

M/s. SAGAR CEMENTS LIME STONE MINE., (Pedaveedu Works)

(Formerly known as M/s. Amareswari Cements Lime stone mine),
Pedaveedu (V) Mattampally (M), Suryapet (Dist).
Telangana.



ENVIRONMENTAL STATEMENT (AUDIT) REPORT FOR THE FINANCIAL YEAR 2024-2025



LAWN ENVIRO PRIVATE LIMITED

(Formerly M/s. Lawn Enviro Associates)

[Environmental Engineers & Consultants in Pollution Control]

Recognised by Central Pollution Control Board, GOI, New Delhi & Laboratory Accredited by NABL.



ISO 9001, 14001 & 45001
Certified Company

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ACKNOWLEDGEMENT

M/s. LAWN ENVIRO PRIVATE LIMITED express sincere debt of gratitude to M/s. SAGAR CEMENTS Limestone Mine. (Pedaveedu Works) for the opportunity given by assigning the preparation of Environmental Statement (Audit) for the financial year 2024–2025, for their captive limestone Mine located at Sy. No. 540, Pedaveedu (V), Mattampally (M), Suryapet District. The Environmental statement (Audit) Report is prepared for the financial year 2024–2025. Special mention needs to be made of Executives of M/s. SAGAR CEMENTS Limestone Mine. (Pedaveedu 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.

CONTENTS

Acknowledgement	2
Contents	3
List of Tables	4
List of Figures	4
Form - V	5
1. INTRODUCTION	11
2. OBJECTIVE OF THE STUDY	11
3. BENEFITS OF ENVIRONMENTAL AUDIT	12
4. LOCATION	13
5. PRODUCTION DETAILS	15
6. MINING PROCESS	15
7. WATER REQUIREMENT	19
8. POLLUTION CONTROL MEASURES IN THE MINE	19
8.1 Air Pollution Control Measures	19
8.2. Ambient Air Quality	24
8.3 Waste Water Sources and Monitoring	25
8.4 Noise Pollution	25
9. GREENBELT DEVELOPMENT	27
10. EXPENDITURE INCURRED FOR ENVIRONMENT PROTECTION MEASURES IN THE FINANCIAL YEAR 2024-2025	28
11. HOUSEKEEPING	28
12. AUDITOR'S COMMENTS	28

APPENDIX

A. National Ambient Air Quality Standards	29
B. Standards for Air quality and effluent for limestone & dolomite mines	31
C. Ambient Air Quality Standards In Respect of Noise	32
D. General Standards for Discharge of Effluents	33
E. Test Characteristics for Drinking Water IS 10500:2012	35
F. Plant Species For Greenbelt Development	37

LIST OF TABLES

7.1 Bore Well Water Analysis Data	21
7.2 Mine Pit Discharge Water Analysis Data	22
7.3 Drinking Water Analysis	23
8.1 Ambient Air Quality Data	25
8.2. Noise Levels	26
8.2.1 Ambient Noise Levels Data	27

LIST OF FIGURES

Fig. 1 Location Map of M/s. Sagar Cements Limestone Mine	14
Fig.2 Mining Process Flow Sheet of M/s. Sagar Cements Limestone Mine	18

FORM – V

(See Rule 14)

ENVIRONMENTAL STATEMENT (AUDIT) REPORT
FOR THE FINANCIAL YEAR ENDING 31st MARCH, 2025

PART – A

- i) Name and address of the agent / : Mr. M.V.RAMANA MURTHY
of the industry operation Sr. Vice President (Works) & Agent (Mines)
M/s. SAGAR CEMENTS LIME STONE MINE
Pedaveedu (V) Matampally (M),
Suryapet (Dist).
- ii) Date of the last environmental : September 2024
audit report submitted
- iii) Production Capacity (Units) : 1.80 MTPA
- iv) Year of Establishment : 6th September 1983

PART – B

WATER AND RAW MATERIAL CONSUMPTION

i) Water Consumption for Limestone Mine – 18.298 (m³/day)

Peak level
Consumption m³/day

- | | | |
|--------------------------|---|-------|
| 1. Dust suppression | – | 9.450 |
| 2. Greenbelt development | – | 4.83 |
| 3. Domestic | – | 4.017 |

Name of Product	Water consumption per unit of product (KL/MT)	
	During the previous financial year (2023–2024)	During the current financial year (2024–2025)
Limestone	0.0128	0.0155

ii) Raw material consumption:

Name of Raw materials	Name of product	Consumption of raw material per MT of output based on MT of Limestone	
		During the previous financial year (2023-2024)	During the current financial year (2024-2025)
-NA-		-NA-	-NA-

PART - C

POLLUTION DISCHARGED TO ENVIRONMENT

(Parameter's as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (kg/day) 2024-2025	Concentrations Of Pollutants in Discharges (mg/L) 2024-2025	Percentage of variation from prescribed standards with reasons
a) Waste water: There is no source to generate process waste water from mining activities. Domestic sewage is treated at septic tank followed by soak pit.			
b) Air: There is no source of emissions; only dust generation during mining operation is monitored by establishing ambient air quality sampling stations at various places in mine premises and surrounding areas. The generated data is shown in table 8.1. Analyzed data shows all the values are within the prescribed standards of T.G.P.C.B.			

PART – D

HAZARDOUS WASTE

(As specified under Hazardous and other wastes Management and Tran boundary Movement Rules, 2016)

Hazardous wastes	Total Quantity	
	During the previous financial year (2023–2024)	During the current financial year (2024–2025)
a) From Process	-N.A-	-N.A-
b) From Pollution control facilities	-N.A-	-N.A-

PART – E

SOLID WASTES

S.No	Solids Waste	Total quantity MT per year	
		During the previous financial year (2023–2024)	During the current financial year (2024–2025)
a)	From Process	-N.A-	-N.A-
b)	From Pollution Control Facility	-N.A-	-N.A-
c)	Quantity recycled or re-utilized	-N.A-	-N.A-

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.

PART – G

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

PART – H

Additional investment for environmental protection including abatement of pollution.

The Management has incurred an amount of Rs.47,29,667/- (Rupees Forty seven lakhs twenty nine thousand six hundred and sixty seven only) during the financial year 2024-2025 for various heads like general expenditure, capital expenditure, monitoring charges, housekeeping charges, health, pest control Green belt development and socio-economic development activities in the (neighboring) near-by villages.

PART – I

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

Dust generation is a major pollutant in mines which can be controlled by adopting pollution control measures in mining operation and water spraying system. The Management's objective is to achieve the production without affecting the physical, chemical and biological environments of the nearby vicinity. Industry has taken lot of efforts to raise the plantation in and around the mining lease area.

1. INTRODUCTION:

M/s. SAGAR CEMENTS LIMESTONE MINE, is producing limestone for the captive consumption of M/s. SAGAR CEMENTS LIMITED, which produces cement of 3.3 MTPA. M/s. SAGAR CEMENTS LIME STIONE MINE. is located at Sy. No. 540, Pedaveedu (V), Mattampally (M), Suryapet District of Telangana State is presently producing limestone of 1.8 MTPA. The total area of 143.72 ha of acquired mining lease is a barren Govt. land and is in non forest area. The main raw material limestone is mined from captive limestone Mine situated at a distance of 3.5 km away from the plant site

2. OBJECTIVE OF THE STUDY:

The objective of the present study is to review the performance of pollution control systems installed by industry so as to identify efficient pollution prevention and control systems, which could be beneficial to both environment and its components. And also Inserted by Rule 2 of the Environment (Protection) second Amendment & Rules, 1992 vide G.S.R. 329 (E), dated: 13-3-1992. Every person carrying on an Industry, operation or process requiring consent under Section 25 of The Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or under section 21 of The Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) or both or authorization under the Hazardous Wastes (Management, Handling & Transboundary, Movement)) Rules, 2016 issued under the Environmental (Protection) Act 1986 (29 of 1986) shall submit an environmental audit report for the financial year ending 31st March in Form - V to the concerned state pollution control board on or before the 30th day of September every year beginning 1993.

3. BENEFITS OF ENVIRONMENTAL AUDIT:

Environmental audit creates awareness in the conservation of natural resources and helps to improve production, safety and health. The benefits of audit are:

1. It helps in reduction of raw material consumption by way of waste minimization and adoption of recovery of waste and recycles the same.
2. Determines the performance of process systems and helps to improve the systems.
3. Efficiency of pollution control systems can be assessed.
4. This gives the awareness of environmental organization in the industry.
5. Data available will help the management for use in the plant modification and adopting pollution control for different types of technology.
6. It helps to identify pollution prone systems and exposure to it by the employees, for taking remedial measures.
7. The management will be assisted in complying with local, regional and national laws and regulations by adopting standards.
8. It helps to identify hazardous wastes, handling measures taken and exposure to litigation can be reduced.
9. To determine the impact on the surrounding environment due to the disposal of its pollutants and identify suitable preventive measures.
10. Energy saving systems can be adopted by considering fuel consumption data.

M/s. Sagar Cements Limestone Mine has entrusted the task of preparation of Environmental Statement (Audit) for their captive limestone Mine to LAWN ENVIRO PRIVATE LIMITED (LEPL), Hyderabad. An in-depth study was conducted by LEA, to review the process efficiency, waste water generated, the present treatment systems, air pollution sources & control measures being adopted, mode of solid waste collection & disposal, the other associated problems leading to the pollution and impact on environment.

4. LOCATION:

M/s. SAGAR CEMENTS LIMESTONE MINE is located at Pedaveedu (V), Matampally (M), in Suryapet District of T.S. The mine is situated at a distance of 2 km from Pedaveedu (V). Captive Limestone mine is located between latitude N16°44'40", 16°44'00" & between longitude E79°49'30", 79°50'55". The mining lease area falls under the Survey of India Topo Sheet No.56P/13 & 56 P/14. Fig.1 shows the Location Map of M/s. SAGAR CEMENT LIMESTONE MINE.

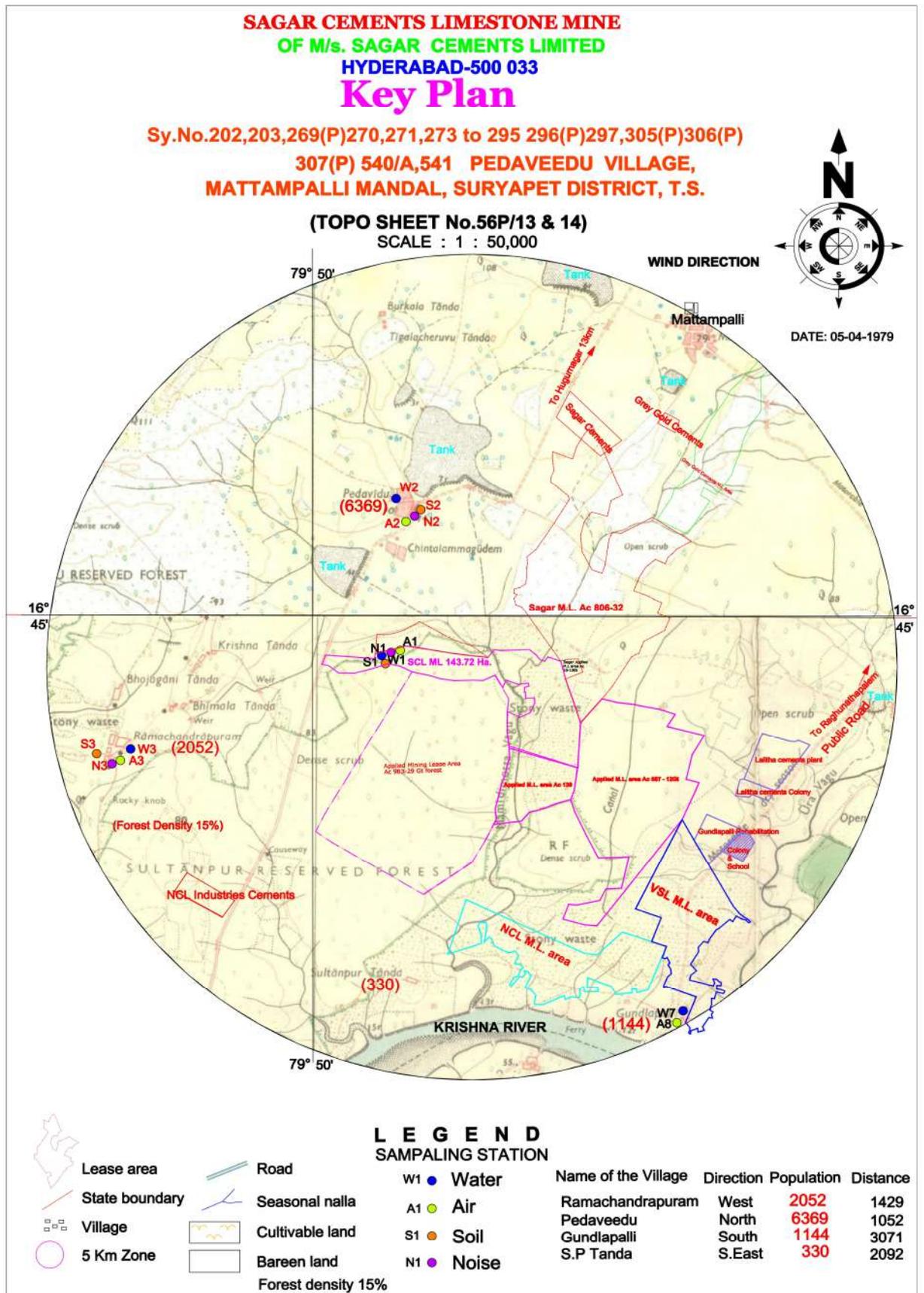


Fig.1 Location Map of M/s. Sagar Cement Limestone Mine (Pedaveedu Works)

Road connecting Huzur nagar–Mattampally passess at a distance of 0.5 Km from the mine lease in the NW direction. The mine area is approached from Kodad (on NH -65) & Miryalaguda at 35Km and 56Km respectively. The nearest Railway Station Nadikudi is at 32Km in SW direction on Secunderabad – Guntur section of South Central Railway. Krishna river is located at a distance of 6.0 Km from site.

5. PRODUCTION DETAILS:

The total quantity of Limestone taken out from mine during the financial year 2024–2025 is 3,35,000 Ton's

6. MINING PROCESS:

Open cast workings:

Limestone is being raised, in the Sagar Cements limestone mine – 2 of the company, by open-cast mechanized method of working. The equipment deployment planning for various mining operations has been done keeping in view the following viz., no/very marginal removal of topsoil is required, breaking of limestone by drilling and blasting and loading of limestone and transport to crusher by excavator–Tippers combination.

The mine as on 31.03.2025 has operated over an extent of 55.929 acres with 2 benches developed already. The mine is proposed to work with the maximum bench height of 4.0 – 6.0 m operation. The gradient of first bench ramp is kept at 1 in 20. The floor levels of the working benches is 68 m and 62 m. Initially the mine

has been opened more or less parallel to the general strike of the beds. The advancement of mine, however, is in the down-dip direction in contrast to the conventional up-dip extensions. The present location has been chosen, to provide for certain amount of flexibility to control the required quality of limestone in the concentrated working to start with. Transportation of limestone from the pit mouth to the crusher located in the plant is accomplished through 25 tones capacity trippers, which will be loaded by hydraulic excavator. The lead distance between the existing mine and crusher, two way, is around 7.0 Km.

M/s. Amareswari Cements Limestone Mine was transferred to Sagar Cements Limited in December 2012. Now they are using explosives from SCL explosives magazine. Burden and spacing is kept around 3.0 m to 5.50 m and blast holes will be drilled with a 115 mm diameter wagon drill. Boosters of high explosives in conjunction with ammonium nitrate fuel oil (ANFO) are used for charging the blast holes. Deep hole blasting operation is being carried out by Nonel.

LIST OF MINING MACHINERY:

Type	No's	Size/Capacity/Max Digging Reach	Make	Model	Dimensions	H.P
Hydraulic excavator	1	1.50 Cum	Tata Hitachi - India	ZAXIS370LCH	L - 11090 mm W - 3190 mm H - 3470 mm	250
Tippers	5	16 Cu.mtrs.	Bharat Benz-India	2583	L - 7765 mm W - 2550 mm H - 3475 mm	160
Rock Drill	1	115 mm	Atlas Capco	-		
Water Tanker	1	12000 KL	Ashok Leyland-India	2560	L - 7550 mm W - 2420 mm H - 3250 mm	120
Bolero	1	4+1 seating	Mahindra-India	Camper-Gold	L - 4700 mm W - 1800 mm H - 1500 mm	50

Mining process is given in Fig.2.

Drilling:

The Deep hole drilling is being carried out by compressor, Wagon drill - 115mm dia. The water mist drilling is being practiced, as a routine process, to arrest the dust at source.

Blasting:

All necessary precautions, right from charging the blast holes, till proper sentries taken, are being monitored by all the competent mines personnel. The usage of detonating card with milli second delay detonators to control ground vibration.

Dozing:

As soon as the blasting is conducted, Loader is utilized for leveling the area, to avoid the effect of any sharp-edged loose rocks. This is mainly to keep the floors of respective benches uniformly leveled and neat for other activities. Since water spray is done soon after the blast, the generation of dust is bare minimum.

Loading:

Hydraulic excavator into Tippers loads the blasted limestone. The entire limestone is directly dispatched to crusher.

Transportation:

Limestone is being transported by the tippers of 30 T capacity from loading face to main limestone crusher hopper.

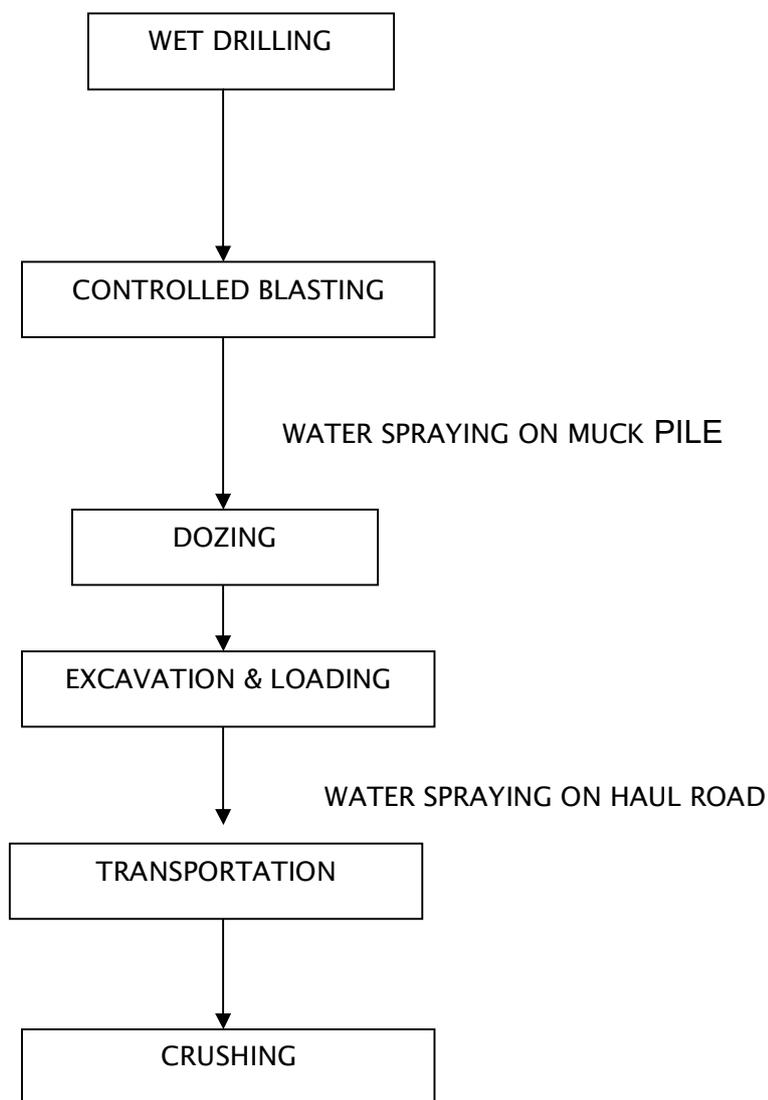


Fig.2 Mining Process Flow Sheet of M/s. Sagar Cements Limestone Mine

7. WATER REQUIREMENT:

The peak water consumption for Mine is 18.298 m³/day and the details are given below:

		Peak level Consumption m ³ /day
1. Dust suppression	-	9.450
2. Greenbelt development	-	4.83
3. Domestic	-	4.017

The water for domestic consumption is supplied by cement plant. The analyzed values of bore well water sample in the year 2024–2025 are given Table 7.1 & 7.2. Also Drinking Water Analysis Data given in Table 7.3.

8. POLLUTION CONTROL MEASURES IN THE MINE:

8.1 Air Pollution Control Measures:

The industry has given top priority to pollution prevention and control. The air pollutants emitted into atmosphere are controlled by adopting various pollution control measures. Stage wise operations are as follows:

Drilling:

Water mist drilling is in practice, keeping the emission of dust to bare minimum at source itself. In addition to this, the drillers have been provided with nose-filters, goggles; helmets, shoes, hand gloves etc. for the safe workings.

Blasting:

Blasting is being carried out as per guidelines of DGMS by delay (non-electrical) detonators, which can keep noise, ground vibrations, fly-rock within the safe limits. Explosives being used from the Explosive Magazine 14.5 Tons located at SCL Mine – 1.

Dozing:

It is the usual & routine practice to doze and level the area, as soon as the blasting is done. This will help to maintain uniform level bench floors, throughout the workings, in all working benches.

Total mine working floor (including loading point) is dozed evenly to avoid heavy dust generation with the movement of tippers.

Loading:

Water spraying on the blasted mass of rock is being in practice for dust suppression before loading into the tippers. Operators have been provided with nose filters & earplugs. The shovel operator's cabin is well covered and dust proof type.

Transportation:

Continuous, water spraying on all the haul roads, right from the (Mines faces) loading points to crusher is a routine process, through 8 KL – water tanker. The cabin of hauling tippers is fully covered to control dust and noise effect on the operator.

TABLE -7.1

WATER QUALITY DATA - BORE WELL WATER

		RESULTS
1	pH	7.38 - 7.57
2	Electrical Conductivity (Micro Siemens/cm)	748.50
3	Turbidity (NTU)	<1.0
4	Total Dissolved Solids	450.0
5	Total Alkalinity	237.0
6	Phenolphthalein Alkalinity as CaCO ₃	Nil
7	Methyl Orange Alkalinity as CaCO ₃	237.0
8	Total Hardness as CaCO ₃	263.97
9	Calcium as Ca	74.41
10	Magnesium as Mg	19.49
11	Sodium as Ca	40.00
12	Potassium as K	2.48
13	Iron as Fe	0.165
14	Chlorides as Cl	67.00
15	Sulphates as SO ₄	27.00
16	Nitrates as NO ₃	1.06
17	Fluorides as F	0.59

Note: All the values except pH & E.C are expressed in mg/L.

TABLE -7.2

WATER QUALITY DATA - MINE DISCHARGE WATER

S.No.	Parameters	Values
1	pH	7.49 - 7.68
2	TSS	11.00
3	O&G	Traces

Note: 1. All the values except pH are expressed in mg/L.

TABLE -7.3
WATER QUALITY DATA - DRINKING WATER

		As per IS:10500 (Drinking Water Standards)		
		RESULTS	Acceptable Limits	Permissible limits in the absence of alternative source
1	Colour (Hazen)	<5.0	5 max	15 max
2	Turbidity (NTU)	<1.0	01 max	05 max
3	pH	7.54-7.94	6.50 - 8.50	No relaxation
4	Total hardness	13.34	200 max	600 max
5	Calcium	4.21	75 max	200 max
6	Magnesium	0.72	30 max	100 max
7	Copper	<0.01	0.05	1.5
8	Iron	<0.10	0.3 max	No relaxation
9	Manganese	<0.01	0.1 max	0.3 max
10	Chloride	9.56	250 max	1000 max
11	Sulphate	3.02	200 max	400 max
12	Nitrates	1.03	45 max	No relaxation
13	Fluorides	0.12	1.0 max	1.5 max
14	Phenol Compounds	<0.001	0.001	0.002
15	Mercury	<0.001	0.001	No relaxation
16	Cadmium	<0.003	0.003	No relaxation
17	Selenium	<0.01	0.01	No relaxation
18	Arsenic	<0.001	0.01	0.05
19	Cyanide	<0.01	0.05	No relaxation
20	Lead	<0.01	0.01	No relaxation
21	Zinc	<0.01	5.0	15
22	Anionic Detergents	Absent	0.2	1.0
23	Chromium	<0.01	0.05	No relaxation
24	Polynuclear aromatic Hydrocarbons as PAH	Absent	NS	NS
25	Mineral Oil	<0.10	0.5	No relaxation
26	Residual Chlorine	<0.20	0.2	01
27	Pesticides	Absent	Absent	0.001
28	Radio active	<0.001	0.1	No relaxation
29	Odour	Agreeable	Agreeable	Agreeable
30	Taste	Agreeable	Agreeable	Agreeable
31	Dissolved Solids	69.75	500	2000
32	Total alkalinity	44.75	200 max	600 max
33	Aluminium	0.010	0.3	0.2
34	Boron	0.015	0.5	1.0
35	E-Coli/100ml	Absent	Absent	NS

Note: 1. All the values except pH, Turbidity, Taste, Colour & Odour are expressed in mg/L.
2. BDL- Below Detectable Limit. (for Hg, 0.001 mg/L and for all other parameters,0.01 mg/L)

8.2 Ambient Air Quality:

Ambient air quality monitoring is carried out quarterly at the following locations to know the status of the ambient air quality.

1. Near Mine Office – ML– 2
2. Near ML Area West Side Boundary.

Note: The Ministry of Environment and Forest (MOEF) New Delhi, has given amendment on 16th November 2009 for revised standards for Ambient Air Quality Standards. M/s. Sagar Cements Limestone Mine (Pedaveedu Works), has following the same.

Ambient air quality is monitored for 8 hours each sample for PM₁₀, PM_{2.5}, SO₂ and NO₂ the average values are presented in Table. 8.1. The analyzed values for PM₁₀, PM_{2.5}, SO₂ and NO₂ are within the limits prescribed by T.G.P.C.B.

Table 8.1

AVERAGE VALUES OF AMBIENT AIR QUALITY DATA

Location	Parameters				
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	CO (ppm)
Core zone					
1. Near Mines Office - ML2	63.75	23.50	7.75	18.75	<1.0
2. Near ML Area West Side Boundary	68.00	26.50	9.75	20.25	<1.0

Note: All the values are expressed as ($\mu\text{g}/\text{m}^3$)

8.3 Wastewater Sources and Monitoring:

Waste water from toilets located at site mines office is being treated at septic tank followed by soak pit. No waste water is generated either from dust suppression system or from (wet) drilling method.

8.4 Noise Pollution:

Noise pollution control measures adopted at various stages of operation are as follows:

Loading:

The cabin doors of shovel are of sound proof type. Earplugs have been provided for shovel and Tipper operators.

Transportation:

The cabin of dump trucks are fully covered to control dust and noise effect on the operator.

Crushing:

Crushing process is being carried out in confined area, which is fully closed. The noise level depends on the hardness of the material, which is fed to the crusher. Noise Levels are measured at various locations in the mines by using sound level meter. Statistical data of average values of noise levels measured at various mine locations during the year 2024–2025 is given in Table 8.2 & 8.2.1.

Table 8.2
Average Values of Noise Levels Data
(Period 2024–2025)

S.No.	Station	Noise Levels in dB(A)
1.	Near Shovel Working	76.24
2.	Near Drill Working	77.41
3.	Tipper Inside Cabin	74.95
4.	Near Crusher Hopper	78.70
5.	Near Haulage Road	74.93
6.	Near Dumping	78.21
7.	Near Drilling Area	77.30
8.	Near Loading Area	79.21
9.	Near S–E ML Boundary	65.40
10.	Near N–E ML Boundary	64.96
11.	Near S–W ML Boundary	66.86

Note: 1. Day time is reckoned in between 6 a.m. and 10 p.m. Limit <75 dB (A)
2. Night time is reckoned in between 10 p.m. and 6 a.m. Limit <70 dB (A)

9. GREENBELT DEVELOPMENT

Greenery/plantation recharges oxygen into environment. Greenbelt development may have the following benefits.

- a. Mitigation of fugitive emissions including odour
- b. Noise pollution control
- c. Improving the local eco-system
- d. Arresting the soil erosion
- e. Improving the landscape of the area
- f. Aesthetics

About 15,853 No's of plantation over an area of Ac. 26.859 is undertaken inside lease area and outside the lease area about 7,840 No's over an area of Ac 15.443 by the end of financial year 2024-2025 in mines and plant respectively. A major breakthrough implementation was made by M/s. Sagar Cements Limestone Mine (Pedaveedu Works) for greenbelt development at mine.

10. EXPENDITURE INCURRED FOR ENVIRONMENT PROTECTION MEASURES IN THE FINANCIAL YEAR 2023-2024

Total expenditure incurred for various Pollution Control Measures, viz. Health, Solid waste management, Monitoring, Greenbelt development socioeconomic activities etc., by the Management of M/s. Sagar Cements Limestone Mine (Pedaveedu Works) has spent an amount of is Rs. 47,29,667/- (Rupees Forty seven lakhs twenty nine thousand six hundred and sixty seven only) during the financial year 2024-2025.

11. HOUSEKEEPING: –

Unnecessary loss of product in the form of dust emission in turn pollute surrounding environment, water spraying is being done in mining area including haul roads to control fugitive emissions. Mine premises are clean and green which reflects on good housekeeping. M/s. Sagar Cements Limestone Mine (Formerly known as AMARESWARI CEMENTS LIMESTONE MINE) is keeping their mine and premises clean and green. Housekeeping has been found to be on top priority.

12. AUDITOR'S COMMENTS:

1. The ambient air quality in mine area is within the prescribed limits of T.S.P.C.B.
2. The audit activities have enabled the mine authorities to control fugitive emissions and water consumption efficiently.
3. During the financial year 2024–2025, an amount of Rs. 47,29,667/- (Rupees Forty seven lakhs twenty nine thousand six hundred and sixty seven only) was spent on environmental protection and social welfare activities by the management of M/s. Sagar Cements Limestone Mine (Formerly known as AMARESWARI CEMENTS LIMESTONE MINE)

Auditors Signature

APPENDIX-A
MINISTRY OF ENVIRONMENT AND FORESTS
NOTIFICATION

New Delhi, the 16th November, 2009.

NATIONAL AMBIENT AIR QUALITY STANDARDS

G.S.R. 826 (E) In exercise of the powers conferred by section 6 and section 25 of the Environment (Protection) Act, 1986, (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:-

1. (1) These rules may be called the Environment (Protection) seventh Amendment Rules, 2009.
 (2) They shall come into force on the date of their publication in the Official Gazette.
2. In the Environment (Protection) Rules, 1986, (hereinafter referred to as the said rules), In rule 3, in sub-rule (3B), for the words, brackets, figures and letters, "In columns (3) to (5) of Schedule VII" the words, brackets figures and letters "in columns (4) and (5) of Schedule VII" shall be substituted.
3. For Schedule VII to the said rules and entries relating thereto, the following Schedule and entries shall be substituted, namely:--

S. No	Pollutant	Time weighted average	Concentration in Ambient Air		
			Industrial , Residential, Rural and Other area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
1.	Sulphur dioxide (SO ₂), µg/m ³	Annual Average*	50 µg/m ³	20 µg/m ³	1. Improved West and Gaeke Method 2. Ultraviolet Fluorescence
		24 hours**	80 µg/m ³	80 µg/m ³	
2.	Nitrogen Dioxide (NO ₂) µg/m ³	Annual Average*	40 µg/m ³	30 µg/m ³	1. Modified Jacob & Hochheiser (Na-Arsenite) Method 2. Chemiluminescence
		24 hours**	80 µg/m ³	80 µg/m ³	
3.	Particulate Matter (Size less than 10 µm) or PM ₁₀ µg/m ³	Annual Average*	60 µg/m ³	60 µg/m ³	1.Gravimetric 2. TOEM 3. Beta attenuation
		24 hours**	100 µg/m ³	100 µg/m ³	
4	Particulate Matter (size less than 2.5 µm) or PM _{2.5} µg/m ³	Annual Average*	40 µg/m ³	40 µg/m ³	1. Gravimetric 2. TOEM 3. Beta attenuation
		24 hours**	60 µg/m ³	60 µg/m ³	
5.	Ozone (O ₃) µg/m ³	8 hours	100 µg/m ³	100 µg/m ³	1. UV photometric 2. Chemiluminescence 3. Chemical Method
		1 hour	180 µg/m ³	180 µg/m ³	
6.	Lead (Pb) µg/m ³	Annual Average*	0.50 µg/m ³	0.50 µg/m ³	1. AAS/ICP Method after sampling on EPM 2000 or equivalent filter paper 2. ED-XRF using Teflon filter
		24 hours**	1.0 µg/m ³	1.0 µg/m ³	

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7.	Carbon Monoxide (CO) mg/m ³	8 hours**	02 mg/m ³	02 mg/m ³	Non dispersive infra Red (NDIR) spectroscopy
		1 hour	04 mg/m ³	04 mg/m ³	
8.	Ammonia (NH ₃) µg/m ³	Annual Average*	100 µg/m ³	100 µg/m ³	1. Chemiluminescence 2. Indophenol blue method
		24 hours**	400 µg/m ³	400 µg/m ³	
9.	Benzene (C ₆ H ₆) µg/m ³	Annual Average	05 µg/m ³	05 µg/m ³	1. Gas chromatography based continuous analyzer 2. Adsorption and Desorption followed by GC analysis
10.	Benzo (a) Pyrene (BaP) particulate phase only, ng/m ³	Annual Average	01 ng/m ³	01 ng/m ³	Solvent extraction followed by HPLC/GC analysis
11.	Arsenic(As) ng/m ³	Annual Average	06 ng/m ³	06 ng/m ³	AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni), ng/m ³	Annual Average	20 ng/m ³	20 ng/m ³	AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

- Annual Arithmetic mean of minimum 104 measurements in a year at particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly / 8 hourly or 01 hourly monitored values, as applicable, shall be complied with the 98% of the time in a year. 2 % of the time, they may exceed the limits but not on two consecutive days of monitoring.

Note: Whenever and wherever monitoring results on two consecutive days of monitoring exceed the limits Specified above for the respective category, it shall be considered adequate reason to institute regular or continuous monitoring and further investigation.

APPENDIX-B**AIR QUALITY STANDARDS FOR
LIME STONE AND DOLOMITE MINES**

(Air Quality Standards as per Indian Bureau of Mines, Department of Mines, Ministry of Coal & Mines, Govt. of India)

S.No.	Parameters/Pollutants	Time weighted average (TWA)	Concentration at work zone monitoring station
1	Suspended Particulate Matter (SPM)	8 hours	700 µg/cu m
2	Resperable Particulate Matter (RPM) size less than 10 microns)	8 hours	350 µg/cu m
3	Sulphur Dioxide (SO ₂)	8 hours	5 mg/cu m
4	Oxides of Nitrogen (NO ₂)	8 hours	6 mg/cu m
5	Carbon Monoxide	8 hours	40 mg/cu m

Note: The distance of monitoring stations from the dust generating source should not exceed 300 m and it should be located in the down wind direction, considering the prominent wind direction.

**MINE EFFLUENT STANDARDS FOR
LIME STONE AND DOLOMITE MINES**

(Mine effluent standards as per Indian Bureau of Mines, Department of Mines, Ministry of Coal & Mines, Govt. of India)

S.No.	Parameters/Pollutants	Concentration not to be exceeded in mg/L except pH
1	pH	5.5 – 9.0
2	Total Suspended Solids (TSS)	100.0
3	Oil & Grease	10.0
4	Iron	3.0
5	Fluoride	1.5

Note: The monitoring stations should be at the place as far as possible close to the source of generation or the discharge from effluent treatment plant, as applicable.

APPENDIX-C

AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE

G.S.R. 158 (E) dt. 09-3-2009

The Environment (Protection) Rules, 1986 (See rule 3)

Area Code	Category of Area	Limits in dB(A)	
		Day Time	Night Time
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	40
D	Silence Zone	50	40

- Note :
1. Day time is reckoned in between 6 am and 10 pm.
 2. Night time is reckoned in between 10 pm and 6 am.
 3. Silence Zone is defined as areas upto 100 m around such premises as hospitals, educational institutions and courts. The silence zones are to be declared by the competent authority. Use of vehicular horns, loud speakers and bursting of crackers shall be banned in these zones.
 4. Mixed categories of areas should be declared as one of the four above mentioned categories by the competent authority and the corresponding standards shall apply.

APPENDIX-D
GENERAL STANDARDS FOR DISCHARGE OF EFFLUENTS
[Schedule II inserted vide G.S.R. 919 (E) dt. 12-9-1988 Published in the
Gazette No. 488 dt. 12-9-1988]
The Environment (Protection) Rules, 1986 (See rule 3)

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Onland for Irrigation	Marine Coastal areas
1	2	3			
		a.	b.	c.	d.
1	Colour and Odour	See Note 1	---	See Note 1	See Note 1
2	Suspended Solids, mg/L, max	100	600	200	a. For process waste water 100 b. For cooling water effluent- 10% above total suspended matter of influent cooling water
3	Particle size	Shall pass 850 micron IS sieve	---	---	a. Floatable solids max- 3 mm b. Settleable solids max-850 μ
4	Dissolved Solids (inorganic), mg/L, max	2100	2100	2100	---
5	p ^H value	5.5 – 9.0	5.5 – 9.0	5.5 – 9.0	5.5 – 9.0
6	Temperature °C, max	Shall not exceed 40 in any section of the stream within 15 m downstream from the effluent outlet	45 at the point of discharge	---	45 at the point of discharge
7	Oil & Grease, mg/L, max	10	20	10	20
8	Total Residual Chlorine, mg/L, max	1.0	---	---	1.0
9	Ammonical Nitrogen (as N), mg/L, max	50	50	---	50
10	Total Kjeldahl Nitrogen (as N), mg/L, max	100	---	---	100
11	Free Ammonia (as NH ₃) mg/L, max	5.0	---	---	5.0
12	Biochemical Oxygen Demand (5 day at 20 °C), mg/L, max	30	350	100	100
13	Chemical Oxygen Demand, mg/L, max	250	---	---	250
14	Arsenic (as As), mg/L, max	0.2	0.2	0.2	0.2
15	Mercury (as Hg), mg/L, max	0.01	0.01	---	0.01
16	Lead (as Pb), mg/L, max	0.1	1.0	---	1.0
17	Cadmium (as Cd), mg/L, max	2.0	1.0	---	2.0

Sl. No.	Parameter	Standards			
		Inland Surface Water	Public Sewers	Onland for Irrigation	Marine Coastal areas
1	2	3			
		a.	b.	c.	d.
18	Hexavalent Chromium (as Cr ⁺⁶), mg/L, max	0.1	2.0	---	1.0
19	Total Chromium (as Cr), mg/L, max	2.0	2.0	---	2.0
20	Copper (as Cu), mg/L, max	3.0	3.0	---	3.0
21	Zinc (as Zn), mg/L, max	5.0	15.0	---	15.0
22	Selenium (as Se), mg/L, max	0.05	0.05	---	0.05
23	Nickel (as Ni), mg/L, max	3.0	3.0	---	5.0
24	Boron (as B), mg/L, max	2.0	2.0	2.0	---
25	Percentage Sodium, max	---	60.0	60.0	---
26	Residual Sodium Carbonate, mg/L, max	---	---	5.0	---
27	Cyanide (as CN), mg/L, max	0.2	2.0	0.2	0.2
28	Chloride (as Cl), mg/L, max	1000	1000	600	---
29	Fluorides (as F), mg/L, max	2.0	15.0	---	15.0
30	Dissolved Phosphate (as P), mg/L, max	5.0	---	---	---
31	Sulphate (as SO ₄), mg/L, max	1000	1000	1000	---
32	Sulphide (as S), mg/L, max	2.0	---	---	5.0
33	Pesticides	Absent	Absent	Absent	Absent
34	Phenolic Compounds (as C ₆ H ₅ OH), mg/L, max	1.0	5.0	---	5.0
35	Radio Active Materials:				
	a. Alfa Emitters µc/mL, max	10 ⁻⁷	10 ⁻⁷	10 ⁻⁸	10 ⁻⁷
	b. Beta Emitters µc/mL, max	10 ⁻⁶	10 ⁻⁶	10 ⁻⁷	10 ⁻⁶

- Note :
- All efforts should be made to remove colour and unpleasant odour as far as practicable.
 - The standards mentioned in this notification shall apply to all the effluents discharged, such as industrial mining and mineral processing activities, municipal sewage, etc.
 - Omitted by Rule 2 of the Environment (Protection) Fourth Amendment Rules, 1992 vide Notification G.S.R. 797 (E) dated 01-10-1992, Gazette No. 396 dated 01-10-1992.

APPENDIX-E
TEST CHARACTERISTICS FOR DRINKING WATER (IS:10500-2012)

Sl. No.	Substance of Characteristic	Require-ment (Acceptable Limit)	Permissible Limit in the Absence of Alternative Source	Methods of Test (Ref. To IS)	Remarks
1	2	3	4	5	6
i.	Colour, Hazen units, max	5	15	3025 (Part 4)	Extended to 15 only if toxic substances are not suspected, in absence of alternative sources.
ii.	Odour	Agreeable	Agreeable	3025 (Part 5)	a. Test cold and when heated b. Test at several dilutions
iii.	Taste	Agreeable	Agreeable	3025 (Part 7 & 8)	Test to be conducted only after safety has been established
iv.	Turbidity, NTU, max	1	5	3025 (Part 10)	---
v.	p ^H value	6.5 – 8.5	No relaxation	3025 (Part 11)	---
vi.	Total Hardness (as CaCO ₃) mg/L, max	200	600	3025 (Part 21)	---
vii.	Iron (as Fe), mg/L, max	0.3	No relaxation	3025 (Part 53)	Total concentration of manganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
viii.	Chlorides (as Cl), mg/L, max	250	1000	3025 (Part 32)	---
ix.	Residual, free Chlorine, mg/L, min	0.2	1	3025 (Part 26)	To be applicable only when water is chlorinated. Tested at consumer end. When protection against viral infection is required, it should be min. 0.5 mg/L
x.	Dissolved Solids, mg/L, max	500	2000	3025 (Part 16)	---
xi.	Calcium (as Ca), mg/L, max	75	200	3025 (Part 40)	---
xii.	Copper (as Cu), mg/L, max	0.05	1.5	3025: 1964 (Part 42)	---
xiii.	Manganese (as Mn), mg/L, max	0.1	0.3	3025:(Part 59)	Total concentration of manganese (as Mn) and iron (as Fe) shall not exceed 0.3 mg/l
xiv.	Sulphate (as SO ₄), mg/L, max	200	400	3025 (Part 24)	May be extended to 400 provided that magnesium does not exceed 30
xv.	Nitrate (as NO ₃), mg/L, max	45	No relaxation	3025 (Part 34)	---
xvi.	Fluoride (as F), mg/L, max	1.0	1.5	3025: (Part 60)	---

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Sl. No.	Substance of Characteristic	Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternative Source	Methods of Test (Ref. to IS)	Remarks
1	2	3	4	5	9
xvii	Phenolic compounds (as C ₆ H ₅ OH), mg/L, max	0.001	0.002	3025: (Part 43)	---
xviii.	Mercury (as Hg), mg/L, max	0.001	No relaxation	IS 3025 (Part 48)/ Mercury Analyser	---
xix.	Cadmium (as Cd), mg/L, max	0.003	No relaxation	IS 3025 (Part 41)	---
xx.	Selenium (as Se), mg/L, max	0.01	No relaxation	IS 3025 (Part 56) or IS 15303*	---
xxi.	Arsenic (as As), mg/L, max	0.01	0.05	3025 (Part 37): 1988	---
xxii.	Cyanide (as CN), mg/L, max	0.05	No relaxation	3025 (Part 27)	---
xxiii.	Lead (as Pb), mg/L, max	0.01	No relaxation	IS 3025 Part 47	---
xxiv.	Zinc (as Zn), mg/L, max	5	15	39 of 3025: 1964 (Part 49)	---
xxv.	Anionic detergents (as MBAS), mg/L, max	0.2	1.0	Annex K of IS 13428	---
xxvi.	Chromium (as Cr ⁶⁺), mg/L, max	0.05	No relaxation	IS 3025 (Part 52)	---
xxvii	Polynuclear aromatic hydrocarbons (as PAH), g/L, max	0.0001	No relaxation	APHA 6440	---
xxviii	Mineral Oil, mg/L, max	0.05	No relaxation	Clause 6 of IS 3025 (Part 39) infrared Partition Method	---
xxix	Pesticides, mg/L, max	Absent	0.001	---	---
xxx	Radioactive materials:				
	a. Alpha emitters, Bq/L, max	0.1	No relaxation	Part - 2	---
	b. Beta emitters, pci/L, max	1.0	No relaxation	Part - 1	---
xxxi	Alkalinity, mg/L, max	200	600	13 of 3025: 1964 (Part - 23)	---
xxxii	Aluminum (as Al), mg/L, max	0.03	0.2	31 of 3025: 1964 (Part - 55)	---
xxxiii	Boron, mg/L, max	0.5	1.0	29 of 3025: 1964 (Part - 57)	---

Note: Atomic Absorption Spectrophotometer method, may be used.

APPENDIX-F
PLANT SPECIES FOR GREEN BELT DEVELOPMENT

SI. No.	BOTANICAL NAME	COMMON NAME	SIZE AND TYPE	SUITABLE SIZE
1.	Acia auriculaeformis (Mimosaceae)	H: Vilaiti	M: Semi evergreen	fragrant white flowers. Suitable in green belts on road sides.
2.	Adina cordifolia (Rubiaceae)	T: Pasupukadamba H: Haldu	L: Deciduous	a light demander, suitable on open areas & near flares.
3.	Aequle marmelos (Rutaceae)	T: Bilavamu H: Bael	M: Deciduous,	good for green belts for green belts near temples.
4.	Anogeissus latifolia (Combretaceae)	T: Chirimanu H: Dhaura	M: Deciduous,	good for green belts near temples
5.	Artabotrys hexapetius (Annonaceae)	T: Monaranjani H: Hara Champa	S: Evergreen shrub	with fragrant flowers good for gardens & inside boundary wall and long canals.
6.	Averrhoa carambola (averrrhoaceae, Oxalidaceae)	T: Kamaarakkarmel H: Kamrak	S: Semi evergreen	good in narrow belts (green belts <50m width) along channels
7.	Azadirachta indica (Meliaceae)	T: Vepachettu H: Nim	L: Evergreen,	suitable in green belts and out side office & hospital buildings
8.	Bauhinia Variegata (Caesalpinhiaceae)	T: Devakanchanamu H: Rachanaram	M: Deciduous,	good in green belts, garden and as a second row avenue tree.
9.	Borassus flabellifer (Arecaceae; Palmae)	T: Taadi H: Tad	L: A tall deciduous,	palm, can be used as wind break when of different age.
10.	Bosellia serrata (Bursaceae)	T: Phirangi saambraani H: Kunder	M: Deciduous	suitable on green shallow soils.
11.	Burera serrata (Bureraceae)	T: Chitreka	M: Deciduous	suitable on shallow soils as a green belt or avenue tree.
12.	Butea monosperma (Fabaceae)	T: Mlduga H: Palas	M: Deciduous	for green belt and as a second row avenue tree.
13.	Caesalpinia pulcherrima (Leguminosae)	T: Pamiditangedu H: Gulutora	M: A large shrub	suitable for gardens outside office and along channels
14.	Callistemon lanceolatus (Myrtaceae)	T: Bottle Brush	M: Deciduous	for some time, ornamental plant in garden
15.	Careva arobora (Lecythidaceae)	T: Araya H: Kumbi	L: Deciduous,	good in green belts.
16.	Carrisa carandas (Apocynaceae)	T: Vaka H: Karaunda	S: semi evergreen,	large bushy shrub, good as a hedge to protect against noise.
17.	Caryota urenus (Palmae)	T: Jilugujattu H: Mari	M: A lofty palm,	good as a wind break.
18.	Cassia fistula (Leguminosae)	T: Rela H: Amaltas	M: Deciduous	good ornamental tree in green belt.
19.	C. Siamea	T: Sima Tangedu	L: Evergreen	good as avenue tree
20.	Casuarina equisetifolia	T: Sarugudu H: Jungli s aru	M: Evergreen,	suitable for covering low-lying areas and in green belt.
21.	Cadrela toons	T: Nandichettu H: Mahanim	L: Deciduous,	good in open spaces, in green belts and along ponds.
22.	Cestrum diurnum	H: Din-ka-maja	S: A shrub	with white fragrant flowers, suitable (solanaceae) around boilers and waste disposal sites.

(Contd..)

PLANT SPECIES FOR GREEN BELT DEVELOPMENT

Sl.No.	BOTANICAL NAME	COMMON NAME	SIZE AND TYPE SUITABLE SIZE
23.	Cleistanthus collinus (Euphorbiaceae)	T: Kadishe H: Garari	S: Deciduous tree suitable in green belts.
24.	Cocus nucifera (palmae)	T: Kobbarichettu H: Nariyal	L: A tall stately palm suitable on sea shore river banks and hill slopes.
25.	Cleistanthus collimus (Leguminosae)	T: Errasissu H: Shisham	M: Deciduous, suitable on areas around flare sites and in green belts.
26.	Delomix reqlia (Leguminosae)	T: Shimasankesual H: Gulmohar	M: Deciduous ornamental, suitable on road sides.
27.	Dillenia inidica	T: Peddakalinga H: Chalta	L: Evergreen, white fragrant flowers, goon in green belts and around waste disposal sites.
28.	D. pentagyna	T: Chinnakalinga H: Aggai	L: Deciduous, good in green belts and onsite around flare.
29.	Embllica officianallis (Euphorbiaceae)	T: Amalakamu H: Amla	M: Deciduous, good as isolated trees in garden
30.	Erythrina suberosa (Leguminosae)	T: Barijama H: Dauldhak	M: Deciduous, good in green belts
31.	E. variegata	T: Badisa H: Dadap	M: Deciduous, good in gardens outside office buildings.
32.	Ficus bengalensis (Moraceae)	T: Marri H: Bargad	L: Deciduous, widely spread avenue tree (15 m apart)
33.	F. religiosa	T: Bodhi H: Pipal	L: Deciduous, widely spaced avenue tree also a single tree in isolated sites.
34.	Emelina arborea (Verbenaceae)	T: Gumartek H: Sewan	M: Deciduous, good in green belts around flare sites.
35.	Grewia tilioifolia (Tiliaceae)	T: Charachi H: Dhamim	M: Deciduous, good in green belts for use as timber
36.	Hamelen patens		S: Evergreen shrub with dense attractive foliage of greenish bronze leaves; good in gardens.
37.	Hardwickia binata (Leguminosae)	T: Yepi H: Anjan	M: Deciduous, good for green belts on shallow soils.
38.	Hibiscus mutabilis (Malvaceae)	H: Sthal Kamal	S: Large bushy shrub, semi evergreen good in green belts & in gardens, along channels.
39.	H. Rosa sinensis	T: Java Pusphamu	S: Evergreen woody showy shrub good for gardens.
40.	Lxora arborea	T: Korivipala H: Navari	S: Much branched evergreen, good in green belts and in gardens.
41.	Lxora coccinea	T: Mankana H: Rangan	S: Much branched evergreen, good in garden and in green belts.
42.	Jasminum sambur (Oleaceae)	T: Boddumalle H: Moghra	s: Much branched evergreen, good in garden and in green belts.
43.	Kydia calycina (Malvaceae)	T: Potri H: Pula	S: Deciduous, good along canals and in green belts.
44.	Lagersteoemia speciosa (Lythaceae)	T: Varagogu H: Jarul	M: Deciduous, good along road sides and in garden

(Contd..)

PLANT SPECIES FOR GREEN BELT DEVELOPMENT

SI.No.	BOTANICAL NAME	COMMON NAME	SIZE AND TYPE SUITABLE SIZE
45.	Lannea coramandelica (Anacardiaceae)	T: Appriyada H: Jhingan	L: Deciduous, good on well drained green belts and around flares.
46.	Lawsonia alba (Lythraceae)	T: Goranti H: Mehndi	S: Glabrous much branched shrub, good along canal sides.
47.	Lochnera rosea (Apocynaceae)	T: Bilaganuueru H: Sadabahar	S: An erect perennial herb; good in garden and along small channels.
48.	Madhuca indica (Sapotaceae)	T: Ippa H: Mahua	M: Deciduous, good in green belts
49.	Mallotus philippensis (Euphorbiaceae)	T: Kunkuma H: Sidur	S: small evergreen good along channels
50.	Melia azedarach (Meliaceae)	T: Turaka Vepa H: Bakain	M: Deciduous good along small roads, and canals.
51.	Millingtonia hortensis (Bignoniaceae)	T: Kavuki H: Akas Nim	L: Semi evergreen flowers fragrant, good along roadsides.
52.	Mimusops elengi (Sapotaceae)	T: Pogada H: Maulsari	M: Evergreen, good for avenues
53.	Moringa oleifera (Moringaceae)	T: Muluga H: Sainjna	M: Deciduous, with fragrant flowers, good in green belts.
54.	Murrava koenigi (Rutaceae)	T: Karepaku H: Mitha neem	S: Semi evergreen good in green belts and along small channels
55.	Oreodoxa regia (Palmae)	Royal palm	L: Semi evergreen good medium and small road sides as an ornamental plant.
56.	Pandanus odoratissimus (Pandanaceae)	T: Mugali H: Kewada	S: A densely branched shrub good in gardens near seashore
57.	Peltophorum inerme (Leguminosae, Caesalpinhiaceae)	T: Kondachinta	M: Semi evergreen, suitable on road sides, in in gardens & outside buildings.
58.	Plumeria acuminata (Apocynaceae)	T: Vaala Ganneru H: Golainchi	M: Semi evergreen, fragrant white flowers, good in green belts.
59.	Plumeria alba	T: Veyui Varahaalu	S: Semi evergreen good for gardens
60.	Plumeria rubra	T: Nurravarahalu H: Golainchi	S: semi evergreen good for gardens
61.	Pterocarpus marsupium (Leguminosae, Papilionaceae)	T: Vegi H: Bija	M: Deciduous, good on open areas with adequate light
62.	Pogamia pinnata (Leguminosae, Papilionaceae)	T: Ganuuga H: Karanj	M: Deciduous, good along roads & canals.
63.	Rauvolfia serpentina (Apocynaceae)	T: Paataalagani H: Chandrabhaga	S: An erect evergreen perennial shrub good along canal.
64.	Salmalia malabarica	T: Booruga H: Semul	M: Deciduous, Good for avenues
65.	Samanea saman (Leguminosae)	T: Nidraganneru	L: Deciduous, good tree along road sides for shade.
66.	Saraca indica (Leguminosae, Caesalpinaceae)	T: Ashoka H: Asok	M: Evergreen tree good on road sides within campus

(Contd..)

PLANT SPECIES FOR GREEN BELT DEVELOPMENT

SI.No.	BOTANICAL NAME	COMMON NAME	SIZE AND TYPE SUITABLE SIZE
67.	<i>Spathodia campanulata</i> (Bignoniaceae)	T: Patadiya H: Runugtora	L: In gardens and avenues and in green belts, it is deciduous.
68.	<i>Syzygium cumini</i> (Myrtaceae)	T: Neeredu H: Jaman	L: Evergreen tree, good in green belts and within campus and road sides.
69.	<i>Tabernamontana coronaria</i> (Apocynaceae)	T: Gandhitagarapu H: Chandni	S: An evergreen shrub good in gardens and along canals.
70.	<i>Tabebuia pentaphylla</i> (Bignoniaceae)		M: Deciduous, good in gardens
71.	<i>Tamarindus indica</i> (Leguminosae, Caesalpinhiaceae)	T: Chintachettu H: Imli	L: Semi evergreen tree along state & national highways suitable site.
72.	<i>Ticoma stans</i> (Bignoniaceae)	T: Pachgotla	L: Evergreen tree, good in garden and along canals.
73.	<i>Tectona grandis</i> (Verbenaceae)	T: Adviteeku H: Sagwan	M: Deciduous, good in green belts and on inner sides of roads.
74.	<i>Terminalia alata</i> (Combretaceae)	T: Tani H: Sain	L: Deciduous, good in green belts near flare site
75.	<i>Terminalia arjuna</i>	T: Yerramadi H: Arjuna	L: Evergreen tree for road sides and in green belts.
76.	<i>Terminalia bellirica</i>	T: Tani H: Bahora	L: Deciduous, good in green belts.
77.	<i>Terminalia bellirica</i>	T: Badamchettu d H: Deshi Badam	L: Deciduous tree good near sea shore.
78.	<i>Thespesia populanea</i> (Malvaceae)	T: Gangaraavi H: Paras Pipal	M: Compact quick growing evergreen tree good along road sides.
79.	<i>Thevetia peruviana</i> (Apocynaceae)	T: Pachaganneru H: Pile, Kaner	S: An evergreen large shrub, has shady yellow, flowers, good around the waste treatment.
80.	<i>Vitex negundo</i> (Verbenaceae)	T: Vaavili H: Sambhaluu	S: A large shrub suitable on areas along channels and streams and on waste lands.
81.	<i>Xylocarpus xylocarpus</i> (Eguminosae, Mimosaceae)	T: Eravalu H: Jambu	L: Deciduous is green belts and on waste lands
82.	<i>Zanthoxylum</i> (Rutaceae)	T: Rhetsamaramu H: Badrang	M: Deciduous in green belts and on waste lands

NOTE: H Denotes Name in Hindi
 T “ Name in Telugu
 S “ Small size
 L “ Large size
 M “ Medium size