

Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

Six monthly compliance report for the period April 2012 to September 2012 to the condition specified in Environment clearance (EC) granted by MoEF Vide letter no. J-11011/719/2007-IA II (I) dated 2012.2007.

Sl.No.	Condition	Compliance
A. Specific Conditions:		
i.	Continuous monitoring system to monitor gaseous emissions shall be provided and limit of SPM shall be controlled within 50 mg/Nm ³ by installing adequate air pollution control system and data submitted to the Ministry's Regional Office at Bangalore, A.P. Pollution Control Board (APPCB) and CPCB regularly.	Continuous monitoring system to monitor gaseous emissions is being commissioned. Air pollution control Equipment like RABH installed for coal mill cement mills. The above pollution control equipment are capable to control the PM within 50 mg/Nm ³ . Data will be collected on commencing of operation and shall be submitted to Ministry's Regional Office at Bangalore, A.P. Pollution Control Board (APPCB) and CPCB regularly. A list of APCDs (Air Pollution Control Devices) in Annexure-A (i) Few photographs of the APCDs are also attached as Exhibit-1
ii.	The company shall install adequate dust collection and extraction system to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. Crusher shall be operated with high efficiency bag filters. All conveyers shall be covered with GI sheets. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided besides coal, cement, fly ash and clinker shall be stored in silos. Pneumatic system shall be used for fly ash handling.	Dust collection and extraction system (Bag filters) where installed to control fugitive dust emissions at various transfer points, raw mill handling (unloading, conveying, transporting, stacking bagging and packing areas etc. are installed. Crusher has been provided with high efficiency bag filters. All conveyers are covered. Covered sheds for storage of raw material such as lime stone, laterite, Coal, Gypsum & Flash ,Cement , Flyash and clinker are stored in silo .Pneumatic system is used for fly ash handling . List of the APCD, s is given at Annexure-A (ii) A few photo graphs are also attached as Exhibit-2.
iii.	Secondary fugitive emissions shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed and data submitted to the Ministry's Regional Office at Bangalore, CPCB and APPCB.	Secondary Fugitive emissions shall be controlled as recommended and shall be regularly monitored. The data will be submitted after commencing the production of the plant.
iv.	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to Ministry of	Shall be complied on regular basis soon after commencing the mining activity.

	Environment and Forests and its Regional Office, Bangalore.	
v.	Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RPM such as haul road, loading and unloading points, transfer points and other vulnerable areas. It shall be ensured *hat the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Shall be complied.
vi.	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded.	Shall be complied.
vii.	Asphalting/concreting of roads and water spray all around the stockyard and loading / Unloading areas in the cement plant shall be carried out to control fugitive emissions.	Already complied. Details are provided in Annexure A (vii).
viii.	Total ground water requirement for cement plant and mining shall not exceed 420 and 60 m ³ /day (including 56 m ³ /day mine water) respectively. All the treated wastewater shall be recycled and reused in the process and/or for ash quenching, dust suppression, green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.	Water consumption will be maintained as per the APPCB limits. No process wastewater shall be discharged outside the factory premises and 'zero' discharge shall be adopted.
ix.	'Permission' for the drawl of ground water from SGWB / CGWA shall be obtained. Mined out area shall be developed as artificial reservoir. The water stored in the artificial reservoir made in the mine pit shall be used maximum to reduce ground water consumption.	Permission for the drawl of ground water is obtained. Copy of the letter is provided at Annexure A (ix). Mined out area will be developed as artificial reservoir. Use of water collected in artificial reservoir in the mine pit will be used to minimize ground water consumption.
x.	Sewage treatment plant (STP) shall be installed for the colony. Treated domestic effluent shall be used for green belt development within the plant premises. Domestic waste from colony and STP shall be segregated into bio-degradable and non-biodegradable. Bio-degradable waste shall be composted and non-biodegradable waste shall be land filled at identified sites. ETP should also be provided for workshop and mineral separation plant wastewater.	STP is being installed. Effluents treatment shall be done as per the guidelines prescribed.
xi.	The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations.	Shall be complied
xii.	All the bag filter dust, raw meal dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing.	Systems are designed and installed for recycling and re-use of the dust collected by pollution control devices. Similarly sludge from domestic sources

	Sludge from domestic sources shall be used as manure for green belt development. Waste oil shall be sold to authorized recyclers / preprocessors only.	shall be used for green belt development. Waste oil shall be sold to authorized recyclers / pre-processors
xiii.	An effort shall be made to use of high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly.	Shall be complied
xiv.	Efforts shall be made to use low grade lime, more fly ash and solid waste in the cement manufacturing.	Shall be complied
xv.	Action plan for the mining, management of over burden (removal, storage, disposal etc.), reclamation of the mined out area and mine closure shall be submitted to the Ministry and its Regional Office at Bangalore.	There is practically no over burden produced at the time of mine running
xvi.	The top soil and solid waste shall be stacked separately at specified dumping site with proper safeguards. Top soil shall be used for the plantation / green belt development during reclamation and solid waste for backfilling.	All the material available in our mining area will be useful in our process.
xvii.	The over burden (OB), inter burden and other waste generated from mines, <i>if any</i> , shall be stacked at the earmarked dump sites only and should not be kept active for long period. Backfilled OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of reclaimed areas shall continue until the vegetation becomes self-sustaining. Regular compliance shall be submitted to the Ministry and its Regional Office at Bangalore on six monthly basis.	No over burden generated in mines.
xviii.	The area for external over burden dump shall be reduced by suitably increasing the height of the dumps with proper terracing. It shall be ensured that the overall slope of the dump does not exceed 28°.	No over burden dump.
xix.	Garland drains shall be constructed to arrest silt and sediment flows from soil. The water so collected shall be used for watering the mine area, haul roads, green belt development etc. The drains shall be regularly de-silted and maintained properly.	Shall be complied.
xx.	Suitable rainwater harvesting and conservation measures to augment groundwater resources in the area on long term basis shall be planned and implemented in consultation with Regional Director, Central Ground Water Board in cement plant and mining area to augment ground water resources and use for dust suppression and horticulture.	Shall be complied.
xxi.	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and new peizometers at suitable locations by the project proponent in and around project area in consultation with	Ground water monitoring shall be carried out as advised by establishing a network of existing wells in consultation with Regional Director ,Central Ground water Board. The

	Regional Director, Central Ground Water Board during the mining operation. The ground water monitoring shall be carried out 4 times in a year i.e. pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and data thus collected shall be regularly sent to the Ministry, its Regional Office at Bangalore, Central Ground Water Authority and State Ground Water Board, Bangalore.	frequency of the monitoring as suggested will be Maintained .The monitoring report will be submitted regularly to MoEF, its Regional Office at Bangalore, Central Ground Water Authority and State Ground Water Board, Bangalore ,Central ground water Authority and State Ground water Board Bangalore. However, water quality is regularly analyzed and abstract of the same is given at Annexure-.A (xxi)
xxii.	The project proponent shall take appropriate mitigative measures to prevent pollutions of nearby River and other surface water body, if any.	No waste water generated in our process.
xxiii.	Deep hole wet drilling sequential blasting method shall be adopted and provision for the control air emissions during blasting using dust collectors/ extractors etc. shall be made. Blasting operation shall be carried out during the daytime only and one bench at a time shall be blasted. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders shall be implemented. 'No objection certificate' from the Chief Controller of Explosives shall be obtained.	Shall be complied.
xxiv.	Out of total 141.574 ha., green belt shall be developed in at least 36 ha. (25 %) in and around the cement plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO. In mining, out of 170.22 ha., plantation shall be raised in an area of 46.72 ha. By planting the native species around mining lease area, over burden dumps, around water body, roads etc. in consultation with the local DFO / Agriculture Department. At least, 1,500 trees per year shall be planted with a tree density of 2,000 trees per ha. An action plan shall be submitted in this regard.	An action plan for green belt development of Plant and Mines area is given at Annexure A (xxiv).
xxv.	The void left unfilled shall be converted into water body. The higher benches of excavated void/mining pit shall be terraced and plantation done to stabilize the slopes. The slope of higher benches shall be made gentler for easy accessibility by local people to use the water body. Peripheral fencing shall be carried out along the excavated area.	Shall be complied.
xxvi.	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be	As detailed in EIA report, there are no endangered species of fauna. However, precautionary measures will be taken to protect & conserve such species if found during mining operation.

	made and the funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional office within 3 months from the date of issue of this letter.	
xxvii.	A final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Shall be complied.
xxviii.	Mechanized open casting shall be adopted and no change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.	Agreed.
xxix.	Consent to Operate shall be obtained from APPCB before starting enhanced production from the mine.	Shall be complied.
xxx.	'Permission' of the State Forest Department shall be obtained regarding impact of cement plant and mining activities on the surrounding 6 reserve forests viz. Gamalapadu RF (0.1-0.4 km.), Madinapadu RF (1.2-1.8 km.), Daida RF (4.7-4.9 km.), Saidulnam RF (3.8-5.0 km.), Ravipahad RF (5.3-6.6 km.) and Warivabad RF (6.2-6.8 km) and all the recommendations shall be followed.	Shall be complied.
xxxi.	The company shall obtain necessary clearances / approval from the concerned Departments i.e. Indian Bureau of Mines, State Government, MoEF etc. for the linked mining component before undertaking any construction activity at the project site.	Necessary approvals for mining already obtained from IBM Ref MS/AP/GNR/LST-189-SZ dt.23.09.2008.
xxxii.	Rehabilitation and Resettlement Plan for the project affected population as per the policy of the State Govt. shall be prepared and implemented.	There is no Rehabilitation and Resettlement involved in this Project.
xxxiii.	Acoustic enclosures shall be provided to control noise wherever necessary. Mine machine shall be provided with silencers. Noise shall also be controlled from cooler fans, compressor house, cement mill and raw mill, cement plant and drilling machines, excavator, blasting at mine site using appropriate noise control measures.	Being complied.
xxxiv.	All the safety norms stipulated by the Director General, Mine & Safety (DGMS) should be implemented.	Shall be complied.
B. General Conditions :		
i.	The project authority shall adhere to the stipulations made by Andhra Pradesh Pollution Control Board (APPCB) and State Government.	Agreed.
ii.	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	Agreed.
iii.	The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the T.N. Pollution Control Board. At no time, the particulate emissions from the cement plant shall exceed APPCB limit.	Already complied.

	Interlocking facility shall be provided in the <i>pollution control</i> equipment so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically.	
iv.	One ambient air quality monitoring station shall be installed in downwind direction. Ambient air quality including ambient noise levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of ambient air quality and stack emissions shall be carried out regularly in consultation with APPCB and report submitted to the APPCB quarterly and to the Ministry's Regional Office at Bangalore half-yearly.	Ambient air quality monitoring station will be set up in consultation with the APPCB. Data will be collected after commencing the production of the plant and the report to be submitted to the concerned authorities.
v.	The company must harvest the rainwater from the rooftops and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	Shall be complied.
vi.	The company shall undertake eco development measures including community welfare measures in the project area.	A list of eco development measures including community welfare measures in the project area is given at Annexure B (vi).
vii.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environmental (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Shall be complied.
viii.	All recommendations made in the Corporate Responsibility for Environment Protection (CREP) for cement plants shall be implemented.	A compliance report of CREP is given at Annexure B (viii)
ix.	Proper housekeeping shall be taken up. Regular annual medical examination of all the employees shall be carried out from the occupational health point of view and records maintained.	Shall be complied.
x.	A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.	An organization chart of the environmental management cell is given at Annexure B (x).
xi.	As proposed in EIA/EMP. Rs. 28.00 Crores and Rs. 0.95 Crores earmarked towards the capital cost and recurring cost/annum respectively for environment pollution control measures for the cement plant and Rs. 35.00 Lakhs and Rs. 23.2 Lakhs earmarked towards the capital cost and recurring cost/annum respectively for environment pollution control measures for the mine shall be suitably used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	As on date, about Rs. 47.78 crores was invested on the air pollution equipments which were installed in expansion (ie RABH, ESP, Bag House and nuisance bag filters). Funds provided for the maintenance of the above equipment shall not be diverted for any other purpose.
xii.	The Regional Office of this Ministry at Bangalore	Agreed.

	/ CPCB / APPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical Interpretation shall be submitted to them regularly.	
xiii.	The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	A financial closure initially took place on 07.07.2007. The land development work was started after getting the CFE from APPCB. Subsequently management of the proponent i.e. ACL was taken over by Jayvee Group in November 2011. The group has been inducted Rs: 177.0 crores, for revival of the ACL. The APPCB has been informed regarding CFO to the expanded capacity on 08.05.2012.
xiv.	The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the A. P. Pollution Control Board / Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This should be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office at Bangalore.	Complied.

Annexure-A(i) for Compliance
of Special Condition no. A(i) of
EC

Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

S.No	Source	Stack Height	Pollution Control Equipment	Present Status	Online Monitoring system
a	Raw mill - 1 & 2 & Kiln	70	Bag House (replacing the existing ESP)	Installation Completed	Installed
b	Cooler	30	ESP (replacing the existing multicyclone)	Installation Completed	Installation is in Progress
c	Coal mill -1	30	Bag Filter	Installation Completed	Installation is in Progress
d	Coal mill -2	30	Bag Filter	Installation Completed	Installation is in Progress
e	Cement mill -1, Ball mill	32	Bag Filter (Replacing Existing ESP)	Installation Completed	Installation is in Progress
f	Cement mill -2, (VRM)	31	Bag Filter	Installation is in Progress	Installation is in Progress
g	Cement mill -3	35	Bag Filter (Replacing Existing ESP)	Installation Completed	Installation is in Progress
h	Lime stone Crusher	30	Bag filter	Installation completed	--

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List of Nuisance bag filters for controlling fugitive dust.

S.No	Location	Units	Quantity
1	Raw mill to CF Silo	No	8
2	Coal handling area	No	3
3	Coal Mill	No	3
4	Clinker section to Raw Mill area	No	2
5	Cement Mill	No	2
6	Fly ash Handling Area	No	6
	Total	No	24

Annexure-A(vii) for Compliance
of Special Condition no. A(vii) of
EC

Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

Controlling Measures to be taken in Plant for controlling Fugitive Emissions:

Construction of Cement Road



Annexure-A(ix) for Compliance
of Special Condition no. A(ix) of
EC

Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

'Permission' for the drawl of ground water from SGWB / CGWA

Sep 01 07 01:25p Deputy Director 1 868632250930

GOVERNMENT OF ANDHRA PRADESH
GROUND WATER DEPARTMENT.

FROM
Sri B. Nagarajswara Rao,
M.Sc.,M.Sc.(Tech.)
Deputy Director
Ground Water Department
¼ Ramannapet
GUNTUR - 7

TO
The Senior Vice President (Projects)
Andhra Cements Limited
2nd floor, Chandralok complex
111, S.D. Road
SECUNDERABAD-500 003.

Lr.No.2/ACL/Hg/2007/ Dated:01.09.2007

Sir,

Sub: Ground Water Department, Guntur—Report on Ground Water
Investigations conducted for M/s. Andhra Cements Limited, Durga
Cement works, Dacheppally (v) & (M), Guntur District—
Communication of Recommendations—Regarding—
Ref: 1. This office Lr.No.2/ACL/Hg/2007/390/dt.27.8.07.
2. Director, GWD, Hyderabad memo No.6818/Hg.II(1)/07,d.31.8.07.
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With reference to the above subject, the recommendations are approved by the
Director, GWD, Hyderabad through reference 2nd cited are as follows:

S. No	VES No.	Type of well recommended	Depth in m.	Dia in mm	Expected yield in lph	Remarks
1	5	Bore well	80.0	165	7,000	Expected yields from the existing 5 bore wells are between 5000 to 7000 lph. Recommended for 10 hours of pumping/day only
2	7	Bore well	80.0	165	7,000	
3	9	Bore well	80.0	165	5,000	
4	5 existing bore wells				30,000	

The total quantum of water available from the existing 5 wells and recommended 3 wells will be in the order of 490m³/day and the balance requirement can be met from the de-watering of mines.

The recommended well site locations are shown in the enclosed map. Further, it is to inform that the recommendations are made in the light of APWALTA and further procedure under APWALTA may be followed during execution from your end.

Yours faithfully,

B. Nagarajswara Rao
DEPUTY DIRECTOR

Ends: As above.

Copy submitted to the Director, GWD, Hyderabad for favour of information.

Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

GOVERNMENT OF ANDHRA PRADESH
GROUND WATER DEPARTMENT

Memo.No.6818/Hg-II(1)/07.

Dated: 31-8-2007.

Sub: - A.P Ground Water Department - Report on groundwater investigations conducted for M/S.Andhra Cements Ltd, Durga Cement Works, Dachepalli(V) & (M), Guntur District - Approval of report and recommendations communicated - Regarding.

Ref: - Lr.No.2/ACL/Hg/2007/390 of the Deputy Director, Ground Water Department, Guntur, Dt. 27.8.2007.

Attention of the Deputy Director, Ground Water Department, Guntur is invited to the subject and reference cited through which he has submitted a report on ground water investigations conducted for M/S.Andhra Cements Ltd, Durga Cement Works Dachepalli (V)&(M), Guntur District for approval.

After scrutiny of the report, the Deputy Director's recommendations are hereby approved as follows

Sl. No	VES No.	Type of well recommended	Depth (m)	Dia (mm)	Expected Yield (lph)	Remarks
1	5	Bore well	80	165	7000	Expected yields from the existing 5 bore wells are between 5000 to 7000 lph. Recommended for 10 Hrs of pumping/day only
2	7	Bore well	80	165	7000	
3	9	Bore well	80	165	5000	
4		5 existing bore wells			30000	

The total quantum of water available from the existing 5 wells and recommended 3 wells will be in the order of 490m³/day and the balance requirement can be met from the dewatering of mines.

The Deputy Director is advised to communicate the recommendation to the firm and advise them to follow WALTA provisions under intimation to head office.

Sd/ Md.IMTIYAZ
DIRECTOR

To
The Deputy Director, Ground Water Department, Guntur.

/// TRUE COPY ///


FOR DIRECTOR

Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

Ground Water Analysis Report
JAN-2009

	Bore Well Near Club	Bore Well At B-type Quarter
PH	8.08	7.50
EC(mMhos/cm ²)	449	1240
TDS (mg/l)	298	592
COD(mg/l)	40	80
BOD(mg/l)	2.8	3.6
ALKALINITY (mg/l)	180	300
HARDNESS (mg/l)	160	300
CHLORIDES (mg/l)	63.82	354.5
SALINITY (PPT)	0.115	0.64
SULPHATES (mg/l)	28	21
IRON(mg/l)	0.01	0,008
NITRATE (mg/l)	0.32	0.46

Andhra Cements Limited
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Ground Water Analysis Report

May-2009

	Bore Well Near Club	Bore Well At Main Road	Bore Well At B-type Quarter
PH	7.13	7.23	7.13
TDS (mg/l)	1520	1569	1495
COD(mg/l)	60	60	60
BOD(mg/l)	11	10	10.5
ALKALINITY (mg/l)	320	340	330
HARDNESS (mg/l)	490	540	520
CHLORIDES (mg/l)	326.2	397.1	411.3
FLOURIDES (µg/l)	110	80	100
SULPHATES (mg/l)	14.1	115.4	10.2
IRON(mg/l)	0.04	0.6	0.9
NITRATE (mg/l)	0.0048	0.0044	0.0058

Ground Water Analysis Report

Aug-2009

	Bore Well Near Club
PH	7.36
TDS (mg/l)	320
COD(mg/l)	10
BOD(mg/l)	0.4
ALKALINITY (mg/l)	120
HARDNESS (mg/l)	90
CHLORIDES (mg/l)	106.3
FLOURIDES (µg/l)	40
SULPHATES (mg/l)	10.2
IRON(mg/l)	0.06
NITRATE (mg/l)	0.04

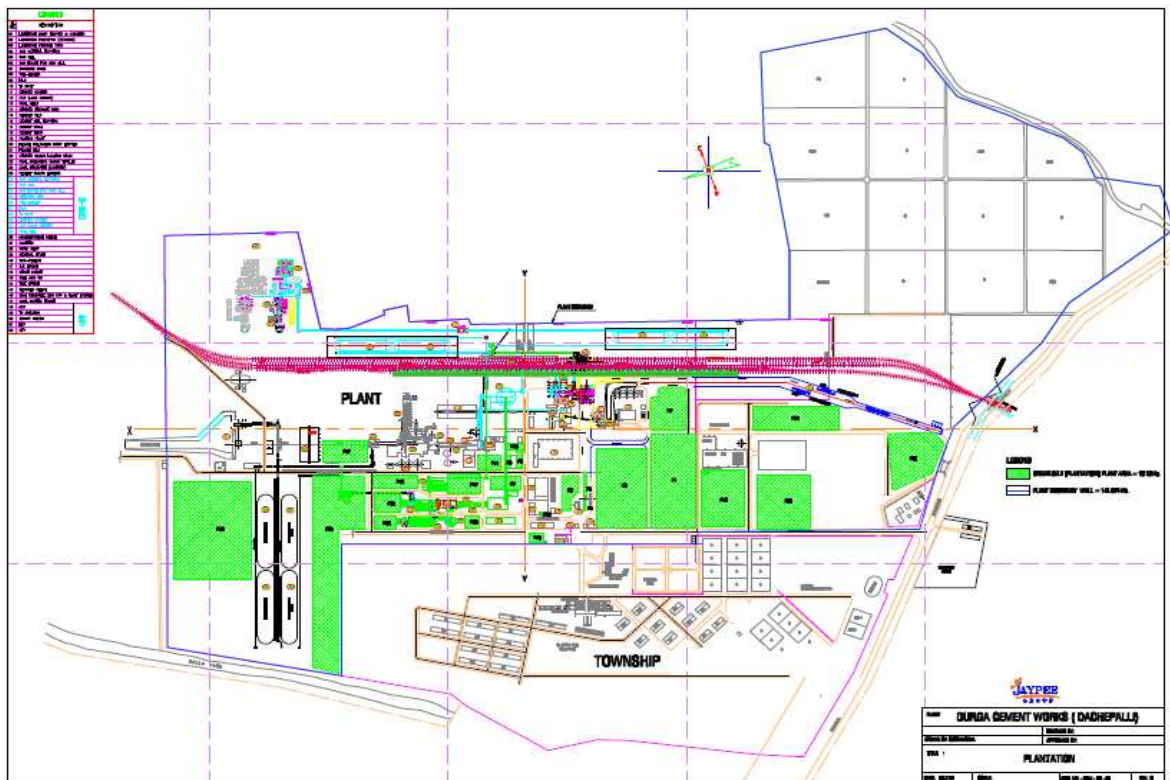
Annexure-A(xxiv) for Compliance
of Special Condition no. A(xxiv)
of EC

Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

Status of green Belt development

Total Industrial Land area: - 141.574 Ha
Existing Green belt: - 18.18 Ha
No.of Saplings Planted till date: - 56,950
Proposed Green belt development in coming 5 years – 18.00 Ha.

Plant layout showing Green Belt development







Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

CO DEVELOPMENT MEASURES TO BE TAKEN BY DCW

Jaypee group believes that harmony between the man and his environment is the prime essence of healthy life and living. The sustenance of our ecological balance is therefore of paramount importance. The Group recognizes its joint responsibility with the Government and the Citizens to protect and preserve the environment.

Practicing the principle of “Inclusive Growth”, following eco-development measures are being implemented or at various stages of implementation

1. SOIL CONSERVATION

Entire cement plant has been constructed on infertile land purchased from “patta lands” of the nearby residents, which is outside the reserved forest. For construction of plant and facilities in no case top fertile soil has been scarified. Rocky terrain had been leveled off for foundations for P& M, Offices & Buildings without any extraneous matter, with the help of excavator /grader only.

2. GREEN BELT DEVELOPMENT.

The Company is raising plantation in an area of 95.0 Ha. , which is more than 33%of the total land belonging to the project. Plantation is being developed in following manner:

S. No.	Form of Plantation	Description
i	Shelter Belt plantation	All around the project 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	Avenue plantation	Parks of township, adm. Building, temple area, either side of internal roads
iii	Block plantation	Vacant land around facilities being developed

Greenbelt development in the form of above described manner will serve following purposes:

- i. Increase in fresh Oxygen supply and
- ii. Acting as carbon sink thereby combating global warming through reduction in CO₂ emissions.
- iii. 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.

Additionally these tree groves will reduce soil erosion, help in enhancing groundwater recharge and create a sound barrier between plant and surrounding areas.

3. WATER CONSERVATION

To put least thrust on natural sources of Water, Company is adopting best possible approaches to conserve water, which can be witnessed as:

- i. Construction of STP to Maintain **Zero Waste Water Discharge**- all type of treated water will be utilized for specific purposes such as plantation, dust suppression etc.
- ii. Installation of air cooled condenser for CPP, in place of conventional large size Cooling towers.
- iii. Rain water harvesting is proposed to be implemented for the Township as well as Plant area.

4. SOLID WASTE MANAGEMENT

Following strategy is being implemented to handle solid waste of all kinds either it may be hazardous or non hazardous:

- Practicing principle of 2Rs i.e. Reduce & 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.
- Maximum possible utilization of Fly ash

5. USE OF ALTERNAVITE FUEL

- Provision is made for use of PET Coke in the Cement Production, which is otherwise waste end product for refineries
- Provision of combustion of hazardous waste in the kiln

6. ENERGY CONSERVATION

- Use of CFL in all building and offices
- Installation energy star rated ACs for offices and load centers
- Use of VFD in place of conventional one
- 6-stage pre heater itself is energy saving effort
- Utilization of hot air gases released from kiln
- Installation of VRMs for raw mill & coal mill

7. SOCIO-ECONOMIC BENEFITS

A Development of any kind is said to be biased, if its benefits doesn't passes to rock bottom strata of the society. In this regard JBSP has contributed in following manner:

- Indirect employment to entrepreneurs
- Direct employment to local residents
- Growth of local market in terms of consumables(Domestic & Industrial)
- Fulfilling CSR & commitment made during public hearing.
- Preference to local people for employment.
- Rise in living standards

Annexure-B(viii) for Compliance
of Special Condition no. B(viii) of
EC

Andhra Cements Limited
Durga Cement Works
Durgapuram, Srinagar(Po),Dachepalli-522414,
Guntur District,Andhra Pradesh.

COMPLIANCE TO CREP

S. NO.	CREP CONDITION	COMPLIANCE
1	Cement Plants, which are not complying* with notified standards, shall do the following to meet the standards: • Augmentation of existing Air Pollution Control Devices — by July 2003 • Replacement of existing Air Pollution Control Devices — by July 2004	Complied
2	Cement Plants located in critically polluted or urban areas (including 5 km distance outside urban boundary) will meet 100 mg/Nm ³ limit of particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm ³ .	Complied
3	The new cement kilns to be accorded NOC/Environmental Clearance w. e. f. 01.04.2003 will meet the limit of 50 mg/Nm ³ for particulate matter emissions.	The pollution control equipments are designed for emission of less than 50 mg/Nm ³ .
4	CPCB will evolve load based standards by December 2003.	—
5	CPCB and NCBM will evolve SO ₂ and NO _x emission standards by June 2004.	—
6	The Cement industries will control fugitive emissions from all the raw material and products storage and transfer points by December 2003. However, the feasibility for the control of fugitive emissions from limestone and coal storage areas will be decided by the National Task Force (NTF). The NTF shall submit its recommendations within three months.	Cement Plant is implementing the following measures to control fugitive dust: 1. Installation of water sprinkling system in Coal & Lime stone stock pile. 2. Enclosure is provided to coal crusher 3. Enclosure is provided to all Conveyor belts. 4. Laying of Concrete roads for vehicle movement . 5. Installation of Dust collectors at all transfer

		<p>points is completed.</p> <p>6. Fly ash transportation by closed tankers</p> <p>7. Fly ash transfer by pneumatic transportation to Fly ash silo</p> <p>8. Construction of silos for storage of Clinker and Fly ash</p>
7	CPCB, NCBM, BIS and Oil refineries will jointly prepare the policy on use of petroleum coke as fuel in cement kiln by July 2003.	Not applicable
8	After performance evaluation of various types of continuous monitoring equipment and feedback from the industries and equipment manufacturers, NTF will decide feasible unit operations/sections for installation of continuous monitoring equipment. The industry will install the continuous monitoring systems (CMS) by December 2003.	<p>Cement Plant will install Continuous Stack Emissions Monitoring system at following location</p> <p>1) <i>Kiln / Raw mill</i></p> <p>2) <i>Coal mill stack</i></p> <p>3) <i>Clinker cooler stack</i></p> <p>4) <i>Cement mill stack</i></p>
9	Trippings in kiln ESP to be minimized by July 2003 as per the recommendation of NTF.	Kiln/Raw Mill is provided with Reverse Air Bag House(RABH).
10	Industries will submit the target date to enhance the utilization of waste material by April 2003.	Depending upon the available Quantity of hazardous waste, we shall explore its utilization after stabilization of plant.
11	NCBM will carry out a study on hazardous waste utilization in cement kiln by December 2003.	--
12	Cement industries will carry out feasibility study and submit target dates to CPCB for co-generation of power by July 2003.	Cement Plant is designed with 4-stage preheater with 5 stage Separate Line Calciner String

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ORGANIZATION STRUCTURE OF EMC

Environment Management Cell

