH 2015

LOCATION -1 NEAR MINE PIT-1, (CROSS WIND)					
S.N		**PM-2.5 µg/m^3**	**PM-10 µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**
1	MAX.	30.04	58.62	9.52	14.70
2	MIN.	17.09	39.40	4.17	6.94
3	AVG.	23.74	47.35	6.63	10.95
4	STD DEV.	2.83	4.64	1.14	1.59
5	COFF. OF VARIATION	0.12	0.10	0.17	0.15
6	98 PERCENTILE	28.62	56.46	8.46	14.40
LOCATION -2 NEAR NAGULERU RIVER PUMP HOUSE, (CROSS WIND)					
S.N		**PM-2.5 µg/m^3**	**PM-10 µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**
1	MAX.	25.68	54.60	9.27	12.83
2	MIN.	16.49	37.64	4.00	7.19
3	AVG.	21.13	45.03	6.35	10.47
4	STD DEV.	2.23	3.74	1.15	1.43
5	COFF. OF VARIATION	0.11	0.08	0.18	0.14
6	98 PERCENTILE	25.04	52.84	8.45	12.71
LOCATION -3 NEAR CPP (TOWARDS GAMALAPADU VILLAGE), (UP WIND)					
S.N		**PM-2.5 µg/m^3**	**PM-10 µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**
1	MAX.	30.26	61.34	8.81	15.88
2	MIN.	16.45	40.00	5.07	9.00
3	AVG.	25.85	49.98	7.09	11.92
4	STD DEV.	2.96	5.01	0.98	1.76
5	COFF. OF VARIATION	0.11	0.10	0.14	0.15
6	98 PERCENTILE	29.91	60.32	8.53	15.24
LOCATION -4 COLONY AREA (TOWARDS SRI NAGAR VILLAGE),(DOWN WIND)					
S.N		**PM-2.5 µg/m^3**	**PM-10 µg/m^3**	**SO_2 µg/m^3**	**NO_2 µg/m^3**
1	MAX.	24.56	56.32	8.63	14.46
2	MIN.	15.26	36.23	3.37	5.89
3	AVG.	19.43	42.83	6.09	9.85
4	STD DEV.	2.52	3.69	1.11	1.77
5	COFF. OF VARIATION	0.13	0.09	0.18	0.18
6	98 PERCENTILE	24.50	49.75	8.48	14.18

DURGA CEMENT WORKS

A Unit of Andhra Cements Limited

Gamalapadu(V), Dechepalli(M),Dist- Guntur

Andhra Pradesh

STACK MONITORING REPORT FROM OCTOBER 2014 TO MARCH 2015

S.N		RABH mg/Nm^3	COOLER ESP mg/Nm^3	COAL MILL mg/Nm^3	CEMENT MILL- 1 mg/Nm^3	CEMENT MILL- 2 mg/Nm^3
1	MAX.	16.60	19.23	16.04	17.7	15.53
2	MIN.	6.05	3.50	4.16	2.23	2.73
3	AVG.	10.81	7.28	7.68	5.93	6.01
4	STD DEV.	2.87	3.49	2.93	4.39	3.70
5	COFF. OF VARIATION.	0.27	0.48	0.38	0.74	0.61
6	98 PERCENTILE	15.84	16.92	15.02	16.50	14.86

DURGA CEMENT WORKS

A unit of Andhra Cements Limited

Gamalapadu (V), Dechepalli(M),Dist- Guntur

Andhra Pradesh- 522414

NOISE LEVEL REPORT OF DCW PLANT

OCTOBER 2014 TO MARCH 2015

	1.Colony area		2. Near time office	
	Day Time dBA (6AM-10PM)	Night Time dBA (10PM-6AM)	Day Time dBA (6AM-10PM)	Night Time dBA (10PM-6AM)
Max.	44.80	43.80	58.60	50.30
Min.	43.10	41.30	48.30	41.30
Avg.	43.93	42.72	53.10	46.40
Std.Dev	0.52	0.75	2.64	1.96
Coff.of Variation	0.01	0.02	0.05	0.04
98 percentile	44.80	43.80	58.26	49.82
	3.Crusher area		4.Raw mill area	
Max.	71.60	67.30	69.80	66.70
Min.	53.60	45.80	53.40	47.30
Avg.	64.43	57.08	64.17	57.85
Std.Dev.	5.66	6.31	4.44	5.62
Coff.of Variation	0.09	0.11	0.07	0.10
98 percentile	71.17	66.96	69.61	66.22
	5. Kiln & Cooler area		6.Coal mill area	
Max.	73.50	69.60	71.60	68.60
Min.	57.30	52.10	51.30	46.20
Avg.	68.62	64.07	65.16	61.18
Std.Dev.	4.17	5.40	4.94	6.38
Coff.of Variation	0.06	0.08	0.08	0.10
98 percentile	73.07	69.50	71.12	68.60
	7.Cement mill area		8.Packing plant area	
Max.	74.80	70.70	69.7	64.8
Min.	68.30	53.60	58.3	52.3
Avg.	71.76	65.67	64.20	57.70
Std.Dev.	1.43	4.55	2.83	3.68
Coff.of Variation	0.02	0.07	0.04	0.06
98 percentile	74.32	70.60	69.12	64.56

Annxure-5

STP OF 300 KLD INSTTALED AT DCW COLONY

STP WATER TESTING REPORT

Vimta Labs Limited
Registered Office
142, IDA Phase II, Cherlapally
Hyderabad-500 051, India
T : +91 40 2726 4141
F : +91 40 2726 3657

Vimta
Driven by Quality. Inspired by Science.

ISSUED TO:
M/S DURGA CEMENT WORKS
DACHEPALLI,
GUNTUR DISTRICT
ANDHRA PRADESH

Report Number : **10404/14-15/VLL/000/01**
Issue Date : **2015-01-20**
Your Ref : **TRF**

KIND.ATTN:- Sanjay Singh

Sample Particulars: STP Outlet

Sample Registration Date: 2015-01-07 Sampling Date : 2015-01-06
Analysis starting Date : 2015-01-08 Analysis Completion : 2015-01-19
Tests required:- pH, Total Suspended Solid, Total Dissolved Solids Chlorides,Sulphates Fluorides, Oil & Grease, Chemical Oxygen Demand, Biological Oxygen Demand, Chromium as Cr , Copper as Cu, Hexavalent Chromium as Cr^{6+}, Lead as Pb, Nickel as Ni, Phenolic Compound, Zinc as Zn , Boron as B, Arsenic as As, Cadmium as Cd, Selenium as Se, Mercury as Hg.

SAMPLE COLLECTED BY VIMTA LABS LTD

TEST RESULTS

Sl. No.	PARAMETER	UOM	RESULT
1	pH	--	7.09
2	Total Suspended Solids	mg/L	48.0
3	Total Dissolved Solids	mg/L	1652.0
4	Chlorides	mg/L	185.0
5	Sulphates	mg/L	45.8
6	Fluorides	mg/L	0.4
7	Oil & Grease	mg/L	1.0
8	COD	mg/L	32.0
9	BOD	mg/L	6.8
10	Chromium as Cr	mg/L	<0.01
11	Copper as Cu	mg/L	0.14
12	Hexavalent Chromium as Cr^{6+}	mg/L	<0.05
13	Lead as Pb	mg/L	<0.01
14	Nickel as Ni	mg/L	<0.01
15	Phenolic Compound as C_6H_5OH	mg/L	<0.01
16	Zinc as Zn	mg/L	0.28
17	Boron as B	mg/L	<0.01
18	Arsenic as As	mg/L	<0.01
19	Cadmium as Cd	mg/L	<0.01
20	Selenium as Se	mg/L	<0.01
21	Mercury as Hg	mg/L	<0.001

Method of Testing: As per APHA 22nd edition.
Instrument Used: ICP - AES (Agilent)

Dr.Subba Reddy Mallampati
Sr.Scientist - Environment

Annexure-6

3rd CAAQM STATION INSTALLED AT CROSS WIND DIRECTION IN DCW MINES AREA

Annexure-7

Various Measures of CSR Activities being done in the surrounding villages

1. Education.
2. Filter Water supply. Maintenance and Support.
3. Dandivagu Lift Irrigation Scheme. Maintenance and Support.
4. Health & Hygiene.
5. Medical Camps.
6. Street lights illumination.
7. Cutting and cleaning bushes.
8. Financial Assistance for maintenance of Religious places.
9. Contribution for Annadanam in a Temple procession.
10. White-washing & colouring of Religious places.
11. Supporting for Athletic Champion Sports meet in the District.
12. Providing Tricycles for the physically challenged persons.
13. Providing Aggregate chips for construction of church etc.
14. Laying water pipe line in Srinagar village.
15. Providing Aggregate chips for filling the pit holes of the Road connecting Ramapuram village to State High Way.
16. Repairs and Reconstruction of School compound wall & Grampanchayat office compound wall.
17. Providing Medical check ups to all students with free medical help and energy food to Junior Class students (weekly twice) at Durga Public School.
18. Construction of Kalyana Mandapam.
19. Road repair work / Cementing of road.
20. Provided R.O.Plant at Srinagar Village under NTR SUJALA PATHAKAM and inaugurated by Shri Yarapathineni Srinivasa Rao, MLA on 02-10-2014.
21. Providing free R.O. Drinking water.
22. Providing Free Medical facilities, Ambulance and Fire services in Emergencies to the neighbouring villages.

SUMMARISED CSR ACTIVITIES & EXPENSES PLANNED FOR 2014-15 & 2015-16

S.No.	Item	Amount (Rs.in Lakhs)
1	Provided R.O.Plant at Srinagar village under NTR SUJALA PATHAKAM, inaugurated by Shri Yarapathineni Srinivasa Rao, MLA on 02-10-2014	2.70
2	Extension of water pipe line in one of wards in Srinagar Village	4.00
3	a) Drinking water supply scheme b) Pump house repairs are to be carried out as the pipeline system was introduced in 1995 and rusted	2.40 4.00
4	Dandivagu Lift Irrigation Scheme	1.60
5	Improving Health & Hygiene in surrounding villages	10.00
6	Aggregate chips for filling pit holes of the Road connecting Ramapuram village to State High way – 2.5 Kms	11.00
7	a) Repairs to the construction of School compound wall in Gamalapadu village – 350 Mtrs with main gate. b) Grampanchayat Office compound wall repairing (collapsed wall) and gat	6.00 2.50
8	Financial assistance for maintenance religious places in surrounding villages	1.00
9	Construction of Kalyana Mandapam in Ramapuram Village	10.00
10	Laboratory and Library renovation in Durga Public School	5.00
11	White-washing & colouring of Siva Temple in Ramapuram in connection with Mahasivaratri	0.10
12	Cutting & Cleaning bushes in Srinagar village	0.60
13	Road repair work / Cementing of road work in Ramapuram & Gamalapadu villages together = 500 Metres	15.00
14	Compassionate grounds subsidized / free education to poor / suffering / deserved people	3.00
15	Providing medical check ups to all students at DPS with free medical help and energy food to lower class (weekly twice)	1.50
16	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	4.00
17	Providing Free Medical facilities, Ambulance and Fire services in Emergencies to the neighbouring villages.	2.50
18	Sri Sitaramula Swamy & Venugopala Swamy temple complex colouring on the occasion of Sriramanavami Festival (28-03-2015).	0.70
19	Flooring & colouring of Srinagar Grampanchayat Office.	0.72
	TOTAL EXPENDITURE	**Rs.88.32 Lac**

DCW CSR ACTIVITIES

RO Water Plant Provided in Srinagar village

Street light & Water supply pipe line provided in nearby village

SUBJECT: MEDICAL HELTH CHECKUP AT DCW DISPANSARY

Eye checkup cap organized in DCW dispensary on date: 06.01.2015

Swain flu drops vacination at Srinagar village school from 05.02.2015 to 15.02.2015

Annexure-8

4 NOS. AAQM MONITORING STATION

Near CPP

Nagularu River Pump House

Colony area

Near Mines Pit-1

3 nos. On line Ambient Air Quality Monitoring System installed

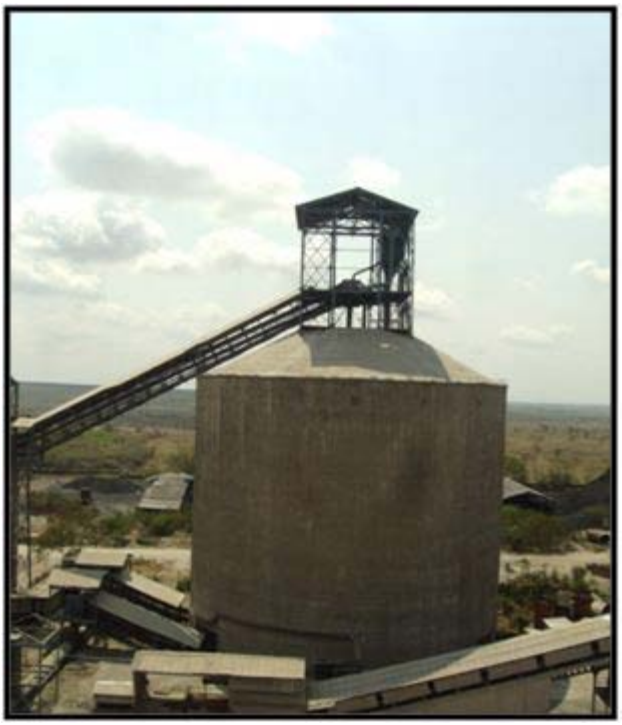
CAAQM Station -1(Towards Srinagar Village) CAAQM Station -2 (Towards Gamalpadu village)

CAAQMS Station-3 installed at Mines area

Annexure-9

FUGITIVE EMISSION CONTROL WITH PROPER MEASURES

Raw meal Silo



Clinker Silo along with bag filter

fly ash silo

FUGITIVE EMISSION CONTROL WITH PROPER MEASURES

Crushed lime stone yard

Coverd Gypsum yard

Covered Laterite yard

Covered Coal yard

FUGITIVE EMISSION CONTROL WITH PROPER MEASURES

Covered belt conveyores

Covered belt conveyores

FUGITIVE EMISSION CONTROL WITH PROPER MEASURES

Water sprinkling by water tanker

Water spry system installed in crusher

Annexure-10

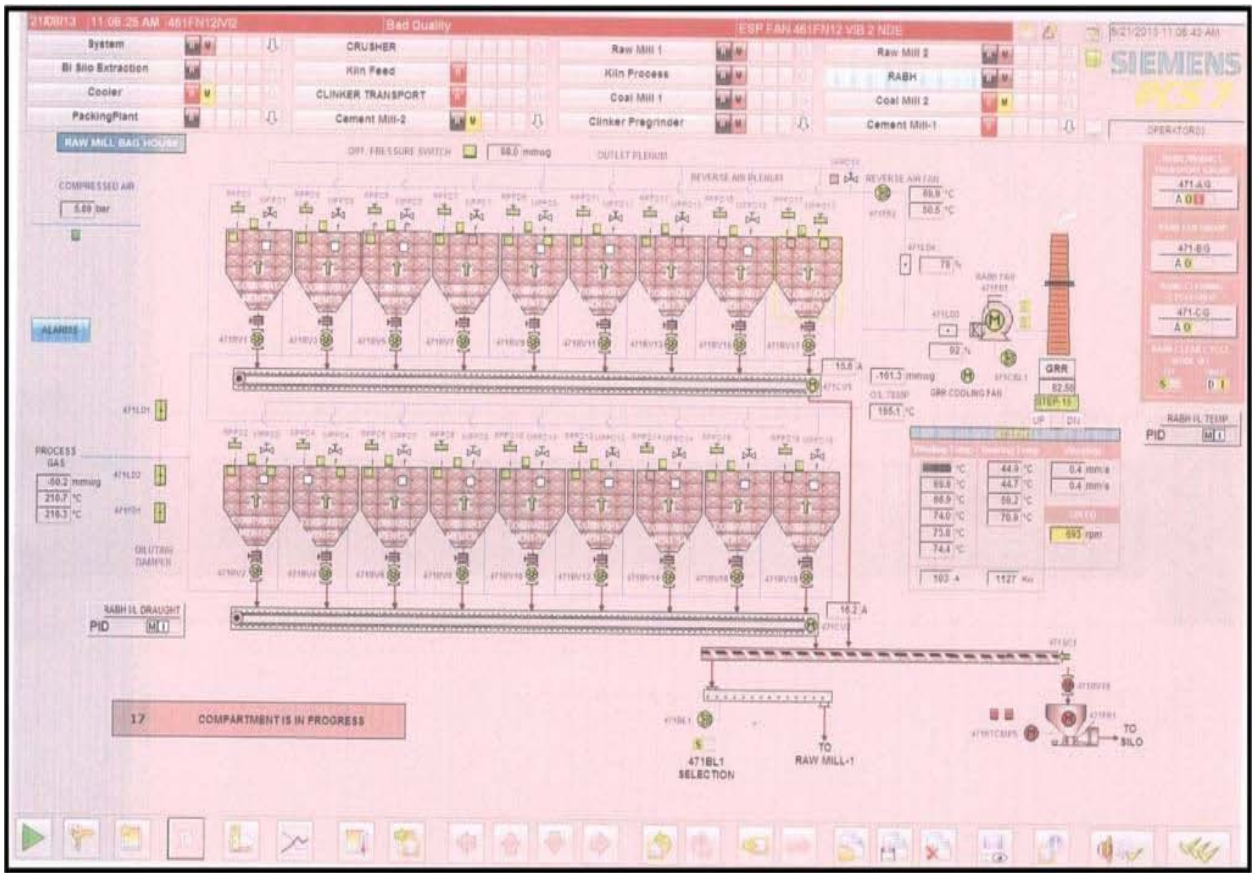
DCW- LIST OF BAG FILTERS

S.No	Department	Eqpt No.	Description	Model	Volume (m^3/h)	No.of bags	No.of solenoid valves	Kw/rpm	Supplier
1	LS Crusher	211BF1	211BC-1 discharge venting	AJ-120-360	17500	120	12	37/1470	Thermax
2	LS Crusher	211BF2	211BC-2 discharge venting (Secondary crusher Bulding top)	AJ-120-360	17500	120	12	22/1470	Thermax
3	Pregrinder,RM-1	361BF3	RM-1 (VRPM) venting	AJ-360-360	39600	360	30	45/1470	Thermax
4	Pregrinder,RM-1	361BF4	RM-1 venting (Ball mill vent bag filter)	CE-02-330x3.6	50000	330	22	55/985	Clair
5	Pregrinder,RM-1	361BF5	Pregrinder department (361BC1,361BE3, 361BC4) venting.	AJ-120-360	17500	120	12	37/1470	Thermax
6	Pregrinder,RM-1	391BF1	Raw Meal Silo & Feed Elevator Venting	CE-02-064x3.6	10000	64	8	15/1450	Clair
7	Pregrinder,RM-1	391BF2	Raw Meal Silo-1 top			120	12		
8	Silo extraction & kiln feed	393BF1	Raw meal Silo discharge enmass conveyor	CE-02-036x3.6	3000	36	6	5.5/2905	IKN
9	Silo extraction & kiln feed	393BF2	Raw meal Silo discharge enmass conveyor	CE-02-036x3.6	3000	36	6	5.5/2905	IKN
10	Silo extraction & kiln feed	393BF3	Kiln feed Bin venting	CE-02-100x3.6	9500	100	10	15/1450	IKN
11	Silo extraction & kiln feed	393BF4	Kiln feed Bin venting	CE-02-100x3.6	9500	100	10	15/1450	IKN
12	Silo extraction & kiln feed	393BF5	PH bucket elevator air slide venting	CE-02-100x3.6	9500	100	10	15/1450	IKN
13	Silo extraction & kiln feed	393BF6	PH bucket elevator air slide venting	CE-02-100x3.6	9500	100	10	15/1450	IKN
14	Silo extraction & kiln feed	393BF7	PH Top Bucket elevator venting	CE-02-100x3.6	9500	100	10	15/1450	IKN
15	Silo extraction & kiln feed	393BF8	Raw meal Recirculation venting	CE-02-100x3.6	9500	100	10	15/1450	IKN
16	RABH	471BF1	Kiln/RM exhaust gases	CE-RABH-18 x 204	1317000	3672	-		Clair
17	Coal Mill-1	421BF1	Coal Mill-1 Vent bag house	TP-336-360	34650	336	24	75/1450	Thermax
18	Coal Mill-1	431BF1	Coal mill department venting bag filter	CE-02-040x 3.6	6000	40	5	5.5	Clair
19	Coal Mill-2	422BF1	Coal Mill-2 VRM Vent bag house	CE-02-3x300x3.6	90000	900	60	360/780	Clair
20	Coal Crusher		Coal Crusher vent bag filter		6600	132	12	9.3/1455	Clair
21	Clinker storage & transportation	491BF1	491DP1 discharge transfer point (cooler DPC)	CE-02-030 FM X 3.6	4000	30	5	5.5/1450	Clair
22	Clinker storage & transportation	491BF2	Clinker Silo	AJ-168-360	25000	168	16	30/1450	Thermax

23	Clinker storage & transportation	511BF1	Clinker silo discharge DPC transfer point (511DPC3)	CE-02-030 FM X 3.6	4000	14	3	3.7/2850	Clair
24	Clinker storage & transportation	511BF2	Clinker silo discharge belt conveyor transfer point (511BC4)	CE-02-030 FM X 3.6	4000	30	5	30/1475	Clair
25	Clinker Pregrinder	561BF1	Transfer points	CE-02-030 FM X 3.6	4000	30			Clair
26	Clinker Pregrinder	561BF2	Clinker Pregrinder Venting (VRPM)	TP-588-360	59400	588	42		Thermax
27	Clinker Pregrinder	561BF3	Clinker Pregrinder Separator Venting (VRPM)	TP-798-360	82460	798	57		Thermax
28	Cement Mill-1	562BF1	Cement Mill-1 Mill Venting	TP-420-360	42650	420	30	75/986	Thermax
29	Cement Mill-1	562BF2	Cement Mill-1 Separator Venting	TP-420-360	42400	420	30		Thermax
30	Cement Mill-2	563BF1	Cement Mill-2 Mill Venting	TP-462-360	47400	462	33	75/986	Thermax
31	Cement Mill-2	563BF2	Cement Mill-2 separator venting	TP-588-360	60000	588	42		Thermax
32	Cement Mill	591BF1	Cement Silo 1&2 feed bucket elevator boot venting.			30	5		
33	Cement Mill	592BF1	Cement mill silo-1 top (flush mounted)				5	5.5/1455	Clair
34	Cement Mill	592BF2	Cement mill silo-2 top (flush mounted)				5	5.5/1455	Clair
35	Packing Plant	612 BF1	Packer 1 venting			195	15	30/1475	
36	Packing Plant	612 BF2	Packer 2 venting			180	15		Thermax
37	Packing Plant	612 BF2A	Packer 2 Bucket elevator venting			180	15		Thermax
38	Packing Plant	612BF3	Packer 3 venting	256-TA 12(6)		256	16	55/1485	
39	Packing Plant	612BF4	Packer 3 venting	121-TA 12(6)		121	11	30/1475	

Annexure-11

Interlocking system provided with APCD

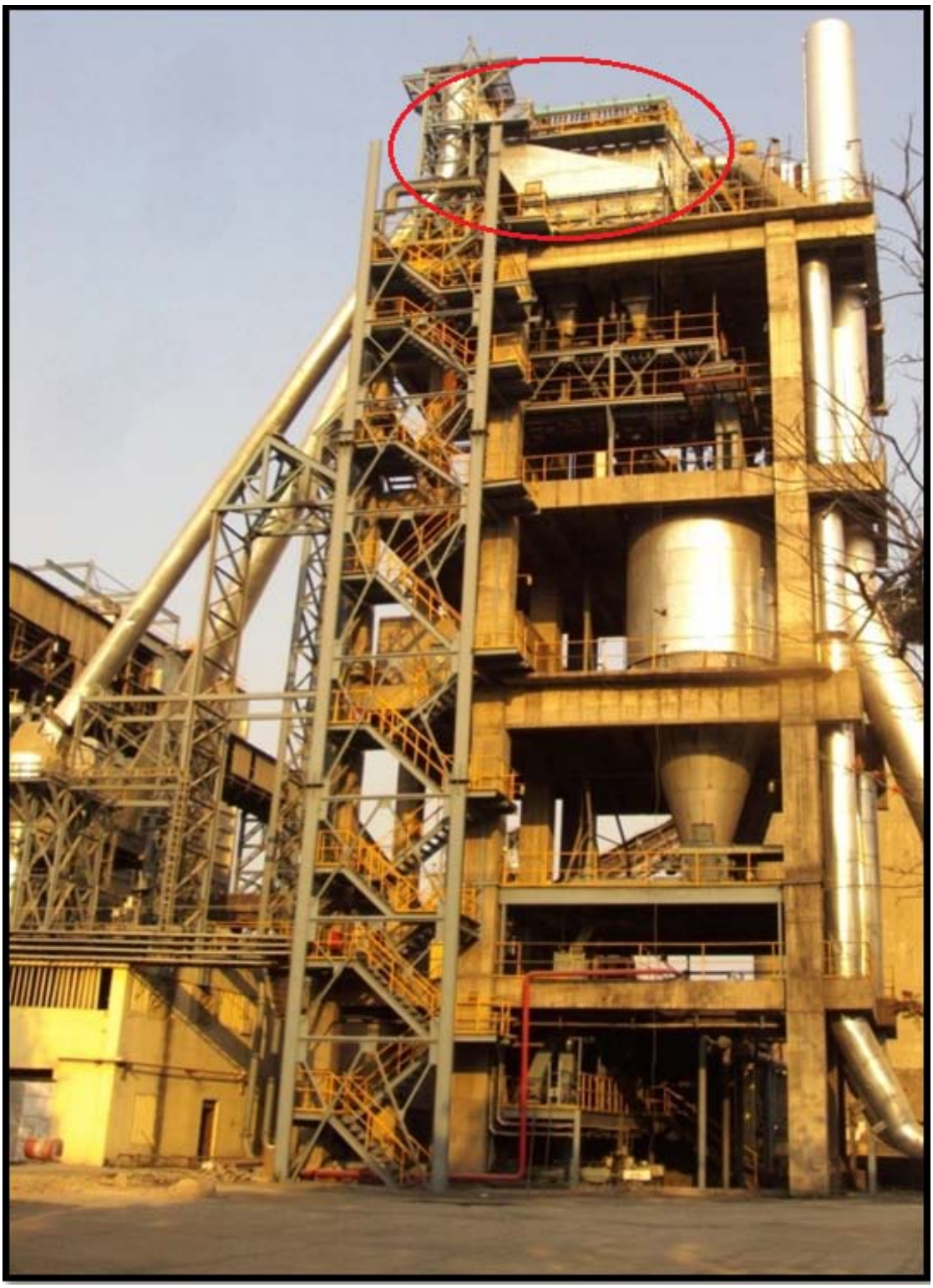


Annexure- 12

Plant roads concreted and maintained

Annexure- 13

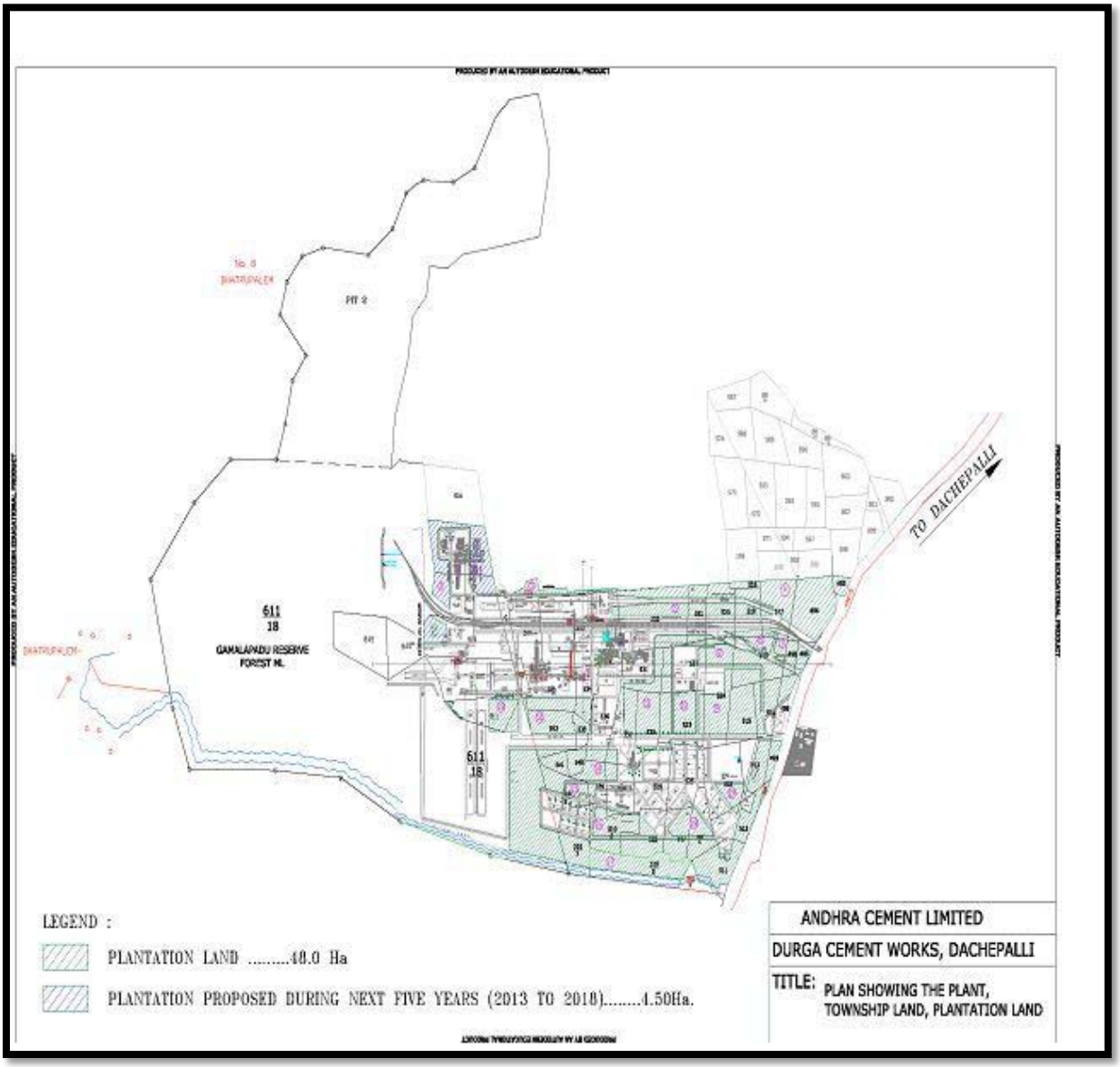
COAL MILL BAG HOUSE



Annexure-14

Status of Green belt development (Plant & Colony)

Total Industrial Land area: - 141.574 Ha.
Existing green belt area in plant area - 48.5 Ha



Tree Plantation DCW plant area