

ENVIRONMENTAL STATEMENT (FORM-V)
FOR
M/s. ANJANI PORTLAND CEMENT LIMITED
For the Year 2017-2018



M/s. ANJANI PORTLAND CEMENT LIMITED,
(A Subsidiary of Chettinad Cement Corporation Pvt Limited)
Gudimalkapuram (Post),Chintalapalem(Village & Mandal)
Suryapet (Dist). T.S.



Report Prepared By

M/s. GLOBAL ENVIRO LABS
(Recognised by Govt. of India, MoEF, New Delhi Vide Gazette Notification No. S.O. 1190 (E))
Tilaknagar "X" Roads, Baghamberpet,
Hyderabad – 13

ACKNOWLEDGMENT

M/s. GLOBAL ENVIRO LABS express sincere gratitude to ***M/s. ANJANI PORTLAND CEMENT LIMITED (A Subsidiary of Chettinad Cement Corporation pvt Limited)*** for the opportunity provided by assigning the preparation of Environmental Statement (Audit) for their Unit at Anjanipuram, Gudimalkapuram Post, Chintalapalem (Village & Mandal) Suryapet District of Telangana State. The Environmental Statement (Audit) is prepared for the financial year from April 2017 to March 2018. ***GLOBAL ENVIRO LABS*** are obliged to the Executives of ***M/s. ANJANI PORTLAND CEMENT LIMITED*** especially ***Sri. N. Venkat Raju, Joint President (Works)*** for their co-operation and assistance during the preparation of this statement. We also wish to acknowledge our gratitude to all of them who helped during the data collection and report preparation.

FORM - V
(See Rule 14)
ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 31st MARCH 2018.

PART – A

- i) Name and address of the owner/ : **Sri. N. Venkat Raju,**
Occupier of the industry oper- Joint President (Works)
ation or process **M/s. Anjani Portland Cement Limited.,**
Sy.No.226,Gudimalkapur (Post),
Chinthalapalem Village & Mandal,
Suryapet (Dist) T.S.
- ii) Date of the last environmental : September 2017.
audit report submitted
- iii) Production Capacity (Units) : Clinker: 3485 TPD Cement: 5835 TPD
CPP: 16 MW
- Produced Quantity (2017-18) : Clinker: 7,83,900 TPA Cement: 9,18,441 TPA
CPP: 8212.9 MW

PART – B

WATER AND RAW MATERIAL CONSUMPTION

1) Water consumption:

Plant	: 77.0 m ³ /day
Cooling Make up	: 56.0 m ³ /day
Domestic	: 21.0 m ³ /day
Captive Power Plant	: 150 m ³ /day
(Cooling /RO Feed/DM water)	

Name of Products	Water consumption per unit of products (m ³ /T)	
	During the previous financial year (1) 2016-2017	During the current financial year (2) 2017-2018
OPC and PPC	0.028	0.0610

ii) Raw Material Consumption

Name of the raw materials	Name of product	Consumption of raw material per MT of output (MT)	
		During the previous financial year 2016-2017	During the current financial year 2017-2018
1. Limestone	Cement	1.48474	1.4374
2. Iron ore		0.0000	0.0000
3. Laterite		0.00665	0.0010
4. Fly ash in Raw Mill		0.00121	0.0031
5. Coal		0.12941	0.1407
6. Iron Sludge		0.00429	0.0026
7. Alternate Fuels (Spent Carbon, Organic Solid & Organic Liquid)		0.03410	0.0174
8. Chemical Gypsum		0.04445	0.0415
9. Spent Gypsum		0.00060	0.0012
10. Saltpan Gypsum		0.00057	0.00002
11. Fly ash in Cement		0.09895	0.1085
12. Slag in Cement		0.0000	0.0089

PART – C

POLLUTION GENERATED (Parameter as specified in the consent issued)

Pollutants	Quantity of Pollution Generated	Percentage of Variation from prescribed Standards with reasons
(a) WATER	Data enclosed	Parameters are well within the limits prescribed by T.S. Pollution Control Board
(b) AIR	Data enclosed	

PART – D

HAZARDOUS WASTE

(As specified under Hazardous wastes/Management and handling) rules, 1989

Hazardous Wastes	Total Quantity (MT / Year)	
	During the previous financial year 2016-2017	During the current financial year 2017-2018
Waste Oils	11.525	11.662 MT
Used Lead Acid Batteries	Nil	Nil

PART – E

SOLID WASTES

	Total Quantity (Tons/ Year)	
	During the previous financial year 2016-2017	During the current financial year 2017-2018
(a) From Process (CPP)	----	14789.055
(b) From Pollution Control Facility	----	----
(c) Quantity recycled or re-utilized	----	----

PART - F

Please specify the characteristics (in terms of concentration and Quantum) of Hazardous as well as solid wastes and Indicates disposal practice adopted for both these categories of wastes.

There are two types of Hazardous waste is generated from this unit and all the hazardous waste is sold to suitable re-processing agents.

There are 11,662 MT/Year of Waste Lube Oil and 0 No's of Lead Acid Batteries are generated from the plant. Waste Lube Oils are stored in drums and mixed with coal and incinerated in the kiln.

There is 14815.38 MT/Year of fly ash (solid waste) generated from 16 MW CPP, which was used in manufacturing of Cement. The intermediate products, raw material and finished product collected in various pollution control systems are being recycled into the process.

PART - G

Impact of the pollution control measures on conservation of natural resources and consequently on the cost of production.

Adequate measures taken to maintain clear environment in and around the factory premises. There is a bare minimum impact on the surrounding environment. Cost of production is slightly increased due to the pollution control measures.

PART – H

Additional investment proposal for environmental protection including abatement of pollution.

M/s. ANJANI PORTLAND CEMENT. They are spending about **2.72** crores per year as maintenance expenditure to run the pollution control system and for a forestation program.

PART - I

Any other particulars in respect of environment protection and abatement of pollution.

Pollution control facilities are functioning satisfactorily. The plant has developed green belt in area of 19.0 Hectares in the plant and in the colony satisfactorily. Prompt attempts have been taken by the plant authorities to grow trees since 1999. The management also proposed to develop the Greenbelt in all vacant areas of the plant, colony and mines. About 51,400 plants have been developed by the management under greenbelt development. The steps taken by the management to abate pollution and at the same time improves the surrounding environment.

One No. of Ambient air quality monitoring stations was installed to measure PM₁₀ and PM_{2.5} at upward wind direction. Second AAQM station installed to measure PM₁₀ and PM_{2.5} at downward wind direction and connected to TSPCB server.

Closed storage facilities are provided for limestone, coal and clinker to improve ambient air quality and confirm to environmental precincts.

On line Stack monitoring stations for Kiln Stack (RABH) and Cooler Stack (ESP) of Line – I and connected to PCB server.

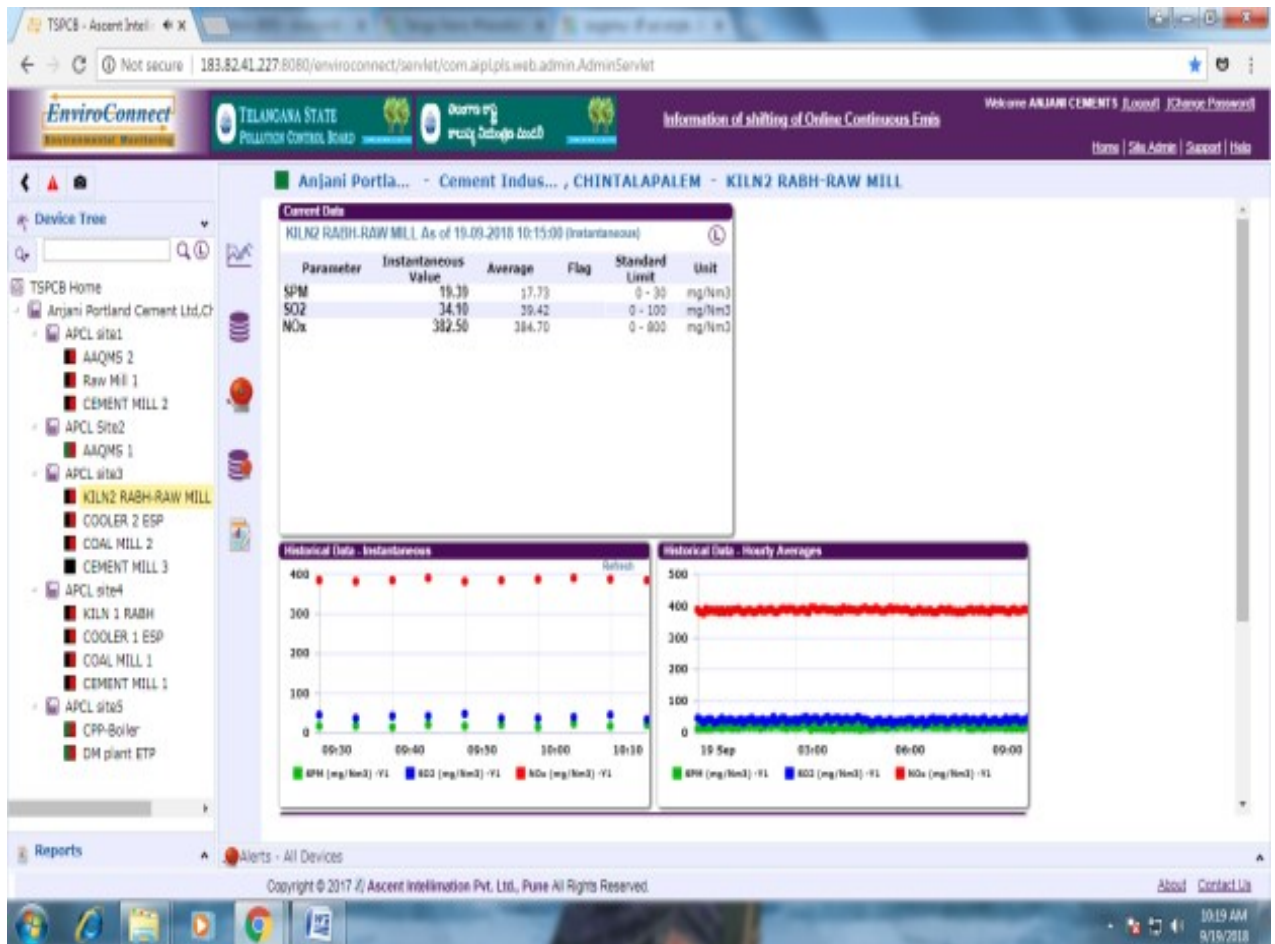
Kiln II & Raw mill were connected to common RABH Stack.

&

Cooler Stack (ESP) of Line – II monitoring stations were connected to PCB server.

On line Stack monitoring stations installed at Line-I Raw mill , Cement Mills & Coal Mill, Line –II Cement Mill & Coal Mill and connected to TSPCB server.

The following pictures are to be made Online Pollution Monitoring Systems of Ambient Air Quality and Stack Emission Monitoring data connected to State & Central Pollution Control Board Server.



1. INTRODUCTION:

The Concern for Environment, both in the national and international arena, has increased manifold in the recent years. Sustainability of present, manufacturing practices, rates of resource consumption, and the effects of economic progress on Environment are debated. People are worried about the health hazards that are posed by any degraded environment. In order to limit degradation, the government in line with its regulatory approach to environmental protection, has enacted environmental audit.

Environment audit can be defined as a management tool compressing a systematic, documentable, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of helping to regulate the environment by facilitating management control of environmental practices and assessing compliances with company policies, which would include meeting regulatory requirements. In essence, environmental audit is a process of detecting waste of resources and environmental damage that can be avoided in any productive activity.

When the procedure for environmental audit was first notified under the Environment (Protection) Act, 1986 by the Ministry of Environment and Forests (vide notification no GSR 329(E) Dated 13th March 1992) the industrial units were required to furnish environmental audit reports. By an amendment (vide notification no GSR 386 (E) Dated 22nd April 1993) the term for the document has been revised from “environmental audit report” to “environmental statement”.

M/s. Anjani Portland Cement Limited (A Subsidiary of Chettinad Cement Corporation pvt Limited) is part Of Chettinad group.

Anjani Portland Cement Limited (APCL) is a one and half decade old company with a proud legacy of Cement to display. A takeover of an ailing company – M/s. Shez Cements in 1999 set the beginning. Starting with initial production capacity of 0.2 million tons per annum in 1999, the company upgrade the First Line.

In 2014-15 **M/s Anjani Portland Cement Limited (A Subsidiary of Chettinad Cement Corporation pvt Limited)** is taken over by Chettinad Group. Anjani Portland Cement Limited is a subsidiary of Chettinad Cement Corporation Limited and Mr.A.Subramanian is a present Managing Director of Anjani Portland Cement Limited.

In the year 2005 Anjani invested Rs.25 Crores to increase Production by process up gradation, Quality upgradation, minimize pollution level and conservation of energy.

With the modernization of process, production increased from 3 Lakhs to 5 Lakhs MT annually with improved quality.

Anjani specialized in manufacturing of PPC which can be manufactured with approximately 30-33 % fly ash in clinker. The fly ash is a waste material from thermal power stations and used for PPC manufacturing.

Thereby we save,

30% Carbon dioxide emissions.

45% of our limestone resources,

Consumption of power and coal.

Anjani Cement is a house hold name in southern part of India. The Company's flagship brand "Anjani Super Gold-PPC", OPC-53 Grade and OPC-43 Grade , "ANJANI PRATHISTTA" (Rapid hardening Portland cement as per IS 8041:1990) and Composite Cement has captured the market.

M/s. ANJANI PORTLAND CEMENT LIMITED(A Subsidiary of Chettinad Cement Corporation Limited) has set up their unit at Sy.No.226 of Gudimalkapuram (Post) Chintalapalem (Village & Mandal), Suryapet District of Telangana State in the year 1999 for manufacturing of OPC & PPC Cement. The installed capacity for Clinker is about 3485 TPD and Cement is 5,835 TPD. The total cost of the project is 238.61 crores. ***M/s. ANJANI PORTLAND CEMENT LIMITED (A Subsidiary of Chettinad Cement Corporation pvt Limited)*** has setup its unit in an area of 51.48 Hectares. Out of 51.48 Hectares the total built-up area and utilities area is 19.0 Hectares and the remaining land is used for green belt development with treated domestic wastewater.

2. OBJECTIVE OF THE STUDY:

The objective of the present study is to review the performance of pollution control systems installed by the industry so as to identify efficient pollution prevention and control systems, which could be beneficial to both environment and its components.

M/s. ANJANI PORTLAND CEMENT LIMITED (A Subsidiary of Chettinad Cement Corporation Limited) has entrusted the task of preparation of Environmental Statement (Audit) to ***M/s. GLOBAL ENVIRO LABS***, Hyderabad and an in-depth study was conducted to review the process efficiency, waste water generated and the present treatment systems, emissions generated and air pollution control equipment provided, mode of solid waste collection and disposal and the other associated problems leading to the pollution and impact on environment.

3. SITE LOCATION:

M/s. ANJANI PORTLAND CEMENT LIMITED (A Subsidiary of Chettinad Cement Corporation Limited) is an ISO: 9001: 2015, ISO 14001: 2015 and OHSAS 18001: 2007 Certified Company. The management is committed in its ISO 14001 Policy to maintain Clean and Safe Environment. The management is committed to maintain Clean and Safe Environment. The project is located about 36 km away from Kodad. The predominant soil is Red Soil. The climatic conditions at the site are mainly dry through out the year and the site comes under Semiarid Zone. The average annual rainfall in the area is 751 mm, the maximum ambient temperature is 45°C and minimum is 17°C. There is no forest area within the radius of 10 kms around the present project site.

4. RAW MATERIALS AND PRODUCTS:

The raw materials used for producing the product of Ordinary Portland Cement are Limestone, Iron ore, Laterite, Gypsum, Fly ash and Coal.

5. PROCESS DESCRIPTION:

APCL manufactures Ordinary Portland Cement and clinker. The production capacity is 5835 metric tones of Ordinary Portland Cement per day. In the year 2017 - 18 the unit has produced 7,83,900 metric tones of Clinker, 9,18,441 metric tones of Cement and Power 8,212.9 MW. The main raw material Limestone is abundant in Telangana and Andhra Pradesh. The availability of Limestone in the local region has prompted the management to start the industry here. The process adopted by the unit is dry process and it would not generate any waste water from the process. The raw materials consumed are as follows:

- 1) Lime stone
- 2) Laterite
- 3) Iron Ore
- 4) Gypsum
- 5) Fly Ash
- 6) Coal & AFR etc.

Limestone obtained from the mines (M/s Anjani Limestone Mine) is crushed to appropriate size in an Impact crusher followed by hammer crusher. To the crushed limestone, Iron ore or laterite and Fly ash is mixed and grounded to fine powder in a raw mill. This part of milling is in closed circuit system to avoid any fugitive dust. The well ground raw mix is then blended thoroughly in order to have a consistent properties, which helps in steady Pyro-processing.

The well homogenized raw mix is carried into Pyro-processing system from silos by conveyors pneumatically. The Pyro-processing system consists of Rotary kiln with five-stage pre-heater and pre-calculator. At this stage pulverized coal is pumped into the calculator. The raw mix undergoes chemical reactions and reaches to sintering temperature and becomes Nodular clinker. The clinker leaving the kiln is cooled in grate cooler and stored in stock pile.

Clinker from Closed CLINKER stock pile and gypsum are ground finely in grinding cement mill(PPC) to about 340 M²/Kg fineness. The cement is conveyed to cement silos for storage and packing through a Modern Roto packer /Bulk loading.

6. WATER REQUIREMENT:

The total water consumption is 77.0 Cum/day (Plant) and CPP is 150 Cum/day and the break up details given below:

Plant:	1. Cooling Makeup	- 56.0	Cum/day
	2. Domestic	- 21.0	Cum/day
CPP:	1. Cooling	- 50.0	Cum/day
	2. RO Plant/DM Plant/ Boiler Feed	- 100.0	Cum/day

The water requirement of 227.0 Cum/day for the plant operations are being met by bore wells located within the factory premises. The water is supplied to the various sections in the plant through overhead tank.

7. GROUND WATER QUALITY:

The total requirement of water for plant operations is drawn from ground water table through 3 no. of bore wells located in the factory & colony premises. Ground water is abundant in the project area. Ground water sample is collected within the factory premises and analyzed for various water quality parameters. The results are presented in table 7.1, and it is observed that the quality of ground water in and around the factory is satisfactory for drinking purpose. So the unit has installed water treatment(R.O) plant and it is effectively working. After treatment the water is good for drinking purpose and this water is supplied to plant.

Table - 7.1

WATER ANALYSIS
(R.O. Water)

1. Colour		: Colourless	Colourless
2. p ^H		: 7.13	6.5-8.5
3. Electrical Conductivity (micro mhos)		: 26	--
4. Dissolved Solids	(mg/l)	: 18	500
5. Total Hardness	(mg/l)	: 05	300
6. Phenolphthalein Alkalinity	(mg/l)	: Nil	--
7. Methyl Orange Alkalinity	(mg/l)	: 08	200
8. Non-Carbonate Hardness	(mg/l)	: Nil	--
9. Calcium as CaCO ₃	(mg/l)	: 04	75
10. Magnesium as CaCO ₃	(mg/l)	: 01	30
11. Sodium as Na	(mg/l)	: 1.8	--
12. Potassium as K	(mg/l)	: 0.1	--
13. Chloride as Cl	(mg/l)	: 2.4	250
14. Sulphate as SO ₄	(mg/l)	: 0.8	200
15. Nitrate as NO ₃	(mg/l)	: 0.24	45
16. Fluorides as F	(mg/l)	: 0.16	1.00
17. Silica as SiO ₂	(mg/l)	: Nil	--
18. Iron as Fe	(mg/l)	: 0.01	0.3
19. Turbidity	(NTU)	: Nil	5.0

8. POLLUTION CONTROL IN THE PLANT:

The industry has given top priority to pollution prevention and control. There are Reverse Air Bag House Filters to arrest the air pollution from the Kiln, Raw meal. Crusher, Blending silo, Coal mill, Cement mills, and packing plant were connected to separate individual Bag Filters & Both line Cooler vent stacks is connected with E.S.P separately. Domestic effluents are treated in 200 KLD Sewage Treatment Plant, treated water which is being used for plantation to minimize the pollution and bring down to the standards prescribed by the TSPCB. There is no solid waste generated from the process. The intermediate products, raw material and finished product collected in various pollution control systems are being recycled into the process.

8.1 Water Pollution Control:

The industry generates no industrial effluent in any manner. The cooling water in the circuit will be adjusted for the evaporation losses and re-circulated in to the process; hence the industrial waste water generated from the plant is virtually nil. The plant is furnished with colony for the staff and employees. The daily water consumption for domestic purpose in colony and plant is about 21 KL/day. About 17 Cum/day of sewage water is generated from the colony and plant is sent to septic tanks fallowed by soak pit and reused for the gardening and plantation.. The sewage water is analyzed and the analyzed different parameters are presented in Table 8.1

Table-8.1

SEWAGE WATER ANALYSIS

pH	:	7.32
Total Dissolved Solids	:	956
Total Suspended Solids	:	49
Chemical Oxygen Demand	:	128
Biochemical Oxygen Demand (3 days at 27°C)	:	23
Oil & Grease	:	0.14

**Sewage Treatment Plant Commissioning with a Capacity
of 200 KLD**

Output water is being used for greenbelt development



8.2 Air Pollution Control:



In general, the cement plant creates air pollution in the neighboring areas. At

M/s. Anjani Portland Cement Limited, the major air pollution is due to the emissions from the Kiln stack, Raw meal stack, Cement mills exhausts, Limestone and Coal crushing units, Fuller coolers and D.G. sets.

The industry has taken interest in controlling the air pollution. Flue gas emissions from the Kiln, Raw mill, Coal mill and Cement mills, Cooler vent, Blending silos and Packing plant stacks are discharged via Bag filters are meeting the standards prescribed by the T.S. Pollution Control Board. Stack emissions monitoring is carried out in every month for the parameters viz. Suspended particulate matter, Sulphur dioxide and Oxides of nitrogen etc. It is noticed from the collected emissions data that the parameters monitored are within the limits prescribed by T.S. Pollution Control Board.

The required electric power is obtained from the TSSPDCL and 2 Nos. of 1250 KVA D.G. Sets and 1 No. of 320 KVA D.G. Set, which are installed by the industry as standby source for uninterrupted power supply.

High-speed diesel is used for stand by generators. The industry has provided catalyst filters and industrial type silencers for diesel generators for controlling the air and noise pollution. Flue gas emissions discharging from the D.G. Set are meeting the standards prescribed by T.S. Pollution Control Board. The Stack Emissions Monitoring for D.G. Set is carried out for the parameters viz. Suspended particulate matter, Sulphur dioxide and Oxides of nitrogen etc. It is noticed from the collected emissions data that the parameters monitored are within the limits prescribed by T.S Pollution Control Board.

8.3. Air Monitoring :

The existing status of Air Quality with respect to Ambient air and Stack flue gas emissions have been monitored on monthly basis throughout the year. The industry has its own stack sampling equipment and high volume samplers. The plant uses its own chemical laboratory for routine analysis

8.3.1. Ambient Air Quality:

The ambient air quality monitoring is carried out at three locations in the plant premises to know the status of the ambient air quality. Monitoring is carried out once in a month at the following places.

- a) Near Security Gate
- b) Near Crusher
- c) Near Kiln Stack Area

Ambient air quality is monitored for 24 hours at each station for the estimation of PM₁₀, sulphur dioxide, oxides of nitrogen and PM_{2.5}. The values for the parameters monitored are represented in the Table 8.2. The analyzed values for PM₁₀, SO₂, NO_x and PM_{2.5} are within the limits prescribed by T.S.P.C.B for industrial and mixed use.

Table – 8.2

AMBIENT AIR QUALITY DATA

S. No:	Location	PM ₁₀ (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	PM _{2.5} (µg/m ³)
1.	Near Security Gate	54	06	10	31
2.	Near Crusher	59	12	07	33
3.	Near Kiln Stack Area	61	11	16	35

8.3.1.2 Stack Emissions:

The flue gas emissions of Kiln, Raw mill, Cooler, Coal mill and Cement mill & crusher are discharged through the stacks are monitored for the parameters SPM once in a month throughout the year. The values of emission data presented in Table 8.3 shows that the monitored values for different parameters are meeting the T.S. Pollution Control Board standards.

The industry is also having 1 No. of 320 KVA D.G. Set and 1250 KVA D.G. Sets with individual stack for each. The flue gas emissions discharged through the stacks of D.G. Sets are monitored for the parameters SPM and values of emission data presented in Table 8.4 and 8.5 shows that the monitored values for different parameters are meeting the T.S.P.C.B standards.

Table – 8.3

STACK EMISSIONS DATA (Yearly quantity)

	SPM (mg / Nm³)
1. Stack attached to the Kiln stack -1	: 18
2. Stack attached to the Coal Mill -1	: 22
3. Stack attached to the Cement Mill	: 25
4. Stack attached to the Cooler Stack - 1	: 28
5. Stack attached to the Crusher Stack – 1	: 21
6. Stack attached to the Raw Mill Stack - 1	: 26
7. Stack attached to Blending Silo stack -1	: 19
8. Stack attached to Packing Plant Stack -1	: 14
9. Stack attached to the Cement Mill -2 -L1	: 24
10. Stack attached to Rotary Kiln – L2	: 28
11. Stack attached to LS Crusher Stack – L2	: 17
12. Stack attached to Coal Mill Stack –L2	: 21
13. Stack attached to Cooler Vent Stack –L2	: 28
14. Stack attached to Cement Mill – L2	: 25
15. Stack attached to Packing Plant – L2	: 18
16. Stack attached to CSP Dust Collector - L2	: 24
17. Stack attached to 70 TPH Coal Fired Boiler	: 32

Table – 8.4

STACK EMISSIONS DATA

320 KVA D.G. Set		
1. Suspended particulate matter (mg/N m ³)	:	54
2. Sulphur dioxide Concentration (mg/N m ³)	:	121
3. Oxides of nitrogen Concentration (mg/N m ³)	:	146

Table – 8.5

STACK EMISSIONS DATA

1250 KVA D.G. Set		
1. Suspended particulate matter (mg/N m ³)	:	62
2. Sulphur dioxide Concentration (mg/N m ³)	:	176
3. Oxides of nitrogen Concentration (mg/N m ³)	:	224

8.3.1.3 Ambient Noise Levels Monitoring:

Noise levels are measured at various places in the factory. High noise levels may have adverse impact on the workers and the surrounding environment. Noise levels are measured using Lutran Make Sound Level Meter. The noise levels measured are presented in Table 8.6 and the measured values are within the limits prescribed by T.S.Pollution Control Board.

Table – 8.5

AMBIENT NOISE QUALITY DATA

Location	Noise Levels in dB (A)	
	Day Time (1)	Night Time (2)
1. Near Security	51	46
2. Near Cement Mill	67	63
3. Near Kiln	69	67
4. Near D.G Set Area	65	61
5. Near Canteen	57	53
6. Near Compressor House	72	68
7. Near Office	59	51
8. Near Limestone Crusher	67	64
9. Near Raw Mill	69	66
10. Near Guest House	53	48

Note: 1. Daytime is reckoned in between 6 a.m and 10 p.m
2. Nighttime is reckoned in between 10 p.m and 6 a.m

8.3 SOLID WASTE MANAGEMENT:

There is 14815.38 MT/Year of fly ash (solid waste) generated from 16 MW CPP, which was used in manufacturing of Cement. The intermediate products, raw material and finished product collected in various pollution control systems are being recycled into the process.

9. GREEN BELT DEVELOPMENT:

Greenery/Plantation recharges oxygen into environment. Green belt development may have the following benefits.

- a) Mitigation of fugitive emissions including odour
- b) Noise pollution control
- c) Improving the local ecosystem
- d) Arresting the Soil erosion
- d) Improving the landscape of the area
- e) Aesthetics

Spatial and compositional design of greenbelt for environmental management is done after considering the following factors.

- a) Topography of the area.
- b) Climate and soil quality of the area.
- c) Flora and fauna spread over the area.
- d) Pollutants source identification and their nature and concentration levels.

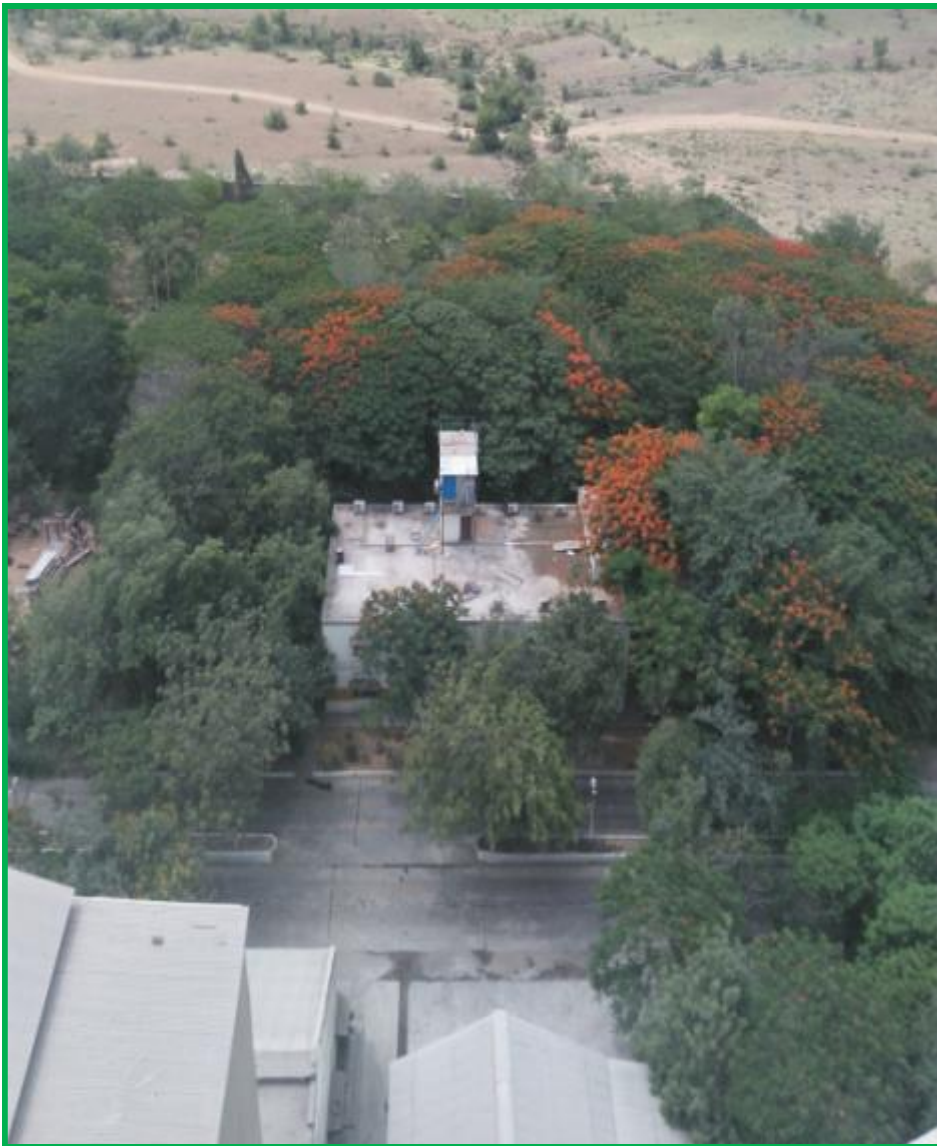
Keeping in view of the above factors, the management has adequately developed the Green belt around the factory premises.

- a) Curtain Plantation: A green belt along the outer periphery of the Proposed project land area is developed. Density of plantation is around 1000 - 1300 plants / Acres.
- b) Lung Plantation: Free and empty places around Office block, Store etc., planted with trees and shrubs. At the planning stage itself, enough open space is made available for developing lawns and gardens.
- c) Ornamental Plantation: Flowering trees and shrubs are planted around office block and in lawns to improve the landscape of the area.

- d) Avenue Plantation: Trees are planted in two rows on either side of the roads, which will improve the landscape, and give healthy air and shadow to the passersby.

A massive plantation has done in and round the process plant. Considering the soil quality, climatic conditions and the water quality and quantity, plant species and plantation practices are selected.

Plant Greenery Photos:















10. COST OF POLLUTION CONTROL :

M/s. ANJANI PORTLAND CEMENT LIMITED(A Subsidiary of Chettinad Cement Corporation Limited) has spent around 2.72 Crores per year as maintenance expenditure to run the pollution control system and for a forestation program.

11. HOUSE KEEPING:

Proper cleaning of the different sections is required to maintain healthy atmosphere and a good quality product. Stores to be maintain properly. Factory premises are to be clean and green to have good house keeping. ***M/s. ANJANI PORTLAND CEMENT LIMITED (A Subsidiary of Chettinad Cement Corporation pvt Limited)*** is keeping their plant and premises neat and tidy. House keeping has been found to be ok and are using Mechanized sweeping machine.

12. ORGANIZATION STRUCTURE:

The organizational structure of the plant is shown in figure. Two officers look after the pollution control activities and they directly report to the Sr.G.M.. It is observed that environmental management group has sufficient No. of personnel. In plant, Personal computers and programmable logic controllers to control kiln, cooler and coal mill. Thus these are automatic control units and other units are manually controlled.

The Vice President (works) heads the Environment Cell in ***M/s. ANJANI PORTLAND CEMENT LIMITED (A Subsidiary of Chettinad Cement Corporation pvt Limited)***. They hold meeting every morning to assess the condition of environment and to take any action arising out of any deviation. The Global Enviro Labs monitor the Ambient Air Quality Monitoring in a month at four different places and Stack Emissions Monitoring in every month and the data generated is recorded and kept as a tool for review purposes.

CONCLUSIONS

The unit of ***M/s. ANJANI PORTLAND CEMENT LIMITED (A Subsidiary of Chettinad Cement Corporation Limited)***, Gidimalkapuram (Post) Chintalapalem (Village & Mandal), Suryapet District of Telangana State, is highly effective in manufacturing of Ordinary Portland Cement. The industry generates no industrial effluent in any manner. The cooling water in the circuit will be adjusted for the evaporation losses and re-circulated in to the process; hence the industrial waste water generated from the plant is virtually nil. The domestic effluent/sewage water is generated from the colony and plant are treated in 200 KLD Sewage Treatment Plant, treated water which is being used for plantation. RABH are attached to the Kiln, Raw mill and Clinker Cooler. Separate bag houses are attached to Coal mill and Cement mill stacks are effectively arresting the dust and a part of other gases also in flue gas emissions. The emissions from the above mentioned sources are monitored and the monitored parameters are meeting the T.S. Pollution Control Board Standards. The ground water is abundant in the project area and it is observed that the quality of ground water in and around the project site is satisfactory for drinking purpose. Stand by generators have catalytic converters and silencers to reduce the pollution load and noise. The green belt is unique and the industry has given top priority to green belt development.. Prompt attempts have been taken by the management to grow trees since 1999. To conclude the industry is functioning effectively for abating the pollution to the minimum levels.



By Royal Charter

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that:

Anjani Portland Cement Ltd.
Anjani Puram
Chintalapalem Village
Gudimalkapuram Post, Mellacheruvu Mandal
Suryapet District 508 246
Telangana
India

Holds Certificate No:

FM 695956

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

Limestone Crushing, Clinkerization, Cement grinding, Packing & Dispatch of Cement & Clinker and Generation & Export of Power

For and on behalf of BSI:

Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2016-05-26

Latest Revision Date: 2018-07-26

Effective Date: 2018-08-09

Expiry Date: 2021-08-08

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Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 345 080 9000
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.
A Member of the BSI Group of Companies.



By Royal Charter

Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

Anjani Portland Cement Ltd.
Anjani Puram
Chintalapalem Village
Gudimalkapuram Post, Mellacheruvu Mandal
Suryapet District 508 246
Telangana
India

Holds Certificate No:

EMS 695957

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

Limestone Crushing, Clinkerization, Cement grinding, Packing & Dispatch of Cement & Clinker
and Generation & Export of Power

For and on behalf of BSI:


Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2016-07-29

Latest Revision Date: 2018-07-26

Effective Date: 2018-08-09

Expiry Date: 2021-08-08

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A Member of the BSI Group of Companies.



By Royal Charter

Certificate of Registration

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM - OHSAS 18001:2007

This is to certify that:

Anjani Portland Cement Ltd.
Anjani Puram
Chintalapalem Village
Gudimalkapuram Post, Mellacheruvu Mandal
Suryapet District 508 246
Telangana
India

Holds Certificate No:

OHS 695958

and operates an Occupational Health and Safety Management System which complies with the requirements of BS OHSAS 18001:2007 for the following scope:

Limestone Crushing, Clinkerization, Cement grinding, Packing & Dispatch of Cement & Clinker and Generation & Export of Power

For and on behalf of BSI:

Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2016-06-29

Latest Revision Date: 2018-07-26

Effective Date: 2018-08-09

Expiry Date: 2021-03-11

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Further clarifications regarding the scope of this certificate and the applicability of BS OHSAS 18001:2007 requirements may be obtained by consulting the organization.
This certificate is valid only if provided original copies are in complete set.

Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 345 080 9000
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Co processing of Alternate Fuels



- The objective is to reduce GHG (Green House Gases) emissions - using alternate fuels .
- In place of Fossil fuels and to reduce waste disposal cost of nearby communities and to preserve mother Earth through environment protection.

Waste recovery by Anjani Cement to reduce GHG emissions



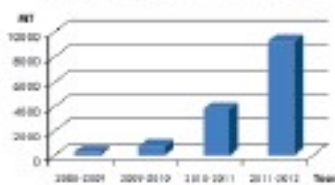
Anjani started using alternative fuels since 2008

Types of alternative fuels using at Anjani are

- Spent Carbon
- Liquid organic fuel
- Solid organic fuel
- Husk

Anjani developed excellent system for usage of alternative fuels in safe way and studied at laboratory level in details with respect to abatement impact on cement manufacturing process and environment

Co Processing of Alternate Fuels



Total : 14019 MT

Alternate Fuels Spent Carbon, Liquid Fuel & Solid Organics

Separate R&D wing developed with all facilities for testing the alternative fuels and analysis of Stack emissions.

Alternative fuels are incinerating in Pyro process system and burnt safely, such as

- High temperature (1400°C)
- Long residence time
- Oxidising atmosphere
- High thermal inertia
- Alkaline environment
- Adequate time in silinder
- Continuous fuel supply
- Calorific value of coal = 3000 - 4000 K.Cal / Kg
- Alternate fuel's calorific value = 2500 - 6000 K.Cal / Kg
- Nearly 20,000 MT of Coal saved by using Alternate fuels.
- 35,000 MT of CO₂ emissions reduced.

Anjani cement | clean cement | green cement | environ cement |||

today, tomorrow and forever...



20 x 26 in



Conservation of Water

Water from the mines pit is pumped out and being utilized by village tank. The excess overflow water being utilized for cultivation purpose.



By using this water nearly 50 Hectares of land being cultivated by the villages.

Anjanicement | **clean**cement | **green**cement | **environ**cement !!!

today, tomorrow and forever...



Stall Backdrop _ 6 x 6 ft