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REGD. A/D

ACL/EMD/F-16 /2014/ 3711

20.11.2014

The Director (s),
Ministry of Environment & Forest (MoEF),
Regional Office, Western Region,
"Kendriya Paryavaran Bhavan"
Link Road No.3, Ravi Shankar Nagar,
Bhopal – 462016, (M.P.)

Sub.: Half Yearly Compliance Status Report of Environmental Clearance of Gajambuja Unit of Ambuja Cements Ltd.

Ref.: Environmental Clearance Order No. J-11011/29/94-I (A) - II dated 16.01.1995 & Environmental Clearance Order No.J-11013/31/2000-IA-II (I) dated 24.10.2000.

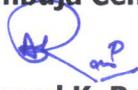
Sir,

We are pleased to submit herewith half yearly compliance status report (i.e. for the period of April'14 to September'14) of Environmental Clearance Order No. J-11011/29/94-I (A) - II & Environment Clearance Order No.J-11013/31/2000-IA-II (I) granted by MoEF to **Gajambuja unit** of Ambuja Cements Ltd., located at Ambujanagar, Taluka - Kodinar, District – Gir Somnath (Gujarat). We are also enclosing here with a CD containing soft copy of the same.

In case of further clarification/information require, we shall be please to provide the same.

Thanking you,

Yours Faithfully,
For **Ambuja Cements Ltd.**


Dr. Anand K. Rai
HOD (Environment)

Encl.: As above.

Copy to:

- 1) Central Pollution Control Board
Western Zonal Office, Synergy House-II,
Subhanpura - Gorwa Road, Vadodara-390023 (Gujarat)
- 2) Member Secretary,
Gujarat Pollution Control Board,
Paryavaran Bhavan, Sector-10-A,Gandhinagar-382010


1.12.14
Gujarat Pollution Control Board
Sector - No. 10-A,
Gandhinagar-382010

MONITORING THE IMPLEMENTATION OF ENVIRONMENTAL SAFEGUARDS

Ministry of Environment & Forests
Regional Office (W), Bhopal
Monitoring Report
Part-I

DATA SHEET

Date: 20.11.2014

- 01 Project type : Cement
- 02 Name of the project : Gajambuja Cements Ltd.
- 03 Clearance letter(s) / OM no. and date : Environment Clearance Order No.
J-11011/29/94-IA-II dated 16.01.1995 &
Environment Clearance Order No.
J-11013/31/2000-IA-II (I) dated 24.10.2000
- 04 Location :
a) District(s) : Gir Somnath
b) State(s) : Gujarat
c) Latitude : 20⁰ 50' N
d) Longitude : 70⁰ 45' E
- 05 Address for correspondence :
a) Address of concerned Project Chief : Shri, S Ramarao
Engineer (with pin code & telephone / telex / (Unit Head)
fax numbers). Ambuja Cements Ltd.
PO Ambujanagar-362715
Taluka : Kodinar,
District: Gir Somnath (Gujarat).
Tel: 02795-221137/232009/237403
Fax: 02795-220328/232032
b) Address of Executive Project Engineer / : Shri, G. V. Ramakrishna (Plant Head)
Manager (with pin code / fax numbers. Gajambuja Cements Ltd.
PO Ambujanagar-362715
Taluka : Kodinar,
District: Gir Somnath (Gujarat).
Tel: 02795-237220/237221
Fax: 02795-220328/232032
- 06 Salient features :
a) of the project : Gajambuja plant has two cement kilns
including 4 cement mills with having total
production of 4.2 MTPA. Cement mill no. 4
has been installed in 2005-06 under this unit
with manufacturing capacity of 144000
MT/Month (1.728 MTPA) Cement. The project
cost was less than 50 Crore then EC was
not applicable.

- b) Environmental management plans : 1. All the existing stacks have been provided suitable & effective pollution control equipments to control the emission from stacks.
2. The regular monitoring of all existing stacks is being carried out by Environment management division of ACL and also external agencies as per statutory requirements.
3. For controlling emission level well below permissible limit. We have installed Continuous Emission Monitoring System (CEMS) at each raw mill & kiln stack.
4. Continual improvement in fugitive as well as source emissions through regular maintenance of existing air pollution control equipments and also implementation of ecofriendly techniques including greenbelt development in the area.
- 07 Break up of the project area.
- a) Submergence area (forest & non-forest) : Not applicable
- b) Others : 28.8 Ha.
- 08 Break up of the project affected population: with enumeration of those losing houses / dwelling units only agricultural land only, dwelling units & agricultural land & landless labourers / artisan.
- a) SC, ST / Adivasis : Not applicable
- b) Others : Not applicable
- 09 Financial details :
- a) Project cost as originally planned and subsequent revised estimates and the year of price reference. : Rs. 300 Crore
- b) Allocation made for Environmental Management Plans with item wise and year wise breakup. : Pl. refer **Annexure III**
- c) Benefit cost ratio / Internal rate of return and the year of assessment. : -
- d) Whether (c) includes the cost of environmental management as shown in the above. : -
- e) Actual expenditure incurred on the project so far. : Rs. 374 Crore

- f) Actual expenditure incurred on the environmental management plans so far. : 16.67 Crore
- 10 Forest land requirement. : Not applicable
- a) The status of approval for diversion of forest land for non-forestry use :
- b) The status of clearing felling :
- c) The status of compensatory afforestation, if any :
- d) Comments on the viability & sustainability: of compensatory afforestation programme in the light of actual field experience so far.
- 11 The status of clear felling in non-forest areas: (such as submergence area of reservoir, approach roads), if any with quantitative information. : Not applicable
- 12 Status of construction. :
- a) Date of commencement (Actual and / or planned) : April 1995 & July 2000 (Expansion)
- b) Date of completion (Actual and / or planned). : Continued.
- 13 Reasons for the delay if the project is yet to start. : Not applicable
- 14 Dates of site visits :
- a) The dates on which the project was monitored by the Regional Office on previous occasions, if any. : 12.10.10 to 13.10.10 by Dr. A. Mehrotra Regional Office, Bhopal
- b) Date of site visit for this monitoring report : 12.10.10 to 13.10.10
- 15 Details of correspondence with project: authorities for obtaining action plans / information on status of compliance to safeguards other than the routine letters for logistic support for site visits). : Half yearly compliance status report is being regularly submitted and last submission was on 25.05.2014 vide letter no.ACL/EMD/F-16/2014

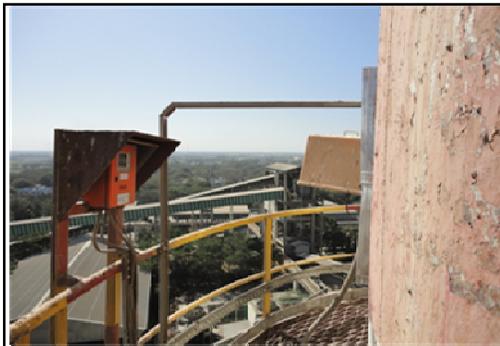
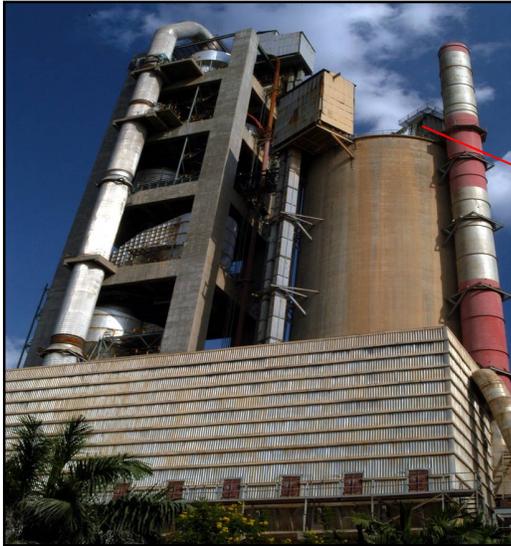
**Compliance Status of Environment Clearance issued to Gajambuja
Plant vide MoEF Letter no. J-11011/29/94-IA-II dated 16.01.95,
J-11013/31/2000-IA-II (I) dated 24.10.2000**

S No.	Conditions	Compliance Status
2 (i)	The project authority must strictly adhere to the stipulations made by the State Govt. and the State Pollution Control Board and is subject to their obtaining consent to establish prior to initiating any work.	<ul style="list-style-type: none"> • Yes, we are Complying with all the Stipulation made by the State Govt. and the State Pollution Control Board. • Consent to establish has been obtained from GPCB. A Copy of it has already been submitted to MoEF vide our letter no.ACL/EMD/F-16/2010/55920 dated 25.12.2010.
2 (ii)	Any further expansion of the plant can be taken up only with the prior approval of this ministry.	<ul style="list-style-type: none"> • Yes, for further expansion, we shall take prior approval from MoEF. • Necessary approval from Ministry have been taken while plant expansion done in year 2000. A Copy of approval obtained from MoEF have already been submitted to MoEF vide our letter no.ACL/EMD/F-16/2010/55920 dated 25.12.2010.
2 (iii)	The emission from various units should conform to the standards prescribed by the Central Government or State Pollution Control Board. At no time the emission level of SPM should be exceed 50 mg/Nm ³ In the event of failure of any pollution control system adopted by the unit, the respective unit should be put cut of operation immediately and should not be restarted until the control system are rectified to achieve the desired efficiency.	<ul style="list-style-type: none"> • Regular stack monitoring is being carried out and results are regularly submitted to SPCB & MoEF. • In order to maintain the emission level well below 50 mg/Nm³, we have installed Glass Bag House (GBH). • Continuous Emission Monitoring System (CEMS) are installed at main process Stacks for on line monitoring. Photograph of CEMS is enclosed as Annexure I • Stack emission monitoring report for the period of April'14 to September'14 is enclosed as Annexure IA.
2 (iv)	The project authority will not change any design of stack without the permission of the State Pollution Control Board. They will also provide closed circuit grinding unit in all the grinding section of the plant.	<ul style="list-style-type: none"> • Point noted and necessary permission will be taken if required. • Closed circuit grinding unit have been provided in all grinding section of the plant.
2 (v)	Adequate number of air quality monitoring stations should be set up in the downwind direction as well as where maximum ground level concentration is anticipated in consultation with the State Board. Also stack emission should be monitored regularly. The data collected should be statistically analyzed, interpreted and submitted to the State Pollution Control Board and	<ul style="list-style-type: none"> • Five Ambient Air Quality Monitoring stations have been established based on guidelines issued by CPCB & reviewed by Prof. B. Padmanabhamurty, Former Prof. JNU, New Delhi and in consultation with GPCB. • Regular monitoring is being carried out and half yearly status is submitted. • Stack monitoring & ambient air quality monitoring report for the period of

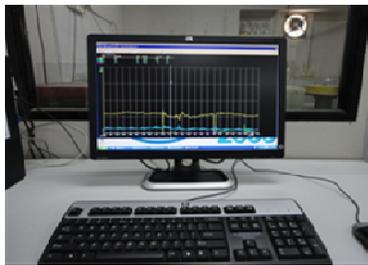
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	this Ministry once in Six Months.	April'14 to September'14 is enclosed as Annexure IA & IB respectively.
2 (vi)	Interlocking facility should be provided in the pollution control equipment such as Bag filters, ESP's etc. so that in the event of pollution control equipment not working, the main plant is shut down automatically.	<ul style="list-style-type: none"> Point noted and complied.
2 (vii)	A separate environmental management cell with suitably qualified personnel to carry out various functions should be set up under the control of senior executive who will report directly to head of the organization.	<ul style="list-style-type: none"> A well established Environmental Management Division (EMD) with suitable qualified personnel is existing. Head of Environment management cell directly report to the Unit Head (Jt. President) of the organization. EMD organization chart is enclosed as Annexure II.
2(viii)	The project authority must set up laboratory facility for collection and analysis of samples under the supervision of competent technical personnel who will directly report to the chief executive.	<ul style="list-style-type: none"> A well established Environment laboratory with sufficient instrument is available. List of laboratory instruments available has already been submitted to MoEF vide our letter no.ACL/EMD/F-16/2010/55920 submission dated 25.12.2010. However, environment monitoring is being carried out by M/s Royal Environment & Auditing and Consultancy services, Rajkot, approved from GPCB on regular basis.
2 (ix)	The funds earmarked for environmental protection measures should not be diverted for other purpose and year-wise expenditure should be reported to this Ministry.	<ul style="list-style-type: none"> Details of capital and recurring expenditure for environmental protection measures are enclosed as Annexure III.
3	The Ministry or any other competent authority may stipulate any further condition after reviewing the comprehensive EIA report or any other report prepared by the project authorities.	<ul style="list-style-type: none"> Point noted.
4	The Ministry may revoke or suspend clearance, if Implementation of the stipulated conditions is not satisfactory.	<ul style="list-style-type: none"> Point noted.
5	The above conditions will be enforced, inter alia, under the provisions of the Water (Prevention & Control of Pollution) Act 1974, the Air (Prevention & Control of Pollution) Act 1981, the Environment (Protection) Act 1986, and the public Liability Insurance Act 1991 along with their amendments and rules.	<ul style="list-style-type: none"> Point noted.

Annexure I



CEMS - The MCS100E IR-Analyzer, SICK MAIHAK GmbH is used for continuous selective measurement of pollutant substances



Typical components
NH₃; HCl; H₂O; SO₂;
CO; NO; NO₂; N₂O;
CO₂; O₂

Continuous Emission Monitoring System (CEMS)

Annexure - IA

Stack Monitoring Results (April'2014 - September'2014)

Month	Stack attached to					
	Raw mill & Kiln- I	Cooler ESP-1	Coal Mill -1	Raw mill & Kiln- 2	Cooler ESP-2	Coal Mill- 2
Average Particulate Matter (mg/Nm ³)						
Apr-14	13	35	37	10	39	38
May-14	16	47	32	12	44	35
Jun-14	13	46	36	14	40	38
Jul-14	16	42	31	10	49	34
Aug-14	12	44	34	17	46	37
Sep-14	16	41	31	13	42	39
Minimum	12	35	31	10	39	34
Maximum	16.00	47.00	37.00	17.00	49.00	39.00
Average	14.33	42.50	33.50	12.67	43.33	36.83
Permissible Limit	50.00	50.00	50.00	50.00	50.00	50.00
Std. deviation	1.861898673	4.324349662	2.588435821	2.658320272	3.777124126	1.94079022

Month	Stack attached to						
	Cement Mill- I	Cement Mill-II	Cement Mill-III	Cement Mill -IV	Packer - I	Packer - II	Packer - III
Average Particulate Matter (mg/Nm ³)							
Apr-14	32	36	37	33	28	32	30
May-14	35	39	32	30	30	36	34
Jun-14	31	35	30	28	32	34	36
Jul-14	28	31	34	30	30	36	33
Aug-14	26	29	31	34	32	34	30
Sep-14	27	30	29	31	34	31	29
Minimum	26	29	29	28	28	31	29
Maximum	35.00	39.00	37.00	34.00	34.00	36.00	36.00
Average	29.83	33.33	32.17	31.00	31.00	33.83	32.00
Permissible Limit	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Std. deviation	3.430257522	3.932768321	2.926886856	2.19089023	2.097617696	2.04124145	2.75680975

Stack Monitoring Results (April'2014 - September'2014)

Month	Stack attached to								
	DG set 4			DG set 5			DG set 6		
	Avg. PM* mg/Nm ³	Avg. SO ₂ ppm	Avg.NOx ppm	Avg. PM* mg/Nm ³	Avg. SO ₂ ppm	Avg.NOx ppm	Avg. PM* mg/Nm ³	Avg. SO ₂ ppm	Avg. NOx ppm
Apr-14	Not Operated								
May-14	Not Operated								
Jun-14	62	61	32	58	55	38	67	58	35
Jul-14	66	60	34	71	58	30	64	65	39
Aug-14	Not Operated			65	54	32	68	61	35
Sep-14	Not Operated			Not Operated			41	26	32
Minimum	62	60	32	58	54	30	41	26	32
Maximum	66.00	61.00	34.00	71.00	58.00	38.00	68.00	65.00	39.00
Average	64.00	60.50	33.00	64.67	55.67	33.33	60.00	52.50	35.25
Permissible Limit	150.00	100.00	50.00	150.00	100.00	50.00	150.00	100.00	50.00
Std. deviation	2.83	0.71	1.41	6.51	2.08	4.16	12.78	17.90	2.87

*PM : Particulate Matters

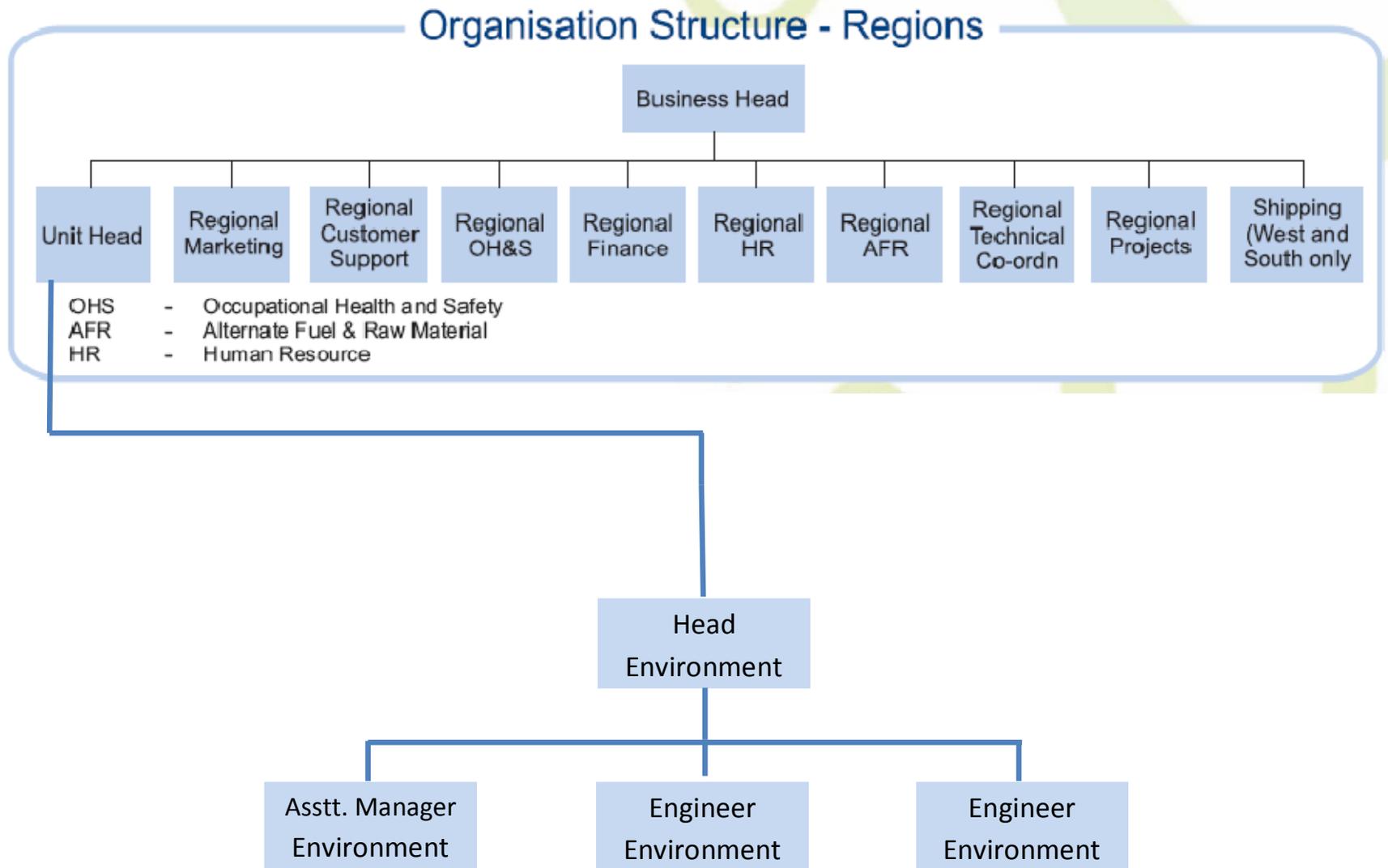
Annexure - I B

Ambient Air Quality Monitoring Results (April 2014 - September 2014)

Month	Average Ambient Air Quality Monitoring Results ($\mu\text{g}/\text{m}^3$)											
	At CCR				Near Packing section				Ambuja School			
	PM2.5	PM10	SO2	NOx	PM2.5	PM10	SO2	NOx	PM2.5	PM10	SO2	NOx
Apr-14	32.00	63.00	12.70	14.80	35.00	61.00	13.20	15.30	23.00	32.00	11.20	16.60
May-14	34.00	59.00	12.40	16.20	38.00	64.00	13.00	16.80	26.00	35.00	12.00	16.40
Jun-14	31.00	52.00	12.80	16.60	29.00	56.00	13.40	17.20	22.00	37.00	12.30	16.10
Jul-14	26.00	44.00	11.70	15.60	31.00	51.00	12.60	16.70	24.00	39.00	11.70	15.70
Aug-14	23.00	41.00	11.20	16.10	28.00	47.00	12.30	15.70	27.00	35.00	12.40	15.20
Sep-14	39.38	51.01	12.03	15.81	37.50	50.54	11.71	16.05	30.25	42.80	11.33	15.83
Minimum	23.00	41.00	11.20	14.80	28.00	47.00	11.71	15.30	22.00	32.00	11.20	15.20
Maximum	39.38	63.00	12.80	16.60	38.00	64.00	13.40	17.20	30.25	42.80	12.40	16.60
Average	30.90	51.67	12.14	15.85	33.08	54.92	12.70	16.29	25.38	36.80	11.82	15.97
Std. deviation	5.82	8.43	0.62	0.62	4.34	6.60	0.63	0.73	3.02	3.75	0.50	0.51

Month	Average Ambient Air Quality Monitoring Results ($\mu\text{g}/\text{m}^3$)							
	West Colony				South Colony			
	PM2.5	PM10	SO2	NOx	PM2.5	PM10	SO2	NOx
Apr-14	27.00	34.00	12.40	16.20	24.00	35.00	12.70	17.10
May-14	29.00	39.00	11.80	17.20	25.00	33.00	12.30	17.60
Jun-14	27.00	35.00	11.50	16.80	23.00	30.00	12.60	17.30
Jul-14	29.00	41.00	12.10	16.50	28.00	35.00	12.90	17.00
Aug-14	26.00	38.00	12.80	16.30	24.00	33.00	11.70	17.70
Sep-14	33.13	44.93	11.66	16.13	30.50	41.96	11.96	15.94
Minimum	26.00	34.00	11.50	16.13	23.00	30.00	11.70	15.94
Maximum	33.13	44.93	12.80	17.20	30.50	41.96	12.90	17.70
Average	28.52	38.65	12.04	16.52	25.75	34.66	12.36	17.11
Std. deviation	2.55	4.01	0.49	0.41	2.89	4.02	0.46	0.63

Annexure II [ORGANISATION CHART]



(A) Capital Investment for Environmental Monitoring :

(1) Monitoring Equipments	: 37.08 Lakh
(2) Environmental Laboratory	: 10.00 Lakh
(3) Others (Monitoring Van & DG sets)	: 22.30 Lakh
(4) Continuous Emission Monitoring System	: 200.0 Lakh
(5) CAAQMS System	: 36.00 Lakh
(6) Opacity Meter	: 28.00 Lakh

Total : Rs. 333.38 Lakh

(B) Recurring expenditure for the period of April'14 to September'14 :

(1) Green belt development	: 7.43 Lakh
(2) Manpower Cost*	: 13.92 Lakh
(3) House Keeping & Dust suppression	: 14.51 Lakh
(4) Maintenance of Pollution Control Equipments	: 50.56 Lakh
(5) Other Env. Protection (Environmental Monitoring)	: 11.04 Lakh
(6) Environment Awareness*	: 1.10 Lakh

Total : Rs. 98.56 Lakh

*Expenditures are common for all the plants & mines.

**(C) Community Development expenditure by Ambuja : Rs. 3.81 Crore
Cement Foundation****

** Community development expenditure is common for all plant & mines at Ambujanagar. Programme wise Expenditure Details for the year 2014 (April to September) is as below:

Ambuja Cement Foundation - Ambujanagar							(Rs. In lakhs)
Details for programme wise expenditure from April to Sept-2014							
Sr.No	Programme	Funds from ACF Resources	*Funds received through Government	from other Donors / Donor Agencies	***People's Contribution	****Direct Funding to Communities	Total Exp.
	GUJARAT - Kodinar						-
1	Water Resource Mangement & Drinking Water Projects						-
	a. Water Resource Devlopment	24.96					24.96
	B .Drinking Water Programme	2.65	-	5.80	2.80	27.56	38.81
	c. Salinity Prevention (KVY III)	10.91		22.04	24.14	26.45	83.54
2	Agriculture Development(Farm Forestry &Afforesation)	1.33		2.02	28.20	28.02	59.57
3	Better Cotton Initiative (BCI)	0.30		7.68			7.98
4	Krishi Vigyan Kendra (KVK)	5.65	46.84		-		52.49
5	Health & Sanitation Programme	5.68			4.29	-	9.97
6	Skill and Enterprunership Development Programme	15.35	4.47		7.12		26.94
7	Village Knowledge Centre & Anganwadi exp	0.92			-		0.92
8	Women / Youth Development & Others	2.09					2.09
9	Integrated Community Development Programme	42.91					42.91
10	Co-ordination & Administration Expenses	29.70					29.70
11	Capital Expenditure	1.46					1.46
	TOTAL	143.91	51.31	37.54	66.55	82.03	381.34