



THE RAMCO CEMENTS LIMITED

ISO 9001 ISO 14001 ISO 45001 ISO 50001
Certified Company

Kumarasamy Raja Nagar – 521457
Jaggayyapet Mandal, Krishna District,
Andhra Pradesh, India
Phone: 08654 224400-04
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RCL/PCB-Form-V/238/606

Date: 25.09.2023

The Environmental Engineer,
AP Pollution Control Board,
Regional Office,
Plot No. 41, Kanakadurga Officer's Colony,
Opp. SBI, Gurunanak Road,
VIJAYAWADA – 520 008.

Dear Sir,

Sub: Submission of Environmental Statement in Form - V for Jayanthipuram Limestone Mine (North Band), Jayanthipuram Limestone Mine (South Band), Ravirala Limestone Mine (RF) and Ramco Budawada Limestone Mine (RF) for the Financial Year 2022-2023 - Reg.


Please find enclosed herewith two sets of Environmental Statement in Form - V for the following Captive Mines of us for the financial year 2022-2023 along with relevant enclosures:

- 1) Jayanthipuram Limestone Mine (North Band)
- 2) Jayanthipuram Limestone Mine (South Band)
- 3) Ravirala Limestone Mine (RF)
- 4) Ramco Budawada Limestone Mine (RF)

This is for your information and records please.

Thanking you.

Yours faithfully,
For The Ramco Cements Limited,


(N RAVISHANKAR)
Sr. President (Manufacturing)

Encl.: As above.

ENVIRONMENTAL STATEMENT (FORM – V)

FOR FINANCIAL YEAR 2022-2023

JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)

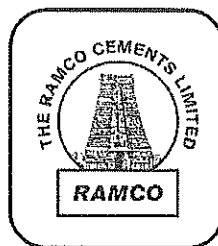
JAYANTHIPURAM LIMESTONE MINE (SOUTH BAND)

RAVIRALA LIMESTONE MINE (RF)

RAMCO BUDAWADA LIMESTONE MINE (RF)

An

**QMS- IS / ISO 9001:2015,
EMS- IS/ ISO 14001:2015,
OHSMS- IS/ISO 45001:2018,
EnMS – ISO 50001:2018
Certified Company**



**THE RAMCO CEMENTS LIMITED,
KUMARASAMY RAJA NAGAR 521457
JAGGAIHPET (M),
NTR DIST., AP.**

ENVIRONMENTAL STATEMENT (FORM – V)

(See rule 14)

Environmental statement for the financial year ending the 31st March 2023**PART – A**

1.	Name and address of the owner / occupier of the industry operation or process	The Ramco Cements Limited Kumarasamy Raja Nagar - 521 457, Jaggaiahpet Mandal, NTR Dt., A.P										
	Industry operation or process	Captive Limestone Mines: 1) Jayanthipuram Limestone Mine (North Band) 2) Jayanthipuram Limestone Mine (South Band) 3) Ravirala Limestone Mine (RF) 4) Ramco Budawada Limestone Mine (RF)										
2.	Industry category Primary – (STC Code) Secondary – (SIC Code)											
3.	Production capacity	Production capacities are: <table border="1"> <thead> <tr> <th>Mine</th> <th>Limestone Capacity, Million TPA</th> </tr> </thead> <tbody> <tr> <td>Jayanthipuram Limestone Mine (North Band)</td> <td>1.80</td> </tr> <tr> <td>Jayanthipuram Limestone Mine (South Band)</td> <td>1.75</td> </tr> <tr> <td>Ravirala Limestone Mine (RF)</td> <td>2.75</td> </tr> <tr> <td>Ramco Budawada Limestone Mine (RF)</td> <td>1.10</td> </tr> </tbody> </table>	Mine	Limestone Capacity, Million TPA	Jayanthipuram Limestone Mine (North Band)	1.80	Jayanthipuram Limestone Mine (South Band)	1.75	Ravirala Limestone Mine (RF)	2.75	Ramco Budawada Limestone Mine (RF)	1.10
Mine	Limestone Capacity, Million TPA											
Jayanthipuram Limestone Mine (North Band)	1.80											
Jayanthipuram Limestone Mine (South Band)	1.75											
Ravirala Limestone Mine (RF)	2.75											
Ramco Budawada Limestone Mine (RF)	1.10											
4.	Year of Establishment	1986										
5.	Date of the last environment audit report submitted	09.09.2022										

PART – B**WATER AND RAW MATERIAL CONSUMPTION**Water consumption m³/day:

Process & greenbelt

512.69 m³/day

Total

512.69 m³/day

Note: Water consumption is considered for 305 days of mine operation.

Name of the product(s)	Water consumption per unit of products (m ³ /MT of Limestone)	
	During the previous financial year (2021-2022)	During the current financial year (2022-2023)
Limestone	0.0344	0.0318

Note:

- The limestone production details are given in Annexure – I.

- Drinking Water consumption for domestic uses is being transported from water treatment plant located in cement plant. This quantity is included in the cement plant domestic use category, hence not mentioned here.

Raw material consumption:

Sl. No.	Name of the raw material	Consumption of raw material	
		During the previous financial year (2021-2022)	During the current financial year (2022-2023)
1	Diesel Oil, L	25,09,366	35,15,416
2	Lubricant Oil, L	27,228	1,68,617
3	Grease, kg	8,316	28,462
4	ANFO, kg	4,74,450	6,98,250
5	Slurry explosives – Large dia. (above 32mm), kg	2,18,561	5,85,113
6	Electrical Detonators – Ordinary, Nos.	1,189	4,720
7	Electrical Detonators – Delay, Nos.	485	4,220
8	Nonel Detonators, Nos.	2,09,451	4,54,885
9	Detonating fuse, m	3,970	13,465

PART- C

Pollution discharged to environment/unit of output
(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants discharged (mass/day)	Concentrations of Pollutants discharges (Mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water			
p ^H	Auto Garage Oil & Grease Trap Treated Waste Water - Not quantified in the financial year 2022-2023	7.68 - 7.99	Well within the prescribed limits
TDS		939.3 mg/L	
TSS		75.7 mg/L	
COD		137.6 mg/L	
BOD		43.0 mg/L	
O & G		2.5 mg/L	
(b) Air - Ambient Air Quality Monitoring in the nearby areas:			
PM ₁₀	Dharmavarapadu Thanda Village	56.03	Well within the prescribed limits
PM _{2.5}		22.66	
SO ₂		14.71	
NO _x		17.36	
CO		239.92	
PM ₁₀	Jayanthipuram Village	55.16	Well within the prescribed limits
PM _{2.5}		22.31	
SO ₂		14.39	
NO _x		17.29	
CO		249.13	

Pollutants	Quantity of Pollutants discharged (mass/day)	Concentrations of Pollutants discharges (Mass/volume), µg/m ³	Percentage of variation from prescribed standards with reasons
PM ₁₀	Chillakallu	55.78	Well within the prescribed limits
PM _{2.5}		22.57	
SO ₂		14.41	
NO _x		17.31	
CO		247.46	
PM ₁₀	K Agraharam Village	54.91	Well within the prescribed limits
PM _{2.5}		22.29	
SO ₂		14.77	
NO _x		17.52	
CO		257.83	
PM ₁₀	Jaggayyapet	56.12	Well within the prescribed limits
PM _{2.5}		22.86	
SO ₂		14.41	
NO _x		17.11	
CO		254.71	
PM ₁₀	Budawada Village	57.23	Well within the prescribed limits
PM _{2.5}		23.10	
SO ₂		14.24	
NO _x		16.94	
CO		261.04	
PM ₁₀	Vedadri Village	55.13	Well within the prescribed limits
PM _{2.5}		22.21	
SO ₂		14.29	
NO _x		16.83	
CO		251.50	
PM ₁₀	Pochampalli Village	54.83	Well within the prescribed limits
PM _{2.5}		22.35	
SO ₂		14.18	
NO _x		16.78	
CO		247.58	
PM ₁₀	Ravirala Village	53.29	Well within the prescribed limits
PM _{2.5}		21.72	
SO ₂		14.39	
NO _x		17.34	
CO		244.42	

Note:

- The analysis data of Auto Garage Oil & Grease Trap Treated Waste Water generated for the financial year 2022-2023 is narrated in Annexure - II. No deviation is observed from Prescribed Standards in this period.
- Data on ambient air quality monitoring carried out in the nearby villages (9 locations) in the financial year 2022-2023 (by MoEF&CC approved environmental monitoring agency) is

enclosed in Annexure – III. No deviation is observed with respect to quality for ambient air quality data from Prescribed Standards in the financial year 2022-2023.

PART – D

HAZARDOUS WASTES

As specified under 1[Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008]]

Hazardous Waste	During the previous financial year (2021-2022)	During the current financial year (2022-2023)
Waste oil	Used within the premises. No disposal to outside agencies.	Used within the premises. No disposal to outside agencies.
Waste grease		
Waste lead acid batteries [#]	74 Nos. disposed to M/s. Rajdeep Energies (P) Ltd., Hyderabad	62 Nos. disposed to M/s R. Ess Iron & Steel Pvt. Ltd.

- Copy of Form - 4 (submitted to APPCB) - Hazardous Waste generation / receipts and consumption / disposal details for mines for the financial year 2022-2023 is enclosed as Annexure - IV.
- Part of the waste oil / lubricants is used along with fresh grease for reclaimers.
- [#] Waste lead acid batteries from cement plant, thermal power plant, waste heat recovery plant and limestone mines.

PART – E

SOLID WASTES

Location	During the previous financial year (2021-2022)	During the current financial year (2022-2023)
(a) From process		
I. Overburden / waste Generation, Tonne		
i. Jayanthipuram Limestone Mine (North Band)	19,67,881	23,12,578
ii. Jayanthipuram Limestone Mine (South Band)	1,39,266	1,28,821
iii. Ravirala Limestone Mine (RF)	95,464	4,11,804
iv. Ramco Budawada Limestone Mine	0	0
II. Top Soil Generation, Tonne		
i. Jayanthipuram Limestone Mine (North Band)	0	0
ii. Jayanthipuram Limestone Mine (South Band)	0	0
iii. Ravirala Limestone Mine (RF)	0	0
iv. Ramco Budawada Limestone Mine	0	0
(b) From pollution control facility (wet drilling, water sprinkling, etc.)	No solid waste generated	
(c) Quantity recycled or re-utilized (for reclamation), Tonne		
i. Jayanthipuram Limestone Mine (North Band)	19,67,881	23,12,578
ii. Jayanthipuram Limestone Mine (South Band)	0	0
iii. Ravirala Limestone Mine (RF)	0	0
iv. Ramco Budawada Limestone Mine	0	0

PART – F

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

Solid Waste Handling & Reclamation:

- Total solid waste handled in the financial year 2022-2023 is as follows:

Name of the Mine	Solid Waste, Tonne		
	Generated	Used in reclamation	Dumped in dumps
Jayanthipuram Limestone Mine (North Band)	23,12,578	23,12,578	0
Jayanthipuram Limestone Mine (South Band)	1,28,821	0	1,28,821
Ravirala Limestone Mine (RF)	4,11,804	0	4,11,804
Ramco Budawada Limestone Mine	0	0	0

- 16.53 ha of area is reclaimed by the end of financial year 2022-2023 at Jayanthipuram Limestone Mine (North Band).
- Details of handling / disposal of various wastes generated from mines, plant and colony are given in Annexure – I.

PART - G

Impact of the pollution control measures taken on concentration of natural resources and on the cost of production

- All the surrounding areas are kept free from pollution.
- No capital expenditure incurred for environmental protection measures in financial year 2022-2023.
- The recurring expenditure incurred for environmental protection measures in financial year 2022-2023 is Rs. 651.65 lakh for all four operating mining leases i.e., nearly Rs. 13.27 per Tonne of limestone production against Rs. 12.97 per Tonne of limestone production in the financial year 2021-2022.
- Various expenditures incurred for environment protection measures for 4 mining leases are listed in Annexure - V.
- An amount of Rs. 669.30 lakh is allocated towards Environment Management Activities for the financial year 2023-2024 towards capital as well as recurring costs for mines and being spent.

PART – H

Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution

- As part of environmental protection measures, 1.20 ha is reclaimed during the financial year 2022-2023 and a cumulative of 16.53 ha by the end of financial year 2022-2023 at Jayanthipuram Limestone Mine (North Band). The investment made for the same in the financial year 2022-2023 is Rs. 485.29 lakh.

PART – I

Any other particulars for improving the quality of the environment

Various Management Systems are being implemented in our premises, viz.,

Management System	Implemented from
Quality Management System - IS/ISO 9001:2015	1996
Environmental Management System - IS/ISO 14001:2015	2006
Occupational Health & Safety Management System – IS/ISO 45001:2018	2010
Energy Management System - ISO 50001:2018	2014
Work Place Management - 5S Certification	2016

ENVIRONMENTAL PROTECTION MEASURES

Ramco group of Companies have diversified activities in Cement, Textiles, Fibre-Cement Products, Wind Energy, Software Products, Surgical Dressings, Ready-Mix Concrete and Dry Mortar Plants.

The Ramco Cements Limited is a unit of the Ramco Group which has been growing steadily right from its inception with present capacity 22.0 Million Tonnes / Annum of cement. RCL, which has always been striving for Total Quality Management, possesses International Management Systems Certificates IS/ISO 9001:2015, IS/ISO 14001:2015, IS/ISO 45001:2018, ISO 50001:2018 and 5-S Workplace Management System.

The KSR Nagar plant was presented with an Award in recognition of practicing 'Cleaner Production Measures' from AP Pollution Control Board, Hyderabad for the year 2011-2012 on the eve of World Environment Day – 05th June 2012. Andhra Pradesh Pollution Control Board recommended for 'Better Environmental Practices Award - First in Cement Industry Category for the year 2016-2017 in the State of Andhra Pradesh'.

Captive Limestone Mines are obtaining awards in Mines Environmental & Mineral Conservation Week and in Mines Safety Week celebrations.

PRODUCTION DETAILS:

The production and dispatch details of limestone from 4 Nos. of captive mines for the financial year 2022-2023 against the production capacities are as follows:

Name of the Mine	Production Capacities of Mines as per EC, TPA	For Current Financial Year 2022-2023, Tonne	
		Production	Despatch
Jayanthipuram Limestone Mine (North Band)	18,00,000	14,99,224	15,55,100
Jayanthipuram Limestone Mine (South Band)	17,50,000	7,70,650	7,50,000
Ravirala Limestone Mine (RF)	27,50,000	21,74,000	21,74,000
Ramco Budawada Limestone Mine (RF)	11,00,000	4,66,400	4,66,400

AIR:

Air Pollution Control Measures:

Various air pollution control measures being undertaken in the mines are:

- Permanent water sprinkling system is installed on mines haul road to reduce fugitive dust.
- Non-el delay detonators are used to reduce ground vibration, to avoid fly rocks & fugitive dust.
- Massive greenbelt development all along the haul roads.
- Dozer is used for dozing haul roads regularly.
- Mobile water sprinklers are used for water sprinkling on internal haul roads & muck pile.

Ambient Air Quality Monitoring:

(i) Ambient Air Quality Monitoring by MoEF&CC Approved External Agency – nearby villages:

Data on ambient air quality monitoring is being carried out in the nearby 9 Nos. of villages (buffer zones of limestone mining leases) in the financial year 2022-2023 is enclosed as Annexure - III. Data on core zone air monitoring carried out in four mining leases in the financial year 2022-2023 is enclosed as Annexure - III. The values are within the specified limits. The average values are:

Location / Norm	Average concentration of pollution type, $\mu\text{g}/\text{m}^3$									
	Financial Year 2021-22					Financial Year 2022-2023				
	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO
Pollution Board Norms	100	60	80	80	2000	100	60	80	80	2000
Dharmavarapupadu Thanda	50.86	20.58	12.73	15.38	212.50	56.0	22.70	14.70	17.40	239.9
Jayanthipuram Village	51.85	20.98	12.79	15.69	217.21	55.20	22.30	14.40	17.30	249.10
Chillakallu Village	50.53	20.45	13.20	16.10	220.75	55.80	22.60	14.40	17.30	247.50
K Agraharam Village	51.08	20.72	13.59	16.34	222.13	54.9	22.3	14.80	17.50	257.80
Jaggayyapet	51.86	21.13	13.68	16.38	242.25	56.10	22.90	14.40	17.10	254.70
Budawada Village	53.69	21.64	13.46	16.16	231.63	57.20	23.10	14.20	16.90	261.00
Vedadri Village	51.80	20.88	13.28	15.83	212.79	55.10	22.20	14.30	16.80	251.50
Pochampalli Village	50.50	20.58	13.05	15.65	206.13	54.80	22.30	14.20	16.80	247.60
Ravirala Village	50.75	20.68	12.83	15.78	209.33	53.30	21.70	14.40	17.30	244.40

Mine / Norm	Location	Average concentration of pollution type, $\mu\text{g}/\text{m}^3$									
		Financial Year 2021-22					Financial Year 2022-23				
		PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO
Pollution Control Board Norms		100	60	80	80	2000	100	60	80	80	2000
Jayanthipuram Limestone Mine (North Band)	Mines Office	58.72	23.78	14.21	16.76	559.42	60.95	24.69	17.29	19.84	569.45
	Workshop	59.17	24.14	14.24	17.09	548.96	60.75	24.79	16.73	19.58	565.04
	Sub-station	57.25	23.37	14.30	17.07	555.38	59.00	24.07	17.26	20.06	556.45
	Magazine Area	57.87	23.52	14.31	17.36	557.54	60.24	24.49	17.01	20.06	570.16
Jayanthipuram Limestone Mine (South Band)	Mines Office	56.63	23.76	14.61	17.11	565.33	60.39	24.40	16.72	19.22	572.92
	Pump House	59.55	24.13	14.71	17.61	558.92	59.85	24.23	16.43	19.33	575.88
	Haul Road	57.96	23.71	14.39	17.14	552.83	59.10	24.17	16.47	19.22	566.96
	Loading Area	60.38	24.54	14.74	17.59	558.71	57.34	23.31	16.51	19.36	576.75
Ravirala Limestone Mine (RF)	Mines Office	59.60	24.06	14.18	16.83	568.13	62.07	25.07	16.93	19.57	573.00
	ML3 Tower Light Area	59.78	24.20	14.83	17.88	567.04	58.63	23.73	16.70	19.74	574.70
	ML4 Tower Light Area	58.86	23.90	14.26	17.31	571.67	60.33	24.52	16.57	19.60	567.95
	View Point Tower Light Area	56.98	22.96	14.82	17.87	559.21	57.30	23.11	17.08	20.12	576.16
Ramico Budawada Limestone Mine (RF)	Drilling Area	60.58	24.50	15.13	17.68	558.71	60.87	24.61	17.38	19.93	583.88
	Loading Area	59.55	24.29	15.33	18.03	560.71	62.06	25.33	17.45	20.15	587.88
	Haul Road - 1	58.29	23.91	15.07	18.02	560.04	61.02	25.01	17.15	20.10	561.83
	Haul Road - 2	59.26	24.41	15.08	17.73	564.21	62.80	25.87	18.08	20.73	566.97

(ii) Continuous Ambient Air Quality Monitoring:

2 Nos. of Continuous ambient air quality monitoring stations are installed. On-line monitoring data is being transmitted to APPCB website. The details of Online Continuous Ambient Air Quality Monitoring equipment are:

Location of continuous ambient air monitoring instrument	Parameter	Make of present equipment	Year of installation	Details of earlier equipment, if any
Time Office	PM ₁₀	Metone	2013	
	PM _{2.5}	Metone	2013	
	SO ₂	Horiba	2015	
	NO _x	Horiba	2015	
Mines Office	PM ₁₀	Metone	2020	DKK, Japan installed in the year 2010 at Time Office is shifted in the year 2013.
	PM _{2.5}	Metone	2014	
	SO ₂	Horiba	2015	
	NO _x	Horiba	2015	

WATER:

Water Requirement:

- Mine seepage water is the source for water requirements.
- By considering 305 days of operation of mines, the total water requirement for Captive Mines is 513.0 m³/day in the financial year 2022-2023 against 458.1 m³/day is consumed for year 2021-2022.

Panchayat Raj & Rural Development Department (nodal agency for Central Ground Water Dept) vide Lr. No. PRR05-11028/45/2018-SLNA-GIS-CORD dated 13.11.2021 (which is valid up to 12.11.2024) accorded permission for mine seepage water withdrawal @ 7000 m³/day, for internal use for Cement Plant, thermal power plant, waste heat recovery plant, captive mines and township.

Water Level Data:

Water levels are being regularly monitored through piezometers on regular basis at 4 mining leases:

Name of the Mine	No. of Piezometers		
	Manual	Automatic	Total
Jayanthipuram Limestone Mine (North Band)	4 Nos.	---	4 Nos.
Jayanthipuram Limestone Mine (South Band)	---	3 Nos.	3 Nos.
Ravirala Limestone Mine (RF)	1 No.	3 Nos.	4 Nos.
Ramco Budawada Limestone Mine(RF)	3 Nos.	---	3 Nos.

Data on water levels collected in the financial year 2022-2023 is enclosed as Annexure – VI. There is no severe impact observed in the water level data.

Permission to Work Below Water Table:

Panchayat Raj & Rural Development Department (nodal agency for Central Ground Water Dept) accorded permission to work below water table vide:

Mine Name	NOC No.	Date of Issue	Valid Up To
Jayanthipuram Limestone Mine (North Band)	PRR05-11028/14/2018-SLNA-GIS-CORD	19.02.2021	18.02.2024
Jayanthipuram Limestone Mine (South Band)	PRR05-11028/13/2018-SLNA-GIS-CORD	07.07.2020	06.07.2023
Ravirala Limestone Mine (RF)	PRR05-11028/15/2018-SLNA-GIS-CORD	07.07.2020	06.07.2023
Ramco Budawada Limestone Mine (RF)	PRR05-11028/16/2019-SLNA-GIS-CORD	13.02.2021	12.02.2024

Water Quality Analysis:

- Ground water samples collected in the nearby villages is being monitored by MoEF&CC approved external agency. Compiled ground water quality data for the samples collected in the nearby villages in the financial year 2022-2023 is enclosed as Annexure – VII. These values are within the specified limits.
- Surface water for the samples collected in the nearby sources is being monitored by MoEF&CC approved external agency. Compiled surface water quality data for the samples collected in the financial year 2022-2023 is enclosed as Annexure – VIII. These values are within the specified limits.

Waste Water Quality Analysis:

- No process effluent generation from limestone extraction.
- Domestic wastewater generated from mining leases is being treated in septic tanks followed by soak pits, located at respective mining leases.
- Mine seepage water is being allowed to settle in mine sump located in respective mine. Mine seepage water quality data for the samples collected in financial year 2022-2023 is enclosed as Annexure – IX. The values are within the specified limits.
- Workshop effluents are being treated in oil & grease trap located and the outlet water is being used for greenbelt development. Compiled data on analysis reports of workshop oil & grease trap outlet water carried out by MoEF&CC approved external agency in the financial year 2022-2023 is enclosed as Annexure - II. The values are within the specified limits. The average values are:

Pollution Type	Unit	Pollution Board Norms	Average Value / Range (2021-2022)	Average Value / Range (2022-2023)
p ^H		5.5 - 9.0	7.64 - 7.84	7.68 - 7.99
TDS	mg/L	2100	966.1	939.3
TSS	mg/L	100	81.5	75.7
COD	mg/L	250	136.5	137.6
BOD	mg/L	100	42.0	43.0
O & G	mg/L	10	2.7	2.5

Rain Water Harvesting Pits & Check Dams:

- 48 Nos. of rain water harvesting structures are made to recharge the ground water in the colony and 4 Nos. of rain water harvesting structures are made to recharge the ground water in the plant by March 2023. The locations of these pits are listed in Annexure – X.
- 1 No. of check dam is constructed near Jayanthipuram Limestone Mine (North Band) and 1 No. of check dam is located near Ravirala Limestone Mine (RF).

Water Conservation:

As part of water conservation measures, water collected in mine pits is being used for:

- Cement plant, thermal power plant & waste heat recovery plant process requirements.
- Water sprinkling for dust suppression purpose (plant & mines).
- Greenbelt development purpose.
- Domestic water requirements of plant, mines & colony.
- Domestic water requirements of nearby villages.
- Part of this outlet water is used for agricultural purpose in the nearby areas.
- Part of the excess treated waste water is being passed to pond (about 0.5 ha area) in our own lands to uplift the water table in the nearby area and balance is being let out.

Drinking Water:

Reverse Osmosis (RO) plant is located at colony and purified water is being distributed to all offices, mines and colony houses. The analysis reports of RO plant inlet and outlet samples collected in the financial year 2022-2023 are enclosed as Annexure – XI.

NOISE & VIBRATION LEVELS:

- Noise level data collected in the mines areas in the financial year 2022-2023 is listed out in Annexure – XII. These values are within the specified limits.
- Vibration levels are being monitored by Minimate instrument regularly.
- The vibration reports collected while blasting at four mining leases [Jayanthipuram Limestone Mine (North Band), Jayanthipuram Limestone Mine (South Band), Ravirala Limestone Mine (RF) and Ramco Budawada Limestone Mine (RF)] in the financial year 2022-2023 are enclosed as Annexure – XIII. These values are within the specified limits.

OCCUPATIONAL HEALTH:

Occupational health check-ups are being carried out for new employees at the time of joining into the organization and occupational health surveillance programme is carried out for all the employees regularly. Full-fledged occupational health centre is established and services are being rendered by qualified occupational health specialist. Occupational health checkup at the time of recruitment is being carried for all the employees as per Mines Rules, with the following tests:

- Lung function test
- ECG

- Chest X-ray
- Blood analysis test
- Urine analysis test
- Audiometry
- Checking colour blindness
- Stool Analysis
- Sputum (Optional)

The employees who are working at the time of initiation of this programme are covered for these tests. If any person failed in this health checkup at the time of recruitment, he/she won't get recruited. Like so, a baseline data on the health status of workmen in the Pre-recruitment stage was established. The same is being repeated periodically to update and to take action accordingly. Occupational health surveillance on regular basis is being carried for all the employees, with the following tests:

- Clinical examination including Neurological assessment
- Lung function test
- ECG
- Chest X-ray
- Blood analysis test
- Urine analysis test
- Audiometry
- Checking colour blindness

If any person failed in this health surveillance programme, he/she will be shifted / transferred to non-hazardous activities. Till now, no such case is observed. Occupational Health Centre (with qualified Occupational Health Specialist) is established with the following facilities:

- X-ray
- ECG
- Spirometry (lung function test)
- Audiometry
- Semi-auto analyser to carryout bio-chemical tests
- Clinical lab for micro-biological tests (including sputum test)
- Checking colour blindness
- Dental chair
- Ambulance

The first aid box is made available for immediate treatment, at all working mining leases. First aid training is imparted to the selected employees regularly. The list of first aid members is being displayed at strategic places.

WASTE HANDLING & CLEANER PRODUCTION PRACTICES:

Solid Waste Handling & Reclamation:

Total solid waste handled in the financial year 2022-2023 is as follows:

Name of the Mine	Solid Waste, Tonne		
	Generated	Used in reclamation	Dumped in dumps
Jayanthipuram Limestone Mine (North Band)	23,12,578	23,12,578	0
Jayanthipuram Limestone Mine (South Band)	1,28,821	0	1,28,821
Ravirala Limestone Mine (RF)	4,11,804	0	4,11,80
Ramco Budawada Limestone Mine (RF)	0	0	0

16.53 Ha. of area got reclaimed by the end of financial year 2022-2023 at Jayanthipuram Limestone Mine (North Band). Out of which 1.20 Ha. reclaimed during the financial year 2022-2023.

Various handling and disposal practices of wastes are:

S. No	Type of waste	Quantity handled in 2022-23	Disposal practice
1	Top Soil Generation	Nil	No top soil generation in the financial year 2022-2023 from all the mining leases.
2	Dust generation during drilling	Nil	Controlled by Wet drilling
3	Dust generation during loading	Nil	Water sprinkling on muck piles
4	Dust generation during transportation	Nil	Water sprinkling on haul roads (by permanent water sprinkler of 2 km length of main haul roads and by water tanker on minor haul roads)
5	Sludge collected from STP	15 m ³	Is being used as manure in greenbelt activities, in place of chemical fertilizers.
6	Colony garbage	2 Tonne of compost	By Vermi-composting and compost is being used for greenbelt activities as manure, in place of chemical fertilizers.
7	Kitchen waste from colony	676 kg of bio-gas generated	Kitchen waste is being composted in bio-gas plant. The generated bio-gas is used in industrial canteen, to partially replace the consumption of LPG.
8	E-waste from plant & mines	Generated - 0.4 Tonne	Disposed 0.4 Tonne of E-waste to APPCB authorized agency (M/s. Best E Waste Recyclers). Returns are being submitted annually to AP Pollution Control Board. Copy of the E-waste returns for the financial year 2022-2023 is enclosed as Annexure – XIV. Total quantity by the end of FY 2022-2023 are: E-waste - 1.129 Tonne Printer Cartridges – 0.26532 Tonne
9	Haz. waste – Waste oil & waste grease from mines	No waste oil & waste grease disposed to external agencies.	Waste oil along with fresh fuel is being used for kiln firing while light up & waste grease for reclaimer lubrication. Excess waste oil & waste grease are sold to APPCB authorized agents. Returns are being submitted annually to APPCB. Copy of the hazardous waste returns for the financial year 2022-2023 is enclosed as Annexure – IV.

S. No	Type of waste	Quantity handled in 2022-23	Disposal practice
10	Haz. waste – waste lead acid batteries from mines	62 Nos.	Waste lead acid batteries are being disposed to the supplier on exchange basis or to APPCB authorized agency (M/s R. Ess Iron & Steel Pvt. Ltd.). Returns are being submitted annually to APPCB. Copy of the haz. waste returns for the financial year 2022-2023 is enclosed as Annexure – IV.
11	Plastic waste collected from colony, mines and plant	12.6 T	Being fired in the kilns.
12	Bio-medical waste from OHC	Yellow – 105.41 kg Red – 24.12 kg White – 1.00 kg Blue – 4.94 kg	Operating Occupational Health Centre (OHC) to provide basic first aid facilities within the premises. Bio-medical waste from this OHC is being regularly collected by APPCB authorized agent, M/s Safenviron Bio-Medical Treatment Plant for onward treatment. The agency collects the bio-medical waste on 48-hour basis. Returns are being submitted annually (for the calendar year) to AP Pollution Control Board. Copy of Bio-Medical Annual Returns submitted for the calendar year 2022 is enclosed as Annexure – XV.

CLEANER PRODUCTION PRACTICES:

To control air emissions as well as fugitive emissions from various sources, various cleaner production practices are initiated. These are:

- Permanent water sprinkler system is installed for a length of nearly 2 km at mines haul road.
- Mobile Water sprinkling on mines internal haul roads.
- Non-el delay detonators instead of conventional detonators.
- Minimate vibration monitor is used to measure the ground vibrations and to control them accordingly.
- Reclamation & rehabilitation initiated at mined out areas.
- For better housekeeping, '5-S – Work Place Management' is implemented.

GREENBELT ACTIVITIES:

Greenbelt developed within ML areas as on 31.03.2023 are as follows:

Name of the Mine	Greenbelt Area in Ha. specified in EC	Greenbelt Developed Extent in Ha. up to	
		31.03.2022	31.03.2023
Jayanthipuram Limestone Mine (North Band)	62.39	65.82	66.40
Jayanthipuram Limestone Mine (South Band)	21.07	21.58	21.58
Ravirala Limestone Mine (RF)	3.19	10.09	10.49
Ramco Budawada Limestone Mine (RF)	0.0	3.50	3.50

High Density Plantation (Miyawaki method):

High density plantation is initiated in the financial year 2019-2020. The details of high density plantation carried out in the plant, captive mines and colony up to March-2023:

- No. of saplings planted – 22335.
- Total area covered – 6040 m².

RECENT SOCIO - ECONOMIC MEASURES CARRIED OUT:

As part of Corporate Social Responsibility, various socio-economic measures are being carried out. Amount spent on various socio-economic activities for the surrounding villages in the financial year 2022-2023 is Rs. 1,20,10,873 /- against Rs. 1,18,27,267/- in the financial year 2021-2022.

EXPENDITURE INCURRED FOR ENVIRONMENT PROTECTION:

- The recurring expenditure incurred for environmental protection measures in financial year 2022-2023 is Rs. 651.65 lakh for all four operating mining leases i.e., nearly Rs. 13.27 per Tonne of limestone production against Rs. 12.97 per Tonne of limestone production in the financial year 2021-2022.
- Various expenditures incurred for environment protection measures (other than socio-economic measures) for 4 mining leases [Jayanthipuram Limestone Mine (North Band), Jayanthipuram Limestone Mine (South Band), Ravirala Limestone Mine (RF) and Ramco Budawada Limestone Mine (RF)] for the financial year 2022-23 are listed in Annexure - V.
- An amount of Rs. 669.30 lakh is allocated towards Environment Management Activities for the financial year 2023-2024 towards capital as well as recurring costs for mines and being spent.

CELEBRATION OF WORLD ENVIRONMENT DAY:

- On the eve of World Environment Day – 5th June 2022, plantation activity conducted at plant premises, mines premises, colony premises and at surrounding areas.

THE RAMCO CEMENTS LTD, KSR NAGAR
AUTO GARAGE OIL & GREASE TRAP OUTLET QUALITY
PERIOD - APRIL 2022 TO MARCH 2023

Parameter	Unit	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Norm	Average / Range	Min.	Max.
p ^H		7.79	7.83	7.91	7.99	7.91	7.84	7.78	7.77	7.68	7.71	7.83	7.91	5.5 - 9.0	7.68 - 7.99	7.7	8.0
Total Dissolved Solids	mg/L	912	923	936	926	938	921	903	923	955	969	976	989	2100	939.3	903.0	989.0
Total Suspended Solids	mg/L	77.3	78.9	79.6	78.3	76.9	75.4	74.3	75.2	71.4	72.3	73.5	75.1	200	75.7	71.4	79.6
Chemical Oxygen Demand	mg/L	129	136	129	132	129	136	129	133	141	148	151	158	250	137.6	129.0	158.0
BOD (for 3 days at 27 °C)	mg/L	40.6	42.3	41.6	40.3	42.3	43.1	40.6	41.8	43.8	45.1	46.2	48.3	100	43.0	40.3	48.3
Oil & Grease	mg/L	2.4	2.7	2.5	2.7	2.5	2.7	2.5	2.4	2.1	2.4	2.6	2.4	10	2.5	2.1	2.7

Note: All values are mentioned as mg/L, except p^H.

THE RAMCO CEMENTS LTD., KSR NAGAR
CORE ZONE AIR QUALITY MONITORING DATA - JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
(PERIOD - APRIL 2022 TO MARCH 2023)

Location	Parameter	April-22		May-22		June-22		July-22		Aug-23		Sep-23		Oct-22		Nov-22		Dec-22		Jan-23		Feb-23		Mar-23		Average	Limits		
		I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night			I Fort-night	II Fort-night
	PM 10	69.3	65.1	73.4	72.9	65.9	65.2	50.9	50.9	53.8	53.9	55.1	55.9	57.6	56.2	58.7	59.7	59.1	58.3	61.9	60.6	63.8	62.3	67.2	65.2	60.95	100		
	PM 2.5	28.0	26.4	29.7	29.6	26.6	26.5	20.6	20.7	21.7	21.9	22.4	22.6	23.3	22.8	23.7	24.2	23.9	23.7	25.0	24.6	25.8	25.3	27.1	26.5	24.69	60		
Mines office	SO ₂	16.1	15.4	19.3	16.9	18.2	17.1	16.2	13.9	15.4	15.6	15.9	16.3	17.2	16.2	18.9	17.4	17.4	16.2	18.1	18.3	19.1	19.2	19.5	21.2	17.29	80		
	NO _x	18.7	17.9	21.9	19.4	20.8	19.6	18.8	16.4	18.0	18.1	18.4	18.9	19.8	18.7	21.5	19.9	20.0	18.7	20.7	20.8	21.7	21.7	22.1	23.7	19.84	80		
	CO	628	636	666	629	556	556	501	502	542	526	536	559	563	551	582	576	572	548	563	562	571	571	584	584	569.46	2000		
	PM 10	67.1	66.8	72.9	74.3	63.6	68.2	53.6	53.6	52.9	55.1	57.9	53.6	55.1	58.9	56.3	61.3	54.6	60.4	56.8	63.5	58.9	65.1	60.2	67.3	60.75	100		
Workshop	PM 2.5	27.2	27.4	29.6	30.5	25.8	28.0	21.8	22.0	21.5	22.6	23.7	21.8	22.4	24.1	22.9	25.1	22.2	24.8	23.1	26.0	23.9	26.7	24.4	27.6	24.80	60		
	SO ₂	15.9	16.3	18.2	15.3	17.3	15.4	17.3	15.1	16.1	15.3	15.8	16.5	16.9	16.3	17.1	16.9	16.3	15.3	17.9	16.9	18.4	17.8	19.1	18.3	16.74	80		
	NO _x	18.8	19.1	21.1	18.1	20.2	18.2	20.2	17.9	19.0	18.1	18.6	19.4	19.8	19.1	20.0	19.7	19.2	18.1	20.8	19.7	21.3	20.6	22.0	21.1	19.59	80		
	CO	606	628	639	653	563	539	489	537	523	531	548	536	549	563	553	584	541	561	559	568	568	583	571	569	565.04	2000		
Substation	PM 10	65.2	62.9	74.3	70.2	67.1	63.9	51.2	49.6	54.6	50.6	52.6	56.8	58.2	53.5	60.2	55.2	58.3	54.6	60.2	55.9	61.2	56.9	63.9	58.9	59.00	100		
	PM 2.5	26.7	25.6	30.4	28.6	27.4	26.0	20.9	20.2	22.3	20.6	21.4	23.2	23.8	21.8	24.6	22.5	23.8	22.2	24.6	22.8	25.0	23.2	26.1	24.0	24.07	60		
	SO ₂	16.8	15.9	19.3	17.1	18.9	16.9	15.9	14.2	15.8	15.9	16.3	15.9	17.3	15.8	18.3	16.3	17.1	16.1	18.3	18.6	18.9	19.1	19.3	20.4	17.27	80		
	NO _x	19.5	18.8	22.0	20.0	21.6	19.8	18.6	17.1	18.5	18.8	19.2	18.6	20.0	18.7	21.0	19.2	19.8	19.0	21.0	21.5	21.6	22.0	22.0	23.3	20.07	80		
	CO	609	612	661	636	542	542	486	512	541	529	536	551	557	547	546	563	529	549	538	556	548	563	559	543	556.46	2000		
	PM 10	63.8	67.3	70.2	71.9	60.2	64.6	50.8	50.4	56.3	53.8	55.1	58.1	60.6	56.8	62.8	58.6	60.7	57.1	62.9	56.3	63.5	58.3	65.2	60.6	60.25	100		
Magazine Area	PM 2.5	26.1	27.2	28.7	29.0	24.6	26.1	20.8	20.4	23.0	21.7	22.3	23.8	24.8	22.9	25.7	23.7	24.8	23.1	25.7	22.7	26.0	23.6	26.7	24.5	24.50	60		
	SO ₂	16.6	16.2	18.4	16.9	17.6	14.3	15.6	15.4	16.5	15.8	16.2	16.8	17.4	17.1	19.2	17.6	18.4	15.9	16.8	17.4	17.1	18.3	18.9	17.9	17.01	80		
	NO _x	19.6	19.3	21.4	20.0	20.6	17.4	18.6	18.5	19.5	18.9	19.3	19.8	20.4	20.2	22.2	20.7	21.4	19.0	19.8	20.5	20.1	21.4	21.9	21.0	20.06	80		
	CO	641	653	674	654	512	559	511	501	548	542	559	553	553	568	549	577	536	557	544	571	553	562	601	606	570.17	2000		

Note: All values are mentioned in µg/m³

THE RAMCO CEMENTS LTD., KSR NAGAR
CORE ZONE AIR QUALITY MONITORING DATA - JAYANTHIPURAM LIMESTONE MINE (SOUTH BAND)
(PERIOD - APRIL 2022 TO MARCH 2023)

Location	Parameter	April-22		May-22		June-22		July-22		Aug-23		Sep-23		Oct-22		Nov-22		Dec-22		Jan-23		Feb-23		Mar-23		Average	Limits	
		I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night			
PM 10	PM 10	72.3	68.3	75.2	73.3	68.3	65.3	53.8	52.7	55.1	53.8	59.6	52.6	62.3	53.5	65.1	52.7	60.6	47.2	62.9	53.8	63.5	55.3	65.2	57.1	60.40	100	
		29.2	27.6	30.4	29.6	27.6	26.4	21.7	21.3	22.3	21.7	24.1	21.3	25.2	21.6	26.3	21.3	24.5	19.1	25.4	21.7	25.7	22.3	26.3	23.1	24.40	60	
SO ₂	SO ₂	15.3	17.4	16.3	18.3	17.9	19.2	12.9	15.3	14.9	16.2	16.2	16.5	17.3	16.9	18.6	17.4	15.4	15.3	16.3	16.2	17.4	17.1	18.9	18.3	16.73	80	
		17.6	20.1	18.6	21.0	20.2	21.9	15.2	18.0	17.2	18.9	18.5	19.2	19.6	19.6	20.9	20.1	17.7	18.0	18.6	18.6	18.9	19.7	19.8	21.2	21.0	19.23	80
NO _x	NO _x	689	651	712	696	623	549	512	487	523	521	556	539	568	545	559	559	523	542	548	558	569	563	574	584	572.92	2000	
		70.4	69.6	73.9	74.1	65.4	68.9	55.9	53.9	57.3	55.1	50.2	57.3	58.7	58.2	59.3	59.2	53.9	55.2	55.1	55.1	56.2	56.9	58.3	58.3	59.85	100	
PM 2.5	PM 2.5	28.7	28.0	30.1	29.9	26.6	27.8	22.8	21.7	23.3	22.2	20.4	23.1	23.9	23.5	24.1	23.9	21.9	22.2	22.4	22.2	22.9	22.9	23.7	23.5	24.24	60	
		17.3	16.9	15.2	17.9	16.3	18.3	14.6	16.2	15.2	15.8	15.9	14.9	16.8	15.6	17.9	16.6	16.1	15.1	16.5	16.5	15.4	18.3	16.8	17.3	17.5	16.43	80
NO _x	NO _x	20.0	20.0	17.9	21.0	19.0	21.4	17.3	19.3	17.9	18.9	18.6	18.0	19.5	18.7	20.6	19.7	18.8	18.2	19.2	18.5	21.0	19.9	20.0	20.6	19.33	80	
		656	656	723	712	654	558	488	496	541	532	563	546	571	553	548	563	529	548	563	563	561	551	568	578	575.88	2000	
PM 10	PM 10	66.3	70.4	71.6	72.9	62.9	65.2	52.6	51.2	54.6	54.6	53.1	56.8	55.2	59.3	54.6	61.3	52.7	56.1	53.6	58.3	55.1	59.5	60.1	60.6	59.11	100	
		27.2	28.7	29.4	29.7	25.8	26.6	21.6	20.9	22.4	22.3	21.8	23.2	22.6	24.2	22.4	22.4	25.0	21.6	22.9	22.0	23.8	22.6	24.3	24.6	24.18	60	
SO ₂	SO ₂	16.2	17.8	16.9	18.6	17.2	15.6	13.2	14.1	16.2	16.1	14.1	16.9	15.8	17.3	17.1	17.8	15.2	16.2	15.9	18.5	16.9	16.2	17.1	18.6	18.4	16.48	80
		18.8	20.7	19.5	21.5	19.8	18.5	15.8	17.0	18.8	19.0	16.7	19.8	18.4	20.2	19.7	20.7	17.8	19.1	18.5	19.8	18.8	20.0	21.2	21.3	19.23	80	
CO	CO	659	648	715	701	629	563	491	501	529	528	542	538	553	549	543	554	518	541	529	563	538	538	571	541	563	566.96	2000
		68.9	72.3	72.4	73.6	63.6	63.7	49.1	48.3	53.8	53.7	48.9	55.1	51.6	57.6	53.8	58.8	48.3	52.4	51.2	55.6	53.1	56.2	54.6	59.7	57.35	100	
PM 2.5	PM 2.5	28.0	29.4	29.5	29.9	25.9	25.9	20.0	19.6	21.9	21.8	19.9	22.4	21.0	23.4	21.9	23.9	19.7	21.3	20.8	22.6	21.6	22.8	22.2	24.2	23.32	60	
		17.1	17.3	15.6	19.2	15.4	17.1	15.1	16.9	15.8	15.9	15.1	16.6	15.9	16.8	16.6	17.1	15.7	15.9	17.1	14.7	18.2	15.3	19.1	16.9	16.52	80	
NO _x	NO _x	20.0	20.1	18.5	22.0	18.3	19.9	18.0	19.7	18.7	18.7	18.0	19.4	18.8	19.6	19.5	19.9	18.6	18.7	20.0	17.5	21.1	18.1	22.0	19.7	19.37	80	
		668	649	736	736	656	578	521	478	536	536	551	544	562	546	550	558	511	523	546	546	548	552	559	589	609	576.75	2000

Note: All values are mentioned in µg/m³

THE RAMCO CEMENTS LTD., KSR NAGAR
CORE ZONE AIR QUALITY MONITORING DATA - RAVIRALA LIMESTONE MINE (RESERVE FOREST)
(PERIOD - APRIL 2022 TO MARCH 2023)

Location	Parameter	April-22		May-22		June-22		July-22		Aug-23		Sep-23		Oct-22		Nov-22		Dec-22		Jan-23		Feb-23		Mar-23		Average	Limits		
		I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night	I Fort-night	II Fort-night			I Fort-night	II Fort-night
	PM 10	70.2	70.2	73.5	74.0	68.3	65.3	50.9	58.3	59.8	60.2	55.1	63.1	62.3	53.5	65.1	52.7	60.6	47.2	62.9	53.8	63.5	55.3	65.2	57.1	60.9	100.0		
	PM 2.5	28.4	28.3	29.8	29.8	27.6	26.4	20.6	23.5	21.8	24.3	22.3	25.4	25.2	21.6	26.3	21.3	24.5	19.1	25.4	21.7	25.7	22.3	26.3	23.1	24.6	60.0		
Mines Office	SO ₂	18.2	16.3	19.3	17.3	17.9	19.2	18.2	12.9	16.9	15.3	17.2	16.3	17.3	16.9	18.6	17.4	15.4	17.7	18.0	18.9	19.7	19.8	21.2	21.0	19.7	80.0		
	NO _x	20.9	18.9	22.0	19.9	20.2	21.9	20.9	15.5	19.6	17.9	19.9	18.9	19.6	19.6	20.9	20.1	17.7	18.0	18.6	18.9	19.7	19.8	21.2	21.0	19.7	80.0		
	CO	654	656	654	701	623	549	596	527	587	598	612	512	568	545	559	559	523	542	548	558	569	563	574	584	579.2	2000.0		
	PM 10	71.6	65.1	74.6	69.2	65.4	68.9	52.7	52.7	54.1	58.3	56.2	59.2	58.7	58.2	59.3	59.2	53.9	55.2	55.1	55.1	56.2	56.9	58.3	58.3	59.7	100.0		
ML3 Tower Light Area	PM 2.5	28.7	26.6	29.9	28.3	26.6	27.8	21.1	21.6	21.7	23.8	22.5	24.2	23.9	23.5	24.1	23.9	21.9	22.2	22.4	22.2	22.9	22.9	23.7	23.5	24.2	60.0		
	SO ₂	17.9	15.8	20.2	19.6	16.3	18.3	17.9	13.6	15.6	16.2	16.3	17.2	16.8	15.6	17.9	16.6	16.1	15.1	15.1	16.5	15.4	18.3	16.8	17.3	17.5	80.0		
	NO _x	21.5	18.3	23.8	22.1	19.0	21.4	21.5	16.1	19.2	18.7	19.9	19.7	19.5	18.7	20.6	19.7	18.8	18.2	19.2	18.5	21.0	19.9	20.0	20.6	19.8	80.0		
	CO	636	639	681	736	654	558	581	512	563	546	586	556	571	553	548	563	529	548	563	561	551	568	563	578	591.0	2000.0		
ML4 Tower Light Area	PM 10	72.7	69.3	70.1	71.2	62.9	65.2	54.3	53.9	55.2	61.2	56.3	62.3	55.2	59.3	54.6	61.3	52.7	56.1	53.6	58.3	55.1	59.5	60.1	60.6	60.0	100.0		
	PM 2.5	29.2	28.5	28.1	29.3	25.8	26.6	21.8	22.2	22.1	25.2	22.6	25.6	22.6	24.2	22.4	25.0	21.6	22.9	22.0	23.8	22.6	24.3	24.6	24.7	24.5	60.0		
	SO ₂	17.3	16.3	19.9	20.2	17.2	15.6	16.2	12.8	16.8	15.9	17.4	16.8	15.8	17.3	17.1	17.8	15.2	16.2	15.9	16.9	16.2	17.1	18.6	18.4	16.9	80.0		
	NO _x	20.2	19.5	22.8	23.4	19.8	18.5	19.1	16.0	19.7	19.1	20.3	20.0	18.4	20.2	19.7	20.7	17.8	19.1	18.5	19.8	18.8	20.0	21.2	21.3	19.7	80.0		
	CO	659	655	712	721	629	563	582	496	591	522	541	539	553	549	543	554	518	541	529	563	538	571	541	563	573.0	2000.0		
	PM 10	73.4	64.6	72.9	65.3	63.6	63.7	51.2	51.2	53.9	59.6	55.1	58.6	51.6	57.6	53.8	58.8	48.3	52.4	51.2	55.6	53.1	56.2	54.6	59.7	57.8	100.0		
View Point Tower Light Area	PM 2.5	29.4	26.2	29.2	26.5	25.9	25.9	20.5	20.8	21.6	24.2	22.0	23.8	21.0	23.4	21.9	23.9	19.7	21.3	20.8	22.6	21.6	22.8	22.2	24.2	23.4	60.0		
	SO ₂	18.8	16.9	19.1	21.2	15.4	17.1	17.3	13.1	15.9	16.5	16.6	17.6	15.9	16.8	16.6	17.1	15.7	15.9	17.1	14.7	18.2	15.3	19.1	16.9	16.9	80.0		
	NO _x	21.6	20.2	21.9	24.5	18.3	19.9	20.1	16.4	18.7	19.8	19.4	20.9	18.8	19.6	19.5	19.9	18.6	18.7	20.0	17.5	21.1	18.1	22.0	19.7	19.8	80.0		
	CO	646	663	723	729	656	578	553	521	543	563	529	582	562	546	550	558	511	523	546	548	552	559	589	609	580.8	2000.0		

Note: All values are mentioned in µg/m³

THE RAMCO CEMENTS LTD., KSR NAGAR
 CORE ZONE AIR QUALITY MONITORING DATA - RAMCO BUDAWADA LIMESTONE MINE (RESERVE FOREST)
 (PERIOD - APRIL 2022 TO MARCH 2023)

Location	Parameter	April-22		May-22		June-22		July-22		Aug-23		Sep-23		Oct-22		Nov-22		Dec-22		Jan-23		Feb-23		Mar-23		Average	Limits
		I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night	I Fort- night	II Fort- night		
		PM 10	66.8	66.8	72.3	73.5	68.3	65.3	52.6	53.9	55.1	55.9	57.3	56.8	59.6	59.3	53.5	60.6	50.2	62.9	53.5	65.1	56.2	66.3	60.2		
PM 2.5	27.1	26.9	29.4	29.6	27.7	26.3	21.4	21.7	22.4	22.5	23.3	22.9	24.2	23.9	21.7	24.4	20.4	25.3	21.7	26.2	22.8	26.7	24.4	27.8	24.61	60	
Drilling Area	SO ₂	19.8	18.3	21.2	22.4	17.3	17.3	14.1	14.2	15.2	15.3	16.3	16.2	17.3	17.3	16.2	18.9	15.1	17.2	16.2	18.6	17.1	19.3	18.3	18.2	17.39	80
	NO _x	22.6	20.6	24.0	24.7	20.1	19.6	16.9	16.5	18.0	17.6	19.1	18.5	20.1	19.6	19.0	21.2	17.9	19.5	19.0	20.9	19.9	21.6	21.1	20.5	19.94	80
	CO	596	572	623	629	589	554	512.0	516	528	582	539	591	526	623	559	629	563	599	569	612	612	623	626	641	583.88	2000
	PM 10	68.2	63.5	74.3	72.9	65.6	62.9	51.9	52.6	53.6	56.2	55.1	58.3	60.2	62.6	62.3	63.8	60.1	60.1	61.6	63.2	63.1	65.1	65.1	67.2	62.06	100
	PM 2.5	27.6	26.2	30.0	30.0	26.5	25.9	21.0	21.7	21.7	23.2	24.0	24.3	25.8	25.2	26.3	24.3	24.8	24.8	24.9	26.0	25.5	26.8	26.3	27.7	25.33	60
Loading Area	SO ₂	18.6	17.9	22.9	23.6	16.2	19.6	12.6	11.9	13.9	15.9	15.2	16.5	15.9	18.2	16.1	19.1	15.3	18.4	16.5	18.9	18.0	19.1	18.5	20.2	17.46	80
	NO _x	21.3	20.6	25.6	26.3	18.9	22.3	15.3	14.6	16.6	18.6	17.9	19.2	18.6	20.9	18.8	21.8	18.0	21.1	19.2	21.6	20.7	21.8	21.2	22.9	20.16	80
	CO	563	563	682	636	612	563	523.0	509	546	549	551	553	562	588	572	612	581	587	602	596	635	620	641	653	587.88	2000
	PM 10	67.3	63.9	71.2	74.3	70.2	63.6	53.5	50.1	54.6	53.9	56.8	55.1	61.6	57.5	63.8	58.3	59.4	55.2	60.3	59.6	62.8	62.3	63.9	65.3	61.02	100
	PM 2.5	27.7	26.1	29.3	30.3	28.9	25.9	22.0	20.4	22.6	22.0	23.4	22.5	25.4	23.5	26.3	23.8	24.5	22.5	24.8	24.3	25.9	25.4	26.3	26.6	25.02	60
Haul Road-1	SO ₂	18.3	17.6	20.6	24.5	18.4	18.1	13.5	13.2	15.1	15.4	14.9	16.3	16.5	17.8	16.9	18.6	14.8	17.1	15.3	17.9	16.3	18.4	17.1	19.2	17.16	80
	NO _x	21.1	20.7	23.4	27.6	21.2	21.2	16.3	16.3	17.9	18.5	17.7	19.4	19.3	20.9	19.7	21.7	17.6	20.2	18.1	21.0	19.1	21.5	19.9	22.3	20.11	80
	CO	636	549	659	654	536	521	501.0	489	523	523	536	536	547	554	553	553	542	546	559	558	596	569	615	629	561.83	2000
	PM 10	70.1	68.6	75.6	75.3	63.9	66.9	55.9	53.2	47.2	58.8	49.6	60.2	60.8	62.8	63.9	63.9	61.2	61.4	63.8	63.6	65.1	65.1	66.2	64.2	62.80	100
	PM 2.5	28.6	28.5	30.8	31.3	26.1	27.8	22.8	22.1	19.3	24.5	20.2	25.0	24.8	26.1	26.1	26.6	25.0	25.5	26.0	26.5	26.6	27.1	27.0	26.7	25.88	60
Haul Road-2	SO ₂	19.4	19.6	23.4	25.3	18.9	20.3	12.8	12.1	14.8	16.1	15.3	17.9	17.8	18.3	18.3	19.4	17.6	18.2	18.1	18.1	18.9	19.0	19.2	15.2	18.08	80
	NO _x	21.9	22.4	25.9	28.1	21.4	23.1	15.3	14.9	17.3	18.9	17.8	20.7	20.3	21.1	20.8	22.2	20.1	21.0	20.6	20.9	21.4	21.8	21.7	18.0	20.73	80
	CO	648	568	701	689	574	542	529.0	523	534	547	548	528	552	536	559	548	538	541	566	555	589	563	573	570	567.54	2000

Note: All values are mentioned in ug/m³



THE RAMCO CEMENTS LIMITED

ISO 9001 ISO 14001 ISO 45001 ISO 50001
Certified Company

Kumarasamy Raja Nagar – 521457
Jaggayyapet Mandal, Krishna District,
Andhra Pradesh, India
Phone: 08654 224400-04
Fax: 08654 222352
E-mail: mcjpm@ramcocements.co.in

RCL/PCB/18/2023-2024

24th June 2023

The Environmental Engineer,
A .P. Pollution Control Board,
Regional Office, Plot No: 41,
Gurunanak Road,
Sri Kanakadurga Officers Colony,
Vijayawada – 521 018.

Dear Sir,

Sub: Submission of Annual Returns of Hazardous Wastes – Form – 4 for our Limestone Mines for the financial year 2022-2023 - Reg.

- Ref: 1 .CFO order for mines No. APPCB/VJA/VJA/488/HO/CFO/2021 dated 07.11.2022.
2. CFO Order No. APPCB/VJA/VJA/488/HO/CFO/2021 dated 27.07.2022 issued for Ravirala Limestone Mine (RF) expansion project from 1.20 to 2.75 MTPA limestone.

Please find enclosed herewith duly filled in Form – 4 - 'Form for Filling Annual Returns' of Hazardous Wastes for our following Limestone Mines for the financial year 2022-2023:

- a. Jayanthipuram Limestone Mine (North Band)
- b. Jayanthipuram Limestone Mine (South Band)
- c. Ravirala Limestone Mine (RF)
- d. Ramco Budawada Limestone Mine (RF)

This is for your kind information please.

Thanking you,

Yours faithfully,
for The Ramco Cements Limited,

(N RAVISHANKAR)
Sr. President (Mfg.)

Encl.: As above.

FORM 4

[See rules 6 (5), 13(8), 16(6) and 22 (2)]
FORM FOR FILLING ANNUAL RETURNS

[To be submitted to State Pollution Control Board by 30th June of every year for the preceding period April to March]

1	Name and address of facility:	The Ramco Cements Limited, Kumarasamy Raja Nagar - 521 457, Jaggayyapet (M), NTR Dist																	
2	Authorization No. and Date of issue:	Authorization No.: <ul style="list-style-type: none"> • CFO order for mines No. APPCB/VJA/VJA/488/HO/CFO/2021 dated 07.11.2022. • CFO Order No. APPCB/VJA/VJA/488/HO/CFO/2021 dated 27.07.2022 issued for Ravirala Limestone Mine (RF) expansion project from 1.20 to 2.75 MTPA limestone. <table border="1" data-bbox="651 801 1378 1223"> <thead> <tr> <th data-bbox="651 801 1038 869">Name of the Mine</th> <th data-bbox="1038 801 1166 869">Unit</th> <th data-bbox="1166 801 1378 869">Production capacity</th> </tr> </thead> <tbody> <tr> <td data-bbox="651 869 1038 981">Jayanthipuram Limestone Mine (North Band)</td> <td data-bbox="1038 869 1166 981">Tonne</td> <td data-bbox="1166 869 1378 981">18,00,000</td> </tr> <tr> <td data-bbox="651 981 1038 1081">Jayanthipuram Limestone Mine (South Band)</td> <td data-bbox="1038 981 1166 1081">Tonne</td> <td data-bbox="1166 981 1378 1081">17,50,000</td> </tr> <tr> <td data-bbox="651 1081 1038 1149">Ravirala Limestone Mine (RF)</td> <td data-bbox="1038 1081 1166 1149">Tonne</td> <td data-bbox="1166 1081 1378 1149">27,50,000</td> </tr> <tr> <td data-bbox="651 1149 1038 1223">Ramco Budawada Limestone Mine (RF)</td> <td data-bbox="1038 1149 1166 1223">Tonne</td> <td data-bbox="1166 1149 1378 1223">11,00,000</td> </tr> </tbody> </table>			Name of the Mine	Unit	Production capacity	Jayanthipuram Limestone Mine (North Band)	Tonne	18,00,000	Jayanthipuram Limestone Mine (South Band)	Tonne	17,50,000	Ravirala Limestone Mine (RF)	Tonne	27,50,000	Ramco Budawada Limestone Mine (RF)	Tonne	11,00,000
Name of the Mine	Unit	Production capacity																	
Jayanthipuram Limestone Mine (North Band)	Tonne	18,00,000																	
Jayanthipuram Limestone Mine (South Band)	Tonne	17,50,000																	
Ravirala Limestone Mine (RF)	Tonne	27,50,000																	
Ramco Budawada Limestone Mine (RF)	Tonne	11,00,000																	
3	Name of the authorized person and full address with telephone, fax number and e-mail:	N Ravi Shankar, Sr. President (Mfg.), The Ramco Cements Limited, Kumarasamy Raja Nagar - 521 457, Jaggayyapet (M), NTR Dist. Telephone: 08654 - 224400 to 04, Fax: 08654 - 222352, e-mail: mcljpm@ramcocements.co.in																	
4	Production during the year (product wise), whether applicable:	<table border="1" data-bbox="651 1458 1378 1912"> <thead> <tr> <th data-bbox="651 1458 1038 1563">Name of the Mine</th> <th data-bbox="1038 1458 1166 1563">Unit</th> <th data-bbox="1166 1458 1378 1563">Production in 2022-2023</th> </tr> </thead> <tbody> <tr> <td data-bbox="651 1563 1038 1675">Jayanthipuram Limestone Mine (North Band)</td> <td data-bbox="1038 1563 1166 1675">Tonne</td> <td data-bbox="1166 1563 1378 1675">14,99,224</td> </tr> <tr> <td data-bbox="651 1675 1038 1776">Jayanthipuram Limestone Mine (South Band)</td> <td data-bbox="1038 1675 1166 1776">Tonne</td> <td data-bbox="1166 1675 1378 1776">7,70,650</td> </tr> <tr> <td data-bbox="651 1776 1038 1843">Ravirala Limestone Mine (RF)</td> <td data-bbox="1038 1776 1166 1843">Tonne</td> <td data-bbox="1166 1776 1378 1843">21,74,000</td> </tr> <tr> <td data-bbox="651 1843 1038 1912">Ramco Budawada Limestone Mine (RF)</td> <td data-bbox="1038 1843 1166 1912">Tonne</td> <td data-bbox="1166 1843 1378 1912">4,66,400</td> </tr> </tbody> </table>			Name of the Mine	Unit	Production in 2022-2023	Jayanthipuram Limestone Mine (North Band)	Tonne	14,99,224	Jayanthipuram Limestone Mine (South Band)	Tonne	7,70,650	Ravirala Limestone Mine (RF)	Tonne	21,74,000	Ramco Budawada Limestone Mine (RF)	Tonne	4,66,400
Name of the Mine	Unit	Production in 2022-2023																	
Jayanthipuram Limestone Mine (North Band)	Tonne	14,99,224																	
Jayanthipuram Limestone Mine (South Band)	Tonne	7,70,650																	
Ravirala Limestone Mine (RF)	Tonne	21,74,000																	
Ramco Budawada Limestone Mine (RF)	Tonne	4,66,400																	

Part A. To be filled by hazardous waste generators

1	Total quantity of waste generated category wise:	From cement plant, thermal power plant, waste heat recovery plant and limestone mines:		
		Type of hazardous waste		Quantity (in Tonne / kL / Nos.)
		Waste Oil		Nil
		Waste Grease		Nil
		Waste Hi-chrome Grinding Media		Nil
Waste Lead Acid Batteries		62 Nos.		
2	Quantity dispatched:			
(i)	To disposal facility:	Not applicable		
(ii)	To recycler to co-processors or pre-processor:	From cement plant, thermal power plant, waste heat recovery plant and limestone mines:		
		Type of hazardous waste	Recycler	Quantity (in Tonne / kL / Nos.)
		Waste Oil	NA	Nil
		Waste Grease	NA	Nil
		Waste Hi-chrome Grinding Media	NA	Nil
Waste Lead Acid Batteries	R.Ess Iron and Steel Pvt. Ltd	62 Nos.		
(iii)	Others:	Not applicable		
3	Quantity utilized in-house, if any:	<p>The waste oil & waste grease generated in the cement plant, thermal power plant, waste heat recovery plant and limestone mines are totally re-used within the premises for:</p> <ul style="list-style-type: none"> • Waste grease for lubrication of reclaimers chains along with fresh grease. • Waste oil for kiln light-up along with fresh HSD. 		
4	Quantity in storage at the end of the year:	From cement plant, thermal power plant, waste heat recovery plant and limestone mines:		
		Type of hazardous waste		Quantity (in Tonne / kL / Nos.)
		Waste oil		Nil
		Waste Grease		Nil
		Waste Hi-chrome Grinding Media		Nil
Waste Lead Acid Batteries		Nil		

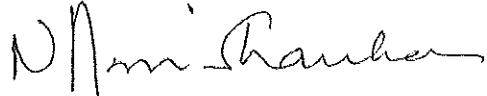
Part B. To be filled by Treatment, storage and disposal facility operators

1	Total quantity of received:	Not applicable
2	Quantity in stock at the beginning of the year:	
3	Quantity treated:	
4	Quantity disposed in landfills as such and after treatment:	
5	Quantity incinerated (if applicable):	
6	Quantity processed other than specified above:	
7	Quantity in storage at the end of the year:	

Part C. To be filled by recyclers or co-processors or other users

1	Quantity of waste received during the year:	Not applicable
(i)	Domestic sources:	
(ii)	Imported (if applicable):	
2	Quantity in stock at the beginning of the year:	
3	Quantity recycled or co-processed or used:	
4	Quantity of products dispatched (wherever applicable):	
5	Quantity of waste generated:	
6	Quantity of waste disposed:	
7	Quantity re-exported (whether applicable):	
8	Quantity in storage at the end of the year:	

Date: 24.06.2023
Place: KSR Nagar


Signature:
Designation: Sr. President (Mfg.)

THE RAMCO CEMENTS LIMITED
JAYANTHIPURAM GROUP OF LIMESTONE MINES
ENVIRONMENTAL PROTECTION ACCOUNT - RECURRING EXPENDITURE DETAILS - FINANCIAL YEAR 2022-23

Capital / Recurring	Description	For the year 2022-2023, Lakh Rs.				For the year 2022- 2023, Rs	Projected for 2023-2024, Lakh Rs.				Total
		Jayanthipuram Limestone Mine (North Band)	Jayanthipuram Limestone Mine (South Band)	Ravirala Limestone Mine (RF)	Ramco Budawada Limestone Mine (RF)		Total	Jayanthipuram Limestone Mine (North Band)	Jayanthipu ram Limestone Mine (South Band)	Ravirala Limestone Mine (Forest)	
	Pollution Control - None! detonators	29.55	7.90	19.80	6.31	6356000	34.37	5.00	24.86	13.00	77.23
	Pollution Control - Water Sprinkling	31.66	6.98	19.22	6.14	6400000	32.00	3.00	20.00	15.00	70.00
Recurring	Pollution Monitoring	1.78	1.51	1.56	1.28	613000	1.80	1.60	1.60	1.30	6.300
	Wet drilling	0.60	0.20	0.56	0.07	143000	0.60	0.40	0.70	0.10	1.80
	Greenbelt	9.86	6.66	6.61	8.11	3124000	10.00	6.50	7.50	15.00	39.000
	Reclamation	485.29	0.00	0.00	0.00	48529400	475.00	0.00	0.00	0.00	475.000
	Total	558.74	23.25	47.75	21.91	65165400	553.77	16.50	54.66	44.40	669.330

**THE RAMCO CEMENTS LIMITED
WATER LEVEL DATA - JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
PERIOD - APRIL 2022 TO MARCH 2023**

I. PIEZOMETER DETAILS:

Location: Bore Well Footwall Side
RL - (+)40.013m
Latitude - N16° 52' 28.4" Longitude - E80° 06' 42.1"
Depth of well - 20.1 m

Location: Open Well Near X Road
RL - (+)40.01m
Latitude - N16 51 29.4 Longitude - E80 07 19.3
Depth of well - 20.0 m

Location: Near Magazine
RL - (+)42m
Latitude - N16 51 40.10 Longitude - E80 07 20.00
Depth of well - 50.0 m

Location: Pit-Z Area
RL - (+)48m
Latitude - N 16 52 39.0 Longitude - E 80 06 15.5
Depth of well - 50.0 m

II. WATER LEVEL DATA

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	4.80
2	30.04.2022	4.78
3	16.05.2022	4.80
4	31.05.2022	4.83
5	16.06.2022	4.86
6	30.06.2022	4.51
7	16.07.2022	3.67
8	31.07.2022	3.29
9	16.08.2022	2.12
10	31.08.2022	2.35
11	16.09.2022	2.41
12	30.09.2022	2.82
13	16.10.2022	2.81
14	31.10.2022	2.66
15	16.11.2022	2.41
16	30.11.2022	3.02
17	16.12.2022	4.64
18	31.12.2022	4.98
19	16.01.2023	5.24
20	31.01.2023	4.95
21	16.02.2023	4.53
22	28.02.2023	4.62
23	16.03.2023	4.73
24	31.03.2023	4.58

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	1.28
2	30.04.2022	1.31
3	16.05.2022	1.35
4	31.05.2022	1.36
5	16.06.2022	1.28
6	30.06.2022	1.26
7	16.07.2022	1.22
8	31.07.2022	1.16
9	16.08.2022	1.13
10	31.08.2022	1.06
11	16.09.2022	1.04
12	30.09.2022	1.02
13	16.10.2022	1.00
14	31.10.2022	0.95
15	16.11.2022	1.00
16	30.11.2022	0.95
17	16.12.2022	1.02
18	31.12.2022	1.28
19	16.01.2023	1.52
20	31.01.2023	1.68
21	16.02.2023	2.13
22	28.02.2023	2.25
23	16.03.2023	2.30
24	31.03.2023	2.23

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	9.79
2	30.04.2022	9.65
3	16.05.2022	9.17
4	31.05.2022	9.02
5	16.06.2022	8.90
6	30.06.2022	8.94
7	16.07.2022	9.11
8	31.07.2022	8.86
9	16.08.2022	8.67
10	31.08.2022	8.63
11	16.09.2022	8.45
12	30.09.2022	8.20
13	16.10.2022	8.35
14	31.10.2022	8.01
15	16.11.2022	9.43
16	30.11.2022	9.85
17	16.12.2022	10.05
18	31.12.2022	9.89
19	16.01.2023	9.75
20	31.01.2023	10.15
21	16.02.2023	10.55
22	28.02.2023	10.02
23	16.03.2023	9.83
24	31.03.2023	9.89

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	6.10
2	30.04.2022	6.14
3	16.05.2022	6.20
4	31.05.2022	6.93
5	16.06.2022	7.91
6	30.06.2022	6.15
7	16.07.2022	5.52
8	31.07.2022	5.24
9	16.08.2022	4.94
10	31.08.2022	4.65
11	16.09.2022	4.76
12	30.09.2022	5.43
13	16.10.2022	5.35
14	31.10.2022	5.60
15	16.11.2022	5.68
16	30.11.2022	5.82
17	16.12.2022	5.91
18	31.12.2022	5.93
19	16.01.2023	5.97
20	31.01.2023	6.18
21	16.02.2023	6.55
22	28.02.2023	6.51
23	16.03.2023	6.48
24	31.03.2023	5.06

**THE RAMCO CEMENTS LIMITED
WATER LEVEL DATA - JAYANTHIPURAM LIMESTONE MINE (SOUTH BAND)
PERIOD - APRIL 2022 TO MARCH 2023**

I. PIEZOMETER DETAILS:

Location: West Side Bore Well, Near Substation

RL - (+)36.00m

Latitude - N16° 51' 32.4" Longitude - E80° 06' 36.0"

Depth of well - 35.05 m

Location: North Side of ML

RL - (+)37.00m

Latitude - N 16° 51' 29.0" Longitude - E 80° 06' 44.3"

Depth of well - 50.00 m

Location: South Side of ML

RL - (+)43.20m

Latitude - N 16° 51' 02.8" Longitude - E 80° 06' 22.3"

Depth of well - 27.44 m

II. WATER LEVEL DATA

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	12.71
2	30.04.2022	12.73
3	16.05.2022	12.75
4	31.05.2022	12.65
5	16.06.2022	11.98
6	30.06.2022	11.76
7	16.07.2022	11.52
8	31.07.2022	11.45
9	16.08.2022	11.32
10	31.08.2022	11.59
11	16.09.2022	11.35
12	30.09.2022	11.12
13	16.10.2022	11.01
14	31.10.2022	10.69
15	16.11.2022	11.75
16	30.11.2022	10.88
17	16.12.2022	10.61
18	31.12.2022	10.38
19	16.01.2023	10.13
20	31.01.2023	10.08
21	16.02.2023	9.97
22	28.02.2023	9.83
23	16.03.2023	9.94
24	31.03.2023	9.90

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	19.42
2	30.04.2022	19.51
3	16.05.2022	19.53
4	31.05.2022	19.54
5	16.06.2022	19.25
6	30.06.2022	19.11
7	16.07.2022	18.85
8	31.07.2022	18.86
9	16.08.2022	18.42
10	31.08.2022	18.33
11	16.09.2022	18.21
12	30.09.2022	18.06
13	16.10.2022	17.60
14	31.10.2022	17.50
15	16.11.2022	12.48
16	30.11.2022	10.63
17	16.12.2022	9.94
18	31.12.2022	9.64
19	16.01.2023	9.44
20	31.01.2023	9.20
21	16.02.2023	9.11
22	28.02.2023	9.08
23	16.03.2023	9.02
24	31.03.2023	8.99

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	7.66
2	30.04.2022	7.65
3	16.05.2022	7.64
4	31.05.2022	7.65
5	16.06.2022	7.51
6	30.06.2022	7.21
7	16.07.2022	6.45
8	31.07.2022	6.28
9	16.08.2022	5.34
10	31.08.2022	5.24
11	16.09.2022	5.10
12	30.09.2022	5.15
13	16.10.2022	3.05
14	31.10.2022	1.50
15	16.11.2022	2.82
16	30.11.2022	3.56
17	16.12.2022	5.97
18	31.12.2022	7.02
19	16.01.2023	7.57
20	31.01.2023	7.54
21	16.02.2023	7.57
22	28.02.2023	7.52
23	16.03.2023	7.47
24	31.03.2023	7.34

THE RAMCO CEMENTS LIMITED
WATER LEVEL DATA - RAVIRALA LIMESTONE MINE (RESERVE FOREST)
PERIOD - APRIL 2022 TO MARCH 2023

I. PIEZOMETER DETAILS:

Location: South Side of Lease
 RL - (+) 51.00m
 Latitude - N 16° 50' 27.6" Longitude - E 80° 07' 58.2"
 Depth of well - 45.0 m

Location: East Side of Mining Lease near 7-2 BH pillar
 RL - (+) 61.00m
 Latitude - N16° 50' 20.4" Longitude - E80° 08' 55.1"
 Depth of well - 24.50 m

Location: West Side of Haul road
 RL - (+) 44.00m
 Latitude - N16° 50' 33.2" Longitude - E80° 08' 05.7"
 Depth of well - 35.0 m

Location: South Side Near BH No. 3-7A
 RL - (+) 55.00m
 Latitude - N16° 50' 11.5" Longitude - E80° 08' 39.1"
 Depth of well - 50.0 m

II. WATER LEVEL DATA

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	17.76
2	30.04.2022	17.81
3	16.05.2022	17.93
4	31.05.2022	18.25
5	16.06.2022	18.15
6	30.06.2022	17.95
7	16.07.2022	17.89
8	31.07.2022	17.71
9	16.08.2022	17.63
10	31.08.2022	16.21
11	16.09.2022	15.95
12	30.09.2022	15.21
13	16.10.2022	15.35
14	31.10.2022	15.29
15	16.11.2022	15.59
16	30.11.2022	15.82
17	16.12.2022	16.24
18	31.12.2022	16.32
19	16.01.2023	16.59
20	31.01.2023	17.42
21	16.02.2023	17.58
22	28.02.2023	17.89
23	16.03.2023	18.25
24	31.03.2023	18.94

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	19.29
2	30.04.2022	19.38
3	16.05.2022	19.41
4	31.05.2022	19.52
5	16.06.2022	19.50
6	30.06.2022	19.43
7	16.07.2022	19.25
8	31.07.2022	18.45
9	16.08.2022	18.04
10	31.08.2022	17.85
11	16.09.2022	17.01
12	30.09.2022	16.91
13	16.10.2022	16.95
14	31.10.2022	17.03
15	16.11.2022	17.86
16	30.11.2022	18.15
17	16.12.2022	18.12
18	31.12.2022	18.27
19	16.01.2023	18.32
20	31.01.2023	18.50
21	16.02.2023	18.54
22	28.02.2023	18.63
23	16.03.2023	18.57
24	31.03.2023	18.66

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	22.16
2	30.04.2022	22.49
3	16.05.2022	22.51
4	31.05.2022	22.98
5	16.06.2022	21.86
6	30.06.2022	21.76
7	16.07.2022	21.54
8	31.07.2022	21.29
9	16.08.2022	21.11
10	31.08.2022	20.95
11	16.09.2022	19.71
12	30.09.2022	19.25
13	16.10.2022	19.35
14	31.10.2022	22.15
15	16.11.2022	19.02
16	30.11.2022	19.05
17	16.12.2022	19.23
18	31.12.2022	19.40
19	16.01.2023	19.64
20	31.01.2023	20.73
21	16.02.2023	20.78
22	28.02.2023	21.17
23	16.03.2023	21.38
24	31.03.2023	21.97

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	26.49
2	30.04.2022	26.58
3	16.05.2022	26.89
4	31.05.2022	27.01
5	16.06.2022	26.86
6	30.06.2022	26.81
7	16.07.2022	26.73
8	31.07.2022	26.69
9	16.08.2022	26.65
10	31.08.2022	23.44
11	16.09.2022	20.65
12	30.09.2022	20.10
13	16.10.2022	20.05
14	31.10.2022	21.06
15	16.11.2022	22.78
16	30.11.2022	23.15
17	16.12.2022	23.48
18	31.12.2022	23.96
19	16.01.2023	24.31
20	31.01.2023	25.14
21	16.02.2023	25.63
22	28.02.2023	25.96
23	16.03.2023	26.42
24	31.03.2023	26.87

THE RAMCO CEMENTS LIMITED

WATER LEVEL DATA - RAMCO BUDAWADA LIMESTONE MINE (RESERVE FOREST)
PERIOD - APRIL 2022 TO MARCH 2023

Location: North Side of Lease
RL - (+)51.00m
Latitude N 16 51 48.0
Depth of well - 45.0 m

Location: South West Side of Lease
RL - (+)51.00m
Latitude - N 16 51 17.7
Depth of well - 45.0 m

Location: West Side of Lease
RL - (+)51.00m
Latitude - N 16 51 30.2
Depth of well - 45.0 m

Longitude - E80 04 34.7

Longitude - E80 04 01.6

Longitude - E80 03 47.7

II. WATER LEVEL DATA

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	24.32
2	30.04.2022	25.19
3	16.05.2022	25.11
4	31.05.2022	24.38
5	16.06.2022	22.79
6	30.06.2022	21.06
7	16.07.2022	19.58
8	31.07.2022	15.43
9	16.08.2022	14.52
10	31.08.2022	13.50
11	16.09.2022	12.75
12	30.09.2022	12.80
13	16.10.2022	12.72
14	31.10.2022	11.01
15	16.11.2022	13.85
16	30.11.2022	16.71
17	16.12.2022	18.90
18	31.12.2022	19.56
19	16.01.2023	20.01
20	31.01.2023	21.43
21	16.02.2023	23.78
22	28.02.2023	25.02
23	16.03.2023	25.58
24	31.03.2023	25.89

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	14.59
2	30.04.2022	15.12
3	16.05.2022	15.10
4	31.05.2022	15.06
5	16.06.2022	14.32
6	30.06.2022	11.59
7	16.07.2022	9.29
8	31.07.2022	8.72
9	16.08.2022	1.06
10	31.08.2022	1.06
11	16.09.2022	1.00
12	30.09.2022	0.59
13	16.10.2022	1.01
14	31.10.2022	2.35
15	16.11.2022	4.24
16	30.11.2022	6.89
17	16.12.2022	9.12
18	31.12.2022	10.87
19	16.01.2023	11.40
20	31.01.2023	12.45
21	16.02.2023	13.12
22	28.02.2023	14.30
23	16.03.2023	14.72
24	31.03.2023	15.08

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	23.76
2	30.04.2022	23.55
3	16.05.2022	22.19
4	31.05.2022	22.06
5	16.06.2022	19.49
6	30.06.2022	18.29
7	16.07.2022	17.46
8	31.07.2022	13.25
9	16.08.2022	8.69
10	31.08.2022	8.25
11	16.09.2022	8.10
12	30.09.2022	7.86
13	16.10.2022	7.25
14	31.10.2022	8.24
15	16.11.2022	11.37
16	30.11.2022	14.78
17	16.12.2022	16.01
18	31.12.2022	18.92
19	16.01.2023	19.87
20	31.01.2023	20.89
21	16.02.2023	21.48
22	28.02.2023	23.12
23	16.03.2023	23.62
24	31.03.2023	23.96

THE RAMCO CEMENTS LIMITED
SURFACE WATER QUALITY DATA - JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
PERIOD - APRIL 2022 TO MARCH 2023

S. No	Parameter	Unit	Upstream				Downstream				Limits
			Apr-22 to Jun-22	Jul-22 to Sep-22	Oct-22 to Dec-22	Jan-23 to Mar-23	Apr-22 to Jun-22	Jul-22 to Sep-22	Oct-22 to Dec-22	Jan-23 to Mar-23	
1	p ^H	-	7.37	7.34	7.46	7.46	7.47	7.41	7.31	7.51	6.5 - 8.5
2	Colour	Hazen	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5-15
3	Temperature	°C	28.90	28.3	28.30	29.7	27.90	29.30	28.60	31.40	NS
4	Turbidity	NTU	2.30	2.00	1.60	1.80	2.20	2.00	1.30	1.50	1-5
5	Residual Chloride	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2-1
6	Dissolved Oxygen	mg/L	4.00	3.30	4.50	4.80	4.30	3.50	4.90	4.90	NS
7	Total Suspended Solids	mg/L	45.20	46.80	43.10	45.20	38.30	42.30	41.20	43.90	NS
8	Electrical Conductivity	µmhos/cm	745.00	756.00	753.00	791.00	823.00	839.00	838.00	896.00	NS
9	Total Dissolved Solids	mg/L	383.00	4.30	421.00	435.00	551.00	529.00	571.00	499.00	500-2000
10	Total Hardness (as CaCO ₃)	mg/L	179.00	181.00	183.00	181.00	282.00	274.00	296.00	296.00	200-600
11	Calcium Hardness	mg/L	93.10	95.10	95.10	96.20	145.00	139.00	153.00	141.00	NS
12	Magnesium Hardness	mg/L	85.20	86.20	86.30	85.30	123.00	119.00	131.00	112.00	NS
13	Calcium (as Ca)	mg/L	34.90	37.30	38.30	37.20	57.30	55.20	57.30	57.30	250-1000
14	Magnesium (as Mg)	mg/L	19.20	18.40	21.60	21.40	25.20	23.20	25.20	26.20	30-No Relaxation
15	Sodium (as Na)	mg/L	34.10	33.90	36.80	37.30	53.90	54.20	55.10	52.90	NS
16	Potassium (as K)	mg/L	1.02	1.02	1.09	1.02	1.12	1.06	1.06	1.14	NS
17	Chloride (as Cl)	mg/L	95.20	92.30	96.20	95.30	13.40	129.00	141.00	16.30	250-1000
18	Sulphate (as SO ₄)	mg/L	29.10	28.30	30.10	32.30	43.60	41.60	45.70	46.20	200-400
19	Total Alkalinity (as CaCO ₃)	mg/L	85.10	86.20	86.80	89.70	119.00	119.00	132.00	128.00	200-600
20	BOD (for 3 days at 27 °C)	mg/L	<1.0	<1.0	<4.0	<4.0	<1.0	<1.0	<4.0	<4.0	NS
21	Chemical Oxygen Demand	mg/L	28.20	27.20	29.70	28.30	28.90	29.10	31.40	30.20	NS
22	Oil & Grease	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NS
23	Iron (as Fe)	mg/L	0.21	0.20	0.48	0.42	0.27	0.21	0.42	0.41	0.3 No Relaxation
24	Fluoride (as F)	mg/L	0.29	0.34	0.29	0.35	0.61	0.80	0.41	0.42	1.0-1.5
25	Nitrate (as NO ₃)	mg/L	0.90	0.90	0.80	0.70	1.30	1.20	1.20	1.30	45 No Relaxation
26	Phosphates (as PO ₄)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NS
27	Cyanide (as CN)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05 No Relaxation
28	Pesticides (as Malathoin)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NS
29	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.001-0.002
30	Manganese (as Mn)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1-0.3
31	Chromium (as Cr ⁺⁶)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05 No Relaxation
32	Copper (as Cu)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05-1.5
33	Selenium as Se	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01 No Relaxation
34	Aluminium (as Al)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03-0.2
35	Cadmium (as Cd)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03 No Relaxation
36	Arsenic as As	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01-0.05
37	Boron (as B)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5-1.0
38	Mercury (as Hg)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.001- No Relaxation
39	Lead (as Pb)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.001- No Relaxation
40	Zinc (as Zn)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	5-15
41	Percent Sodium	%	36.80	37.90	43.50	45.10	39.20	39.10	41.60	40.60	NS
42	Total Coliforms	MPN/100 mL	74.30	73.70	76.20	79.60	85.20	87.20	88.20	88.90	Shall not be present in any 100ml.
43	Faecal Coliforms	MPN/100 mL	28.90	29.60	29.10	29.20	33.60	34.10	35.10	33.10	Shall not be present in any 100ml.
44	E.Coil	MPN/100 mL	21.00	23.00	25.00	22.00	29.00	28.00	32.00	28.00	Shall not be present in any 100ml.

THE RAMCO CEMENTS LIMITED, KSR NAGAR
SURFACE WATER QUALITY DATA - JAYANTHIPURAM LIMESTONE MINE (SOUTH BAND)
PERIOD - APRIL 2022 TO MARCH 2023

S. No	Parameter	Unit	Upstream				Downstream				Limits
			Apr-22 to Jun-22	Jul-22 to Sep-22	Oct-22 to Dec-22	Jan-23 to Mar-23	Apr-22 to Jun-22	Jul-22 to Sep-22	Oct-22 to Dec-22	Jan-23 to Mar-23	
1	pH	-	7.52	7.56	7.58	7.68	7.59	7.62	7.59	7.73	6.5 - 8.5
2	Colour	Hazen	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5-15
3	Temperature	°C	30.40	28.60	33.50	31.80	30.20	30.80	31.40	32.70	NS
4	Turbidity	NTU	2.70	2.30	2.80	2.60	2.60	2.50	2.10	2.50	1-5
5	Residual Chloride	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2-1
6	Dissolved Oxygen	mg/L	3.40	4.20	4.90	4.90	3.80	4.30	4.50	4.70	NS
7	Total Suspended Solids	mg/L	44.60	43.80	43.80	43.60	44.10	47.10	46.10	47.10	NS
8	Electrical Conductivity	µmhos/cm	736.00	727.00	756.00	768.00	836.00	839.00	878.00	896.00	NS
9	Total Dissolved Solids	mg/L	396.00	364.00	421.00	436.00	536.00	523.00	553.00	569.00	500-2000
10	Total Hardness (as CaCO ₃)	mg/L	183.00	171.00	191.00	212.00	262.00	252.00	278.00	288.00	200-600
11	Calcium Hardness	mg/L	95.10	93.50	96.20	95.30	147.00	149.00	142.00	149.00	NS
12	Magnesium Hardness	mg/L	83.80	82.70	86.20	89.60	134.00	134.00	121.00	129.00	NS
13	Calcium (as Ca)	mg/L	41.20	39.20	38.20	39.10	59.20	57.60	59.20	57.30	250-1000
14	Magnesium (as Mg)	mg/L	18.40	17.10	19.10	21.40	24.60	25.20	25.20	26.30	30-No Relaxation
15	Sodium (as Na)	mg/L	30.70	33.90	33.40	32.70	53.90	54.60	57.20	55.90	NS
16	Potassium (as K)	mg/L	1.09	1.02	1.01	1.02	1.06	1.08	1.08	1.08	NS
17	Chloride (as Cl)	mg/L	99.60	95.40	97.30	99.10	139.00	148.00	162.00	152.00	250-1000
18	Sulphate (as SO ₄)	mg/L	28.20	29.10	29.10	30.60	43.60	43.50	43.50	43.80	200-400
19	Total Alkalinity (as CaCO ₃)	mg/L	84.10	83.50	82.40	83.10	138.00	134.00	131.00	142.00	200-600
20	BOD (for 3 days at 27 °C)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
21	Chemical Oxygen Demand	mg/L	24.90	24.20	26.20	27.30	31.20	27.90	28.40	29.10	NS
22	Oil & Grease	mg/L	<0.1	<0.1	<0.1	<0.1	<1.0	<0.1	<1.0	<0.1	NS
23	Iron (as Fe)	mg/L	0.22	0.19	0.25	0.25	0.19	0.23	0.19	0.37	0.3 No Relaxation
24	Fluoride (as F)	mg/L	0.24	0.26	0.29	0.29	0.42	0.42	0.43	0.48	1.0-1.5
25	Nitrate (as NO ₃)	mg/L	0.69	0.67	0.67	0.69	0.91	0.88	0.88	0.91	45 No Relaxation
26	Phosphates (as PO ₄)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NS
27	Cyanide (as CN)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05 No Relaxation
28	Pesticides (as Malathoin)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NS
29	Phenolic Compounds (as C ₆ H ₅ OH)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.001-0.002
30	Manganese (as Mn)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1-0.3
31	Chromium (as Cr ⁺⁶)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05 No Relaxation
32	Copper (as Cu)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05-1.5
33	Selenium as Se	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01 No Relaxation
34	Aluminium (as Al)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03-0.2
35	Cadmium (as Cd)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03 No Relaxation
36	Arsenic as As	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01-0.05
37	Boron (as B)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.5-1.0
38	Mercury (as Hg)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.001- No Relaxation
39	Lead (as Pb)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.001- No Relaxation
40	Zinc (as Zn)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	5-15
41	Percent Sodium	%	33.90	33.50	35.40	39.70	36.20	36.10	38.90	39.10	NS
42	Total Coliforms	MPN/100 mL	73.60	75.10	77.10	78.60	83.90	83.80	85.20	88.90	Shall not be present in any 100ml.
43	Faecal Coliforms	MPN/100 mL	32.70	34.60	35.20	35.30	33.60	35.10	39.30	36.90	Shall not be present in any 100ml.
44	E.Coil	MPN/100 mL	17.10	15.40	18.20	19.10	19.80	17.30	22.30	23.80	Shall not be present in any 100ml.

THE RAMCO CEMENTS LIMITED
MINE DISCHARGE WATER QUALITY DATA
PERIOD - APRIL 2022 TO MARCH 2023

S. No	Parameter	Unit	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Limits
I. JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)															
1	p ^H		7.88	7.81	7.89	7.92	7.81	7.87	7.81	7.78	7.63	7.68	7.67	7.73	5.5 - 9.0
2	Total Suspended Solids	mg/L	51.2	53.5	51.6	53.9	50.6	53.9	51.6	50.3	52.6	53.9	54.1	56.2	10
3	Total Dissolved Solids	mg/L	983	974	973	989	972	986	978	969	973	986	996	984	100
4	Chlorides (as Cl)	mg/L	306	312	301	296	288	293	289	274	281	289	291	278	2100
5	Sulphates (as SO ₄)	mg/L	85.9	86.3	84.5	80.6	76.9	78.1	76.3	74.3	72.5	73.6	75.1	76.3	30
6	BOD (for 3 days at 27 °C)	mg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	250
7	Chemical Oxygen Demand	mg/L	18.30	19.20	18.30	19.20	18.10	18.90	17.10	17.70	16.90	17.40	18.20	19.10	1000
8	Oil & Grease	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2
9	Iron (as Fe)	mg/L	0.37	0.35	0.31	0.30	0.28	0.32	0.30	0.33	0.30	0.34	0.35	0.37	1000
10	Fluoride (as F)	mg/L	0.66	0.62	0.60	0.58	0.52	0.54	0.52	0.49	0.42	0.47	0.49	0.41	30
II. JAYANTHIPURAM LIMESTONE MINE (SOUTH BAND)															
1	p ^H		7.83	7.89	7.91	7.98	7.96	7.86	7.79	7.60	7.52	7.59	7.68	7.74	5.5 - 9.0
2	Total Suspended Solids	mg/L	61.2	63.5	62.7	63.5	61.3	61.3	58.2	53.9	51.6	53.5	55.1	57.3	10
3	Total Dissolved Solids	mg/L	763	781	763	759	741	740	721	702	714	726	731	729	100
4	Chlorides (as Cl)	mg/L	192	185	179	168	158	139	125	115	112	115	118	121	2100
5	Sulphates (as SO ₄)	mg/L	73.8	71.6	70.3	68.3	65.2	65.1	61.6	59.6	58.3	59.6	61.2	62.3	30
6	BOD (for 3 days at 27 °C)	mg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	250
7	Chemical Oxygen Demand	mg/L	15.90	16.20	15.90	14.90	13.20	13.20	12.90	12.10	12.80	13.50	13.90	14.20	1000
8	Oil & Grease	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2
9	Iron (as Fe)	mg/L	0.24	0.22	0.24	0.21	0.18	0.17	0.15	0.11	0.10	0.14	0.18	0.17	1000
10	Fluoride (as F)	mg/L	0.43	0.41	0.40	0.38	0.35	0.34	0.30	0.25	0.21	0.26	0.28	0.25	30
III. RAVIRALA LIMESTONE MINE (RF)															
1	p ^H		7.84	7.87	7.79	7.88	7.93	7.96	7.99	7.87	7.79	7.87	7.91	7.98	5.5 - 9.0
2	Total Suspended Solids	mg/L	58.60	59.3	58.6	52.6	53.5	51.2	53.50	52.4	53.1	55.3	56.2	57.9	10
3	Total Dissolved Solids	mg/L	814	826	814	793	826	812	829	801	82.4	83.9	85.1	86.3	100
4	Chlorides (as Cl)	mg/L	217	221	231	212	239	220	234	218	201	206	219	221	2100
5	Sulphates (as SO ₄)	mg/L	89.3	86.2	85.4	80.6	82.7	75.9	77.8	68.6	67.3	69.1	72.7	73.8	30
6	BOD (for 3 days at 27 °C)	mg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	250
7	Chemical Oxygen Demand	mg/L	18.40	18.90	17.30	16.30	16.90	15.60	16.20	14.90	15.20	16.30	16.90	17.10	1000
8	Oil & Grease	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2
9	Iron (as Fe)	mg/L	0.51	0.57	0.56	0.54	0.55	0.51	0.57	0.52	0.50	0.54	0.56	0.58	1000
10	Fluoride (as F)	mg/L	0.62	0.60	0.63	0.59	0.62	0.58	0.61	0.55	0.51	0.57	0.61	0.64	30

THE RAMCO CEMENTS LTD., KSR NAGAR
DETAILS OF RAIN WATER HARVESTING PITS

S. No.	LOCATION	TO ACCOMMODATE	PIT NUMBERING	No. OF PITS	ROOF TOP AREAS (m ²)	PAVED AREA (m ²)	UNPAVED AREA (m ²)	PIT DIMENSIONS		LATITUDE	LONGITUDE
								LENGTH, m	WIDTH, m		
I. COLONY AREA											
1	C+ Qtrs buildings(C+1 -C+8)	Building roof top & Open yard	10	4	1200			3.45	1.5	16°52'26.55" N	80°07'45.85" E
			11					3.45	1.5	16°52'24.84" N	80°07'45.61" E
			12					3.45	1.5	16°52'25.05" N	80°07'44.10" E
			13					3.45	1.5	16°52'26.86" N	80°07'44.32" E
2	New school building	Building roof top & Open yard	1	4	3075			3.2	1.8	16°52'33.29" N	80°07'48.71" E
			2					3.1	1.8	16°52'32.42" N	80°07'46.66" E
			3					3.3	2.7	16°52'30.19" N	80°07'49.25" E
			4					2.2	3.2	16°52'28.98" N	80°07'47.78" E
3	Occupational Health Centre	Building roof water	6	2	200			3.3	1.7	16°52'28.03" N	80°07'39.85" E
			7					3.1	2.2	16°52'29.01" N	80°07'39.94" E
4	New Administration building	Building roof top & Open yard	9	1	540			3.2	2.4	16°52'30.10" N	80°07'35.84" E
5	Reading room	Building roof top water	8	1	120			1.1	1.8	16°52'26.79" N	80°07'41.36" E
6	D40 area	D40 quarter open yard	23	1			500	2.3	2.3	16°52'17.48" N	80°07'34.77" E
7	B Type quarter area (near B2 1 No. and B4 backside 1 No.)	School ground	21	2			1000	2.7	2.2	16°52'18.27" N	80°07'36.65" E
			22					1.7	1.7	16°52'20.10" N	80°07'36.08" E
8	C30	Open yard	15	1			200	2.3	2.5	16°52'26.13" N	80°07'43.14" E
9	Near Volley Ball ground	East of play ground	16	1		200		3.8	2	16°52'24.58" N	80°07'41.27" E
10	Near culvert @ Cricket ground	Open land near C ground	5	1			3000	3.4	2.7	16°52'32.07" N	80°07'44.40" E
11	Bachelor hostel area	Rain water collection pit through natural ground	14	2		550		2.1	2.3	16°52'26.75" N	80°07'31.59" E
			20					1.7	2.8	16°52'25.34" N	80°07'31.05" E
12	CMD guest house area	Building roof top & Open yard	17	3	1000			1.5	1.5	16°52'24.0" N	80°07'44.43" E
			18					0.6	0.9	16°52'23.71" N	80°07'43.52" E
			19					0.7	0.7	16°52'23.56" N	80°07'44.53" E
13	D - 1 block Apartment	D41 - D44 block roof top and open land	39	1	200			3	1.6	16°52'16.74" N	80°07'33.50" E
14	D - 2 block Apartment	D45 - D48 block roof top and open land	40	1	200			3.4	2.1	16°52'16.59" N	80°07'32.04" E
15	D - 3 block Apartment	D49 - D52 block roof top and open land	41	1	200			3.3	1.7	16°52'16.68" N	80°07'32.15" E
16	D - 4 block Apartment	D53 - D56 block roof top and open land	42	1	200			2.6	1.8	16°52'16.55" N	80°07'33.28" E
17	D - 5 block Apartment	D57 - D60 block roof top and open land	43	1	200			2.8	1.8	16°52'16.41" N	80°07'34.34" E
18	D - 6 block Apartment	D61 - D64 block roof top and open land	44	1	200			2	2	16°52'18.75" N	80°07'32.10" E
19	D - 7 block Apartment	D64 - D68 block roof top and open land	45	1	200			2.5	2	16°52'18.48" N	80°07'33.31" E
20	E - 1 Block Apartment	E41 - E52 block roof top and open land	27	2	295			3.3	1.7	16°52'20.92" N	80°07'30.66" E
			28					3.2	1.6	16°52'19.92" N	80°07'30.12" E
21	E - 2 Block Apartment	E53 - E64 block roof top and open land	25	2	295			3.3	2.1	16°52'22.31" N	80°07'30.97" E
			26					3.3	2.1	16°52'21.23" N	80°07'30.77" E
22	F - 1 Block Apartment	F75 - F86 block roof top and open land	29	2	293			3	2	16°52'18.04" N	80°07'30.41" E
			30					3.4	2.2	16°52'19.35" N	80°07'30.39" E
23	F - 2 Block Apartment	F87 - F98 block roof top and open land	31	2	293			3	2.1	16°52'16.38" N	80°07'30.18" E
			32					3	2.1	16°52'17.76" N	80°07'30.27" E
24	F - 3 Block Apartment	F99 - F110 block roof top and open land	33	2	293			3.3	2.3	16°52'16.53" N	80°07'28.64" E
			34					3	2.1	16°52'17.75" N	80°07'28.85" E
25	F - 4 Block Apartment	F111 - F122 block roof top and open land	35	2	293			2.9	1.3	16°52'18.33" N	80°07'28.98" E
			36					2.6	1.8	16°52'19.53" N	80°07'28.99" E
26	F - 5 Block Apartment	F123 - F134 block roof top and open land	37	2	293			2.9	1.3	16°52'19.96" N	80°07'29.10" E
			38					2.4	1.5	16°52'21.09" N	80°07'29.33" E
27	STP Area	Rain water collection pit through natural ground	46	1		400	1000	1.5	1.5	16°52'20.61" N	80°07'34.85" E
28	C-Type quarters area	Rain water collection pit through natural ground	47	1			500	2.8	2.7	16°52'22.97" N	80°07'39.48" E
29	C-18 Quarter backside	Rain water collection pit through natural ground	48	1			1000	2.5	2.5	16°52'22.06" N	80°07'40.37" E
30	E3& E4 Block Apartments	Roof top and open land	49	1	305			1.2	1.3	16°52'23.53" N	80°07'30.43" E
COLONY TOTAL				48							
II. PLANT AREA											
31	CCR	Roof top and open land	1	1	1100			3	2	16°52'33.16" N	80°07'19.21" E
32	Mines office	Roof top and open land	2	2	350			1.4	1.4	16°52'21.07" N	80°07'11.11" E
			3					1.5	1.5	16°52'21.58" N	80°07'11.82" E
33	Thermal Power Plant area	Cooling tower building surrounding surface water	4	1				1.5	1.5	16°52'26.34" N	80°07'11.11" E
PLANT TOTAL				4							
Total				62	11345	1150	7200				

Government of Andhra Pradesh
Rural Water Supply & Sanitation Department
State Level Water Testing Laboratory
O/o The Project Director
State Water Supply & Sanitation Mission
 "C" Block, Vasudha shelter, LIC colony, Gollapudi, Vijayawada - 521225

TEST REPORT ON CHEMICAL ANALYSIS OF WATER(DRINKING)
General Physico- Chemical Parameters

Name and address : The Ramco Cements Ltd

Location : Jayanthipuram, Jaggayyapeta, NTR Dist.

Test Report ID No : SLL/SWSM/RWS/ Prvt/0105

Date of Reciept : 19-01-2023

Date of issue : 25-01-2023

Description of the test items: Water Sample

Sl.No.	Physico-Chemical Parameters	Units	Water Sample	As per IS (10500 - 2012)	
				Requirement (Acceptable Limit)	Permissible Limit (in the absence of alternative source)
1	Colour	Pt-Co	0	5	15
2	Turbidity	NTU	0	1	5
3	pH		6.58	6.5-8.5	No relaxation
4	Electrical Conductivity	micromhos/cm	143	-	-
5	Total Dissolved Solids	mg/lit	92	500	2000
6	Salinity	gm/lit	0.06	0.48	1.836
7	Total Alkalinity as CaCO ₃	mg/lit	22	200	600
8	Total Hardness as CaCO ₃	mg/lit	36	200	600
9	Calcium as Ca ⁺⁺	mg/lit	6	75	200
10	Magnesium as Mg ⁺⁺	mg/lit	5	30	100
11	Flouride as F ⁻	mg/lit	0.12	1.0	1.5
12	Chloride as Cl ⁻	mg/lit	17	250	1000
13	Nitrate as NO ₃ ⁻	mg/lit	1.3	45	No relaxation
14	Sulphate as SO ₄ ⁻²	mg/lit	16.3	200	400
15	Total Iron as Fe	mg/lit	0.04	1.0	No relaxation
16	Sodium as Na ⁺	mg/lit	11	-	-
17	Potassium as K ⁺	mg/lit	3.2	-	-
18	Silica	mg/lit	3.6	-	-

S. Venkatesh
 Lab.Chemist

[Signature]
 Asst. Chemist
 State Level Water Testing Laboratory
 Rural Water Supply & Sanitation Dept. A.P
 VIJAYAWADA.

**THE RAMCO CEMENTS LIMITED,
NOISE LEVEL MONITORING - JAYANTHIPURAM LIMESTONE MINES
PERIOD - APRIL 2022 TO MARCH 2023**

Sl. No	Date of monitoring	Name Of the Mine	Machine / Location	Noise Level - Day time (6AM to 10PM), dB(A)	Permissible Limit dB(A)	Noise Level - Night time (10PM to 6AM), dB(A)	Permissible Limit dB(A)
1	29.09.2022	Ravirala Limestone Mine (Reserve Forest)	Drilling area	71.2	< 75	63.9	< 70
2			Loading area	71.9	< 75	62.8	< 70
3			Haul road	70.9	< 75	62.8	< 70
4			Unloading area	71.5	< 75	63.5	< 70
5			Mines office	53.6	< 75	38.1	< 70
6			Dumping area	51.4	< 75	40.7	< 70
7			Pump house	63.9	< 75	45.4	< 70
8			Weigh bridge	60.8	< 75	46.9	< 70
9			Ravirala View point	65.9	< 75	46.8	< 70
10			Near ML-4 Tower Light	60.6	< 75	45.3	< 70
1	28.09.2022	Jayanthipuram Limestone Mine (North Band)	Drilling area	71.6	< 75	63.9	< 70
2			Loading area	73.4	< 75	63.8	< 70
3			Haul road	72.9	< 75	61.6	< 70
4			Unloading area	71.6	< 75	63.9	< 70
5			Mines office	53.9	< 75	37.6	< 70
6			Crusher Hopper	63.4	< 75	53.6	< 70
7			Sub Station	61.9	< 75	53.1	< 70
8			Pump House	70.2	< 75	60.6	< 70
9			Weigh Bridge	64.1	< 75	52.7	< 70
10			PMC Camp	54.9	< 75	43.8	< 70
1	29.09.2022	Jayanthipuram Limestone Mine (South Band)	Drilling area	72.3	< 75	64.9	< 70
2			Loading area	70.9	< 75	63.5	< 70
3			Haul road	70.7	< 75	60.6	< 70
4			Unloading area	71.4	< 75	61.4	< 70
5			Mines office	54.1	< 75	37.3	< 70
6			Dump Yard	53.2	< 75	55.9	< 70
7			RSMS Camp	65.9	< 75	50.6	< 70
8			R&B road	70.6	< 75	52.3	< 70
9			Pump House	63.7	< 75	53.1	< 70
10			SB Bund Area	54.6	< 75	45.4	< 70
1	28.09.2022	Ramco Budawada Limestone Mine (Reserve Forest)	Drilling area	71.3	< 75	65.3	< 70
2			Loading area	73.4	< 75	60.9	< 70
3			Haul road - 1	72.6	< 75	62.8	< 70
4			Haul road - 2	70.9	< 75	58.3	< 70
5			Rest Shelter	52.7	< 75	35.3	< 70

63 u/c

Jayanthipuram Limestone Mine
THE RAMCO CEMENTS LIMITED

BLASTING REPORT

NBA-BSTLS

Date : 15/12/2022 Time : 3:30 pm Blast No. : JPM/460/10/22-23

Distance of Instrument from Blasting site : 100 mtrs

Distance of Village from Blasting site : 980 mtrs

Blast Location : PH-II V B (N)

No. of Holes : 71

Bench Height (Mtrs) : 4

Total Meterage (Mtrs) : 252.3 (Two Hundred and Fifty Two point Three only)

Avg. Depth of Holes (Mtrs) : 3.6

Burden (Mtrs) : 3

Spacing (Mtrs) : 3

ROM Blasted (Expected Tons) : 6360 MT

Production (Ton / Mtr) : 25.20

Explosive & Accessories Used

Non Cap Sensitive 83mm (Kg) :

manu Cap Sensitive 83mm (Kg) : 800

ANFO (Kg) : -

IED (Nos) : -

ASD EDD (Nos) : 10

cord (Mtrs) : -

Nonels (Nos) : 71

Boost 25 mm (Kg) : -

Cast Booster (Kg) : -

Powder Factor (Tons / Kg) 7.95

Total Explosive 800 kgs

Nonels :

- 1. S.dets - smtrs = 11 nos
- 2. excel - smtrs = 60 nos
- 3.
- 4.

Max. charge / day : 33.80 kgs

Remarks: There are no public / private structures within the danger zone.

P.P.V : 1.78 mm/sec

ABOP : 111.5 dB(A)

Fly Rock distance : 6mtrs

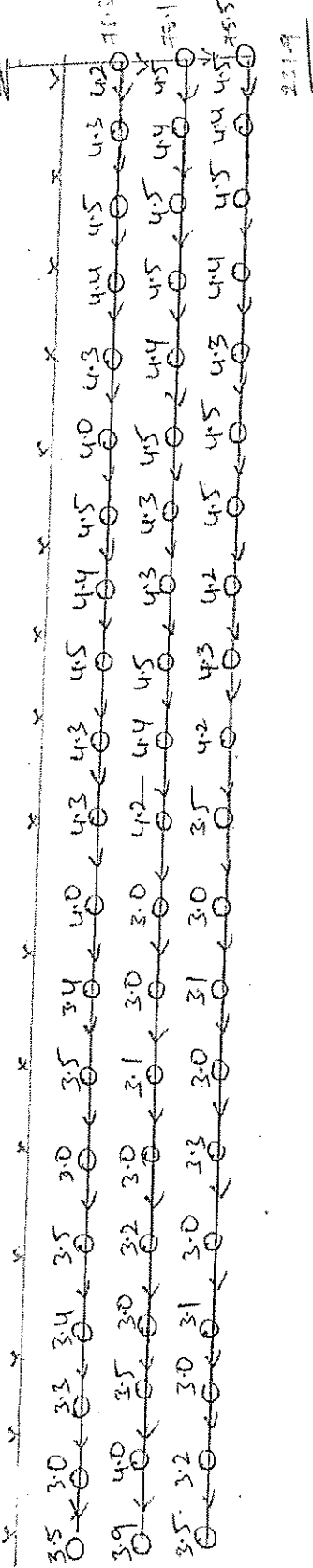
Direction of Instrument from Blasting site : North

R. [Signature]
Blasting Foreman

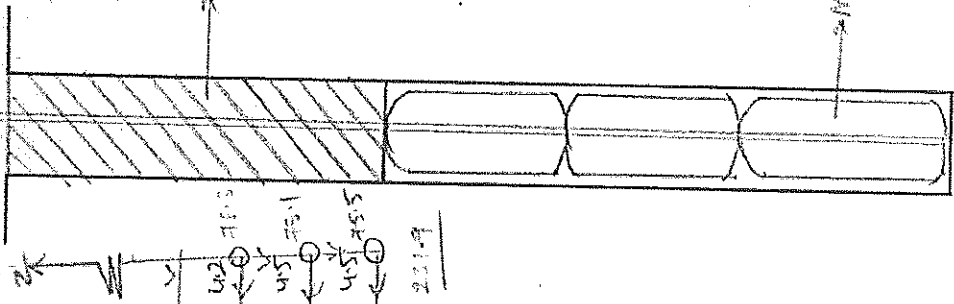
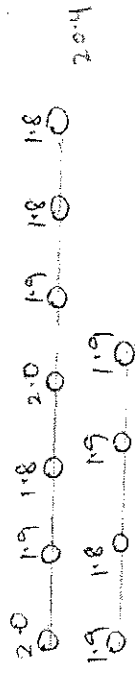
[Signature]
Asst. Manager (D&B)

C. [Signature]
Mines Manager.

Free face



Toe Holes



Date/Time Long at 15:32:31 December 15, 2022
 Trigger Source Geo: 0.510 mm/s, Mic: 131 dB(L)
 Range Geo: 254 mm/s
 Record Time 2.0 sec at 2048 sps
 Job Number: 116

Serial Number BE15430 V 10.72-1.1 Minimate Blaster
 Battery Level 6.2 Volts
 Unit Calibration May 3, 2022 by UES New Delhi
 File Name _TEMP.EVT
 Scaled Distance 15.0 (100.0 m, 44.7 kg)

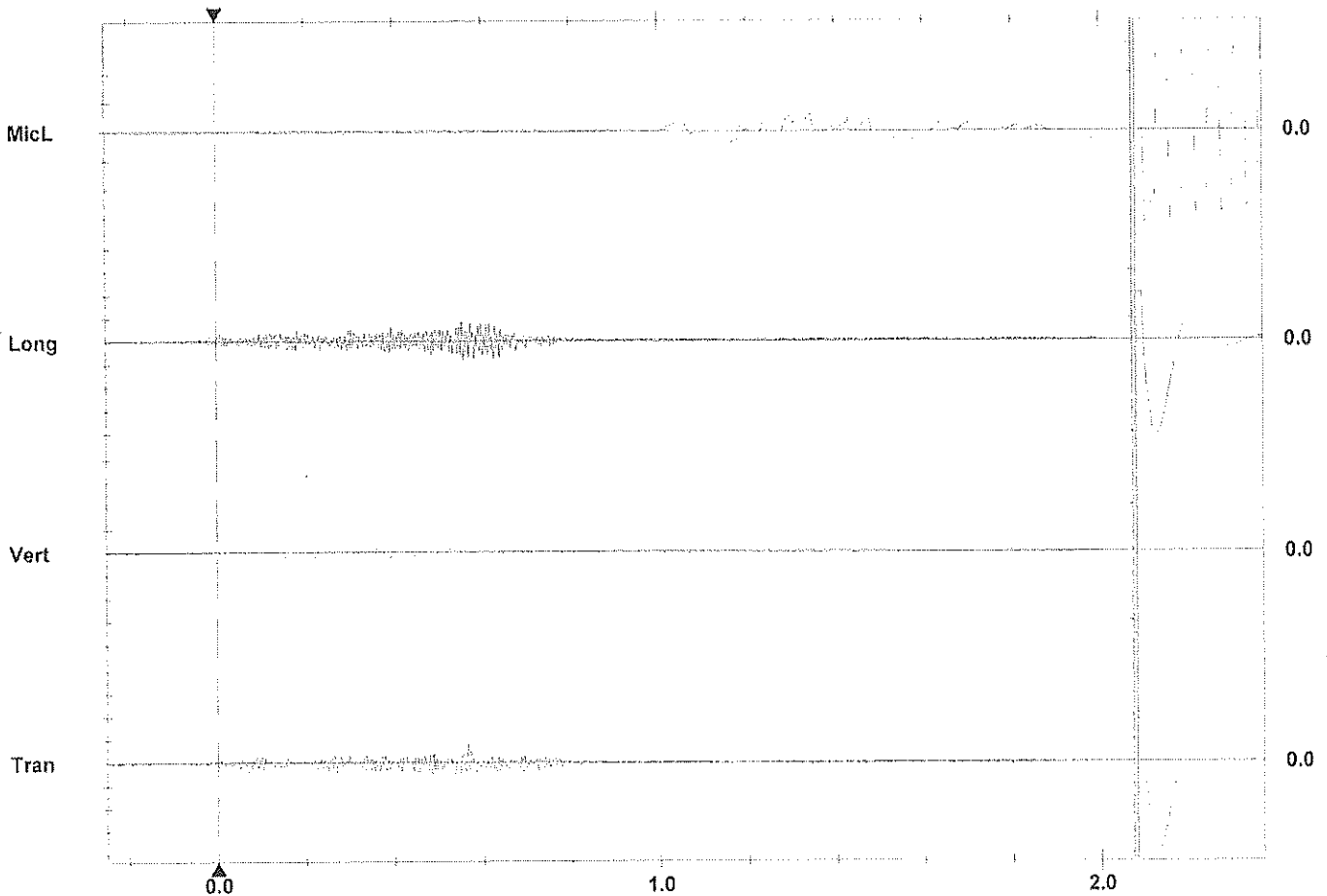
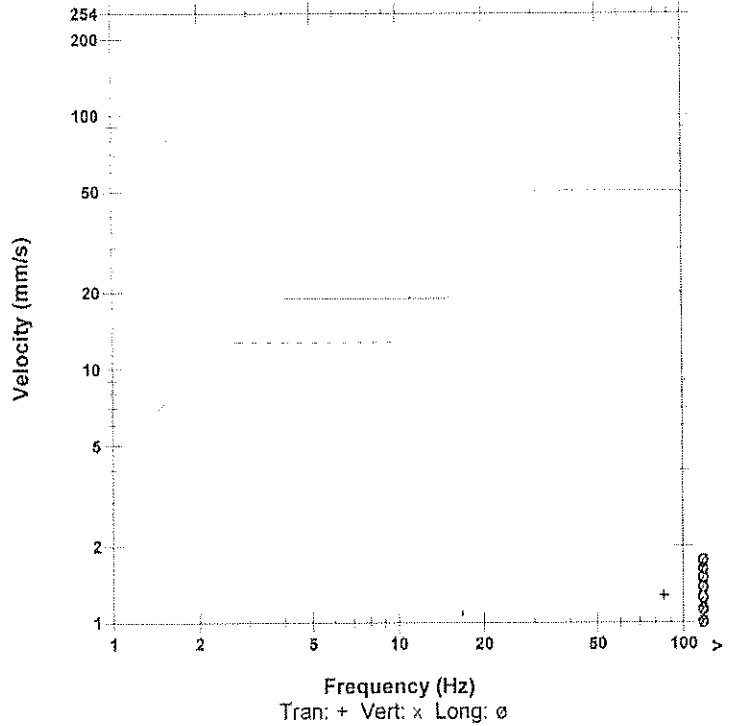
Notes
 Location: JPM LST Mine Pit-2 5th Bench North
 Client: M/s. The Ramco Cements Limited
 User Name: P SHASHANK
 General:

Microphone Linear Weighting
 PSPL 111.5 dB(L) at 1.240 sec
 ZC Freq 37 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 476 mv)

	Tran	Vert	Long	
PPV	1.65	0.889	1.78	mm/s
ZC Freq	114	79	171	Hz
Time (Rel. to Trig)	0.564	0.563	0.554	sec
Peak Acceleration	0.133	0.0795	0.186	g
Peak Displacement	0.00239	0.00264	0.00198	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.4	7.4	7.3	Hz
Overswing Ratio	3.7	3.6	3.6	

Peak Vector Sum 1.94 mm/s at 0.582 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.00 mm/s/div Mic: 10.00 pa.(L)/div
 Trigger = ▶ ◀

Sensor Check

.....Jayanthipuram.....LIMESTONE MINE
THE RAMCO CEMENTS LIMITED

BLASTING REPORT

SBI-BSTLS

Date : 13/12/2022 Time : 1:00pm Blast No. : Jpm/usu/D/22-23
 Distance of Instrument from Blasting site :- 100mts
 Distance of village from Blasting site :- 550mts

Blast Location : Pit - II II Bench West
 No. of Holes : 41
 Bench Height (Mtrs) : 5
 Total Meterage (Mtrs) : 202.6 (Two Hundred and two point six only)
 Avg. Depth of Holes (Mtrs) : 4.94
 Burden (Mtrs) : 3
 Spacing (Mtrs) : 3
 ROM Blasted (Expected Tons) : 4560MT
 Production (Ton / Mtr) : 22.50

Explosive & Accessories Used

Non Cap Sensitive 83mm (Kg) : -
 Maruti Cap Sensitive 83mm (Kg) : 375
 ANFO (Kg) : 600
 IED (Nos) : -
 EDD (Nos) : 02
 cord (Mtrs) : -
 Nonels (Nos) : 41
 Boost 25 mm (Kg) : -
 Cast Booster (Kg) : -
 Powder Factor (Tons / Kg) : 4.67
 Total Explosive : 975 Kgs

Nonels :

1. Exel - 8 mtrs = 41 nos
- 2.
- 3.
- 4.

Max. charge/delay :- 71 kgs

Remarks : There are no public/private structures within the danger zone.

P.P.V :- 0.51 mm/sec

A.B.O.P :- 121.7 dB(L)

Fly Rock Distance :- 6mts

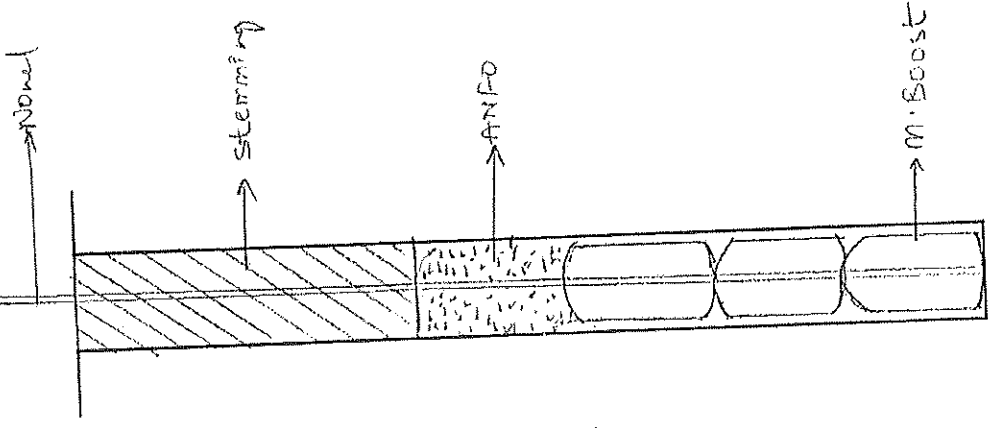
Direction of Instrument from Blasting site :- North/West.

P. Ganga
 Blasting Foreman

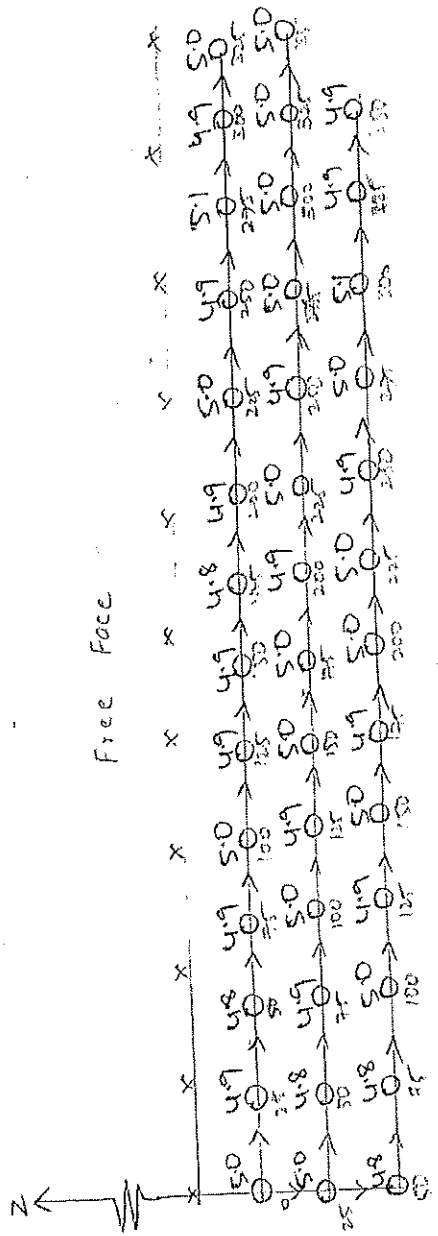
H. S. S.
 Asst. Manager (D&B)

C. Jay
 13/12/22
 Mines Manager.

Charging Pattern



Delay Pattern



Date/Time Long at 11:06:37 December 13, 2022
 Trigger Source Geo: 0.510 mm/s, Mic: 131 dB(L)
 Range Geo : 254 mm/s
 Record Time 2.0 sec at 2048 sps
 Job Number: 115

Serial Number BE15430 V 10.72-1.1 Minimate Blaster
 Battery Level 6.1 Volts
 Unit Calibration May 3, 2022 by UES New Delhi
 File Name TEMP.EVT
 Scaled Distance 15.0 (100.0 m, 44.7 kg)

Notes

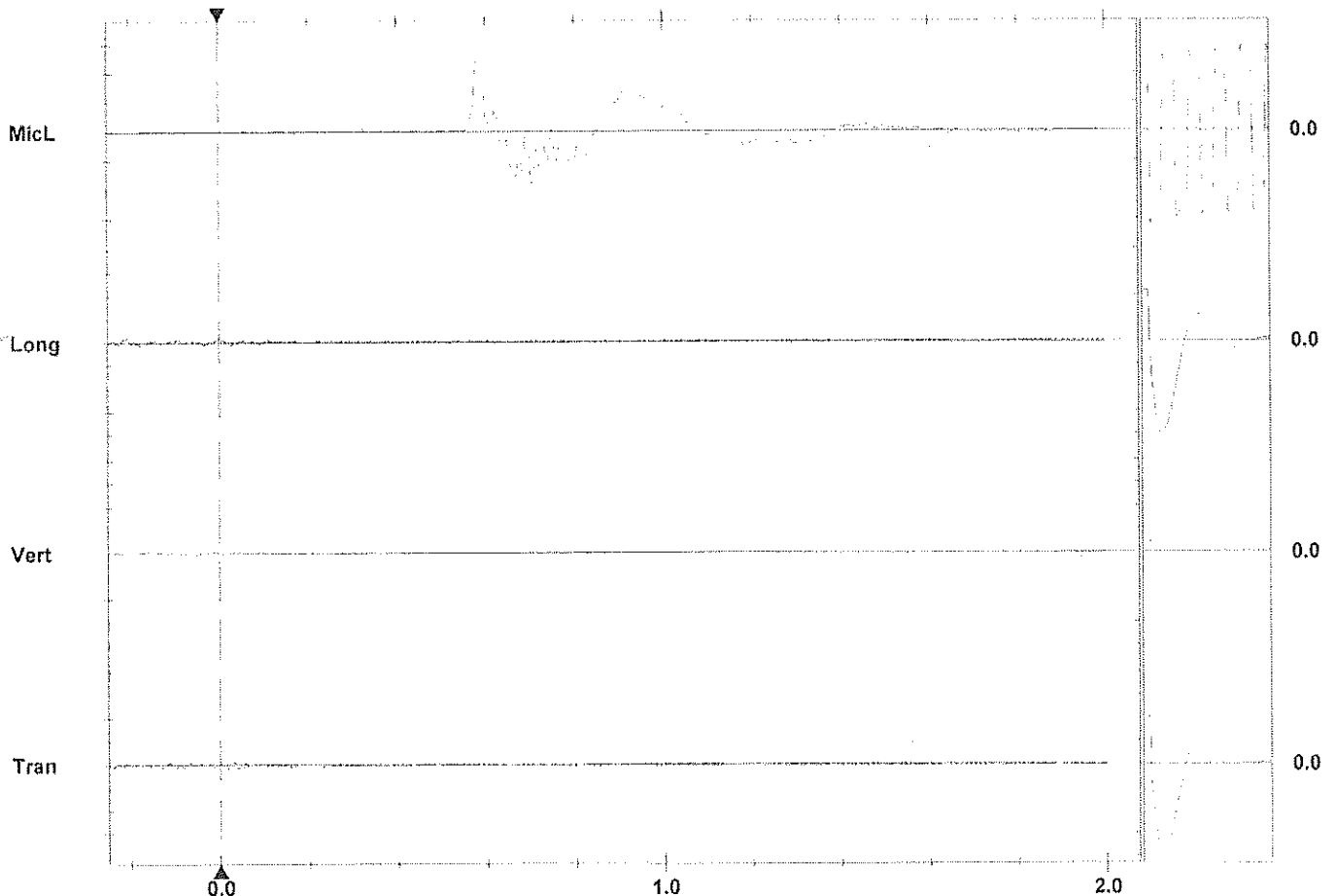
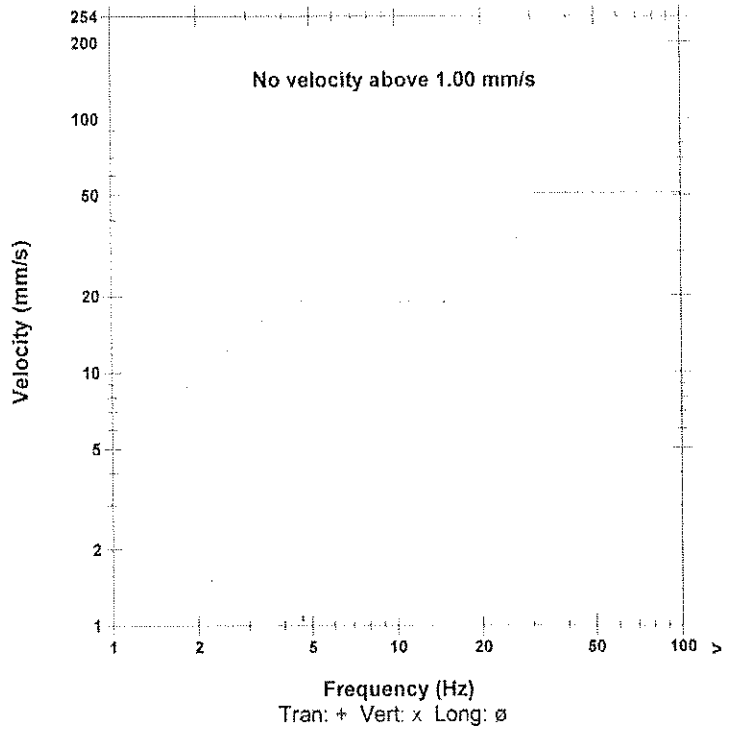
Location: JPM LST Mine Pit-3 2nd Bench West
 Client: M/s. The Ramco Cements Limited
 User Name: P SHASHANK
 General:

Microphone Linear Weighting
 PSPL 121.7 dB(L) at 0.579 sec
 ZC Freq 6.7 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 448 mv)

	Tran	Vert	Long	
PPV	0.508	0.254	0.508	mm/s
ZC Freq	33	>200	79	Hz
Time (Rel. to Trig)	0.011	-0.214	0.000	sec
Peak Acceleration	0.0530	0.0530	0.0530	g
Peak Displacement	0.00251	0.00124	0.00205	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.4	7.3	7.3	Hz
Overswing Ratio	3.7	3.6	3.6	

Peak Vector Sum 0.622 mm/s at 0.000 sec

USBM RI8507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.00 mm/s/div Mic: 10.00 pa (L)/div
 Trigger = ▶ ←

Sensor Check

Ravivada.....LIMESTONE MINE
THE RAMCO CEMENTS LIMITED

BLASTING REPORT

RR1 - BSTCL-STRLO

Date: 27/06/22 Time: 1:50 pm Blast No.: RP/30/D/22-23.

Distance of Instrument from Blast site: - 100 mts
 Distance of village from Blast site: - 2.8 kms
 Blast Location : VII Bench west.

No. of Holes : 50

Bench Height (Mtrs) : 6.0

Total Meterage (Mtrs) : 306.4 (Three Hundred and six point

Avg. Depth of Holes (Mtrs) : 6.1

Burden (Mtrs) : 3.0

Spacing (Mtrs) : 3.0

ROM Blasted (Expected Tons) : 6860

Production (Ton / Mtr) : 22.38

Explosive & Accessories Used

Non Cap Sensitive 83mm (Kg) : —

Maruthi Cap Sensitive 83mm (Kg) : 950

ANFO (Kg) : —

IED (Nos) : —

EDD (Nos) : 3

cord (Mtrs) : —

Nonels (Nos) :

Boost 25 mm (Kg) : —

Cast Booster (Kg) : —

Powder Factor (Tons / Kg) : 7.22.

Total Explosive : 950

Nonels :

1. Excl: 6 mts : 04 nos
2. Excl: 9 mts : 46 nos
3. 50 nos
- 4.

Max. Charge / delay : - 76

Remarks: There are no public/private structure within danger zone.

P.P.V :- 3.81 mm/sec

A.B.O.P :- 117.8 dB(L)

Fly rock distance :- 0.5 mts

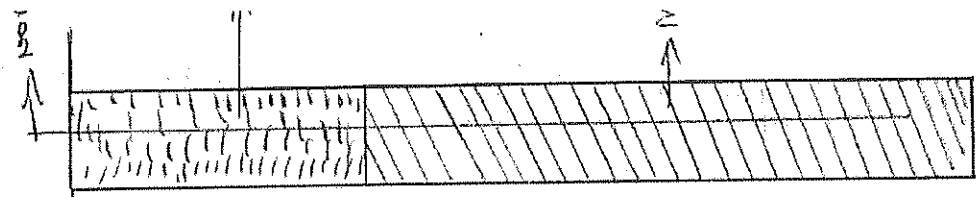
Direction of Instrument from Blast site :- West

Quartz

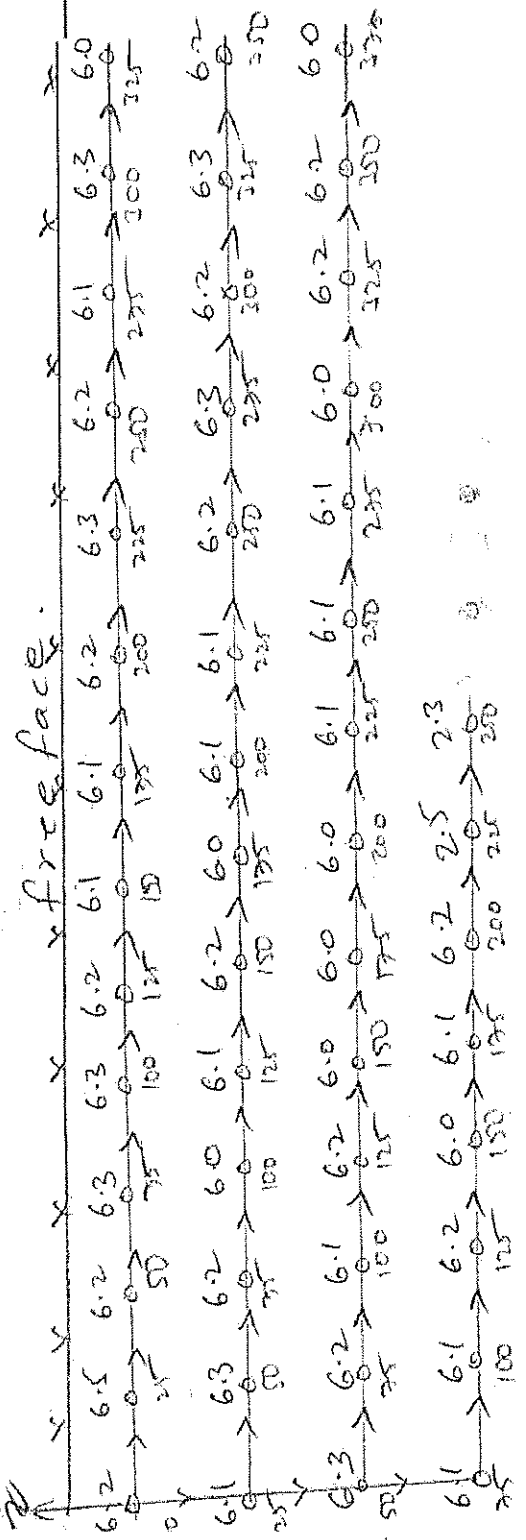
h...

RP: 27/6/22

Charging Pattern



Delay Pattern





Event Report

Date/Time Long at 18:16:14 June 27, 2022
Trigger Source Geo: 0.510 mm/s
Range Geo: 254 mm/s
Record Time 2.0 sec at 2048 sps
Job Number: 33
Notes
Location: RRF 7th Bench South West
Client: M/s. The Ramco Cements Limited
User Name: S. Ravi Kumar
General:

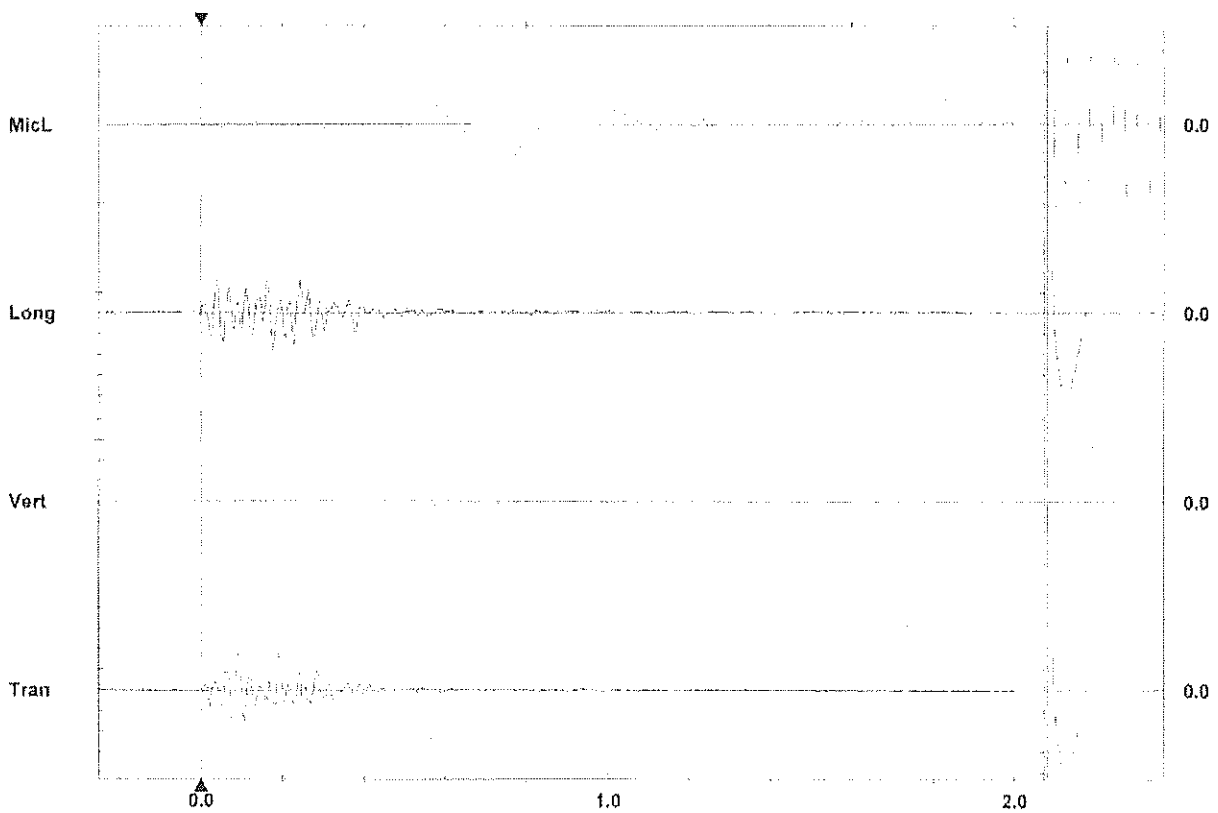
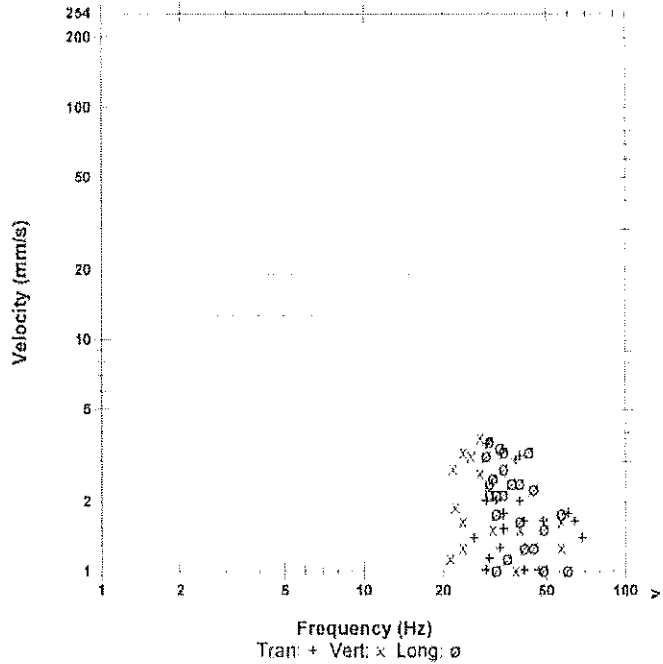
Serial Number BE15430 V 10.72-1.1 Minimate Blaster
Battery Level 6.3 Volts
Unit Calibration May 3, 2022 by UES New Delhi
File Name TEMP.EVT
Scaled Distance 15.0 (100.0 m, 44.7 kg)

Microphone Linear Weighting
PSPL 15.5 pa.(L) at 0.724 sec, 119-S-3-200
ZC Freq 3.1 Hz
Channel Test Passed (Freq = 20.1 Hz Amp = 498 mv)

	Tran	Vert	Long	
PPV	3.68	3.81	3.68	mm/s
ZC Freq	30	28	30	Hz
Time (Rel. to Trig)	0.090	0.215	0.175	sec
Peak Acceleration	0.133	0.106	0.133	g
Peak Displacement	0.0184	0.0202	0.0176	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.4	7.4	7.3	Hz
Overswing Ratio	3.7	3.6	3.6	

Peak Vector Sum 4.67 mm/s at 0.076 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: 0.00 mm/s/div Mic: 20.00 mm/s

19/10/2023

.....Ramco Rudawala.....LIMESTONE MINE
THE RAMCO CEMENTS LIMITED

BLASTING REPORT

RB-BSTU

Date: 19/10/2023 Time: 12:00pm Blast No.: RB/92/D/22-23
 Distance of Instrument from Blasting site: 100mts.
 Distance of village from Blasting site: 2.3kms
 Blast Location : I Bench West
 No. of Holes : 31
 Bench Height (Mtrs) : 8.5
 Total Meterage (Mtrs) : 264.0
 Avg. Depth of Holes (Mtrs) : 8.52
 Burden (Mtrs) : 3
 Spacing (Mtrs) : 4
 ROM Blasted (Expected Tons) : 7920MT
 Production (Ton / Mtr) : 30.00

Explosive & Accessories Used

Non Cap Sensitive 83mm (Kg) : -
 Prime Cap Sensitive 83mm (Kg) : 250
 ANFO (Kg) : 1250
 IED (Nos) : -
 MSD EDD (Nos) : 02
 cord (Mtrs) : -
 Nonels (Nos) : 3
 Boost 25 mm (Kg) : -
 Cast Booster (Kg) : -
 Powder Factor (Tons / Kg) : 5.3
 Total Explosive : 1500Kgs

Nonels :

1. Sdets - 13 mtrs = 31 nos
- 2.
- 3.
- 4.

Max. charge / delay :- 14516kgs

Remarks: There are no public/private structures within the dam
 30.

P.P.V :- 2.67 mm/sec

A B O P :- 121.9 dB(L)

Fly Rock Distance :- 8 mts

Direction of Instrument from Blast site :- West

Blasting Foreman

Asst. Manager (D&B)

Mines Manager.



Event Report

Date/Time Tran at 10:54:22 January 19, 2023
 Trigger Source Geo: 0.510 mm/s, Mic: 131 dB(L)
 Range Geo: 254 mm/s
 Record Time 2.0 sec at 2048 sps
 Job Number: 122

Serial Number BE15430 V 10.72-1.1 Minimate Blaster
 Battery Level 6.1 Volts
 Unit Calibration May 3, 2022 by UES New Delhi
 File Name _TEMP.EVT
 Scaled Distance 15.0 (100.0 m, 44.7 kg)

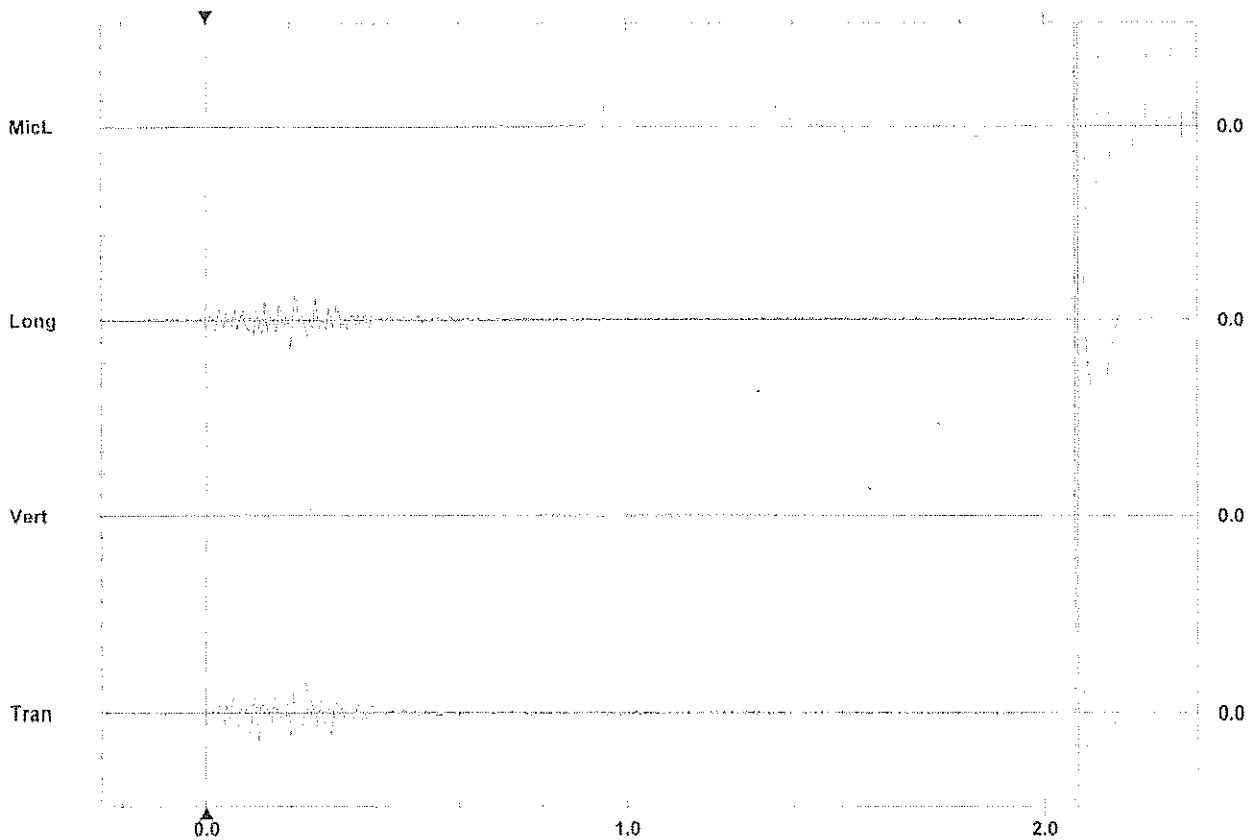
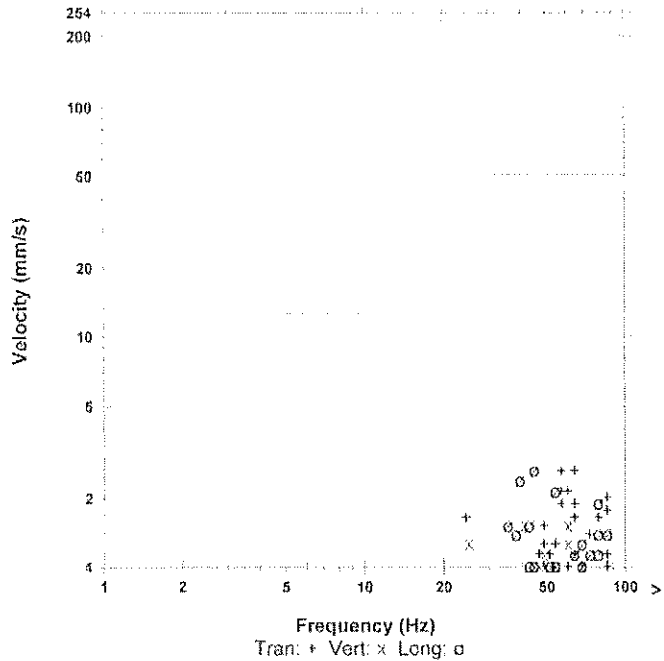
Notes
 Location: RBD LST Mine 1Bench West
 Client: M/s. The Ramco Cements Limited
 User Name: PBK KUMAR
 General:

Microphone Linear Weighting
 PSPL 121.9 dB(L) at 1.132 sec
 ZC Freq 3.5 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 470 mv)

	Tran	Vert	Long	
PPV	2.67	1.52	2.67	mm/s
ZC Freq	57	41	45	Hz
Time (Ref. to Trig)	0.125	0.089	0.201	sec
Peak Acceleration	0.133	0.0795	0.106	g
Peak Displacement	0.00775	0.00713	0.00902	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.4	7.3	Hz
Overswing Ratio	3.6	3.6	3.6	

Peak Vector Sum 3.41 mm/s at 0.201 sec

USBM R18507 And OSMRE



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.00 mm/s/div Mic: 10.00 pa.(L)/div Sensor Check
 Trigger = ▶ ◀



THE RAMCO CEMENTS LIMITED

ISO 9001 ISO 14001 ISO 45001 ISO 50001
Certified Company

Kumarasamy Raja Nagar – 521457
Jaggayyapet Mandal, Krishna District,
Andhra Pradesh, India
Phone: 08654 224400-04
Fax: 08654 222352
E-mail: mcjpm@ramcocements.co.in

RCL/PCB/05/2023-2024

04th May 2023

The Environmental Engineer,
A.P. Pollution Control Board,
Regional Office, Plot No: 41,
Gurunanak Road,
Sri Kanakadurga Officers Colony,
Vijayawada – 18.

Dear Sir,

Sub: Submission of Annual Returns of E-Wastes – Form – 3 for our Limestone Mines for the Financial Year 2022-2023 - Reg.

Ref: CFO order for mines No. APPCB/VJA/VJA/488/HO/CFO/2021 dated 07.11.2022.


Please find enclosed herewith duly filled in Form – 3 - 'Form for Filing Annual Returns' of E-Wastes for our following Limestone Mines for the financial year 2022-2023:

- a. Jayanthipuram Limestone Mine (North Band)
- b. Jayanthipuram Limestone Mine (South Band)
- c. Ravirala Limestone Mine (RF)
- d. Ramco Budawada Limestone Mine (RF)

This is for your kind information please.

Thanking you,

Yours faithfully,
for The Ramco Cements Limited,


(N RAVISHANKAR)
Sr. President (Mfg.)

Encl.: As above.



FORM-3

[See rules 4(5), 5(5); 8(6), 9(4), 10(8), 11(9), 13 (1) (xi), 13(2)(v), 13(3)(vii) and 13(4)(v)]
FORM FOR FILING ANNUAL RETURNS

[To be submitted by producer or manufacturer or refurbisher or dismantler or recycler by 30th day of June following the financial year to which that return relates].

Quantity in Metric Tonnes (MT) and numbers

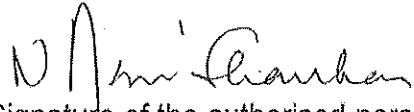
1	Name and address of the producer or manufacturer or refurbisher or dismantler or recycler	<p>The Ramco Cements Limited, Kumarasamy Raja Nagar - 521 457, Jaggayyapet (M), NTR Dist</p> <p>Capitve Limestone Mines:</p> <ul style="list-style-type: none"> a. Jayanthipuram Limestone Mine (North Band) b. Jayanthipuram Limestone Mine (South Band) c. Ravirala Limestone Mine (RF) d. Ramco Budawada Limestone Mine (RF) 									
2	Name of the authorised person and complete address with telephone and fax numbers and e-mail address	<p>N Ravishankar, Sr. President (Mfg.), The Ramco Cements Limited, Kumarasamy Raja Nagar - 521 457, Jaggayyapet (M), NTR Dist. Telephone: 08654 – 224400 to 04, Fax: 08654 – 222352, e-mail: mcljpm@ramcocements.co.in</p>									
3	<p>Total quantity of e-waste collected or channelised to recyclers or dismantlers for processing during the year for each category of electrical and electronic equipment listed in the Schedule I (Attach list) by PRODUCERS</p> <p>Details of the above</p>										
3(A)*	BULK CONSUMERS: Quantity of e-waste	<p>Cumulative quantity of generation in the financial year 2022-2023 for cement plant, thermal power plant & limestone mines:</p> <table border="1" data-bbox="879 1518 1433 1630"> <thead> <tr> <th>Type</th> <th>Quantity</th> <th>No.</th> </tr> </thead> <tbody> <tr> <td>E-waste</td> <td>Nil</td> <td></td> </tr> <tr> <td>Printer Cartridges</td> <td>0.4 Tonne</td> <td></td> </tr> </tbody> </table>	Type	Quantity	No.	E-waste	Nil		Printer Cartridges	0.4 Tonne	
Type	Quantity	No.									
E-waste	Nil										
Printer Cartridges	0.4 Tonne										
3(B)*	REFURBISHERS: Quantity of e-waste:										

3(C)*	DISMANTLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials or components recovered and sold; iii. Quantity of e-waste sent to recycler; iv. Residual quantity of e-waste sent to Treatment, Storage and Disposal Facility.							
3(D)*	RECYCLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials recovered and sold in the market; iii. Details of residue sent to Treatment, Storage and Disposal Facility							
4	Name and full address of the destination with respect to 3(A)-3(D) above	In the financial year 2022-2023, 0.4 Tonne of e-waste is disposed to M/s Best E-Waste Recyclers Pvt. Ltd., Tumkur.						
5	Type and quantity of materials segregated or recovered from e-waste of different codes as applicable to 3(A)-3(D)	Cumulative quantity available as on 31.03.2023 with respect to cement plant, thermal power plant & limestone mines: <table border="1"> <thead> <tr> <th>Type</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>E-waste</td> <td>1.129 Tonne</td> </tr> <tr> <td>Printer Cartridges</td> <td>0.26532 Tonne</td> </tr> </tbody> </table>	Type	Quantity	E-waste	1.129 Tonne	Printer Cartridges	0.26532 Tonne
Type	Quantity							
E-waste	1.129 Tonne							
Printer Cartridges	0.26532 Tonne							

✓ Enclose the list of recyclers to whom e-waste have been sent for recycling.

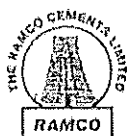
Place: KSR Nagar

Date: 04.05.2023


Signature of the authorised person

Note:-

- (1) * Strike off whichever is not applicable.
- (2) Provide any other information as stipulated in the conditions to the authoriser.
- (3) In case filing on behalf of multiple regional offices, Bulk Consumers and Producers need to add extra rows to 1 & 3(A) with respect to each office.



THE RAMCO CEMENTS LIMITED

ISO 9001 ISO 14001 ISO 45001 ISO 50001
Certified Company

Kumarasamy Raja Nagar - 521457
Jaggayyapet Mandal, Krishna District,
Andhra Pradesh, India
Phone: 08654 224400-04
Fax: 08654 222352
E-mail: mcclpm@ramcocements.co.in

RCL/PCB/63/2022-2023

06th March 2023

The Environmental Engineer
AP Pollution Control Board,
Regional Office, Plot No. 41,
Gurunanak Road,
Sri Kanakadurga Officers' Colony,
Vijayawada - 521 008.

Dear Sir,

Sub: Submission of Form - IV - Bio-Medical Waste Returns - Calendar Year 2022
- Reg.

Ref: Authorization Lr. No. BMW/APPCB/RO-VJA/2021-419 dated 05.08.2021.

This has reference to the above cited Bio-Medical Authorization letter issued for our Occupational Health Centre located at our cement plant. Please find enclosed herewith duly filled-in Form - IV - Bio-Medical Waste Returns for the period January 2022 to December 2022.

This is for your kind information and perusal please.

Thanking you,

Yours faithfully,
For The Ramco Cements Limited,

N. Ravi Shankar
Sr. President (Mfg.)

Encl.: As above

Handwritten initials

Handwritten text: 15/03/2023

Form – IV
(See rule 13)
ANNUAL REPORT

[To be submitted to the prescribed authority on or before 30th June every year for the period from January to December of the preceding year, by the occupier of Health Care Facility (HCF) or Common Bio-Medical Waste Treatment Facility (CBWTF)]

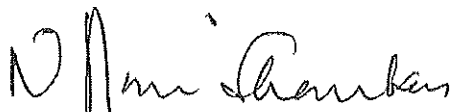
S. No.	Particulars	
1	Particulars of the Occupier	
	(i) Name of the authorised person (occupier or operator of facility)	Authorized Person - N Ravi Shankar Operator of Facility – Dr. S Raja Kesava Prasad
	(ii) Name of HCF or CBMWTF	Occupational Health Centre (The Ramco Cements Limited)
	(iii) Address for Correspondence	Kumarasamy Raja Nagar – 521 457,
	(iv) Address of Facility	Jaggaiahpet Mandal, Krishna Dist., AP.
	(v) Tel. No, Fax. No	Tel. No.: 08654 – 224400 - 04 Fax No.: 08654 - 222352
	(vi) E-mail ID	mcljpm@ramcocements.co.in
	(vii) URL of Website	www.ramcocements.in
	(viii) GPS coordinates of HCF or CBMWTF	N - 16 ^o 52' 28.7" E - 80 ^o 07' 40.0"
	(ix) Ownership of HCF or CBMWTF	The Ramco Cements Limited (State Government or Private or Semi Govt. or any other)
	(x) Status of Authorisation under the Bio-Medical Waste (Management and Handling) Rules	Authorisation No. BMW/APPCB/RO-VJA/2021-419 dated 05.08.2021 valid up to 30.09.2024.
	(xi) Status of Consents under Water Act and Air Act	Valid up to: 31.01.2027
2	Type of Health Care Facility	
	(i) Bedded Hospital	No. of Beds: 06 – Occupational Health Centre
	(ii) Non-bedded hospital (Clinic or Blood Bank or Clinical Laboratory or Research Institute or Veterinary Hospital or any other)	NA
	(iii) License number and its date of expiry	Factory Licence No. 9538 Expiry date: 31.12.2022
3	Details of CBMWTF	NA
	(i) Number healthcare facilities covered by CBMWTF	
	(ii) No. of beds covered by CBMWTF	
	(iii) Installed treatment and disposal capacity of CBMWTF	
	(iv) Quantity of biomedical waste treated or disposed by CBMWTF	
4	Quantity of waste generated or disposed in kg per annum (on monthly average basis)	Record of bio-medical waste generation is being maintained. Consolidated report (on month wise details) for the calendar year 2022 is enclosed as Annexure – I.
		• Yellow Category: 115.16 kg per annum
		• Red Category: 32.27 kg per annum

S. No.	Particulars																																				
		<ul style="list-style-type: none"> White: 1.90 kg per annum Blue Category: 5.59 kg per annum General Solid waste: NA 																																			
5	Details of the Storage, treatment, transportation, processing and Disposal Facility																																				
	(i) Details of the on-site storage facility	Size: Bins – 4 Nos. Capacity: 20 L each – 4 Nos. Provision of on-site storage (cold storage or any other provision) - Disposed to authorized treatment facility within stipulated time																																			
	disposal facilities	<table border="1"> <thead> <tr> <th>Type of treatment equipment</th> <th>No. of units</th> <th>Capacity, kg/day</th> <th>Quantity treated or disposed in kg per annum</th> </tr> </thead> <tbody> <tr> <td>Incinerators</td> <td></td> <td></td> <td rowspan="2">Not authorized</td> </tr> <tr> <td>Plasma Pyrolysis Autoclaves</td> <td></td> <td></td> </tr> <tr> <td>Microwave</td> <td></td> <td></td> <td>Not authorized</td> </tr> <tr> <td>Shredder</td> <td>01</td> <td>----</td> <td>----</td> </tr> <tr> <td>Needle tip cutter or destroyer</td> <td>01</td> <td>----</td> <td>----</td> </tr> <tr> <td>Sharps encapsulation or concrete pit Deep burial pits</td> <td></td> <td></td> <td>Not authorized</td> </tr> <tr> <td>Chemical disinfection</td> <td>01</td> <td>----</td> <td>----</td> </tr> <tr> <td>Any other treatment equipment</td> <td></td> <td></td> <td>Not authorized</td> </tr> </tbody> </table>	Type of treatment equipment	No. of units	Capacity, kg/day	Quantity treated or disposed in kg per annum	Incinerators			Not authorized	Plasma Pyrolysis Autoclaves			Microwave			Not authorized	Shredder	01	----	----	Needle tip cutter or destroyer	01	----	----	Sharps encapsulation or concrete pit Deep burial pits			Not authorized	Chemical disinfection	01	----	----	Any other treatment equipment			Not authorized
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	(iii) Quantity of recyclable wastes: sold to authorized recyclers after treatment in kg per annum	Consolidated report (on month wise details) recyclable waste sold to authorized recyclers after treatment for the calendar year 2022 is enclosed as Annexure – I.																																			
	(iv) No. of vehicles used for collection and transportation of biomedical waste	Vehicle of authorized treatment facility is used for transportation of biomedical waste.																																			
	(v) Details of Incineration ash and ETP sludge generated and disposed during the treatment of wastes in kg per annum	<table border="1"> <thead> <tr> <th></th> <th>Quantity generated</th> <th>Where disposed</th> </tr> </thead> <tbody> <tr> <td>Incineration ash</td> <td></td> <td rowspan="2">Not authorized</td> </tr> <tr> <td>ETP sludge</td> <td></td> </tr> </tbody> </table>		Quantity generated	Where disposed	Incineration ash		Not authorized	ETP sludge																												
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	(vi) Name of the Common Bio-Medical Waste Treatment Facility Operator through which wastes are disposed of	M/s Safenviron Bio-Medical Treatment Plant, D. No. 29-3-14, Governorpet, 1 st Venkateswara Rao Street, Vijayawada, Krishna District.																																			
	(vii) List of member HCF not handed over bio-medical waste	NA																																			
6	Do you have bio-medical waste management committee? If yes, attach minutes of the meetings held during the reporting period	No.																																			

S. No.	Particulars	
7	Details trainings conducted on BMW	
	(i) Number of trainings conducted on BMW Management	Routine BMW awareness training programme is done to paramedics at our OHC. Any changes / amendments in the BMW Rules will be updated during consequent training programmes.
	(ii) number of personnel trained	06
	(iii) number of personnel trained at the time of induction	06
	(iv) number of personnel not undergone any training so far	NIL
	(v) whether standard manual for training is available?	Yes
	(vi) any other information	NA
8	Details of the accident occurred during the year	
	(i) Number of Accidents occurred	NIL
	(ii) Number of the persons affected	NIL
	(iii) Remedial Action taken (Please attach details if any)	NA
	(iv) Any Fatality occurred, details	NIL
9	Are you meeting the standards of air Pollution from the incinerator? How many times in last year could not met the standards?	Not authorized
	Details of Continuous online emission monitoring systems installed	Not authorized
10	Liquid waste generated and treatment methods in place. How many times you have not met the standards in a year?	Not authorized
11	Is the disinfection method or sterilization meeting the log 4 standards? How many times you have not met the standards in a year?	Not authorized
12	Any other relevant information	No

Certified that the above report is for the period from 01.01.2022 to 31.12.2022.

Date: 06.03.2023
Place: KSR Nagar


Name and Signature of the Head of the Institution
N Ravi Shankar
Sr. President (Mfg.)

The Ramco Cements Limited, Kumarasamy Raja Nagar
 Details of Bio Medical Waste Handled
 (Period - January 2022 to December 2022)

Sl. No	Month	Weight (in kilogram) of Used Linen & Dressing material (Yellow)	Weight (in kilogram) of Disposable Syringes (without needles & fixed needle syringes) & Intravenous sets (Red)	Weight (in kilogram) of Used Needles, needles from needle tip cutter & blades (White)	Weight (in kilogram) of Broken or discarded glass medicine vials & Ampoules (Blue)
1	Jan-22	0.3	0.1	0	0
2	Feb-22	5	4.1	0.45	0.35
3	Mar-22	4.45	3.95	0.45	0.3
4	Apr-22	1.1	6	0	0
5	May-22	1.5	4.45	0	0
6	Jun-22	6.74	6.25	0	0.35
7	Jul-22	28.88	1.45	0	0
8	Aug-22	12.16	1.23	0	1.6
9	Sep-22	12.4	1.34	0.5	1.31
10	Oct-22	13.57	0	0	0.38
11	Nov-22	12.85	0	0	0.7
12	Dec-22	16.21	3.4	0.5	0.6
	Grand Total	115.16	32.27	1.9	5.59
	Monthly average	9.597	2.689	0.158	0.466