Andhra Cements Limited

Durga Cement Works

Durgapuram, Srinagar (Po), Dachepalli-522414,

Guntur District, Andhra Pradesh.

Six monthly compliance report for the period October-12 to March-13 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 through stacks has been commissioned. Air pollution control equipments like RABH installed in Kiln & Raw mill, Bag filter installed in coal mill, ESP installed in cooler. Bag filters are being installed in cement mills in place of ESP. SPM level is maintained below 50 mg/Nm3. Data is being submitted to Ministry's Regional Office at Bangalore, A.P. Pollution Control Board (APPCB) and CPCB regularly. Stack emission report is attached 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) have been installed to control fugitive dust emissions at various transfer points i.e raw mill 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 lime stone, laterite, coal, gypsum. Cement and clinker are stored in silos. Fly ash silo is ready and pneumatic system is being installed for fly ash handling. List of the APCDs are given in Annexure-A(ii)
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.	The secondary fugitive emission is being controlled as recommended and is being regularly monitored. The monitoring data is being submitted to APPCB, CPCB and MOEF regularly.

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 Environment and Forests and its Regional Office, Bangalore.	Shall be complied after commencing the mining activity on regular basis.
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 that the ambient air quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	Regular water sprinkling is being carried out using water tankers at all pollution prone areas, conforming the air quality norms as prescribed by the CPCB. Ambient Air Monitoring data are enclosed as per Annexure-A(iii)
iv.	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.	Being complied by taking suitable measures for maintenance of Mine's vehicles. The vehicles are not overloaded and are covered with tarpaulin.
v.	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.	Being complied. Photographs are attached in Annexure-A(iv).
vi.	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 are maintained as per the APPCB limits. No process wastewater are discharged outside the factory premises and 'zero' discharge is adopted.
vii.	'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 obtained. Copy of the letter is provided at Annexure-A(v). Mined 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.
viii.	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	STP is being installed by M/S Peacock Engineers Pvt. Ltd. Hyderabad. Work Order for STP is enclosed as Annexure-A(vi) . Sludge of STP will be used as manure and treated water for gardening. Bio-degradable and non bio-degradable waste will be treated as directed.

	be provided for workshop and mineral separation plant wastewater.	
ix.	The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations.	Agreed, We will ensure that no natural course of water obstructed due to any mining operation.
x.	All the bag filter dust, raw mill 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. Sludge from domestic sources shall be used as manure for green belt development. Waste oil shall be sold to authorized recyclers / preprocessors only.	Systems are designed and installed for recycling and re-use of the dust collected by pollution control devices. Similarly sludge from domestic sources shall be used for green belt development. Waste oil shall be sold to authorized recyclers / pre-processors
xi.	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
xii.	Efforts shall be made to use low grade lime, more fly ash and solid waste in the cement manufacturing.	Being complied, we are mixing low and high grade Limestone to conserve the natural resources.
xiii.	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 no overburden in our mine, as Limestone is exposed on the surface. A copy of mining scheme approval letter by IBM is enclosed as Annexure-A(vii).
xiv.	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.	There is no top soil in our mine, as it is not applicable.
xv.	The over burden (OB), inter burden and other waste generated from mines, *if* any, 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.	There is no overburden, inter burden and other waste generated in our mine.100% limestone being used for cement manufacturing.
xvi.	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°.	Not applicable, as no over burden dumps need not to be generated.
xvii.	Garland drains shall be constructed to arrest silt and sediment flows from soil. The water so	Not applicable, since there is no wastes dump generated in our mine.

	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.	
xviii.	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.	Being complied. Rain water will be harvested and collected into Mine's pit for further use in the plant. Scheme of Rain water harvesting is enclosed as Annexure-A(viii)
xix.	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 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.	Water quality is regularly analyzed and abstract of the same is given at Annexure-A(ix).
xx.	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/plant.
xxi.	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.	Being complied. The charge per hole is also adjusted to minimize ground vibration and to control fly rocks. We are monitoring Ground vibration and air blast with the help of 'Minimate' instrument and keeping records of the same. The results are well within the permissible limits specified by DGMS. We have obtained no objection certificate from Chief controller of explosives, in form LE-3 for Explosive Possession and Use. Licence No.E/HQ/AP/22/93(E1673) as Annexure –A(x)
xxii.	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	Shall be complied.An action plan for green belt development of Plant and Mines area is given at Annexure – A(xi).

	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.	
xxiii.	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.	Our Mine is running mine, which will be converted into water body after completion of life. The maximum bench height is 8 m which is as per Mining plan approved by IBM.
xxiv.	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 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.	We are in process for making action plan for conservation and protection of flora & fauna around mining area with consultation of state forest department. There is no endangered fauna around the mining area.
xxv.	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.	.Agreed. Shall be complied.
xxvi.	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. Mechanised open cast mining is adopted and we will take prior approval of MOEF for any change in technology or scope.
xxvii.	Consent to Operate shall be obtained from APPCB before starting enhanced production from the mine.	Complied ,enclosed as per Annexure-A(xii)
xxviii.	'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.
xxix.	The company shall obtain necessary clearances	Necessary permissions are obtained.

	/ 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.	Letter No.MS/AP/GNR/LST-189-SZ from IBM enclosed as Annexure – A(vii)
xxx.	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.
xxxi.	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.	All Mining machineries provided with silencers. Sharp bits are using with wet drilling to reduce noise of drilling machine. Drill operators are provided ear plug. Bottom initiation with the help of shock tubes and use of millisecond delay to reduce noise by blasting. Acoustic enclosures in the plant area are used where ever possible.
xxxii.	All the safety norms stipulated by the Director General, Mine & Safety (DGMS) should be implemented.	We are implementing all the safety norms stipulated by DGMS
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. Interlocking facility shall be provided in me *pollution control* equipment so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically.	Being complied. Stack emission data enclosed as Annexure-A(i)
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.	Being complied. Two On line real time AAQM Station has been installed. Ambient air, Stack emission and Noise level Monitoring data are regularly submitted to APPCB, CPCB & MoEF. Pl see Annexure –A(ii)
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	All the water from the roof tops, storm water drains lead to main drains connecting to the mines water

	various activities of the project to conserve fresh water.	reservoir.
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 (i).
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 Ruies, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Being complied. Noise control measures including acoustic hoods, silencers. Enclosures have been provided.
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 (ii)
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.	Being Complied. Report enclosed as Annexure- B(iii)
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 (iv).
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 already 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 / 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.	Agreed. Six monthly compliance report is regularly being submitted.
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.	Shall be complied.

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.

ANNEXTRE -1

ANDHRA CEMENT LIMITED, DURGA CEMENT WORKS STACK MONITORING REPORT				
	Kiln & RABH common stack	**Cooler ESP**	**Coal Mill 1&2 Common Stack**	**Cement mill 1 & 2**
Maximum	41	32	26	UNDER MAINTENANCE
Minimum	36	27	20	
Average	38.5	29.5	23	
Std. Deviation	3.5	3.5	4.2	
Coefficient of variation	0.1	0.1	0.2	
98th Percentile	40.9	31.9	25.88	

Exhibit 1

a). Bag filter installed at the limestone crusher along with cover shed.

b). Reverse Air Bag House (RABH) installed for kiln and raw mill.

c). Cooler ESP

Annexure A (ii)

List of Air Pollution Control Devices installed in Andhra Cement Ltd. (DCW)

S.No.	Department	Eqpt.No.	Description	Model	Volume (M^3)/h)	No. of bags	Supplier
1	LS Crusher	211BF1	211 BC1 Discharge venting	AJ - 120 - 360	17500	120	Thermax
2	LS Crusher	211BF2	211 BC3 Discharge venting	AJ 130 360	17500	120	Thermax
3	Pregrinder RM-1	361BF3	RM 1 VRPM Venting	AJ 360 360	39600	360	Thermax
4	Pregrinder RM-1	361BF4	RM 1 Venting	CE 02 330 × 3.6	50000	330	Clair
5	Pregrinder RM-1	361BF5	Pregrinder department Venting	AJ 120 360	17500	120	Thermax
6	Pregrinder RM-1	391BF1	Raw mill silo and feed elevator venting	CE 02 064 × 3.6	10000	64	Clair
7	Pregrinder RM-1	391BF2	Raw mill silo and feed elevator venting	CE 02 064 × 3.6	10000	64	Clair
8	Silo Extraction and Kiln Feed	393BF1	Silo Discharge enmass conveyor	CE 02 036 × 3.6	8000	40	IKN
9	Silo Extraction and Kiln Feed	393BF2	Silo Discharge enmass conveyor	CE 02 036 × 3.6	3000	40	IKN
10	Silo Extraction and Kiln Feed	393BF3	Bin venting	CE 02 100 × 3.6	9500	100	IKN
11	Silo Extraction and Kiln Feed	393BF4	Bin venting	CE 02 100 × 3.6	9500	100	IKN
12	Silo Extraction and Kiln Feed	393BF5	PH Bucket elevator air slide venting	CE 02 100 × 3.6	9500	100	IKN
13	Silo Extraction and Kiln Feed	393BF6	PH Bucket elevator air slide venting	CE 02 100 × 3.6	9500	100	IKN
14	Silo Extraction and Kiln Feed	393BF7	PH Venting	CE 02 100 × 3.6	9500	100	IKN
15	Silo Extraction and Kiln Feed	393BF8	Recirculation venting	CE 02 100 × 3.6	9500	100	IKN
16	RABH	471BF1	Kiln/RM Exaust gases	CE RABH 18 × 204	9500	3672	Clair
17	Caol Mill 1	421BF1	Coal mill 1 Venting	TP 336 360	34650	336	Thermax

18	Caol Mill 1	431BF1	Coal Mill department Venting	CE 02 040 ×3.6	6000	40	Clair
19	Caol Mill 2	422BF1	Coal Mill 2	CE 02 3×300×3.6	90000	900	Clair
20	Coal Crusher		Coal Crusher		6600		Clair
21	Clinker storage and transportation	491BF1	491 DP 1 Discharge	CE 02 030 FM ×3.6	4000	30	Clair
22	Clinker storage and transportation	491BF2	Clinker silo	AJ 168 360	25000	168	Thermax
23	Clinker storage and transportation	511BF4	Transfer Points	CE 02 030 FM ×3.6	4000	30	Clair
24	Clinker storage and transportation	511BF5	Transfer Points	CE 02 030 FM ×3.6	4000	30	Clair
25	Clinker Pregrinder	561BF1	Transfer points	CE 02 030 FM ×3.6	4000	30	Clair
26	Clinker Pregrinder	561BF2	Clinker prigrinder venting	TP 588 360	59400	588	Thermax
27	Clinker Pregrinder	561BF3	Clinker pregrinder separator venting	TP 798 360	82460	798	Thermax
28	Cooler Section ESP	ESP	Clinker Cooling	-	-	-	Thermax

ANNETRE A (iii)

ANDHRA CEMENT WORKS,
(DURGA CEMENT WORKS)
ANDHRA CEMENT WORKS, DURGA CEMENT WORKS
AMBIENT AIR QUALITY MONITORING REPORT FROM OCT-2012 TO MARCH 2013

Near VIP Guest House (Towards Sri Nagar Village)				
	PM 10	PM 2.5	SO_X	NO_X
Maximum	43	31	14	18
Minimum	35	23	6	10
Average	39.1	26.8	9.4	14.1
Std. Deviation	3.3	2.9	2.9	3.3
Coefficient of variation	0.1	0.1	0.3	0.2
98th Percentile	42.9	30.8	13.6	17.9

Near Engg. Building				
Maximum	59	36	14	18
Minimum	41.0	28.0	7.0	12.0
Average	47.1	31.6	9.9	15.0
Std. Deviation	7.0	2.7	2.5	2.2
Coefficient of variation	0.1	0.1	0.3	0.1
98th Percentile	58.0	35.6	13.7	17.8

Near Mine office				
Maximum	49.0	38.0	13.0	18.0
Minimum	43.0	20.0	5.0	10.0
Average	45.8	31.4	8.6	13.1
Std. Deviation	2.5	6.6	2.7	3.7
Coefficient of variation	0.1	0.2	0.3	0.3
98th Percentile	48.9	37.8	12.6	17.9

Near Packing plant Weigh bridge Towards Gamalapadu Village)				
Maximum	55.0	40.0	12.0	19.0
Minimum	42.0	31.0	5.0	9.0
Average	47.5	34.3	8.8	14.0
Std. Deviation	5.3	3.3	2.6	4.4
Coefficient of variation	0.1	0.1	0.3	0.3
98th Percentile	54.7	39.4	11.9	19.0

ANDHRA CEMENT LIMITED

(DURGA CEMENT WORKS)

NOISE LEVEL REPORT

1. DCW COLONY AREA		
	Day Time	**Night Time**
Minimum	39.6	39.0
Maximum	43.5	42.1
Average	41.6	40.8
Std. Deviation	1.45	1.30
Coefficient of variation	0.03	0.03
98th Percentile	43.4	42.1

2.Near Mine Office		
	Day Time	**Night Time**
Minimum	42.9	42.3
Maximum	50.8	49.5
Average	46.2	45.15
Std. Deviation	2.94	2.80
Coefficient of variation	0.06	0.06
98th Percentile	50.48	49.23

3.Towards Gamalapadu village		
	Day Time	**Night Time**
Minimum	43.9	42.5
Maximum	50.1	48.2
Average	46.9	45.58
Std. Deviation	2.38	2.22
Coefficient of variation	0.05	0.05
98th Percentile	49.98	48.14

Annexure A (IV)

Concreted Roads

Concreted Roads inside the plant along with tree plantation

Concrete roads within mines with tree plantations

Fugitive Emission Control measures

(A) Lime stone cover shed.

(B) Crusher to Raw mill " Covered belt conveyor"

(C) Bag filters installed at transfer points

(D) Clinker silo with covered conveyor and Bag filter

ANNEXURE – A (V)

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

Sep 01 07 01:25p Deputy Director 1 8688322250930

GOVERNMENT OF ANDHRA PRADESH
GROUND WATER DEPARTMENT

FROM

Sri B. Nagarajeswara 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, Dachepally (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,dt.31.8.07.

--:o:--

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 490m^3/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,

DEPUTY DIRECTOR

Encls: As above.

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

Annexure-A (vi)

Work Order for STP

DURGA CEMENT WORKS
A Unit of Andhra Cements Limited

ACL/DCW/12/12/ 776
Dated: 18th March, 2013.

TO,
Peacock Aqua Engineers
Plot No-33, Radhe nagar colony,
HS Darga, Hyderabad, (A.P).
Cell: 98662 21369.

Work Order No.ACL/DCW/CW/12/259 **Dated: 18th March, 2013**

Sub: - Work Order for **Supply , installation and commissioning of a 300 KL per day capacity Sewage Treatment Plant for Durga Cement Works** of Andhra Cements Limited in Durgapuram Village of Dachepalli (Mandal), Guntur (District), A.P.

Dear Sir,

1.0 With reference to the discussions held with you on the above subject, we are pleased to place a Work Order for **Supply , installation and commissioning of a 300 KL per day capacity Sewage Treatment Plant for Durga Cement Works** of Andhra Cements Limited, subject to the terms and conditions mentioned hereunder.

2.0 Scope of Work:
The Scope of Work shall consist of providing all resources such as detailed designing, engineering, procurement, supply, erection and commissioning of equipment & instruments, submission of vendors equipment drawings, manpower, Tools and Tackles, supervision etc. required for carrying out various items of work of **Supply , installation and commissioning of various equipments based on General Layout of the 300 KL per day capacity Sewage Treatment Plant for Durga Cement Works** of Andhra Cements Limited, except as provided other wise in this work order. The detailed scope of work is given in **Annexure -1.**

3.0 Obligations of ACL
3.1 Facilities to be provided by ACL are detailed at **Annexure-II**

4.0 Terms and Conditions:
4.1 Brief description of the STP process is given at **Annexure – III.** General conditions of the work order are given in **Annexure-IV** and special conditions of the contract are given at **Annexure – V.**

5.0 Date of commencement & Time for completion:
5.1 Time is essence of the work:
5.2 Date of commencement of the work has been **15th day of March, 2013.**
5.3 Duration for the Work Order shall be **Fifty Two days (52 days) w.e.f. 15-03-2013.**
5.4 You shall complete the work in all respects on or before **05th day of May, 2013.**

JAYPEE GROUP

ANDHRA CEMENTS LIMITED
Regd. Office & Factory : Durga Cement Works, Durgapuram, Srinagar (P.O), Dachepalli - 522414, Guntur District, Andhra Pradesh
Ph : +91 - 8649 - 257428, Fax : +91 8649-257428

6.0 Value of the Work Order:

6.1 Estimated value of Work Order at the rates mentioned in **Annexure-VI (A)** (Bill of Quantities) Works out to **Rs 25,30,800/- only (Rupees Twenty Five Lac Thirty Thousand Eight Hundred only).** Actual Value of the Work shall be as per the quantities of various items of the work actually executed by you and accepted by **ACL** at the rates mentioned against each item in the Bill of Quantities enclosed **(Annexure-VI -A).** Detailed description of items of BOQ are however given in **Annexure- VI (B).**

7.0 Payments:

7.1 The agreed rates shall be firm for the entire duration of the Work Order.

7.2 Rates provided in the Bill of Quantities **(Annexure-VI (A))** are inclusive of all present and future Taxes, Duties, Charges, Levies, etc. by the Government / Statutory Authorities.

7.3 You shall be paid as per the agreed rates given in **Annexure-VI (A)** (Bill of Quantities) for the quantities of work actually executed by you and accepted by **ACL** as per the terms of this order.

7.4 An amount equivalent to **60%** of the value of work order shall be paid to you after completion of designing, manufacturing and supplying of all the material and equipment required to complete the work as per bill of quantities. **20%** of the value of the work order shall be paid after completion of erection of the equipment. **10%** of the value of the work order shall be paid after commissioning of the equipment and the balance of **10%** shall be paid against the Performance Bank Guarantee provided by you. for a period of One year.

7.5 TDS and all other applicable taxes and duties shall be deducted from the bills due.

7.6 VAT shall be paid extra @ **14.5 %** on the value of supplies made by you against Items **A,B,C and D of Bill of Quantities**

7.7 Service Tax shall be paid @ **12.36%** of the value of E of the Bill of Quantities.

8.0 Guarantee:

8.1 The work carried out by you shall be warranted and guaranteed for trouble free performance for a period of One year from date of commissioning. You will continue to provide Technical support free of charges for services for 3 years with cost of materials / spares to our account.

9.0 Termination of contract:

9.1 The contract may be terminated, if you commit any default in complying with or commit breach of the terms and conditions of the contract and do not remedy it or take affective steps to remedy it immediately, not later than ten days in case a notice in writing has been served by us. We shall have the right to terminate the contract in full or in part as aforesaid without prejudice to any of the rights or remedies, which shall have accrued or shall accrue for which the termination notice in writing to you by us shall be conclusive evidence. The contract may also be cancelled in case of any of the followings.

9.2 Being an individual or being a firm or being a partner thereof, shall at any time be adjudged insolvent by an order of the Court.

9.3 Assigns, transfers, sub-lets the contract or any part thereof without the prior written approval from us. In case the progress of the work and workmanship, quality of work is found not satisfactory.

10.0 Consequences of Termination

10.1 In case of termination of the Work Order, the Vendor would be liable to pay all costs and liabilities as may accrue to ACL, without any protest or dispute. ACL will be entitled to recover the aforesaid costs and liabilities from your pending dues and the balance, if any, shall be paid by you to ACL within 30 days of demand.

This order is issued in duplicate. You are kindly requested to sign & return one copy in token of your acceptance of this order.

Thanking you,
Yours faithfully,
For **Andhra Cements Limited**

(R.K .Dooda)
Sr.Vice President (Projects)

Accepted

VENDOR

Encl: Annexure I, II, III IV, V, VI (A) & VI (B)

Annexure – 1

Name of work: Work Order for **Supply , Installation and commissioning of a 300 KL per day capacity Sewage Treatment Plant for Durga Cement Works** of Andhra Cements Limited in Durgapuram Village of Dachepalli Mandal, Guntur (District), A.P

Scope of work (Details)

The Scope of Work shall consist of providing all resources such as detailed designing, engineering, procurement, supply, erection and commissioning of equipment & instruments and submission of vendor's G.A. drawings of equipment etc including manpower required for carrying out various items of work of **Supply , installation and commissioning of various equipments based on General Layout of the 300 KL per day capacity Sewage Treatment Plant for Durga Cement Works** of Andhra Cements Limited, except as provided other wise in this work order. The detailed scope of work is given hereunder.

1. Detailed designing & Engineering, which includes.
    - Preparation of process & Instrument diagram with pipe sizing.
    - Preparation of detailed Specification for equipment.
2. Procurement & supply of equipment as mentioned in our detailed description and Bill of Quantity.(Annexure III & IV).
3. Erection of equipment & instruments as listed in Bill of Quantities (Annexure-VI(A)) strictly according to the specification and Methodology given at Annexure No-III and as directed by engineer-in-charge.
4. Piping work with in battery limit.
5. Submission of GA drawings of equipments for vendor.
6. General.
    - Providing as built drawings of layout, Hydraulic profile, P&ID
    - Transportation of equipment / material to site of DCW of ACL near Durgapuram of Dachepalli (M) Guntur Dt. (A.P).
    - Carrying out performance guarantee test run of the system.
    - Erection and commissioning of all equipments, Instruments, Electrical items, Pipe and fittings as per the respective lists mentioned above.
7. COMMISSIONING OF SEWAGE TREATMENT PLANT:– You shall depute your commissioning engineer as required for commissioning. Client shall however depute his manpower for operation of the plant.
8. You shall train our operational staff for efficient and smooth operation of STP. Necessary formats for maintaining records will be provided by you.
9. Carrying out
   (a) Periodic checks of plant performance during the Gurrantee period every month.
   (b) Carrying out maintenance work (If required) during guarantee period of one year(Defects liability Period), in course of the monthly visits by your representative.
10. First fill of oil / grease is included in your offer.

Vendor

Andhra Cements Limited

Annexure – II

Name of Work :-Work Order for **Supply , installation and commissioning of a 300 KL per day capacity Sewage Treatment Plant for Durga Cement Works** of Andhra Cements Limited in Durgapuram Village of Dachepalli (Mandal), Guntur (District), A.P

Obligations of ACL

The following shall be in the scope of ACL.

1. Civil works of the plant.
2. Water and power required during commissioning of plant.
3. ETP plant chemicals, bio-sludge, cowdung , oils, Grease , Lubricants and General consumables.
4. Charging the main panel with 3 phase power.
5. Manpower including supervisory staff to operate the plant after commissioning.
6. Special Safety equipment as required.
7. Approvals required from Government Authority, if any.
8. Laboratory testing.
9. Plant area lighting .
10. Rent free accommodation to your supervisory staff, Technicians and labour shall be provided by ACL, if available, as per the norms of ACL. However, Food charges shall be to the account of the contractor.
11. For emergency the Ambulance service is available on round the clock basis.

Vendor

Andhra Cements Limited

Annexure – III

Name of Work :- Work Order for **Supply , Installation and commissioning of a 300 KL per day capacity Sewage Treatment Plant for Durga Cement Works** of Andhra Cements Limited in Durgapuram Village of Dachepalli (Mandal), Guntur (District), A.P.

BRIEF DESCRIPTION OF THE STP PROCESS.

The waste water from the toilets, dining area and Kitchen is collected in a collection sump. The sump is provided with 2 pumps (one running and one stand by). The equalizer effluent is then pumped in to an aeration tank in which effluent is kept in aerobic condition by supplying suitable quantity of air through diffusers. Air is supplied by a blower. The organic matter i aerobically stabilized and is sent to a clarifier. The washed out sludge from aeration tank will be settled in the clarifier and the same will be sent to the sludge holding tank. The clarified water from clarifier is collected in a collection sump.

The collected treated water is pumped through a pressure sand filter where suspended solids are completely removed then it passes through an activated carbon filter. On line chlorination system shall be provided after AC filter to kill the pathogenic bacteria.

The excess sludge from the clarifier will be sent to sludge drying beds. The contractor has to supply scheme and equipments required for sending the excess sludge from the clarifier to sludge draying beds.

The treated water shall be utilised for on land disposal and gardening.

Vendor

Andhra Cements Limited

19 **You shall follow Work Procedure based on safety, health and environment policy.**

20 You will ensure proper discipline to be observed by all your employees and labour, failing which action will be taken against you and the concerned employees / workmen will be debarred at site.

21 Any item other than the items mentioned in the enclosed Rate list, if required to be executed as per site conditions, will be paid at the rates mutually agreed upon.

22 All safety norms as required for your job shall be adhered to by your superiors & Group of workers deployed by you for the job.

23 **Defects Liability Period** shall be as specified in **Annexure-V.**

24 **Indemnity**

You shall indemnify and keep indemnified **ACL** against all claims that may be referred on us by any party by virtue of ACL(DCW) being the principal employer under law in respect of Contractors / Sub-contractors' workmen, tools and equipment. If required, proof of such insurance shall be submitted to **ACL** by you. **ACL** will cover equipment to be erected by Comprehensive Marine-cum-Erection Policy. It is agreed and understood that ACL(DCW)'s insurance policy does not cover for your benefit on the Contractor/s in respect of his equipment or employees.

25 If there is any dispute regarding work, the decision of the **D.I.C. JAIPRAKASH ASSOCIATES LIMITED** will be final and binding to you.

26 **Governing law and Jurisdiction**

The Work Order shall be governed and construed in accordance with the laws of India and shall be subject to the Jurisdiction of the competent Court in New Delhi, India.

27 If the progress of work is not satisfactory, the Work Order may be finalized by giving one week's notice to the contractor. However, if the contractor desires to leave the work, he may do so by serving one month's notice to the Andhra Cements Limited.

VENDOR

Andhra Cements Limited

Annexure-V

Name of Work: - Work Order for **Supply , installation and commissioning of a 300 KL per day capacity Sewage Treatment Plant for Durga Cement Works** of Andhra Cements Limited in Durgapuram Village of Dachepalli Mandal, Guntur District, A.P.

Special Conditions of Contract.

1. **SAFETY :**

I. **Personal Protection Equipment (P.P.E).** Such as Helmets, safety belts etc... Shall be issued by **ACL** only on the basis of availability on returnable basis. All such equipment issued to you shall be returned to our stores in acceptable condition immediately on completion work.

ii It shall be your responsibility to ensure that proper steps are initiated regarding use of Personal **Protection Equipment**, whether the same are made available by **ACL** or not.

iii Utmost importance shall be given to the adherence of the safety norms and rules at the works site . You should get yourself acquainted to the safety rules in vogue and follow them with out fail. You shall at your own expense appoint a person who will be responsible for adherence of all relevant safety rules by your workmen.

2. Time is the essence of the **Work Order** and you shall arrange to complete the supply and installation of STP work in scheduled time, as indicated by our Engineer-in-charge and agreed by you. In case we feel that you are not deploying adequate manpower of the desired skill or you are not able to complete the job in time, we reserve the right to deploy extra manpower at your cost and / or divert part or whole of the balance jobs.
3. You shall provide your Commissioning Engineer during the period of installation and other connected work of the contract and also for a period of one month from date of completion of installation work to ensure smooth running of equipment.
4. You shall provide the following information with in one week from date of issuing this work order
   (I) Your schedule of supply of equipment with in Five weeks.
   (II) Your schedule of erection of equipment with in seven weeks from the date of issue of this work order.
5. You shall provide three sets of drawings related with the installation of the equipment being supplied by you and one set of civil drawings required for installation of the same.
6. You will carry out the work with best quality, as followed in the industry for this type of work and to the full satisfaction of the Engineer-in-charge or our appointed Consultant.
7. Food shall be provided by **ACL** to your labours /workers, if necessary, at your cost. However free accommodation shall be provided, if available.
8. **Defects Notification Period** for the above work shall be One year from the date of completion of work in all respects.
9. The contractor has to supply scheme and equipments required for sending the excess sludge from the clarifier to sludge draying beds.

Vendor

Andhra Cements Limited

ANDHRA CEMENTS LIMITED

Annexure- VI (B)

Detailed description of equipment to be supplied as per Bill of Quantities (BOQ)

Sl.No of BOQ item	Detailed Description of Item	Quantity
A	Electro - Mechnical Equipments	
1	**BAR SCREEN** Screen suitable for installation in RCC tank of size with 5 mm X 50mm MSEP bars at 20 mm C/C kept at an inclination of 45 degree to horizontal. Type : Inclined bars MOC: Stainless Steel Make: Peacock	2 Sets
2	**Air Puring Grid at Equalization Tank** Air puring grid in HDPE will be installed in equalization tank to equlize the raw sewagw. MOC - HDPE Quantity - Lot	1 Set
3	**Coarse Bubble Diffusers** Coarse bubble will be fitted to air puring grid in equlization tank at equal spacings. MOC : EPDM Size : 4 inch dia Make: Greatech or eq	16 nos
4	**Sewage Transfer pump** Non clog vertical submersible pump in C.I to transfer raw sewage from collection tank aeration tank.The unit will include a pressure gauge and a NR V in the discharge end Specifications: Discharge : 15 m3 / hr Head : 12 meters Type : Submersible centrifugal MOC : CI Make : KSB/Sharp or eq	2 Sets

5	**Air Blowers** Positive displacement, horizontal, Twin lob compressor of suitable capacity to supply air to the aertion tank. The unit will inclide TEFC motor, common base plate, v belt pulley, air filter, silencers, a pressure gauge.Specify valve and a NR V is provided in the dischare end. **Specification of blowers and motors** Casing : CI FG 220 Lobes : CI FG 260 Shafts : Dynamically balanced Timing gears : EN 353 duly hardened RPM : 1500 Discharge : 300 cum/hr Head : 4.0 meters Enclosur : TEFC Voltage : 415 +/- 10% Frequency : 50 Hz Make : Everest or eq	3 Sets (2w + 1 S)
6	**Fine Bubble Diffusers** Fine pore diffusers with necessary piping will be installed in aeration tank. MOC : EPDM Size : 63 dia X 1000 long Make : Sanlee or eq	2 Sets
7	**Sludge Recycle Pumps** Air operated sludge lifting pumps will be installed in clarifier hopper bottom in order to recalculated the settle sludge from the clarifier to aeration tank and sludge holding tank. Discharge : 10 m3/hr Head : 6 meters MOC : GI Type : Air operated Make : Peacock	2 Sets
8	**Filter Feed Pumps** Mono block pumps in C.I to transfer treated sewage from secondary collection tank to sand filter. The unit will include a pressure gauge and a NR V in the discharged end. **Specifications:** Discharge : 15 m3/hr Head : 30 meters Type : Centerifugal momoblock MOC : CI Make : Kirloskar or eq	2 Sets

Annexure – A (vii)

Copy of mining scheme

भारत सरकार/ GOVERNMENT OF INDIA
खान मंत्रालय/ MINISTRY OF MINES
भारतीय खान ब्यूरो/ INDIAN BUREAU OF MINES
क्षेत्रीय नियंत्रक, दक्षिण अंचल/ क्षेत्र के कार्यालय
OFFICE OF THE CONTROLLER OF MINES (SOUTH ZONE)

Telegram: MINESBUREAU
FAX. (080) 2337 287
Tel (080) 2337 287/ 23375366-67
E-mail:

29, Industrial Suburb, II Stage,
Tumkur Road, Goraguntepalya
Yeswanthpur
Bangalore- 560 022

No. MS/AP/GNR/LS(-189-SZ

Date: 23.09.2008

To M/s. Andhra Cements Limited.
Durga Cement Works, Gamalapadu Village
Dachepalli Mandal, Guntur district
Andhra Pradesh- 522 414

Sub: Approval of Scheme of Mining (including Progressive Mine Closure Plan) in respect of your DCW Limestone Mine over an extent of 170.22 ha situated at Gamalapadu village, Dachepalli Mandal, Guntur district of A P State, submitted under Rule 12 of MCDR, 1988.

Ref: Your Letter No. ACL/DCW/GM(P&A)/4/MS/2008-09/132 dated 22.09.2008 submitting final copies of the Scheme of Mining

Sirs,

In exercise of the power conferred by sub rule (4) of Rule 12 of Mineral Conservation and Development Rules, 1988, I hereby approve the aforesaid Scheme of Mining (including Progressive Mine Closure Plan). This approval is subject to the following conditions

1. This Scheme of Mining (including Progressive Mine Closure Plan) is approved without prejudice to any other law applicable to the area from time to time whether made by the Central Government, State Government or any other authority

2. The Scheme of Mining (including Progressive Mine Closure Plan) is approved without prejudice to any order or direction from any court of competent jurisdiction.

3. It is also clarified that the approval of your aforesaid Scheme of Mining (including Progressive Mine Closure Plan) does not in any way imply the approval of the Government in terms of any other provision of the Mines and Minerals (Development & Regulation) Act, 1957, or the rules framed there under and any other law

4. It is further clarified that the approval of the Scheme of Mining (including Progressive Mine Closure Plan) is subject to the provision of Forest (Conservation) Act, 1980, Forest Conservation Rules, 2003 and other relevant statutes, orders and guidelines as may be applicable to the lease area from time to time.

5. Provisions of the Mines Act, 1952 and Rule & Regulations made there under including submission of notice of opening, appointment of manager and other statutory officials as required by the Mines Act, 1952 shall be complied with

6. The execution of the Scheme of Mining (including Progressive Mine Closure Plan) shall be subjected to vacation of prohibitory orders/ notices, if any

Contd. ..

7. If anything is found to be concealed as required by the Mines Act or the contents of the Scheme of Mining and the proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect.

8. A copy of EIA/ EMP report, approved by MOEF, New Delhi, should be submitted to this office as well as to the Regional Controller of Mines, Indian Bureau of Mines, Hyderabad within one month of approval along with a copy of their approval letter.

9. Environment monitoring Cell of the Company shall continue monitoring ambient air quality, dust fall rate, water quality, soil sample analysis and noise level measurements on various stations established for the purpose both in the core zone and buffer zone as per Department of Environment guidelines and keeping in view CCOM's Circular No. 5/92 season-wise every year by engaging the services, preferably of an Environmental laboratory approved by MOEF/ CPCB. The data so generated shall be maintained in a bound paged register kept for the purpose and the same shall be made available to the inspecting officers on demand.

10. The validity period of the financial assurance should be renewed before the expiry of the same and should be submitted to the Regional Controller of Mines, Indian Bureau of Mines, Kendriya Sadan, Sultan Bazar, Koti, Hyderabad- 500 095, under intimation to this office.

11. A yearly report should be submitted before 1st July of every year setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved Mine Closure Plan.

Yours faithfully,

(Dr. B.P.SINHA)
Controller of Mines (SZ)

Encls: One of approved SGM
(including Progressive Mine Closure Plan).

Copy forwarded for information to:-

1. Shri Y.Madhusudan ROP, M/s. Goa Resources Development Company, No.2, Navodaya Colony, Road No.2, Banjara Hills, Hyderabad-500 034

2. The Chief Controller of Mines, Indian Bureau of Mines, Nagpur-440 001

3. The Director, Department of Mines & Geology, Government of Andhra Pradesh, B.K.R.K. Bhavan, 8th Floor, Tank Bund Road, Hyderabad- 500 029 **along with a copy of approved Scheme of Mining (including Progressive Mine Closure Plan).**

4. The Director of Mines Safety, Directorate General of Mines Safety, APHB Complex, Gruha Kalpa, Block E, N.I. Road, Nampally, Hyderabad- 500 001, **along with a copy of approved Scheme of Mining (including Progressive Mine Closure Plan).**

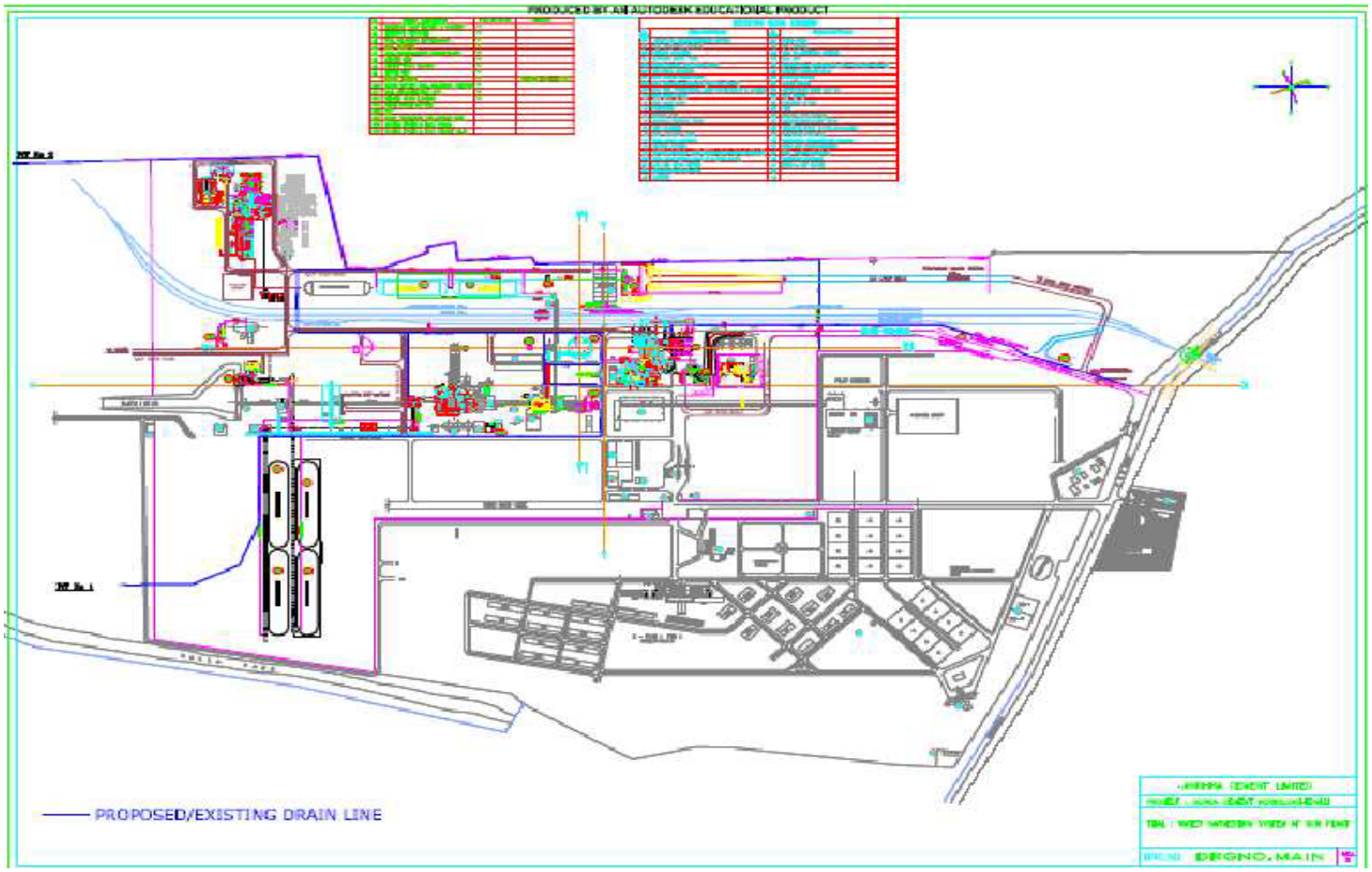
5. The Regional Controller of Mines, Indian Bureau of Mines, Kendriya Sadan, Sultan Bazar, Koti, Hyderabad- 500 095, **along with a copy of approved Scheme of Mining (including Progressive Mine Closure Plan).**

Encl: As above

(Dr. B.P.SINHA)
Controller of Mines (SZ)

Annexure- A (viii)

Scheme of Rain water harvesting



Annexure-(ix)

Water quality analysis report

DETAILS OF WATER SAMPLING LOCATIONS

Code	Location	Arial Distance (km)	Direction
		wrt Plant	
Ground Water			
GW1	Plant site	--	--
GW2	Kattayanagaram	3.4	SE
GW3	Gamalapadu	3.3	SSE
GW4	Madinapadu	5.4	E
GW5	Shrinagar	1.1	NW
GW6	Ramapuram	3.7	NNW
GW7	Pondugala	5.1	NW
GW8	Srinivasapuram	3.1	W
Surface Water			
SW1	Dandi vagu	4.6	W
SW2	Nala near Shrinagar	0.3	NW
SW3	Naguleru vagu near Kotayanagaram	2.4	SE
SW4	Krisnha river near Ramapuram	4.3	N
SW5	Baturalem	3.5	NE

GROUND WATER QUALITY

Sr. No.	Parameter	Unit	Limits as per IS10500	GW1	GW2	GW3	GW4	GW5	GW6	GW7	GW8
1	pH	-	6.5-8.5 (NR)	7.7	7.9	7.9	7.7	7.6	7.2	7.3	7.1
2	Colour	Hazen	5(25)	2	2	2	3	2	2	2	2
3	Taste	-	Agreeable	Aj	Aj	Aj	Aj	Aj	Aj	Aj	Aj
4	Odour	-	UO	UO	UO	UO	UO	UO	UO	UO	UO
5	Conductivity	µS/cm	$	2940	989	2150	1051	2100	1776	1847	2250
6	Turbidity	NTU	1(10)	3	4	3	4	3	3	3	3
7	TDS	mg/l	500(2000)	1996	674	1458	710	1422	1201	1254	1528
8	Total Hardness as CaCO3	mg/l	300(600)	870	345	930	388	940	480	372	980
9	Total Alkalinity	mg/l	200(600)	305	280	195	210	315	315	135	345
10	Calcium as Ca	mg/l	75(200)	216	94	164	87.2	184.9	138.4	169.6	156.0
11	Magnesium as Mg	mg/l	30(100)	36.5	26.7	43.7	41.3	19.4	20.4	36.8	46.2
12	Residual Chlorine	mg/l	0.2 Min	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
13	Boron	mg/l	1	0.53	0.09	0.36	0.11	0.37	0.23	0.22	0.40
14	Chlorides as Cl	mg/l	250(1000)	389	111	333	188	390	240	264	375
15	Sulphates as SO_4	mg/l	200(400)	376.4	91.3	400.6	87.2	233.6	166.1	186.7	223.8
16	Fluorides as F	mg/l	1.0(1.5)	1.2	0.3	1.0	0.3	1.0	0.5	0.4	1.1
17	Nitrates as NO_3	mg/l	45(NR)	24.4	31.1	38.9	58.4	22.8	77.4	135.4	38.9
18	Sodium as Na	mg/l	$	160.2	56.7	238.9	51.6	233.9	183.6	132.8	256.9
19	Potassium as K	mg/l	$	2.1	1.9	22.1	2.7	1.8	1.8	50.7	1.8
20	Phenolic Compounds	mg/l	0.001(0.002)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
21	Cyanides	mg/l	0.05(Nil)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
22	Anionic Detergents	mg/l	0.2(1.0)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
23	Mineral Oil	mg/l	0.01(0.03)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
24	Cadmium as Cd	mg/l	0.01(Nil)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
25	Arsenic as As	mg/l	0.01(Nil)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
26	Copper as Cu	mg/l	0.05(1.5)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
27	Lead as Pb	mg/l	0.05(Nil)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
28	Manganese as Mn	mg/l	0.1(0.3)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
29	Iron as Fe	mg/l	0.3(1.0)	0.05	0.05	0.08	0.03	0.07	0.03	0.05	0.05
30	Chromium as Cr+6	mg/l	0.05(Nil)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01
31	Selenium as Se	mg/l	0.01(Nil)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
32	Zinc as Zn	mg/l	5(15)	1.43	0.01	0.02	0.05	4.80	0.05	0.03	0.56
33	Aluminium as Al	mg/l	0.03(0.2)	0.04	0.04	0.08	0.06	0.05	0.06	<0.01	<0.01
34	Mercury as Hg	mg/l	0.001(NR)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
35	Pesticides	mg/l	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
36	E.Coli	-	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
37	Total Coliforms	MPN/100 ml	10	<2	<2	<2	<2	<2	<2	<2	<2

SURFACE WATER QUALITY

Sr. No.	Parameter	Unit	Limits as per IS10500	SW1	SW2	SW3	SW4	SW5
1	pH	-	6.5-8.5 (NR)	8.0	7.9	7.7	8.1	7.9
2	Colour	Hazen	5(25)	3	4	3	3	4
3	Taste	-	Agreeable	Ag	Ag	Ag	Ag	Ag
4	Odour	-	UO	UO	UO	UO	UO	UO
5	Conductivity	µS/cm	$	1125	702	1805	693	709
6	TDS	mg/l	500(2000)	5	5	4	4	5
7	Turbidity	NTU	5(10)	768	482	1230	468	478
8	Total Hardness as CaCO3	mg/l	300(600)	280	174	370	170	185
9	Total Alkalinity	mg/l	200(600)	210	215	330	165	165
10	Calcium as Ca	mg/l	75(200)	44.0	41.6	96.8	33.6	30.0
11	Magnesium as Mg	mg/l	30(100)	41.3	17.0	31.1	20.9	26.7
12	Residual Chlorine	mg/l	0.2 Min	<0.2	<0.2	<0.2	<0.2	<0.2
13	Boron	mg/l	1	0.10	<0.01	0.27	0.08	0.08
14	Chlorides as Cl	mg/l	250(1000)	209	60	340	92	94
15	Sulphates as SO_4	mg/l	200(400)	44.7	50.9	85.3	44.0	49.3
16	Fluorides as F	mg/l	1.0(1.5)	1.2	0.4	0.8	0.5	0.5
17	Nitrates as NO_3	mg/l	45(NR)	0.3	<0.1	0.3	0.4	0.7
18	Sodium as Na	mg/l	$	123.6	73.4	239.9	78.9	75.1
19	Potassium as K	mg/l	$	5.1	15.6	10.6	0.8	3.0
20	Phenolic Compounds	mg/l	0.001(0.002)	<0.001	<0.001	<0.001	<0.001	<0.001
21	Cyanides	mg/l	0.05(NR)	<0.02	<0.02	<0.02	<0.02	<0.02
22	Anionic Detergents	mg/l	0.2(0.1)	<0.1	<0.1	<0.1	<0.1	<0.1
23	Mineral Oil	mg/l	0.01(0.03)	<0.01	<0.01	<0.01	<0.01	<0.01
24	Cadmium as Cd	mg/l	0.01(NR)	<0.01	<0.01	<0.01	<0.01	<0.01
25	Arsenic as As	mg/l	0.01(NR)	<0.01	<0.01	<0.01	<0.01	<0.01
26	Copper as Cu	mg/l	0.05(1.5)	<0.01	<0.01	<0.01	<0.01	<0.01
27	Lead as Pb	mg/l	0.05(NR)	<0.01	<0.01	<0.01	<0.01	<0.01
28	Manganese as Mn	mg/l	0.1(0.3)	<0.01	0.21	0.02	<0.01	<0.01
29	Iron as Fe	mg/l	0.3(1.0)	0.02	0.12	0.07	0.03	0.02
30	Chromium as Cr+6	mg/l	0.05(NR)	<0.05	<0.05	<0.05	<0.05	<0.05
31	Selenium as Se	mg/l	0.01(NR)	<0.01	<0.01	<0.01	<0.01	<0.01
32	Zinc as Zn	mg/l	5(15)	0.01	0.13	0.02	0.014	0.02
33	Aluminium as Al	mg/l	0.03(0.2)	0.05	0.03	0.04	0.03	0.02
34	Mercury as Hg	Mg/l	0.001(NR)	<0.001	<0.001	<0.001	<0.001	<0.001
35	Pesticides	Mg/l	Absent	Absent	Absent	Absent	Absent	Absent
36	E.Coli	-	Absent	Absent	Absent	Absent	Absent	Absent
37	Total Coliforms	MPN/100 ml	10	<2	<2	<2	<2	<2

Annexure –A(x)

Liscence from chief controller of Explosives.

LICENCE (FORM E.E.)

(See proviso to Sub-rule (1) of Rule 34 of the Explosives Rules, 2008)

Licence to possess : (e) for use explosives of class 1, 2,3,4,5,6 or 7 in a magazine

Licence No. : E/HQ/AP/22/93(E1673)
Annual Fee Rs 14000/-

1. Licence is hereby granted to : **Andhra Cements Limited (Occupier : D.Somaiah,) Durga Cement Works, P.O. Dachepalli, Guntur Dist. 522414, A.P., Town/Village - District-. State-. Pincode - 522414**
2. Status of licensee : **Company**
3. Licence is valid only for the following purpose : possess for use of **Nitrate Mixture, Detonating Fuse, Detonators, Safety Fuse,**
4. (a) Licence is valid for the following kinds and quantity of explosives:

Sr. No.	Name and Description	Class & Division	Sub-division (If any)	Quantity at any one time
1.	Nitrate Mixture	2 ,0	0	10000 Kg.
2.	Detonating Fuse	6 ,2	0	12000 Mtrs
3.	Detonators	6 ,3	0	44000 Nos.
4.	Safety Fuse	6 ,1	0	10000 Mtrs

b) Quantity of explosives to be purchased in a calendar month[applicable for licence under article 3(b) and (c)] : **3 times as above.**

5. The licensed premises shall conform to the following drawing(s):
Drawing No : E/HQ/AP/22/93(E1673) dated : 03/10/1994
6. The licensed premises are situated at following address:
Sufvey No(s). 611/18 , Town/Village : **GAMALAPADU**
Police Station : **DACHEPALLI**
PinCode : Phone : District : **GUNTUR** State : **Andhra Pradesh**
E-Mail Fax :
7. The licensed premises consist of following facilities : **A MAIN MAGZINE ROOM A LOBBAY AND DETONATES STORE ROOM.**
8. The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and the following Annexures.
(1) Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
(2) Conditions and Additional Conditions of this licence signed by the licensing authority.
(3) Distance Form DE-2
9. This licence shall remain valid till **31st day of March 1994**

This licence is liable to be suspended or revoked for any violation of the Act or Rules framed there under or the conditions of this licence as set or... ler Set VIII, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description how in the plans and Annexure attached hereto.

The Date 03/10/1994

Sd/-
Chief Controller of Explosives

Endorsement for renewal of licence

Date of Renewal	Date of Expiry	Signature of licensing authority
06/03/2012	31/03/2014	Dy. Chief Controller of Explosives, Hyderabad

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Following are the conditions of licence number E/[illegible]/22/[illegible](E10/3) to possess for sale or use, explosives of Class 1,2,3, 7 in a magazine in Form LE-3 (articles 3(b) to (e)) granted by Chief controller of Explosives or Controller of Explosives.

1 The quantity of explosives on the premises at any one time shall not exceed the licensable capacity
2 The magazine used for storage of explosives shall [illegible] specified in Schedule [illegible]
3 The magazine shall be used only for keeping of explosives [illegible] and of tools or implements for work connected with the keeping of such explosives.
4 The opening of packages and the weighting and packing of explosives shall not be carried on in the magazine.
5 Two or more description or explosives which may be permitted to be kept in the magazine shall be kept only if they are separated from each other by an intervening partition of such substance or character, or by such intervening space, as will effectually prevent explosion or fire in the one communicating with the other; Provided that—

(d) the various explosives of Class 2 (nitrate-mixture), Class 3 (nitro-compound), safety fuses belonging to Class 6 Division 1and detonating fuses belonging to Class 6 Division 2 as do not contain any exposed iron or steel, may be kept with each other without any intervening partition or space ,
(e) Detonators belonging to Class 6 Division 3 shall be kept separately
(f) Gun powder belonging to Class 1 shall be kept separately.

6 Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of licensing authority.
7 Explosives of Class 3 (nitro compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of the Controller of Explosives.

(i) When such sanction has been given, a written certificate showing the period covered by the sanction shall be obtained from the Controller of Explosives at each inspection, and shall be kept by the licensee and produced on demand

(ii) When an explosive owing to its being no longer of standard purity or owing to signs of liquefaction or of exuded nitro-glycerin or liquid nitro-glycerin or liquid nitrocompound is no longer fit for storage in the magazine or store house the licensee shall comply, at his own expense, with such directions as to its disposal as the Chief Controller or Controller of Explosives may issue.

8. The interior of the magazine and the benches, shelves and fittings therein shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel contact with the explosives. Such interior, benches, shelves and fittings shall so far as is reasonably practicable, be kept free from grit and shall otherwise be clean; and in the case of any explosives liable to be dangerously affected by water, due precautions shall be taken to exclude water there from;

Provided that so much of this condition as relates to precautions against the exposure of any iron or steel shall not be obligatory in a building in which no explosive other than explosive of the 1st Division 6th (Ammunition) Class is kept.

9. If the lighting conductor is tested by the Controller of Explosives, the licensee shall pay the fees prescribed for test. In the even of the test proving unsatisfactory, the same fees shall be payable by the licensee for each subsequent test until the lighting conductor is passed by the testing officer as satisfactory.

Provided that the fees payable for a single test shall be charged for all tests made on a conductor during any one day .

Provided further that where two or more lighting conductors are attached to one and the same magazine, the fee for the testing of all such conductors shall not exceed the fee prescribed in this condition for testing a single lighting conductor.

10 Due provisions shall be made, by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the factory premises of fie, Lucifer matches or any substance or article likely to cause explosion or fire, but this condition shall not prevent the introduction of an artificial light of such construction, position or character as not to cause any danger of fire or explosion;

Provided that so much of this condition as applies to the exclusion of iron or steel, shall not be obligatory in a building in which no explosive other than an explosive of the 1st Division of the 6th (Ammunition) Class is kept.

11. The licensee shall keep records and accounts of all explosives in Forms RE-3 and RE-4 or RE-5, as the case may be, and exhibit the stock books and records to any of the officers authorised under the Explosives Rules, 2008 whenever such officer may call upon him to do so. The stock books in the prescribed proforma shall be page numbered.
12 No changes or alterations shall be carried out to the premises without prior approval of the licensing authority and the licensee shall comply with any condition that may be specified by the licensing authority in this behalf
13 Magazine shall at all times be kept in state of good repair (or maintained in good condition). The licensee shall report to licensing authority forthwith, if the magazine becomes unfit for storage of any explosives for any reason whatsoever.
14 The licensee of the magazine shall submit quarterly return as per sub-rules (3) and (4) of rule 24 of these rules.
15. Any encroachment of the safety distance shall be immediately communicated to the licensing authority for necessary advice and action.
16. The licensing authority shall be immediately informed for advice if any explosive is found deteriorated or unserviceable.
17. The explosive packages shall be stocked in such a way so as to allow movement of at least one person to check the condition of all packages stored and to read the manufacture particulars of each package.

The resistance of the lightning conductor to earth shall be as low as possible and in no case be more than 10 ohms.

18 The resistance of the lightning conductor to earth shall be as low as possible and in no case be more than 10 ohms.
19. A distance of 15 meters surrounding the magazine or store house shall be kept clear of dried grass or bush or flammable materials.
20 Every package of explosive at the time of bringing inside the magazine shall be examined for its sound condition.
21 Not more than 4 persons shall be allowed inside the magazine or store house at any one time
22. Empty packages of the explosives shall be removed at the earliest and destroyed
23. The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
24. Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
25. If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority
26 The licensee shall purchase authorised explosives/ fireworks or safety fuse as mentioned in the list authorised explosives from a licensed factory or company for possession and sale from the magazine
27 The possession and sale of fire-crackers generating noise level exceeding,

a) 125 dB(AI) or 145 dB(C)pk at 4 meters distance from the point of bursting shall be prohibited,

b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by 5 log10 (N) dB, where N = number of crackers joined together.

28 Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority

For Chief Controller of Explosives

Annexure –A(xi).

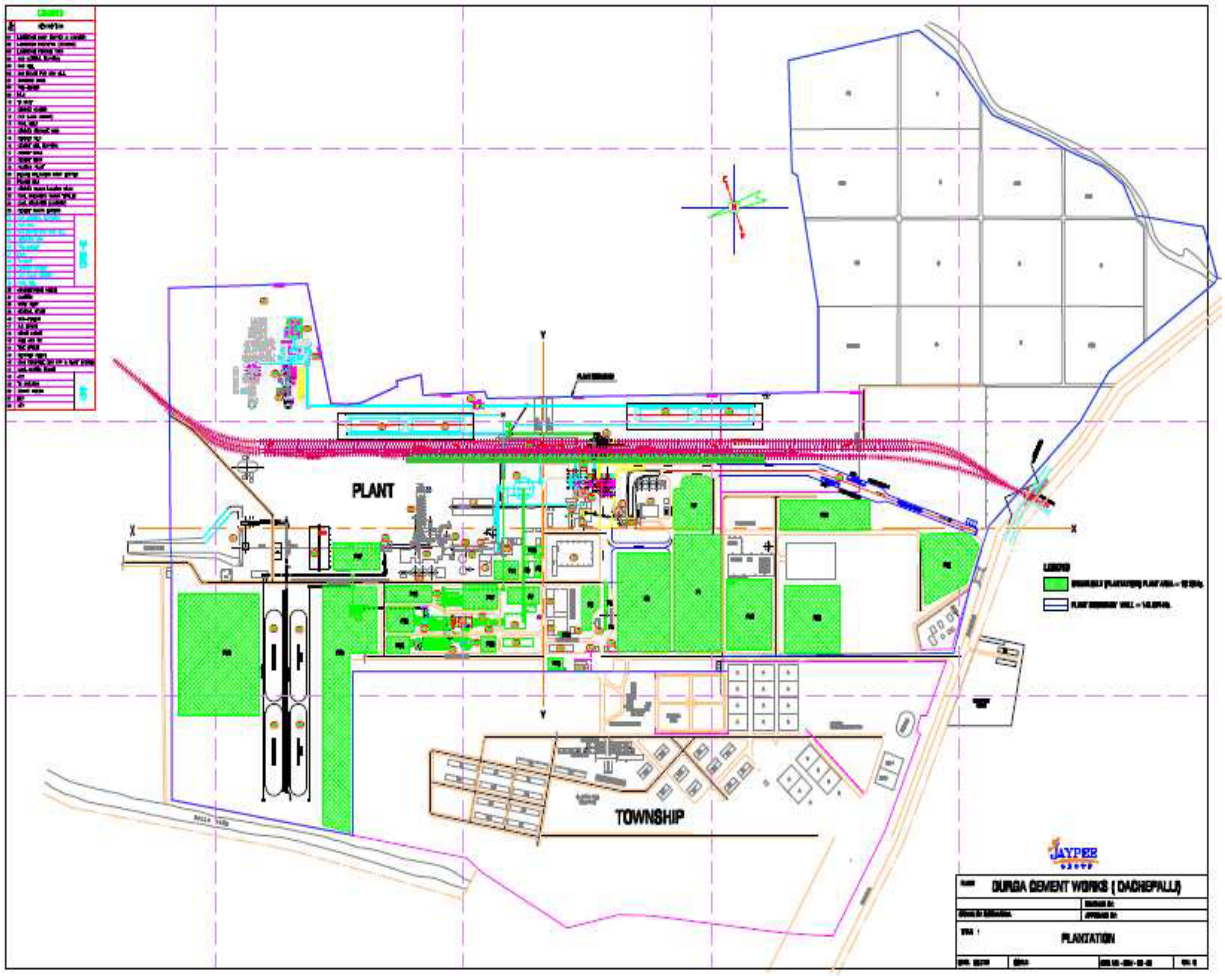
Green belt development plan for Plant and Mines

Status of green Belt development (Plant)

Total Industrial Land area:	-	141.574 Ha
Existing Green belt:	-	20.0 Ha
No. of Saplings Planted till date:	-	60250
Proposed Green belt development in coming 5 years –		18.00 Ha.

Plant layout showing Green Belt development

➢



Status of green Belt development (Mines)

Total mine lease area: - 170.22 Ha

Existing Green belt: - 2.0 Ha

No.of Saplings Planted till date: - 2642 in 2 Ha.

Proposed Green belt development in coming 5 years – 13.5 Ha.

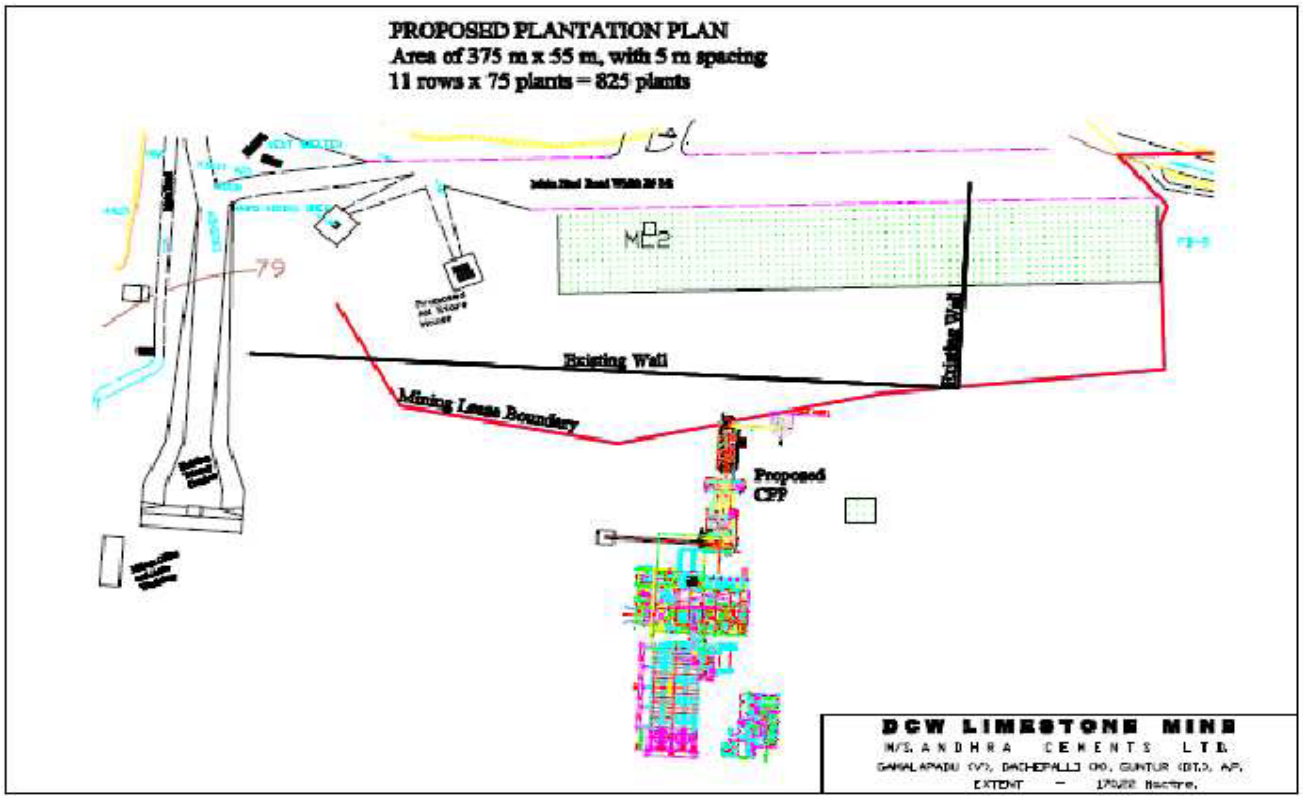
Summary of Green belt area

		Within mine area	Outside mine lease area
1	Area covered	0.5 Ha.	1.5 Ha
2.	Tree planted number	562	2080
3.	Survival rate	75-80%	80%

Proposed Plantation plan

Area: 375 m X 55 m, with 5 m spacing

11 Rows x 75 plant =825 plants



Annexure- A(xii)

CFO Mines from APPCB

ANDHRA PRADESH POLLUTION CONTROL BOARD
PARYAVARAN BHAVAN, A-3, INDUSTRIAL ESTATE,
SANATHNAGAR, HYDERABAD - 500 018.

Phone: 040-23887500
Fax: 040- 23815631
Grams : Kalusya Nivarana
Website : appcb.ap.nic.in

RED CATEGORY
CONSENT ORDER
BY REGISTERED POST WITH ACKNOWLEDGEMENT DUE

Consent Order No : APPCB/VJA/GTR/713/HO/CFO/2012- 2613 Date : 01.09.2012

(Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act,1974 and amendments thereof and Operation of the plant under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof) .

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 (hereinafter referred to as 'the Acts') and the rules and orders made there under to

M/s. Andhra Cements Limited
(Existing & Expansion)
(Mines Division)
Durgapuram (v),
Dachepalli (M),
Guntur District.

(Hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of emissions per hour from the chimneys as detailed below:

I. Outlets for discharge of effluents:

Outlet No.	Outlet Description	Max Daily Discharge	Point of Disposal
1	Domestic Effluents	4.0 KLD	Septic Tank followed by soak pit.

This order is subject to the provisions of the Acts and orders made there under and further subject to the terms and conditions incorporated in the schedule A and B enclosed to this order.

This consent order is valid for Mining of Limestone to the quantities indicated below only.

S.No	Product	Quantity
1	Lime Stone mining	3.0 Million Tons Per Annum

The consent should be valid for a period ending with the 30th Day of June 2013.

Sd-
MEMBER SECRETARY

To
M/s. Andhra Cements Limited
(Mines Division)
Durgapuram (v),
Dachepalli (M),
Guntur District.

// C.F.B.O. //

Joint Chief Environmental Engineer (CFO)

SCHEDULE – A

1. The applicant should make applications **through 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 **along with detailed compliance to the conditions stipulated in the CFO and HWA.**
2. All the conditions stipulated in the Schedule – A of the earlier CFO order No: **APPCB /VJA/GTR/534/HO/CFO/2008, dt.18.11.2008** remains same. The industry should ensure consistent compliance of each condition of Schedule-A".

SCHEDULE - B

Special Conditions

1. The effluent discharged should not contain constituents in excess of the tolerance limits mentioned below.

Outlet No.	Parameter	Limiting Standards
1.	P^H	5.50 – 9.00
	Total Suspended Solids (at 103 – 105°C)	200.0 mg/l
	Oil & Grease	10.0 mg/l
	Chemical Oxygen Demand (COD)	250.0 mg/l
	BOD	100.0 mg/l

2. The industry should take steps to reduce water consumption to the extent possible and consumption should NOT exceed the quantities mentioned below:

S.No	Purpose	Quantity
1.	Process & Washing (Sprinkling in Mining)	55.0 KLD
2.	Domestic	5.0 KLD
	Total:	**60.0 KLD**

3. Separate water meters with necessary pipeline should be provided for assessing the quantity of water used for each of the purposes mentioned below:

   1. Spraying in mine pits 2. Domestic purposes

4. The industry should file the water cess returns in Form-I 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 readings. The industry should remit water cess as per the assessment orders as and when issued by Board.
5. The industry should 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 2.5 μm) - 60 μg/ m^3; SO_2 - 80 μg/ m^3; NO_x - 80 μg/m^3, outside the factory premises at the periphery of the industry.

   Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, 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).

6. The industry should not increase the capacity beyond the permitted capacity mentioned in this order, without obtaining CFE & CFO of the Board.
7. The industry should earmark an amount of Rs. 1.3 Lakhs per annum for 10 years towards the Enterprise Social Responsibility (ESR) activities. The industries should 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.
8. The industry should develop green belt and maintain it on the over burden dumps, haul roads and also along the boundary of the mining area to control air pollution in the surrounding area.
9. All waste material should be disposed properly within the Mining Lease Area.
10. All mining rejects, irrespective of size and quality, should be hauled away from the mine.

11. The natural drainage of water should be maintained. The Dump sites should not cross any streams. Water flow from the Mine Lease Area should be free of suspended matter and conform to prescribed water quality standards even during the monsoon.
12. Plantation with native species should be raised along the roads, dump sites to develop a wide greenbelt all around the ML area in consultation with local DFO/ Agriculture department.
13. Dumping of overburden should be like a retreating pyramid bench formation and should carry physical and biological reclamation concurrently. Dumps should be contoured and provided with relief control and stablised. Dump tops should be compacted, leveled and provided with proper drainage.
14. Soil binding and nitrogen fixing plants should be planted in the Mine Lease Area. Biological reclamation should be done in two phases. The first phase should be with appropriate quick growing grass and shrubs and in the second phase slower growing native shrubs and trees should be grown.
15. Check dams and filter beds should be constructed to protect from stream runoffs.
16. Ground water table levels should be monitored every season. Any lowering of the ground water table in comparison to the previous season should be reported to the Board immediately. Discarded pits should be allowed to fill with water.
17. Vehicles should be well maintained and engine idling should be minimized. Vehicle cabs should be made dust-proof.
18. Drills should be water-jacketed. Local exhaust ventilation systems should be installed at dust generation points and the dust should be fed to a dust collection system.
19. Blasting should be sequential in such a manner as to achieve minimum vibration.
20. The industry should establish four ambient air quality monitoring stations in the core zone as well as in the buffer zone for monitoring RPM, SPM, NOx and SO2. Location of the ambient air quality stations should be decided based on metrological data, topographical features and environmentally and ecologically sensitive targets and the frequency of monitoring should be undertaken in consultation with the APPCB
21. A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior executive who will report directly to the head of the organization.
22. The industry should comply with all other conditions stipulated in the CFE order dated 27-06-2008 including conditions Nos. 4 and 5 of Schedule B pertaining to air and noise pollution control from mines.
23. The industry should comply with all the TF directions issued from time to time.
24. The applicant should submit Environment statement in Form V before 30th September of every year as per Rule No.14 of E (P) Rules, 1986 & amendments.

Sd/-
MEMBER SECRETARY

To

M/s. Andhra Cements Limited
(Mines Division)
Durgapuram (v),
Dachepalli (M),
Guntur District.

// T.C.F.B.O. //

Joint Chief Environmental Engineer (CFO)

Annexure:- B(i)

Lists of Eco Development measures

Andhra Cements Limited

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

ECO 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 CO_2 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 JBCP 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 (ii)

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/Nm3 limit of particulate matter by December 2004 and continue working to reduce the emission of particulate matter to 50 mg/Nm3.	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/Nm3 for particulate matter emissions.	The pollution control equipments are designed for emission of less than 50 mg/Nm3.
4	CPCB will evolve load based standards by December 2003.	____
5	CPCB and NCBM will evolve SO2 and NOx 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 points is completed. 6. Fly ash transportation by closed tankers 7. Fly ash transfer by pneumatic

		transportation to Fly ash silo 8. Construction of silos for storage of Clinker and Fly ash
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.	Cement Plant will install Continuous Stack Emissions Monitoring system at following location 1) *Kiln / Raw mill* 2) *Coal mill stack* 3) *Clinker cooler stack* 4) *Cement mill stack*
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

Annexure- B(iii)

Medical records

ANDHRA CEMENTS LIMITED : : DURGA CEMENT WORKS
JAYPEE GROUP
DURGAPURAM, DACHEPALLI

PREVENTIVE HEALTH CHECK UP

Date: ....

Name: CH VENKATESWARULU. Age: 54 Sex: M

Designation & Dept. FORK LIFT OPERATOR /

Nature of Job - FORK LIFT OPERATOR.

GENERAL EXAMINATION

1. Height : 5' 3"
2. Weight : 67 KGS.
3. H/o Allergy : NIL
4. Past History : NIL
5. Family history : NIL
6. Pulse / BP : 82/mt , 110/70 mm of Hg
7. Vision : DIST 6/6 NEAR 6/6. Both eyes -
8. Hearing : Both ears Normal.

SYSTEMIC EXAMINATION

1. Respiratory System : Lungs clinically clear.
2. CVS : S_1S_2 + NAD.
3. CNS : NAD.
4. GIT : [illegible] NAD, No [illegible]/[illegible].
5. Uro-genital system : NAD.
6. Locomotor system : Arthritis of ankle joint.

LABORATORY / X-RAY CHEST REPORT

Blood ESR 22 mm/1st hr
Blood urea
Serum Creatinine | NAD.
[illegible] - [illegible]
Urine NAD.

Medical Officer
Andhra Cements Limited
Durga Cement Works
Dachepalli.-522414

VENKATA RAMANA X-RAY & LAB

Main Road, Narayanapuram, DACHEPALLI.
Cell : 94403 82993, 99488 18178, 99498 30809

Patient Name : Sri. Venkata Swamy Age : 52 Sex : male
Ref.by Dr. D. Sweety Gen. MBBS Date :

HAEMOTOLOGY

T.W.B.C.	7,800 cells/cu
T.R.B.C.	
DC	
Polymorphos	63 %
Lymphocytes	30 %
Eosinophils	2 %
Monocytes	
ESR : 1st Hour	82 mm/1st hour
HB	8.4 %
Scale :	100% 14.5 gms.
MP PV	
PF	
Platelet Count	
Bleeding Time	
Clotting Time	
Blood Group	
RH Typing	
URINE	
PREGNANCY TEST	
Sugar	N.R
Albumin	N.R
Bile Salts	Negative
Bile Pigments	Negative
MICRO	
Puscells	1-3/HPF
RBC	N.R
EP Cells	N.R
Casts	N.R
Crystals	N.R
Others :	

VDRL	
RA Factor	Negative
ASO	
CRP	
WIDAL	
S.Typhi "O"	
S.Typhi "H"	
S. Paratyphi "A"(H)	
S. Paratyphi "B"(H)	
Mantoux	
HCV	
HBS Ag	
HIV	
HIV I	
HIV II	
(Advised Westren Blood Test for confirmation)	
F. Blood Sugar N.V. 70 To 100 mg%	
R/PP Blood Sugar. N.V. 80 To 140 mg%	135 mg%
Serum Biliurubin N.V. 0.2 To 1.0mg%	
Blood Urea N.V. 15 To 40 mg%	28
Serum Creatinine N.V. 0.5 To 1.3 mg%	
Serum Cholestrol N.V. 130 to 250 mg%	
Serum Calcium N.V. 8.4 to 10.4 Mg.%	
Serum Uric Acid (normal 2-5 — 6.8 mg%)	4.2 mg%

Signature

ANDHRA CEMENTS LIMITED : : DURGA CEMENT WORKS
JAYPEE GROUP
DURGAPURAM, DACHEPALLI

PREVENTIVE HEALTH CHECK UP

Date: .....

Name : B.V. SRINIVASA RAO. Age: ..... Sex: M

Designation & Dept. Sr. P.O. Administration Dept

Nature of Job - —

GENERAL EXAMINATION

1. Height : 156 Cms
2. Weight : 65 Kgs.
3. H/o Allergy : NIL
4. Past History : Acute Bronchitis.
5. Family history : Father - HTN, DM
6. Pulse / BP : 78/min, 110/70 mmHg
7. Vision : Using Specs. With Specs, both eyes, Near & Distant normal
8. Hearing :

SYSTEMIC EXAMINATION

1. Respiratory System : Airways clear.
2. CVS : NAD.
3. CNS : NAD.
4. GIT : Liver NOT palpable. NAD.
5. Uro-genital system : NAD
6. Locomotor system : NAD.

LABORATORY / X-RAY CHEST REPORT

Blood. Hb 11%.
ESR 15 mm

Medical Officer
Andhra Cements Limited
Durga Cement Works
Dachepalli.-522414

VENKATA RAMANA X-RAY & LAB

Main Road, Narayanapuram, DACHEPALLI.
Cell : 94403 82993, 99488 18178, 99498 30809

Patient Name : B. V. Srinivasa Rao Age : 57 Sex : male
Ref by Dr. D. Sunitha gari MBBS Date :

HAEMOTOLOGY

T.W.B.C.	9,500 cells/cu
T.R.B.C.	
DC	
Polymorphos	62 %
Lymphocytes	27 %
Eosinophils	11 %
Monocytes	—
ESR : 1st Hour	15 mm/1hour
HB	80 %
Scale :	100% ..... 14.5 gms.
MP PV	
PF	
Platelet Count	
Bleeding Time	
Clotting Time	
Blood Group	
RH Typing	
URINE	
PREGNANCY TEST	
Sugar	N.L
Albumin	N.L
Bile Salts	Negative (-ve)
Bile Pigments	negative (-ve)
MICRO	
Puscells	2-5/HPF
RBC	N.L
EP Cells	N.L
Casts	N.L
Crystals	N.L
Others :	

VDRL	
R A F actor	
ASO	
CRP	
WIDAL	
S.Typhi "O"	
S.Typhi "H"	
S. Paratyphi "A"(H)	
S. Paratyphi "B"(H)	
Mantoux	
HCV	
HBS Ag	
HIV	
HIV I	
HIV II	
(Advised Westren Blood Test for confirmation)	
F. Blood Sugar N.V. 70 To 100 mg%	
R/PP Blood Sugar. N.V. 80 To 140 mg%	110 mgs %
Serum Biliurubin N.V. 0.2 To 1.0mg%	
Blood Urea N.V. 15 To 40 mg%	
Serum Creatinine N.V. 0.5 To 1.3 mg%	
Serum Cholestrol N.V. 130 to 250 mg%	
Serum Calcium N.V. 8.4 to 10.4 Mg.%	

Signature

ANDHRA CEMENTS LIMITED : : DURGA CEMENT WORKS
JAYPEE GROUP
DURGAPURAM, DACHEPALLI

PREVENTIVE HEALTH CHECK UP

Date: .....

Name : N. GURUVULU. Age: 55 Sex: M.

Designation & Dept. Machinary attendant / Mechanical

Nature of Job - .....

GENERAL EXAMINATION

1. Helght : 5'4"
2. Weight : 63 kgs.
3. H/o Allergy : NIL
4. Past History : NIL.
5. Family history : NIL
6. Pulse / BP : 72/pm 120/80 mm/Hg
7. Vision : Both eyes 6/6 < Dist Needs
8. Hearing : Normal both ears

SYSTEMIC EXAMINATION

1. Respiratory System : Lungs clear, NAD
2. CVS : NAD. (S1S2+, No extra sounds, No murmur)
3. CNS : NAD.
4. GIT : NAD. (Liver & Spleen not palpable)
5. Uro-genital system : NAD
6. Locomotor system : NAD.

LABORATORY / X-RAY CHEST REPORT

Blood. NAD

Urine. NAD.

Medical Officer
Andhra Cements Limited
Durga Cement Works
Dachepalli.-522414

VENKATA RAMANA X-RAY & LAB

Main Road, Narayanapuram, DACHEPALLI.
Cell : 94403 82993, 99488 18178, 99498 30809

Patient Name: N. Guruvelu Age: 55 Sex: male
Ref.by Dr. P. Srinivas Guntur MBBS Date: [illegible]

HAEMOTOLOGY

T.W.B.C.	: 6,200 cells/cumm
T.R.B.C.	:
DC	:
Polymorphos	: 60 %
Lymphocytes	: 35 %
Eosinophils	: 5 %
Monocytes	:
ESR : 1st Hour	: 7 mm/1st hour
HB	: 78 %
Scale :	100%............14.5 gms.
MP PV	:
PF	:
Platelet Count	:
Bleeding Time	:
Clotting Time	:
Blood Group	:
RH Typing	:

URINE

PREGNANCY TEST	:
Sugar	: Nil
Albumin	: Nil
Bile Salts	: Negative (-ve)
Bile Pigments	: Negative (-ve)
MICRO	:
Puscells	: 1-3/HPF
RBC	: Nil
EP Cells	: Nil
Casts	: Nil
Crystals	: Nil

Others :

VDRL	:
RA Factor	:
ASO	:
CRP	:
WIDAL	:
S.Typhi "O"	:
S.Typhi "H"	:
S. Paratyphi "A"(H)	:
S. Paratyphi "B"(H)	:
Mantoux	:
HCV	:
HBS Ag	:
HIV	:
HIV I	:
HIV II	:

(Advised Westren Blood Test for confirmation)

F. Blood Sugar N.V. 70 To 100 mg%	:
R/FP Blood Sugar N.V. 80 To 140 mg%	: 108 mgs %
Serum Biliurubin N.V. 0.2 To 1.0mg%	:
Blood Urea N.V. 15 To 40 mg%	:
Serum Creatinine N.V. 0.5 To 1.3 mg%	:
Serum Cholestrol N.V. 130 to 250 mg%	:
Serum Calcium N.V. 8.4 to 10.4 Mg.%	:

Signature

ANDHRA CEMENTS LIMITED : : DURGA CEMENT WORKS
JAYPEE GROUP
DURGAPURAM, DACHEPALLI

PREVENTIVE HEALTH CHECK UP

Date: .....

Name : P. VEERIAH. Age: 48 Sex: M

Designation & Dept: PQC, Testing boy.

Nature of Job - .....

GENERAL EXAMINATION

1. Height : 5'6"
2. Weight : 90 kgs.
3. H/o Allergy : NIL.
4. Past History : NIL
5. Family history : NIL
6. Pulse / BP : Sinus BP: 140/90 mm
7. Vision : Normal both eyes
8. Hearing : Normal both ears

SYSTEMIC EXAMINATION

1. Respiratory System : Bilateral clear air entry
2. CVS : S1S2 +
3. CNS : NAD.
4. GIT : NAD.
5. Uro-genital system : NAD.
6. Locomotor system : Arthritis both knees.

LABORATORY / X-RAY CHEST REPORT

Blood: Hb 12 gms%
S. Creat. 2.4 mg%.

Medical Officer
Andhra Cements Limited
Durga Cement Works
Dachepalli.-522414

VENKATA RAMANA X-RAY & LAB

Main Road, Narayanapuram, DACHEPALLI.
Cell : 94403 82993, 99488 18178, 99498 30809

Patient Name : P. Veeraiah Age : 48 Sex : Male
Ref by Dr. P. Suresh Guru Medical Date :

HAEMOTOLOGY

T.W.B.C.	4,700 cells/cu
T.R.B.C.	
DC	
Polymorphos	65 %
Lymphocytes	30 %
Eosinophils	5 %
Monocytes	—
ESR : 1st Hour	10 mm/1st hour
HB	85 %
Scale :	100% 14.5 gms
MP PV	
PF	
Platelet Count	
Bleeding Time	
Clotting Time	
Blood Group	
RH Typing	
URINE	
PREGNANCY TEST	
Sugar	NIL
Albumin	NIL
Bile Salts	Negative (-ve)
Bile Pigments	Negative (-ve)
MICRO	
Puscells	3-6/HPF
RBC	NIL
EP Cells	NIL
Casts	NIL
Crystals	NIL
Others :	

VDRL	
R A Factor	
ASO	
CRP	
WIDAL	
S.Typhi "O"	
S.Typhi "H"	
S. Paratyphi "A"(H)	
S. Paratyphi "B"(H)	
Mantoux	
HCV	
HBS Ag	
HIV	
HIV I	
HIV II	
(Advised Westren Blood Test for confirmation)	
F. Blood Sugar N.V. 70 To 100 mg%	
R/PP Blood Sugar. N.V. 80 To 140 mg%	112 mg%
Serum Billiurubin N.V. 0.2 To 1.0mg%	
Blood Urea N.V. 15 To 40 mg%	
Serum Creatinine N.V. 0.5 To 1.3 mg%	
Serum Cholestrol N.V. 130 to 250 mg%	264 mg%
Serum Calcium N.V. 8.4 to 10.4 Mg.%	

Signature

ANDHRA CEMENTS LIMITED : : DURGA CEMENT WORKS
JAYPEE GROUP
DURGAPURAM, DACHEPALLI

PREVENTIVE HEALTH CHECK UP

Date: ....

Name : P. BALA KRISHNA. Age: 52 Sex: M

Designation & Dept. Sr. Eng. ELECTRICAL

Nature of Job - ....

GENERAL EXAMINATION

1. Height : 5' 6"
2. Weight : 66 Kgs.
3. H/o Allergy : NIL
4. Past History : NIL.
5. Family history : NIL
6. Pulse / BP : 76/min 130/80 mmHg.
7. Vision : Both eyes DV +1.00 NV +3.00
8. Hearing : with glasses - normal Both ears Normal

SYSTEMIC EXAMINATION

1. Respiratory System :
2. CVS : S1S2+, .
3. CNS : NAD.
4. GIT : NAD. (No hepatomegaly, No [illegible], [illegible])
5. Uro-genital system : NAD
6. Locomotor system : NAD.

LABORATORY / X-RAY CHEST REPORT

Blood: E 6%.
(Chest NAD)
Urine: NAD.

Medical Officer
Andhra Cements Limited
Durga Cement Works
Dachepalli.-522414

VENKATA RAMANA X-RAY & LAB

Main Road, Narayanapuram, DACHEPALLI.
Cell : 94403 82993, 99488 18178, 99498 30809

Patient Name : P. Balakrishna Age : 45 Sex : male

Ref.by Dr. P. Suresh - Gowtham Date :

HAEMOTOLOGY

T.W.B.C.	7,200 cells/cmm
T.R.B.C.	
DC	
Polymorphos	60 %
Lymphocytes	34 %
Eosinophils	6 %
Monocytes	—
ESR : 1st Hour	8 mm/1st hour
HB	86 %
Scale :	100% 14.5 gms.
MP PV	
PF	
Platelet Count	
Bleeding Time	
Clotting Time	
Blood Group	
RH Typing	

URINE

PREGNANCY TEST	
Sugar	NIL
Albumin	NIL
Bile Salts	Negative (-ve)
Bile Pigments	Negative (-ve)

MICRO

Puscells	2-4/HPF
RBC	NIL
EP Cells	NIL
Casts	NIL
Crystals	NIL
Others :	

VDRL	
R. F actor	
ASO	
CRP	
WIDAL	
S.Typhi "O"	
S.Typhi "H"	
S. Paratyphi "A"(H)	
S. Paratyphi "B"(H)	
Mantoux	
HCV	
HBS Ag	
HIV	
HIV I	
HIV II	
(Advised Westren Blood Test for confirmation)	
F. Blood Sugar N.V. 70 To 100 mg%	
R/PP Blood Sugar. N.V. 80 To 140 mg%	
Serum Biliurubin N.V. 0.2 To 1.0mg%	
Blood Urea N.V. 15 To 40 mg%	
Serum Creatinine N.V. 0.5 To 1.3 mg%	
Serum Cholestrol N.V. 130 to 250 mg%	
Serum Calcium N.V. 8.4 to 10.4 Mg.%	

Signature

Annexure-(IV)

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

ORGANIZATION STRUCTURE OF EMC