

1.0 INTRODUCTION

The concern for environment, both in the National and International arena, has increased manifold in the recent years. Sustainability of present manufacturing practices and rate of resource consumption and effects of economic progress on environment are debated. People are worried about the health hazards that are posed by degraded environment. In order to limit degradation, the Government, in line with its regulatory approach to environmental protection, has enacted a numerous saturates and rules.

2.0 ENVIRONMENTAL AUDIT

Environmental audit can be defined as a management tool comprising a systematic documented, 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 compliance 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) date, 13th March 1992), the industrial units were required to furnish environmental audit reports. By an amendment (vide notification no. GSR 386 (e) date. 22nd April 1993), the term for the document has been revised from “environmental audit report” to “Environmental Statement”.

Environmental Statement has to be submitted by every person carrying over an industry, operation or process requiring consent under section 25 of the Water (Prevention and Control of Pollution) Act of 1974 or under section 21 of the Air (Prevention and Control of Pollution) Act of 1981 or both or authorization under Hazardous wastes (Management and Handling) Rules of 1989 issued under the Environment (protection) Act of 1986. The statement has to be submitted every year to the concerned State Pollution Control Board for the Period ending on 31st March in a prescribed form (Form V) by 30th September every year, beginning from 1993.

M/s. Anjani Portland Cements Ltd. has entrusted the job of preparing the Environmental Statement for their mine for the financial year 2017-2018 to M/s. Pragathi Labs and Consultants Pvt. Ltd., Hyderabad.

3.0 PROJECT LOCATION

Anjani Lime Stone Mine -I of M/s Anjani Portland Cement Limited is located at Sy. No 24/1,373, 374 and 375 of Chintalapalem village & Mandal in Suryapet District of Telangana State (Longitude 79°57'45” – 79°58'00” E and 16°45'30” – 16°46'00” N Latitude) in the year 1999. It has the mining lease area over an extent of 57.52 hectares. Anjani Portland cement is an ISO: 9001, 14000 & 18000 are certified. Anjani Portland also got the awards for CSR during the year 2015. Dewatered Mine water is using for cultivating the lands.

Anjani Lime Stone Mine -III of M/s Anjani Portland Cement Limited is located at Sy.No 49/2 of Gudimalkapuram village, Chintalapalem Mandal in Suryapet District of Telangana State (Longitude 80°00'49.2” – 80°00'53.2” E and 16°46'37.4” – 16°46'42.7” N Latitude) in the year 2008.. It has mining lease area over an extent of 4.75 hectares.

ANJANI PORTLAND CEMENT LIMITED

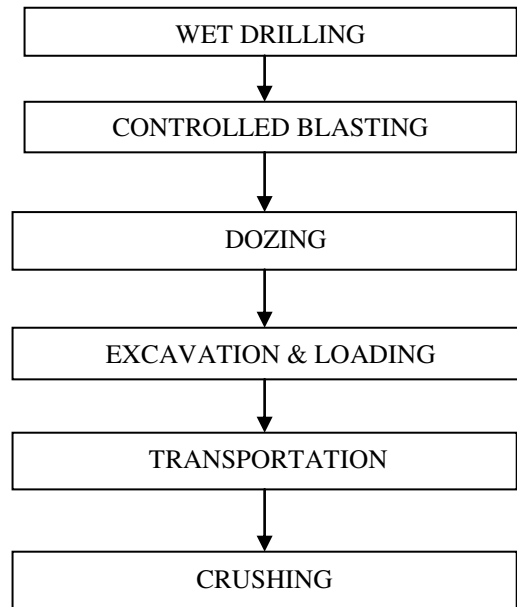
ENVIRONMENTAL STATEMENT FORM – V

Anjani Lime Stone Mine -IV of M/s Anjani Portland Cement Limited is located at Sy. No 375 of Chintalapalem village & Mandal in Suryapet District of Telangana State (Longitude 79°57'57.6" – 79°57'59.9" E and 16°45'22.9" – 16°45'35.1" N Latitude) in the year 2017. It has mining lease area over an extent of 15.00 hectares.

4.0 Production Details

Product	Production (MT/annum)	
	2016-17	2017-18
Mine-I	1020892.44	1106835.60
Mine-III	79000.00	1121.00
Mine-IV	0.00	500.00
Total	1099892.44	1108456.60

Mining Process



Open Cast works

Mechanized mining is in practice for the production rate of 1.65 MTPA Limestone for cement plant.

1. Over burden dumps : Nil
2. Ore bench height : First bench height 6 to 6.5m it is in progress, Second bench height 6 m it is in progress, Third bench height 6 m it is in progress, Sump made in the fourth bench for Anjani Limestone Mine-I & . First bench height 4to 5m it is in progress, Second bench height 5 m it is in progress, for Anjani Limestone Mine-III
3. Ore bench width : Bench width maintained more than bench height

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

- i.e. + 15 to 20 m
4. General conditions of face : All benches are dressed properly to avoid loose Boulders and bench slope is maintained at 10° to 15° inwardly.
5. Soil dumps : Soil dumps are used for greenbelt development
6. Bench floor : Bench floor is maintained tidy and clean with a gentle slope along the dip of the strata

5.0 Water consumption and Waste Water generation

The ground water is the chief source of water for the plant. The water quality is found good enough where there is no pretreatment is necessary. The water consumed and wastewater generation is as follows:

Source	Water consumption m ³ /day	Waste water generation m ³ /day
Sprinkling on haul road and much pile wetting	36.0	Nil
Wet Drilling	1.5	Nil
Domestic	1.0	Nil
Greenbelt development	3.5	Nil
Total	42.0	--

There is no waste water generated from the mine as there are no persons living in the mine site.

6.0 Pollution Control in the Mine

Air Pollution Control

In the open cast mine envisaged mining operations such as drilling, excavation, loading and unloading, movement of dumpers on haul roads are expected to generate particulate matter apart from that fugitive dust also cause for the air pollution due to vehicular movements.

Dust emission sources

Fugitive and Non-fugitive dust emissions during mining

No.	Source	Nature of emission	Frequency of emission	Nature of air pollution
1	Construction of infrastructural facilities (building, roads)	Fugitive and area source	Infrequent and pre-mining	Dust
2	Top soil stripping			
3	Drilling	Fugitive and point source	Frequent and post-mining	Dust, CO, NO ₂ , SO ₂
4	Blasting	Fugitive and point source		
5	Excavation of ore	Fugitive and area source	Very frequent and post-mining	Dust
6	Waste rock dumping	Non-fugitive &	Very frequent and post-	Dust

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

7	Loading and unloading of ore	point source	mining	
8	Material transport	Fugitive and line source	Very frequent and post mining	Dust
9	Wind erosion	Fugitive and area source	Frequent and post mining	Dust
10	Stock piles	Fugitive and area source	Frequent and post-mining	Dust

Proposed Mitigation Measures

Air pollution can be controlled by Dust suppression system, dust extraction system and vehicular emissions will be controlled.

Dust Suppression System

Adequate water sprinkling arrangement would be provided to suppress the dust emissions from haul roads, mine working places, stock piles and other areas susceptible to dust emissions due to surface wind.

Vehicular Emission Control

Vehicular emissions are expected from diesel operated transported equipment. By avoiding idle running and over loading of the engine, in addition, the engines shall periodically serviced to ensure proper running and control of the vehicular emissions.

The roads, dump yard and other dust raising places will be sprinkled with water regularly especially in the summers. Afforestation will be taken up in a phased manner during the mine life. Avenue plantation will be under taken to avoid noise and dust pollution.

Activity	Expected Pollution	Control Measures Adopted
Drilling of holes for blasting purpose	Dust emissions while drilling	The Wagon Drill does drilling. (Wet Process) hence no dust during drilling activity is generated.
Blasting operation	Dust emissions while blasting	Blasting is done based on the air conditions. Sprinkling of water on the top layer before blasting to reduce the fine dust emissions.
Loading of truck in the mine area for transportation.	Dust emissions while loading the limestone	Sprinkling of water on the limestone before and while loading the trucks.
Transportation of limestone to Stock yard	Dust emissions from the truck in movement and dust emissions from the roads due to vehicle movement Emissions from the vehicle due to fuel combustion.	Sprinkling of water on the roads at regular intervals to arrest the dust particles. Regular maintenance of the vehicle for proper combustion and reduced emissions.
Stacking of the limestone	Dust entertainment due to the movement of vehicle of dust into the ambient air due to winds.	Movable windshields of 5m by 8m, which have to be kept to arrest the wind based in wind direction, are provided. The storage of the limestone has to be done

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

		in a proper way by constructing a retaining bund all round the storage area.
Loading and Transportation of limestone	Dust entertainment and spillage while loading and transportation of limestone.	Due care has been taken while loading the trucks so as to minimize the dust entering the air.

The existing status of Air Quality with respect to ambient and Dust emissions has been monitored and details are given in the below **Tables**.

Noise Pollution Control

Noise will be produced during operational phase of mining due to drilling, blasting, ore extractors, movement of trippers and other heavy machinery.

The noise generated by the mining activity is dissipated within the core zone. Since, the mining and allied activities will takes place only during day time. However, the increase in noise levels will not pose any major problem on surrounding villages.

Proposed Mitigation Measures

Regular maintenance of noise generating units and equipments will minimize the noise levels. The noise level will reduce and anticipated noise levels falls below the prescribed limits.

Well designed green belt which is planned around the noise sources, act as noise barriers, and regular maintenance of vehicles shall minimize the noise levels.

Providing proper noise proof enclosure with glycerin soaked cotton and earmuffs for the workers separated from the noise source and exhaust silencers for all mine transport equipment.

The existing noise levels are given in the below **Tables**

Water Pollution Control

The ground water quality of the bore-wells in buffer zone indicates the quality of water is within the drinking water standards (IS 10500). Mining and allied activities shall have direct impact on improvement of ground water potential. Due to the creation of mines as water storage bodies, there would be an increase in ground water potential due to infiltration and percolation.

Proposed Mitigation Measures

The mine as such would not produce any significant quantity of waste water on a continuous basis except nominal amount of sanitary and canteen waste. The treated water would be used for greenbelt development.

The existing water quality are given in the **Tables**

FORM V

**ENVIRONMENTAL STATEMENT REPORT FOR THE FINANCIAL YEAR
ENDING 31ST MARCH 2018**

PART - A

1. Name and address of
 - i) Industry : Anjani Limestone Mine of
M/s Anjani Portland Cement Limited
Chintalapalem village & Mandal,
Suryapet District, Telangana State.
 - ii) Owner : Sri N. Venkat Raju
Sr. Vice President (works)
2. Production Capacity : Mine-I - 1.67 MTPA
Mine-III - 0.15 MTPA
Mine-IV – 0.10 MPTA
3. Date of Last Environmental Audit : 2017
Submitted

PART - B

I) PRODUCTION DETAILS

Product	Production (MT/annum)	
	2016-17	2017-18
Mine-I	1020892.44	1106835.60
Mine-III	79000.00	1121.00
Mine-IV	0.00	500.00
Total	1099892.44	1108456.60

WATER CONSUMPTION

Description	Water Consumption (m ³ /day)
Sprinkling on haul road and much pile wetting	36.0
Wet Drilling	1.5
Domestic	1.0
Greenbelt development	3.5
Total	42.0

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

Name of Product	Water consumption (KL/T)	
	During 2016-2017	During 2017-2018
Lime stone	0.000277	0.000282

PART – C

POLLUTION SOURCE & CONTROL

The major sources of air pollutants are dust from the mine and SO₂, NO₂ & CO from the vehicular movements. The monitoring details are given below

Table No. 1 Ambient Air Quality (Mine No. I)

MONTH: JUNE-2017

Location	Date of Monitoring	Concentration (µg/m ³)				CO mg/m ³
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	05 th June, 2017	69	37	9.0	14	0.7
Near Loading Area	05 th June, 2017	76	41	12	19	1.2
Drilling Area	05 th June, 2017	70	39	10	16	1.0
Near Haul Road	05 th June, 2017	64	35	7.0	11	0.6
Gudimalkapuram (V)	05 th June, 2017	46	24	7.4	9.1	0.43
Chintalapalem (V)	05 th June, 2017	48	26	6.7	10	0.56
Kothagudem (V)	05 th June, 2017	45	23	5.2	8.5	0.41
Yerragunta (T)	05 th June, 2017	43	21	4.8	7.6	0.34

Table No. 3 Ambient Air Quality (Mine No. III)

MONTH: JUNE-2017

Location	Date of Monitoring	Concentration (µg/m ³)				CO mg/m ³
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	07 th June, 2017	67	35	8.6	13	0.8
Near Loading Area	07 th June, 2017	74	39	11	17	1.1
Drilling Area	07 th June, 2017	71	36	10	14	0.9
Near Haul Road	07 th June, 2017	65	34	9.4	11	0.7
Gudimalkapuram (V)	07 th June, 2017	56	31	7.6	9.8	0.6
Chintalapalem (V)	07 th June, 2017	52	28	6.4	8.7	0.7
Kothagudem (V)	07 th June, 2017	49	26	6.1	8.4	0.6
Yerragunta (T)	07 th June, 2017	54	30	7.3	10.1	0.7

Table No. 2 Ambient Air Quality (Mine No. IV)

MONTH: JUNE-2017

Location	Date of Monitoring	Concentration (µg/m ³)				CO mg/m ³
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	06 th June, 2017	64	32	9.0	12	1.0
Near Loading Area	06 th June, 2017	76	40	10	16	1.2
Drilling Area	06 th June, 2017	60	29	9.1	11.5	0.9
Near Haul Road	06 th June, 2017	67	35	8.6	11	1.1
Gudimalkapuram (V)	06 th June, 2017	56	29	8.8	10	0.7
Chintalapalem (V)	06 th June, 2017	53	27	7.4	9.2	0.6

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

Kothagudem (V)	06 th June, 2017	50	26	6.1	8.7	0.56
Yerragunta (T)	06 th June, 2017	54	27	8.6	9.8	0.8

Table No. 4 Water Quality Data
MONTH: JUNE-2017

Parameters	Units	Bore Water
Turbidity	NTU	3.1
pH value	--	7.45
T. Hardness as CaCO ₃	mg/L	186
Chlorides as Cl ⁻	mg/L	80
Total Dissolved Solids	mg/L	396
Calcium as Ca	mg/L	42
Magnesium as Mg	mg/L	20
Sulphates as SO ₄	mg/L	15
Nitrate as NO ₃	mg/L	2.9
Fluorides as F	mg/L	1.0
T. Alkalinity as CaCO ₃	mg/L	182
Electrical Conductivity	μmhos/cm	627
Suspended Solids	mg/L	9.0
Calcium Hardness as CaCO ₃	mg/L	104
Mg Hardness as CaCO ₃	mg/L	82
Ph. Alkalinity as CaCO ₃	mg/L	Nil
MO Alkalinity as CaCO ₃	mg/L	182
Potassium as K	mg/L	3.0
Sodium as Na	mg/L	57
Silica	mg/L	3.2

Table No. 5 Mine Discharge Water
MONTH: JUNE-2017

Parameters	Units	Effluent
Colour	Hazen	4.8
Odour	--	Objectionable
Turbidity	NTU	7.6
pH	--	7.43
Electrical Conductivity	μmhos/cm	1086
Total Dissolved Solids	mg/L	698
Total suspended solids	mg/L	64
Chlorides as Cl ⁻	mg/L	142
Sulphates as SO ₄ ²⁻	mg/L	75
Nitrate Nitrogen as NO ₃	mg/L	4.2
Fluorides as F	mg/L	1.1
Iron as Fe	mg/L	2.4
Calcium as Ca	mg/L	93
Magnesium as Mg	mg/L	29
T. Alkalinity as CaCO ₃	mg/L	286
T. Hardness as CaCO ₃	mg/L	360
Sodium as Na	mg/L	97
Potassium as K	mg/L	6.0

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

Dissolved Oxygen (DO)	mg/L	5.1
Chemical Oxygen Demand (COD)	mg/L	38
BOD at 27 ⁰ C (3 days)	mg/L	16
Oil & Grease	mg/L	4.0

Table No. 6 Ambient Air Quality (Free Silica)

MONTH: JUNE-2017

Parameters	Units	Results
Mine-I Drilling Area	%	0.42
Mine-III Drilling Area	%	0.45
Mine-IV Drilling Area	%	0.56

Table No. 7 Ambient Air Quality (Dust Emissions)

MONTH: JUNE-2017

Parameters	Operator	Dust Conc. (mg/m ³)	Threshold limit (mg/m ³) as per DGMS
Haulage Road	K. Narsi Reddy	1.23	3.00
Near Breaker Machine	S. Nageswara Rao	1.39	3.00
Near Driller	M. Nageswara Rao	1.26	3.00
Mine Office	B. Aadi Reddy	0.64	3.00
Back hoe Shovel	S. Gopi	1.57	3.00

Table No. 8 Personal Noise Quality

MONTH: JUNE-2017

Parameters	Operator	Noise levels dB(A)
Haulage Road	K. Narsi Reddy	54.0
Near Breaker Machine	S. Nageswara Rao	71
Near Driller	M. Nageswara Rao	67.0
Mine Office	B. Aadi Reddy	54.0
Back hoe Shovel	S. Gopi	65.0

Table No. 9 Ambient Noise Quality

MONTH: JUNE 2017

Parameters	Noise levels dB(A)
1m distance from Haulage Road	50.0
1m distance from Driller	64.0
1m distance from Breaker Machine	68.0
1m distance from Mine Office	52.0
1m distance from Shovel	63.0

Table No. 10 Ambient Air Quality (Mine No. I)

MONTH: SEPTEMBER 2017

Location	Date of Monitoring	Concentration (µg/m ³)				CO mg/m ³
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	04 th September, 2017	64	35	9.4	16	0.8
Near Loading Area	04 th September, 2017	73	39	13	21	1.3
Drilling Area	04 th September, 2017	68	37	11	17	1.1
Near Haul Road	04 th September, 2017	61	33	8.6	13	0.7

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

Gudimalkapuram (V)	04 th September, 2017	43	22	7.6	9.7	0.46
Chintalapalem (V)	04 th September, 2017	46	25	6.9	10.8	0.58
Kothagudem (V)	04 th September, 2017	43	21	5.6	8.9	0.43
Yerragunta (T)	04 th September, 2017	41	18	5.2	8.2	0.36

Table No. 12 Ambient Air Quality (Mine No. III)

MONTH: SEPTEMBER 2017

Location	Date of Monitoring	Concentration ($\mu\text{g}/\text{m}^3$)				CO mg/m ³
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	06 th September, 2017	65	32	9.4	14	0.9
Near Loading Area	06 th September, 2017	72	37	12	19	1.2
Drilling Area	06 th September, 2017	68	33	12	16	1.0
Near Haul Road	06 th September, 2017	62	31	10	13	0.8
Gudimalkapuram (V)	06 th September, 2017	53	29	8.4	11	0.7
Chintalapalem (V)	06 th September, 2017	48	24	7.6	9.5	0.8
Kothagudem (V)	06 th September, 2017	45	23	6.9	9.6	0.7
Yerragunta (T)	06 th September, 2017	50	26	7.8	10.6	0.8

Table No. 11 Ambient Air Quality (Mine No. IV)

MONTH: SEPTEMBER 2017

Location	Date of Monitoring	Concentration ($\mu\text{g}/\text{m}^3$)				CO mg/m ³
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	05 th September, 2017	62	30	10	14	1.1
Near Loading Area	05 th September, 2017	73	38	12	17	1.2
Drilling Area	05 th September, 2017	56	27	10	13	1.0
Near Haul Road	05 th September, 2017	64	32	9.1	13	1.1
Gudimalkapuram (V)	05 th September, 2017	53	27	9.3	12	0.8
Chintalapalem (V)	05 th September, 2017	51	26	8.6	9.8	0.7
Kothagudem (V)	05 th September, 2017	48	23	7.8	9.3	0.6
Yerragunta (T)	05 th September, 2017	52	24	8.9	10	0.8

Table No. 13 Water Quality Data

MONTH: SEPTEMBER 2017

Parameters	Units	Bore Water
Turbidity	NTU	2.9
pH value	--	7.38
T. Hardness as CaCO ₃	mg/L	182
Chlorides as Cl ⁻	mg/L	80
Total Dissolved Solids	mg/L	406
Calcium as Ca	mg/L	42
Magnesium as Mg	mg/L	19
Sulphates as SO ₄	mg/L	16
Nitrate as NO ₃	mg/L	3.1
Fluorides as F	mg/L	1.0
T. Alkalinity as CaCO ₃	mg/L	185
Electrical Conductivity	$\mu\text{mhos}/\text{cm}$	632
Suspended Solids	mg/L	10
Calcium Hardness as CaCO ₃	mg/L	104
Mg Hardness as CaCO ₃	mg/L	78
Ph. Alkalinity as CaCO ₃	mg/L	Nil

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

MO Alkalinity as CaCO ₃	mg/L	185
Potassium as K	mg/L	1.4
Sodium as Na	mg/L	61
Silica as SiO ₂	mg/L	3.4

Table No. 14 Mine Discharge Water

MONTH: SEPTEMBER 2017

Parameters	Units	Effluent
Colour	Hazen	4.6
Odour	--	Objectionable
Turbidity	NTU	7.8
pH value	--	7.32
Electrical Conductivity	μmhos/cm	1094
Total Dissolved Solids	mg/L	706
Total suspended solids	mg/L	62
Chlorides as Cl ⁻	mg/L	146
Sulphates as SO ₄ ²⁻	mg/L	78
Nitrate Nitrogen	mg/L	4.5
Fluorides as F	mg/L	1.2
Iron as Fe	mg/L	2.0
Calcium as Ca	mg/L	95
Magnesium as Mg	mg/L	31
T. Alkalinity as CaCO ₃	mg/L	289
T. Hardness as CaCO ₃	mg/L	364
Sodium as Na	mg/L	99
Potassium as K	mg/L	5.6
Dissolved Oxygen (DO)	mg/L	4.8
Chemical Oxygen Demand (COD)	mg/L	36
BOD at 27 ^o C (3 days)	mg/L	14
Oil & Grease	mg/L	3.0

Table No. 15 Ambient Air Quality (Free Silica)

MONTH: SEPTEMBER 2017

Parameters	Units	Results
Mine-I Drilling Area	%	0.45
Mine-III Drilling Area	%	0.43
Mine-IV Drilling Area	%	0.54

Table No. 16 Ambient Air Quality (Dust Emissions)

MONTH: SEPTEMBER 2017

Parameters	Operator	Dust Conc. (mg/m ³)	Threshold limit (mg/m ³) as per DGMS
Haulage Road	K. Narsi Reddy	1.21	3.00
Near Breaker Machine	S. Nageswara Rao	1.34	3.00
Near Driller	M.Nageswara Rao	1.22	3.00
Mine Office	B. Aadi Reddy	0.61	3.00

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

Back hoe Shovel	S. Gopi	1.49	3.00
-----------------	---------	------	------

Table No. 17 Personal Noise Quality

MONTH: SEPTEMBER 2017

Parameters	Operator	Noise levels dB (A)
Haulage Road	K. Narsi Reddy	51.0
Near Breaker Machine	S. Nageswara Rao	68.0
Near Driller	M. Nageswara Rao	64.0
Mine Office	B. Aadi Reddy	52.0
Shovel	S. Gopi	63.0

Table No. 18 Ambient Noise Quality

MONTH: SEPTEMBER 2017

Parameters	Noise levels dB (A)
1m distance from Haulage Road	48.0
1m distance from Breaker Machine	64.0
1m distance from Driller	62.0
1m distance from Mine Office	49.0
1m distance from Shovel	60.0

Table No. 19 Ambient Air Quality (Mine No. I)

MONTH: DECEMBER 2017

Location	Date of Monitoring	Concentration ($\mu\text{g}/\text{m}^3$)				CO mg/m^3
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	04 th December, 2017	60	32	9.8	18	0.9
Near Loading Area	04 th December, 2017	69	36	14	23	1.5
Drilling Area	04 th December, 2017	65	34	12	19	1.2
Near Haul Road	04 th December, 2017	58	30	8.9	14	0.8
Gudimalkapuram (V)	04 th December, 2017	41	20	8.0	10	0.50
Chintalapalem (V)	04 th December, 2017	43	21	7.2	11	0.62
Kothagudem (V)	04 th December, 2017	40	19	5.9	9.3	0.47
Yerragunta (T)	04 th December, 2017	39	17	5.6	8.5	0.39

Table No. 21 Ambient Air Quality (Mine No. III)

MONTH: DECEMBER 2017

Location	Date of Monitoring	Concentration ($\mu\text{g}/\text{m}^3$)				CO mg/m^3
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	06 th December, 2017	62	30	10	15	1.0
Near Loading Area	06 th December, 2017	69	34	14	21	1.4
Drilling Area	06 th December, 2017	64	31	13	18	1.1
Near Haul Road	06 th December, 2017	60	29	11	16	0.9
Gudimalkapuram (V)	06 th December, 2017	51	24	9.0	13	0.7
Chintalapalem (V)	06 th December, 2017	45	21	8.1	10	0.7
Kothagudem (V)	06 th December, 2017	42	20	7.2	9.8	0.8

ANJANI PORTLAND CEMENT LIMITED**ENVIRONMENTAL STATEMENT FORM – V**

Yerragunta (T)	06 th December, 2017	47	23	8.3	11	0.9
----------------	---------------------------------	----	----	-----	----	-----

Table No. 20 Ambient Air Quality (Mine No. IV)

MONTH: DECEMBER 2017

Location	Date of Monitoring	Concentration ($\mu\text{g}/\text{m}^3$)				CO mg/m^3
		PM ₁₀	PM _{2.5}	SO ₂	NO ₂	
Near Mines Office	05 th December, 2017	59	28	11	16	1.2
Near Loading Area	05 th December, 2017	70	36	13	19	1.4
Drilling Area	05 th December, 2017	53	27	11	15	1.1
Near Haul Road	05 th December, 2017	61	33	9.6	14	1.2
Gudimalkapuram (V)	05 th December, 2017	51	24	9.7	13	0.9
Chintalapalem (V)	05 th December, 2017	48	23	9.0	10	0.8
Kothagudem (V)	05 th December, 2017	46	22	8.1	9.5	0.7
Yerragunta (T)	05 th December, 2017	50	23	9.2	11	0.8

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

Table No. 22 Water Quality Data

MONTH: DECEMBER 2017

Parameters	Units	Bore Water
Turbidity	NTU	2.4
pH value	--	7.42
T. Hardness as CaCO ₃	mg/L	180
Chlorides as Cl ⁻	mg/L	77
Total Dissolved Solids	mg/L	400
Calcium as Ca	mg/L	40
Magnesium as Mg	mg/L	19
Sulphates as SO ₄	mg/L	17
Nitrate as NO ₃	mg/L	2.6
Fluorides as F	mg/L	1.1
T. Alkalinity as CaCO ₃	mg/L	182
Electrical Conductivity	µmhos/cm	621
Suspended Solids	mg/L	13
Calcium Hardness as CaCO ₃	mg/L	100
Mg Hardness as CaCO ₃	mg/L	80
Ph. Alkalinity as CaCO ₃	mg/L	Nil
MO Alkalinity as CaCO ₃	mg/L	182
Potassium as K	mg/L	1.5
Sodium as Na	mg/L	59
Silica as SiO ₂	mg/L	3.2

Table No. 23 Mine Discharge Water

MONTH: DECEMBER 2017

Parameters	Units	Effluent
Colour	Hazen	4.2
Odour	--	Objectionable
Turbidity	NTU	7.5
pH value	--	7.24
Electrical Conductivity	µmhos/cm	1082
Total Dissolved Solids	mg/L	700
Total suspended solids	mg/L	60
Chlorides as Cl ⁻	mg/L	143
Sulphates as SO ₄ ²⁻	mg/L	52
Nitrate Nitrogen as NO ₃	mg/L	4.2
Fluorides as F	mg/L	1.3
Iron as Fe	mg/L	2.6
Calcium as Ca	mg/L	93
Magnesium as Mg	mg/L	31
T. Alkalinity as CaCO ₃	mg/L	281
T. Hardness as CaCO ₃	mg/L	361
Sodium as Na	mg/L	80
Potassium as K	mg/L	5.0
Dissolved Oxygen (DO)	mg/L	4.6
Chemical Oxygen Demand (COD)	mg/L	33
BOD at 27 ⁰ C (3 days)	mg/L	15

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

Oil & Grease	mg/L	4.0
--------------	------	-----

Table No. 21 Ambient Air Quality (Free Silica)

MONTH: DECEMBER 2017

Parameters	Units	Results
Mine-I Drilling Area	%	0.42
Mine-III Drilling Area	%	0.4
Mine-IV Drilling Area	%	0.52

Table No. 22 Ambient Air Quality (Dust Emissions)

MONTH: DECEMBER 2017

Parameters	Operator	Dust Conc. (mg/m ³)	Threshold limit (mg/m ³) as per DGMS
Haulage Road	K. Narsi Reddy	1.18	3.00
Near Breaker Machine	S. Nageswara Rao	1.31	3.00
Near Driller	M. Nageswara Rao	1.20	3.00
Mine Office	B. Aadi Reddy	0.58	3.00
Shovel	S. Gopi	1.43	3.00

Table No. 23 Personal Noise Quality

MONTH: DECEMBER 2017

Parameters	Operator	Noise levels dB (A)
Haulage Road	K. Narsi Reddy	58.0
Near Breaker Machine	S. Nageswara Rao	65.0
Near Driller	M Nageswara Rao	63.0
Mine Office	B. Aadi Reddy	54.0
Shovel	S. Gopi	61.0

Table No. 24 Ambient Noise Quality

MONTH: DECEMBER 2017

Parameters	Noise levels dB (A)
1 m Distance from Haulage Road	55.0
1m distance from Breaker Machine	71.0
1 m Distance from Near Driller	68.0
1 m Distance from Mine Office	57.0
1 m Distance from Shovel	65.0

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

--

Nil

Nil

PART – E

SOLID WASTE

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

PART – F

CHARACTERISTICS OF HAZARDOUS, SOLID WASTES & MODE OF DISPOSAL

There is no hazardous and solid waste generated from the mine.

PART – G

IMPACT OF POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON THE COST OF PRODUCTION

Adequate measures taken to construct Check dams to maintain clear environment in and around the mine premises. There is a minimum impact on the surrounding environment. Cost of mining activity is slightly increased due to the pollution control measures.

PART – H

MISCELLANEOUS:

The presence of the massive green belt in the township and also in the surroundings is helping as control of pollutants and improved the quality of Ambient Air.

• **Details of Plantations:**

Total area covered	: 13.52 Ha
No. of plants planted	: 10,280 Nos.

ANJANI PORTLAND CEMENT LIMITED

ENVIRONMENTAL STATEMENT FORM – V

Total amount spent (towards the Cost of plants) : Rs.10,06,560/- per year for maintaining clean Environment & Green belt purpose

- **Accident Details**

No major accidents occurred during the reporting period. All the minor accidents are attended by the first-aid at the site only. There is no fatal accident during the financial year 2016-2017

- **Auditor Comments:**

The production level found to be significantly increased in this financial year as compared to the previous year. The water consumption has been increased when computing the unit water requirement it is comparatively high in contrast to previous year.

The management shall follow all the post project management precautions as mentioned in the EIA report. They are advised to produce monthly monitoring data for stacks, ambient air quality, noise, wastewater and water from only recognized laboratories from Ministry of Environment and Forests, Govt. of India.