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Andhra Pradesh, India
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THE RAMCO CEMENTS LIMITED

RCL/PCB-Form-V/238/171

Date: 24.09.2021

The Environmental Engineer,
AP Pollution Control Board,
Regional Office,
Plot No. 41, Kanakadurga Officers Colony,
Opp. SBH, 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
2020-2021 - Reg.

Please find enclosed herewith three sets of Environmental Statement in
Form - V for the following Captive Mines of The Ramco Cements Limited
for the financial year 2020-2021 along with relevant enclosures:

- Jayanthipuram Limestone Mine (North Band)
- Jayanthipuram Limestone Mine (South Band)
- Ravirala Limestone Mine (RF)
- Ramco Budawada Limestone Mine (RF)

This is for your information and records please.

Thanking you.

Yours faithfully,
For The Ramco Cements Limited,

(N. RAVI SHANKAR)
Sr. President (Mfg)

Encl.: As above.

ENVIRONMENTAL STATEMENT (FORM – V)

FOR FINANCIAL YEAR 2020-2021

**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
JAGGAIAHPET (M),
KRISHNA DIST., AP.**

ENVIRONMENTAL STATEMENT (FORM – V)
(See rule 14)
Environmental statement for the financial year
ending the 31st March 2021
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, Jaggiahpet Mandal, Krishna Dt., A.P											
	Industry operation or process	:	Captive Limestone Mines: • Jayanthipuram Limestone Mine (North Band) • Jayanthipuram Limestone Mine (South Band) • Ravirala Limestone Mine (RF) • Ramco Budawada Limestone Mine (RF)											
2.	Industry category Primary – (STC Code) Secondary – (SIC Code)													
3.	Production capacity		Production capacities are: <table><tr><td>Mine</td><td>Limestone Capacity, Million TPA</td></tr><tr><td>Jayanthipuram Limestone Mine (North Band)</td><td>1.8</td></tr><tr><td>Jayanthipuram Limestone Mine (South Band)</td><td>0.5</td></tr><tr><td>Ravirala Limestone Mine (RF)</td><td>1.2</td></tr><tr><td>Ramco Budawada Limestone Mine (RF)</td><td>1.1</td></tr></table>		Mine	Limestone Capacity, Million TPA	Jayanthipuram Limestone Mine (North Band)	1.8	Jayanthipuram Limestone Mine (South Band)	0.5	Ravirala Limestone Mine (RF)	1.2	Ramco Budawada Limestone Mine (RF)	1.1
Mine	Limestone Capacity, Million TPA													
Jayanthipuram Limestone Mine (North Band)	1.8													
Jayanthipuram Limestone Mine (South Band)	0.5													
Ravirala Limestone Mine (RF)	1.2													
Ramco Budawada Limestone Mine (RF)	1.1													
4.	Year of Establishment		1986											
5.	Date of the last environment audit report submitted	:	10.09.2020											

PART – B
WATER AND RAW MATERIAL CONSUMPTION

Water consumption m³/day:

Process & greenbelt	405.13 m ³ /day
Total	405.13 m ³ /day

Note: Water consumption is considered for 310 days of mine operation.

Name of the product(s)	Water consumption per unit of products (m ³ /MT of Limestone)	
	During the current financial year (2019-2020)	During the current financial year (2020-2021)
Limestone	0.032	0.042

Note:

- 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.
- Due to COVID-19 pandemic in the financial year 2020-2021, the production got reduced. This affected the water consumption pattern.
- The limestone production details are given in Annexure – I.

Raw material consumption:

Sl. No.	Name of the raw material	Consumption of raw material	
		During the current financial year (2019-2020)	During the current financial year (2020-2021)
1	Diesel Oil, L	1970600	1493892
2	Lubricant Oil, L	36052	33832
3	Grease, kg	9210	8818
4	ANFO, kg	542850	450950
5	Slurry explosives – Large dia. (above 32mm)., kg	139000	111700
6	Electrical Detonators – Ordinary, Nos.	1134	1560
7	Electrical Detonators – Delay, Nos.	672	264
8	Nonel Detonators, Nos.	15874	12938
9	Detonating fuse, m	3920	1325

PART- C

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

(1) 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 2020-2021	7.64 - 7.84	Well within the prescribed limits
TDS		933.8 mg/L	
TSS		87.0 mg/L	
COD		134.8 mg/L	
BOD		38.1 mg/L	
O & G		2.2 mg/L	

(1) Pollutants	Quantity of Pollutants discharged (mass/day)	Concentrations of Pollutants discharges (Mass/volume)	Percentage of variation from prescribed standards with reasons
(b) Air - Ambient Air Quality Monitoring in the nearby areas:			
PM ₁₀	Dharmavarapadu Thanda Village	47.18 µg/m ³	Well within the prescribed limits
PM _{2.5}		19.05 µg/m ³	
SO ₂		12.49 µg/m ³	
NOx		15.12 µg/m ³	
CO		210.55 µg/m ³	
PM ₁₀	Jayanthipuram Village	49.66 µg/m ³	Well within the prescribed limits
PM _{2.5}		20.19 µg/m ³	
SO ₂		12.77 µg/m ³	
NOx		15.51 µg/m ³	
CO		215.23 µg/m ³	
PM ₁₀	Chillakallu	52.43 µg/m ³	Well within the prescribed limits
PM _{2.5}		21.22 µg/m ³	
SO ₂		12.95 µg/m ³	
NOx		15.39 µg/m ³	
CO		213.36 µg/m ³	
PM ₁₀	K Agraharam Village	53.56 µg/m ³	Well within the prescribed limits
PM _{2.5}		21.81 µg/m ³	
SO ₂		12.84 µg/m ³	
NOx		15.66 µg/m ³	
CO		194.55 µg/m ³	
PM ₁₀	Jaggayyapet	60.61 µg/m ³	Well within the prescribed limits
PM _{2.5}		24.42 µg/m ³	
SO ₂		12.99 µg/m ³	
NOx		16.23 µg/m ³	
CO		278.05 µg/m ³	
PM ₁₀	Budawada Village	51.42 µg/m ³	Well within the prescribed limits
PM _{2.5}		20.76 µg/m ³	
SO ₂		12.55 µg/m ³	
NOx		15.42 µg/m ³	
CO		213.82 µg/m ³	
PM ₁₀	Vedadri Village	50.85 µg/m ³	Well within the prescribed limits
PM _{2.5}		20.60 µg/m ³	
SO ₂		12.62 µg/m ³	
NOx		15.54 µg/m ³	
CO		214.50 µg/m ³	
PM ₁₀	Pochampalli Village	55.92 µg/m ³	Well within the prescribed limits
PM _{2.5}		22.83 µg/m ³	
SO ₂		12.50 µg/m ³	
NOx		15.35 µg/m ³	
CO		205.36 µg/m ³	
PM ₁₀	Ravirala Village	52.88 µg/m ³	Well within the prescribed limits
PM _{2.5}		21.33 µg/m ³	
SO ₂		12.78 µg/m ³	
NOx		15.56 µg/m ³	
CO		208.73 µg/m ³	

Note:

- The analysis data of Auto Garage Oil & Grease Trap Treated Waste Water generated for the financial year 2020-2021 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 2020-2021 (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 (adjacent to plant & in surrounding villages) from Prescribed Standards in the financial year 2020-2021.

PART – D HAZARDOUS WASTES

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

Hazardous Waste	During the previous financial year (2019-2020)	During the current financial year (2020-2021)
Waste oil	15.54 kL	Used within the premises. No disposal to outside agencies.
Waste grease	4.7 MT	
Waste lead acid batteries	Nil	No disposal to outside agencies.

- Copy of Form - 4 (submitted to APPCB) - Hazardous Waste generation / receipts and consumption / disposal details for mines for the financial year 2020-2021 is enclosed as Annexure - IV.
- Part of the waste oil / lubricants is used along with fresh grease for reclaimers.

PART – E SOLID WASTES

Location	During the Previous financial year (2019-2020)	During the current financial year (2020-2021)
(a) From process		
I. Overburden / waste Generation, Tonne		
i. From Jayanthipuram Limestone Mine (North Band)	9,92,337	612590
ii. From Jayanthipuram Limestone Mine (South Band)	46,996	23037
iii. From Ravirala Limestone Mine (RF)	2,18,116	109277
iv. From Ramco Budawada Limestone Mine	0	0
II. Top Soil Generation, Tonne		
i. From Jayanthipuram Limestone Mine (North Band)	0	0
ii. From Jayanthipuram Limestone Mine (South Band)	0	0
iii. From Ravirala Limestone Mine (RF)	0	0
iv. From 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)	9,92,337	612590
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 2020-2021 is as follows:

Name of the Mine	Solid Waste, Tonne		
	Generated	Used in reclamation	Dumped in dumps
Jayanthipuram Limestone Mine (North Band)	612590	612590	0
Jayanthipuram Limestone Mine (South Band)	23037	0	23037
Ravirala Limestone Mine	109277	0	109277
Ramco Budawada Limestone Mine	0	0	0

- 14.28 ha of area is reclaimed by the end of financial year 2020-2021 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.
- The capital expenditure incurred for environmental protection measures in financial year 2020-2021 is NIL against Rs. 6.754 lakh in the financial year 2019-2020 for all four operating mining leases.
- The recurring expenditure incurred for environmental protection measures in financial year 2020-2021 is Rs. 242.45 lakh for all four operating mining leases i.e., nearly Rs. 8.11 per Tonne of limestone production against Rs. 9.14 per Tonne of limestone production in the financial year 2019-2020.
- Various expenditures incurred for environment protection measures for 4 mining leases are listed in Annexure - V.
- An amount of Rs. 235.84 lakh is allocated towards Environment Management Activities for the financial year 2021-2022 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, 0.85 ha is reclaimed during the financial year 2020-2021 and a cumulative of 14.28 ha by the end of financial year 2020-2021 at Jayanthipuram Limestone Mine (North Band).

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 (formerly known as Madras Cements Ltd.) is a unit of the Ramco Group which has been growing steadily right from its inception with present capacity 16.5 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. Captive Mines is using Nonel Delay Detonators, to reduce ground vibration, to avoid fly rocks & fugitive dust. Permanent water sprinkling system is installed on mines haul road to reduce fugitive dust.

PRODUCTION DETAILS:

Name of the Mine	Production Capacities of Mines as per EC, TPA	For Financial Year 2019-2020, Tonne		For Financial Year 2020-2021, Tonne	
		Production	Despatch	Production	Despatch
Jayanthipuram Limestone Mine (North Band)	18,00,000	17,66,408	17,95,000	1695892	1644000
Jayanthipuram Limestone Mine (South Band)	5,00,000	4,99,500	4,99,500	499000	499000
Ravirala Limestone Mine (RF)	12,00,000	11,84,000	11,84,000	792000	792000
Ramco Budawada Limestone Mine (RF) *	11,00,000	85,200	85,200	4000	4000

AIR:**Air Pollution Control Measures:**

- 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 carried out in the nearby 9 Nos. of villages (buffer zones of limestone mining leases) in the financial year 2020-2021 is enclosed as Annexure - III. Data on core zone air monitoring carried out in four mining leases in the financial year 2020-2021 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 2019-2020				Financial Year 2020-2021				
	PM ₁₀	PM _{2.5}	SO ₂	NO _x	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO
Pollution Board Norms	100	60	80	80	100	60	80	80	2000
Dharmavarapadu Thanda	58.18	22.50	13.23	17.47	47.18	19.05	12.49	15.12	210.55
Jayanthipuram Village	52.79	20.85	13.68	17.99	49.66	20.19	12.77	15.51	215.23
Own Your House Colony	62.54	24.40	13.57	17.63					
Chillakallu					52.43	21.22	12.95	15.39	213.36
K Agraharam Village	65.21	25.23	13.73	17.79	53.56	21.81	12.84	15.66	194.55
Jaggayyapet	71.07	28.53	15.91	20.09	60.61	24.42	12.99	16.23	278.05
Budawada Village	60.93	24.02	13.63	17.98	51.42	20.76	12.55	15.42	213.82
Vedadri Village	59.38	23.15	13.80	17.62	50.85	20.60	12.62	15.54	214.50
Padmavathi Nagar	61.90	24.15	14.71	17.91					
Pochampalli Village					55.92	22.83	12.50	15.35	205.36
Ravirala Village	63.38	24.58	14.10	17.80	52.88	21.33	12.78	15.56	208.73

Mine	Location	Average concentration, µg/m³								
		Financial Year 2019-2020				Financial Year 2020-2021				
		PM ₁₀	PM _{2.5}	SO ₂	NOx	PM ₁₀	PM _{2.5}	SO ₂	NOx	CO
Pollution Board Norms		100	60	80	80	100	60	80	80	2000
Jayanthipuram Limestone Mine (North Band)	Mines Office	65.74	26.71	14.75	18.73	56.25	22.42	12.63	15.55	558.86
	Workshop	63.30	25.08	14.75	18.08	57.16	23.04	12.72	15.74	578.50
	Sub-station	64.34	26.04	14.69	18.23	56.69	23.21	12.73	15.48	571.64
	Magazine Area	62.86	24.63	14.83	18.46	56.75	23.11	12.88	15.45	581.05
Jayanthipuram Limestone Mine (South Band)	Mines Office	62.83	25.10	14.48	17.95	55.90	22.56	12.94	15.84	586.59
	Pump House	62.95	24.85	14.90	18.14	56.30	22.96	12.82	15.90	580.77
	Haul Road	63.45	25.29	14.88	18.61	56.01	22.84	13.03	15.91	570.32
	Loading Area	64.63	25.64	14.49	18.30	57.11	23.17	13.15	16.00	576.32
Ravirala Limestone Mine	Mines Office	60.96	23.80	14.33	17.74	55.59	22.44	12.56	15.50	556.91
	ML3 Tower Light Area	63.10	24.51	14.63	18.48	56.46	23.00	13.11	15.86	551.95
	ML4 Tower Light Area	61.72	24.10	14.70	18.05	55.82	22.57	12.71	15.59	549.95
	View Point Tower Light Area	62.18	24.31	15.02	18.54	55.18	22.70	13.18	16.12	550.59
Ramco Budawada Limestone Mine	Drilling Area	60.69	23.50	14.20	17.53	54.00	21.77	13.75	16.51	548.77
	Loading Area	62.23	24.86	14.30	17.69	55.02	22.25	13.76	16.67	532.91
	Haul Road	59.93	23.60	14.49	17.72					
	Haul Road - 1					55.56	22.55	13.60	16.44	542.86
	Unloading Area	61.98	24.48	14.82	18.19					
	Haul Road - 2					55.80	22.55	13.65	16.50	547.59

(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 310 days of operation of mines, the total water requirement for Captive Mines is 405.13 m³/day in the financial year 2020-2021 against 335.68 m³/day in the financial year 2019-2020.
- Panchayat Raj & Rural Development Department (nodal agency for Central Ground Water Dept) vide Lr. No. PRR05-11028/45/2018-SLNA-GIS-CORD dated 06.07.2019 (which is valid up to 05.07.2021) accorded permission for mine seepage water withdrawal @ 7000 m³/day, for internal use

Water Level Data & Permission to Work Below Water Table:

Water levels are 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 2020-2021 is enclosed as Annexure – I - A.

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
Jayanthipuram Limestone Mine (North Band)	NOC No. PRR05-11028/14/2018-SLNA-GIS-CORD dated 19.02.2021, which is valid up to 18.02.2024.
Jayanthipuram Limestone Mine (South Band)	NOC No. PRR05-11028/13/2018-SLNA-GIS-CORD dated 07.07.2020, which is valid up to 06.07.2023
Ravirala Limestone Mine (RF)	NOC No. PRR05-11028/15/2018-SLNA-GIS-CORD dated 07.07.2020, which is valid up to 06.07.2023
Ramco Budawada Limestone Mine (RF)	NOC No. PRR05-11028/16/2019-SLNA-GIS-CORD dated 13.02.2021, which is valid up to 12.02.2024.

Water Quality Analysis:

- Ground water for the 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 2020-2021 is enclosed as Annexure – I-B.
- 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 2020-2021 is enclosed as Annexure – I-C.

Waste Water Quality Analysis:

- No process effluent generation from limestone extraction.
- Domestic wastewater is being treated in respective septic tanks followed by soak pits.
- 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 2020-2021 is enclosed as Annexure-I-D. 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 in the financial year 2020-2021 by MoEF&CC approved external agency 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 (2019-2020)	Average Value / Range (2020-2021)
p ^H		5.5 - 9.0	7.18 - 7.93	7.64 - 7.84
TDS	mg/L	2100	894.2	933.8
TSS	mg/L	100	85.4	87.0
COD	mg/L	250	131.2	134.8
BOD	mg/L	100	34.0	38.1
O & G	mg/L	10	2.8	2.2

Rain Water Harvesting Pits & Check Dams:

- 48 Nos. of rain water harvesting structures are made to recharge the ground water in the colony by March 2021. 4 Nos. of rain water harvesting structures are made to recharge the ground water in the plant by March 2021. The locations of these pits are listed in Annexure – I-E.
- 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.
- Check bund is constructed in SE direction of Ravirala Limestone Mine.

Water Conservation:

Water collected in mine pits is being used for:

- Cement plant & power 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 waste water is being passed to pond (about 0.5 ha area) in our own lands to uplift the water table 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 in the financial year 2020-2021 are enclosed as Annexure – I-F.

NOISE & VIBRATION LEVELS:

- Noise level data collected in the mines areas in the financial year 2020-2021 is listed out in Annexure – I-G.
- 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 2020-2021 are enclosed as Annexure – I-H.

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, was not 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 checkup, he 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 2020-2021 is as follows:

Name of the Mine	Solid Waste, Tonne		
	Generated	Used in reclamation	Dumped in dumps
Jayanthipuram Limestone Mine (North Band)	612590	612590	0
Jayanthipuram Limestone Mine (South Band)	23037	0	23037
Ravirala Limestone Mine	109277	0	109277
Ramco Budawada Limestone Mine	0	0	0

- 14.28 ha of area is reclaimed by the end of financial year 2020-2021 at Jayanthipuram Limestone Mine (North Band).

Various handling and disposal practices of various wastes are:

Type of waste	Quantity handled in 2020-2021	Disposal practice
Top Soil Generation	Nil	No top soil generation in the financial year 2020-2021 from all the mining leases.
Dust generation during drilling	Nil	Controlled by Wet drilling
Dust generation during loading	Nil	Water sprinkling on muck piles
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)
Sludge collected from STP	54.6 m ³	Is being used as manure in greenbelt activities, in place of chemical fertilizers.
Colony garbage	47.5 Tonne of compost	By Vermi-composting and compost is being used for greenbelt activities as manure, in place of chemical fertilizers.
Kitchen waste from colony	0.388 T of bio-gas generated	Kitchen waste is being composted in bio-gas plant, which is under commission stage. The generated bio-gas is used in industrial canteen, to partially replace the consumption of LPG.
E-waste from plant & mines	Printer Cartridges – 0.10538 Tonne	Is being disposed to APPCB authorized agencies. Returns are being submitted annually. Copy of the E-waste returns for the financial year 2020-2021 is enclosed as Annexure – I-I. Total quantity by the end of FY 2020-2021 are: E-waste - 1.129 Tonne Printer Cartridges – 0.15996 Tonne

Type of waste	Quantity handled in 2020-2021	Disposal practice
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 (Annexure – IV).
Haz. waste – waste lead acid batteries from mines	No waste lead acid batteries disposed to external agencies.	Waste lead acid batteries are being disposed to the supplier on exchange basis or to APPCB authorized agencies. Returns are being submitted annually (Annexure – IV).
Plastic waste collected from colony, mines and plant	13.10 T	Being fired in the kilns.
Bio-medical waste from OHC	Calendar year 2020: Yellow – 89.25 kg Red – 60.80 kg White – 11.25 kg Blue – 7.60 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 hours basis. Copy of Bio-Medical Annual Returns submitted for the calendar year 2020 is enclosed as Annexure – I-J.

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.
- Nonel 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 area as on 31.03.2021 are as follows:

Name of the Mine	Greenbelt Area specified in EC	Greenbelt Developed up to	
		31.03.2020	31.03.2021
Jayanthipuram Limestone Mine (North Band)	62.39	64.32	65.22
Jayanthipuram Limestone Mine (South Band)	21.07	19.05	21.08
Ravirala Limestone Mine	3.19	8.41	9.79
Ramco Budawada Limestone Mine	0.0	3.25	3.45

Note: All values are mentioned in ha.

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 2021:

- 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. Cost of various socio-economic activities for the surrounding villages for the period 2003-2021 (18 years) is Rs. 10,18,79,161.516/- i.e., nearly Rs. 56.6/- lakh per annum. The details are enclosed as Annexure – I-K.

Some of the major initiatives taken in the financial year 2020-2021 are as follows:

- Medical camps conducted in nearby villages of Jayanthipuram, Ravirala, Budawada, K. Agraharam etc. Due to COVID-19 pandemic, 12 Nos. of medical camps conducted in nearby villages in the financial year 2020-2021 and medicines are being distributed at free of cost.
- Water supply for agriculture fields at Jayanthipuram Village.
- Water supply for Jayanthipuram village, Dharmavarapupadu Thanda village & Budawada village (in summer season) for safe drinking water.
- Installation of Reverse Osmosis (RO) plants for Jayanthipuram village and Dharmavarapupadu Thanda village.

EXPENDITURE INCURRED FOR ENVIRONMENT PROTECTION:

- The recurring expenditure incurred for environmental protection measures in financial year 2020-2021 is Rs. 242.45 lakh for all four operating mining leases i.e., nearly Rs. 8.11 per Tonne of limestone

production against Rs. 9.14 per Tonne of limestone production in the financial year 2019-2020.

- 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 2020-2021 are listed in Annexure - V.
- An amount of Rs. 235.84 lakh is allocated towards Environment Management Activities for the financial year 2021-2022 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 2020, plantation activity conducted at plant premises, mines premises, colony premises and at surrounding areas.

THE RAMCO CEMENTS LIMITED
WATER LEVEL DATA - JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
PERIOD - APRIL 2020 TO MARCH 2021

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-2 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	16.04.2020	6.50
2	30.04.2020	7.28
3	16.05.2020	8.54
4	31.05.2020	9.34
5	16.06.2020	9.89
6	30.06.2020	8.58
7	16.07.2020	3.50
8	31.07.2020	0.81
9	16.08.2020	2.84
10	31.08.2020	3.95
11	16.09.2020	4.65
12	30.09.2020	3.26
13	16.10.2020	3.1
14	31.10.2020	3.25
15	16.11.2020	3.68
16	30.11.2020	3.76
17	16.12.2020	4.02
18	31.12.2020	4.15
19	16.01.2021	4.33
20	31.01.2021	4.21
21	16.02.2021	4.14
22	28.02.2021	4.26
23	16.03.2021	4.32
24	31.03.2021	4.54

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	2.45
2	30.04.2020	2.60
3	16.05.2020	2.75
4	31.05.2020	2.63
5	16.06.2020	2.50
6	30.06.2020	2.20
7	16.07.2020	1.95
8	31.07.2020	1.50
9	16.08.2020	1.45
10	31.08.2020	1.25
11	16.09.2020	1.30
12	30.09.2020	1.25
13	16.10.2020	1.24
14	31.10.2020	0.98
15	16.11.2020	0.69
16	30.11.2020	0.75
17	16.12.2020	0.57
18	31.12.2020	0.25
19	16.01.2021	0.35
20	31.01.2021	0.51
21	16.02.2021	0.70
22	28.02.2021	0.85
23	16.03.2021	0.98
24	31.03.2021	1.02

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	11.50
2	30.04.2020	12.65
3	16.05.2020	13.65
4	31.05.2020	11.60
5	16.06.2020	10.09
6	30.06.2020	8.30
7	16.07.2020	7.93
8	31.07.2020	7.35
9	16.08.2020	8.24
10	31.08.2020	9.20
11	16.09.2020	9.35
12	30.09.2020	8.24
13	16.10.2020	7.51
14	31.10.2020	7.54
15	16.11.2020	7.69
16	30.11.2020	7.85
17	16.12.2020	8.26
18	31.12.2020	8.51
19	16.01.2021	8.21
20	31.01.2021	8.55
21	16.02.2021	8.60
22	28.02.2021	8.72
23	16.03.2021	8.85
24	31.03.2021	8.95

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	7.15
2	30.04.2020	7.63
3	16.05.2020	8.29
4	31.05.2020	8.95
5	16.06.2020	9.34
6	30.06.2020	8.27
7	16.07.2020	6.70
8	31.07.2020	4.72
9	16.08.2020	4.68
10	31.08.2020	4.64
11	16.09.2020	4.75
12	30.09.2020	4.01
13	16.10.2020	3.86
14	31.10.2020	3.99
15	16.11.2020	4.26
16	30.11.2020	4.71
17	16.12.2020	5.46
18	31.12.2020	5.94
19	16.01.2021	6.57
20	31.01.2021	5.91
21	16.02.2021	5.80
22	28.02.2021	5.85
23	16.03.2021	5.81
24	31.03.2021	5.82

THE RAMCO CEMENTS LIMITED
WATER LEVEL DATA - JAYANTHIPURAM LIMESTONE MINE (SOUTH BAND)
PERIOD - APRIL 2020 TO MARCH 2021

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	16.04.2020	12.89
2	30.04.2020	12.35
3	16.05.2020	12.52
4	31.05.2020	12.60
5	16.06.2020	12.16
6	30.06.2020	12.12
7	16.07.2020	11.06
8	31.07.2020	12.03
9	16.08.2020	12.08
10	31.08.2020	11.06
11	16.09.2020	11.95
12	30.09.2020	10.48
13	16.10.2020	10.78
14	31.10.2020	11.62
15	16.11.2020	11.76
16	30.11.2020	11.74
17	16.12.2020	11.99
18	31.12.2020	12.04
19	16.01.2021	11.92
20	31.01.2021	11.98
21	16.02.2021	12.14
22	28.02.2021	12.15
23	16.03.2021	12.17
24	31.03.2021	12.04

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	18.34
2	30.04.2020	18.22
3	16.05.2020	18.94
4	31.05.2020	19.35
5	16.06.2020	18.79
6	30.06.2020	18.86
7	16.07.2020	17.82
8	31.07.2020	18.10
9	16.08.2020	18.32
10	31.08.2020	17.39
11	16.09.2020	17.50
12	30.09.2020	16.51
13	16.10.2020	16.43
14	31.10.2020	15.29
15	16.11.2020	15.84
16	30.11.2020	16.17
17	16.12.2020	16.79
18	31.12.2020	17.2
19	16.01.2021	17.97
20	31.01.2021	18.37
21	16.02.2021	18.61
22	28.02.2021	18.54
23	16.03.2021	18.86
24	31.03.2021	18.99

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	9.26
2	30.04.2020	9.65
3	16.05.2020	9.34
4	31.05.2020	9.10
5	16.06.2020	8.53
6	30.06.2020	7.35
7	16.07.2020	7.18
8	31.07.2020	7.11
9	16.08.2020	7.19
10	31.08.2020	6.95
11	16.09.2020	5.45
12	30.09.2020	3.10
13	16.10.2020	2.55
14	31.10.2020	2.79
15	16.11.2020	3.16
16	30.11.2020	5.47
17	16.12.2020	6.49
18	31.12.2020	7.55
19	16.01.2021	7.52
20	31.01.2021	7.56
21	16.02.2021	7.55
22	28.02.2021	7.51
23	16.03.2021	7.53
24	31.03.2021	7.45

THE RAMCO CEMENTS LIMITED
WATER LEVEL DATA - RAVIRALA LIMESTONE MINE (RESERVE FOREST)
PERIOD - APRIL 2020 TO MARCH 2021

I. PIEZOMETER DETAILS:

Location: South Side of Lease
RL - (+)51.00m
Latitude - N 16° 50' 27.6"
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"
Depth of well - 24.50 m

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

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

II. WATER LEVEL DATA

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	23.95
2	30.04.2020	24.45
3	16.05.2020	23.59
4	31.05.2020	22.85
5	16.06.2020	20.69
6	30.06.2020	19.75
7	16.07.2020	20.56
8	31.07.2020	21.60
9	16.08.2020	21.72
10	31.08.2020	21.43
11	16.09.2020	21.26
12	30.09.2020	20.95
13	16.10.2020	18.64
14	31.10.2020	14.38
15	16.11.2020	12.58
16	30.11.2020	14.98
17	16.12.2020	15.34
18	31.12.2020	15.86
19	16.01.2021	16.24
20	31.01.2021	14.95
21	16.02.2021	13.87
22	28.02.2021	14.29
23	16.03.2021	15.49
24	31.03.2021	16.52

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	18.76
2	30.04.2020	18.83
3	16.05.2020	18.86
4	31.05.2020	18.89
5	16.06.2020	18.92
6	30.06.2020	18.90
7	16.07.2020	14.34
8	31.07.2020	17.54
9	16.08.2020	17.67
10	31.08.2020	17.46
11	16.09.2020	17.72
12	30.09.2020	17.54
13	16.10.2020	15.63
14	31.10.2020	13.74
15	16.11.2020	15.27
16	30.11.2020	16.86
17	16.12.2020	17.79
18	31.12.2020	17.89
19	16.01.2021	18.02
20	31.01.2021	18.12
21	16.02.2021	18.32
22	28.02.2021	18.43
23	16.03.2021	18.5
24	31.03.2021	18.54

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	24.87
2	30.04.2020	25.02
3	16.05.2020	25.08
4	31.05.2020	25.10
5	16.06.2020	24.98
6	30.06.2020	24.99
7	16.07.2020	23.34
8	31.07.2020	23.56
9	16.08.2020	23.93
10	31.08.2020	23.15
11	16.09.2020	22.87
12	30.09.2020	22.46
13	16.10.2020	20.90
14	31.10.2020	16.96
15	16.11.2020	16.15
16	30.11.2020	15.66
17	16.12.2020	15.61
18	31.12.2020	15.75
19	16.01.2021	16.16
20	31.01.2021	16.55
21	16.02.2021	17.82
22	28.02.2021	18.11
23	16.03.2021	19.08
24	31.03.2021	20.39

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	27.98
2	30.04.2020	28.11
3	16.05.2020	28.24
4	31.05.2020	28.34
5	16.06.2020	28.25
6	30.06.2020	28.09
7	16.07.2020	23.16
8	31.07.2020	25.13
9	16.08.2020	22.31
10	31.08.2020	23.79
11	16.09.2020	23.25
12	30.09.2020	22.92
13	16.10.2020	19.24
14	31.10.2020	16.3
15	16.11.2020	18.33
16	30.11.2020	19.06
17	16.12.2020	19.66
18	31.12.2020	20.02
19	16.01.2021	21.25
20	31.01.2021	21.97
21	16.02.2021	22.61
22	28.02.2021	23.22
23	16.03.2021	24.01
24	31.03.2021	24.63

THE RAMCO CEMENTS LIMITED
WATER LEVEL DATA - RAMCO BUDAWADA LIMESTONE MINE (RESERVE FOREST)
PERIOD - APRIL 2020 TO MARCH 2021

I. PIEZOMETER DETAILS:

Location: North Side of Lease
RL - (+)51.00m
Latitude - N 16 51 48.0
Depth of well - 45.0 m
Longitude - E80 04 34.7

Location: South West Side of Lease
RL - (+)51.00m
Latitude - N 16 51 17.7
Depth of well - 45.0 m
Longitude - E80 04 01.6

Location: West Side of Lease
RL - (+)51.00m
Latitude - N 16 51 30.2
Depth of well - 45.0 m
Longitude -E80 03 47.7

II. WATER LEVEL DATA

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	24.50
2	30.04.2020	25.68
3	16.05.2020	26.75
4	31.05.2020	27.90
5	16.06.2020	27.45
6	30.06.2020	26.22
7	16.07.2020	21.65
8	31.07.2020	18.95
9	16.08.2020	11.57
10	31.08.2020	7.63
11	16.09.2020	6.95
12	30.09.2020	6.65
13	16.10.2020	5.26
14	31.10.2020	6.89
15	16.11.2020	8.54
16	30.11.2020	9.15
17	16.12.2020	12.67
18	31.12.2020	14.55
19	16.01.2021	16.20
20	31.01.2021	17.59
21	16.02.2021	19.15
22	28.02.2021	20.64
23	16.03.2021	21.25
24	31.03.2021	22.06

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	15.10
2	30.04.2020	16.50
3	16.05.2020	18.50
4	31.05.2020	16.20
5	16.06.2020	14.25
6	30.06.2020	12.38
7	16.07.2020	11.35
8	31.07.2020	9.35
9	16.08.2020	7.50
10	31.08.2020	0.51
11	16.09.2020	2.50
12	30.09.2020	2.15
13	16.10.2020	0.65
14	31.10.2020	1.26
15	16.11.2020	2.64
16	30.11.2020	3.95
17	16.12.2020	4.68
18	31.12.2020	5.49
19	16.01.2021	7.04
20	31.01.2021	7.90
21	16.02.2021	8.80
22	28.02.2021	9.25
23	16.03.2021	10.86
24	31.03.2021	11.59

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2020	23.15
2	30.04.2020	24.50
3	16.05.2020	27.50
4	31.05.2020	28.35
5	16.06.2020	24.60
6	30.06.2020	22.77
7	16.07.2020	18.50
8	31.07.2020	11.68
9	16.08.2020	7.50
10	31.08.2020	5.31
11	16.09.2020	4.65
12	30.09.2020	3.25
13	16.10.2020	2.51
14	31.10.2020	3.64
15	16.11.2020	4.86
16	30.11.2020	7.34
17	16.12.2020	11.25
18	31.12.2020	13.02
19	16.01.2021	14.34
20	31.01.2021	15.15
21	16.02.2021	15.80
22	28.02.2021	17.45
23	16.03.2021	18.54
24	31.03.2021	20.58

S. No	Parameter	Unit	Tharmavaranpatti, Thanda Bore Well Water	Chilakkal Open Well Water	K. Agaram Bore Well Water	Pockampalli Bore Well Water	Jayanthipuram Village Bore Well Water	Revurda Village Bore Well Water	Voldadi Village Bore Well Water	Budavada Bore Well Water	Jogayyapatti Bore Well Water	IS 18500-2011
1	pH		7.46	7.39	7.47	7.43	7.45	7.49	7.53	7.49	7.46	7.1
2	Colour	°	27.6	28.3	28.6	27.8	27.8	25.2	27.1	26.9	27.1	20
3	Temperature	°C	1.2	1.1	1.1	1.1	1.4	1.3	1.5	1.2	1.1	15
4	Turbidity	NTU	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5
5	Residual Chlorine	mg/l	4.1	4.2	4.5	4.3	3.6	3.4	3.9	3.8	3.7	0.5
6	Electrical Conductivity	µmhos/cm	798	789	812	796	842	851	846	808	845	700
7	Total Dissolved Solids	mg/l	229	231	252	249	256	274	286	312	292	500
8	Total Hardness (as CaCO ₃)	mg/l	128	135	141	136	137	129	134	145	142	200
9	Calcium Hardness	mg/l	102	109	131	121	113	117	109	134	123	100
10	Magnesium Hardness	mg/l	30.4	48.4	46.9	47.1	63.4	61.2	62.1	65.1	62.9	100
11	Chloride (as Cl)	mg/l	30.4	29.3	28.6	31.2	29.7	23.6	26.3	24.9	31.2	200
12	Nitrate (as NO ₃)	mg/l	41.6	40.7	44.6	42.3	42.4	41.9	45.3	44.9	47.9	50
13	Sulfate (as SO ₄)	mg/l	1	1	1.3	1.2	4	4.2	4.6	4.4	7.1	400
14	Total Alkalinity (as CaCO ₃)	mg/l	129	134	142	139	136	143	140	138	139	200
15	Chloride (Cl)	mg/l	37.1	35.9	39.6	38.3	41.6	40.4	41.6	42.2	42.6	250
16	Sulfate (SO ₄)	mg/l	118	109	124	121	118	131	123	107	108	100
17	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
18	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
19	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
20	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
21	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
22	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
23	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
24	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
25	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
26	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
27	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
28	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
29	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
30	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
31	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
32	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
33	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
34	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
35	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
36	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
37	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
38	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
39	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
40	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
41	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
42	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
43	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300
44	Hardness (as CaCO ₃)	mg/l	154	16.3	18.2	17.6	23.9	22.7	24.2	23.1	30.6	300

THE RAMCO CEMENTS LIMITED
SURFACE WATER QUALITY DATA - JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
PERIOD - APRIL 2020 TO MARCH 2021

S. No	Parameter	Unit	Upstream				Downstream				Limits
			Apr-20 to Jun-20	Jul-20 to Sep-20	October 2020 to Dec-2020	Jan-2021 to March-2021	Apr-20 to Jun-20	Jul-20 to Sep-20	October-2020 to Dec-2020	Jan-2021 to March-2021	
1	p ^H	-	7.29	7.37	7.45	7.39	7.41	7.39	7.43	7.42	6.5 - 8.5
2	Colour	Hazen	<2	<2.0	<2	<2.0	<2	<2.0	<2	<2.0	5-15
3	Temperature	°C	26.9	27.4	29.9	28.6	27.9	28.3	30.1	29.7	NS
4	Turbidity	NTU	2.0	2	2.5	2.3	2.0	2.4	2.8	2.6	1-5
5	Residual Chloride	mg/L	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1	<0.1	0.2-1
6	Dissolved Oxygen	mg/L	3.1	3.4	3.8	3.7	3.7	3.6	3.9	3.8	NS
7	Total Suspended Solids	mg/L	43	43.6	47	45.1	39	37.9	39	38.6	NS
8	Electrical Conductivity	µmhos/cm	729	714	734	721	792	758	774	763	NS
9	Total Dissolved Solids	mg/L	385	376	392	384	531	529	553	542	500-2000
10	Total Hardness (as CaCO ₃)	mg/L	172	185	195	192	265	274	292	281	200-600
11	Calcium Hardness	mg/L	91.6	90.3	92.7	91.3	137	178	185	184	NS
12	Magnesium Hardness	mg/L	82.7	85.3	88.6	87.1	118	109	113	111	NS
13	Calcium (as Ca)	mg/L	34.3	35.2	37.1	36.3	56.3	53.6	56.7	55.1	250-1000
14	Magnesium (as Mg)	mg/L	18.3	17.9	19.3	18.6	22.9	24.7	26.9	26.3	30-No Relaxation
15	Sodium (as Na)	mg/L	32.9	31.9	33.2	34.1	51.7	50.6	55.2	54.1	NS
16	Potassium (as K)	mg/L	1.02	1.04	1.08	1.09	1.07	1.06	1.12	1.11	NS
17	Chloride (as Cl)	mg/L	93.6	91.9	95.1	94.5	128	132	142	131	250-1000
18	Sulphate (as SO ₄)	mg/L	27.1	26.3	29.1	28.6	40.2	42.3	48.6	47.3	200-400
19	Total Alkalinity (as CaCO ₃)	mg/L	82.3	80.4	83.6	82.9	118	111	134	126	200-600
20	BOD (for 3 days at 27 °C)	mg/L	<1	<1.0	<1	<1.0	<1	<1.0	<1	<1.0	NS
21	Chemical Oxygen Demand	mg/L	26.4	25.9	29.8	28.6	27.6	28.3	32.3	29.6	NS
22	Oil & Grease	mg/L	<0.01	<0.01	<0.1	<0.1	<0.01	<0.01	<0.1	<0.1	NS
23	Iron (as Fe)	mg/L	0.17	0.14	0.21	0.19	0.17	0.14	0.21	0.18	0.3 No Relaxation
24	Fluoride (as F)	mg/L	0.26	0.21	0.34	0.31	0.30	0.2	0.14	0.1	1.0-1.5
25	Nitrate (as NO ₃)	mg/L	0.9	0.7	0.81	0.79	1.0	1.4	1.6	1.3	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	Nil	<0.01	<0.01	<0.01	Nil	<0.01	<0.01	<0.01	0.05 No Relaxation
28	Pesticides (as Malathion)	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	Nil	<0.01	<0.01	<0.01	Nil	<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	%	34.2	35.3	38.6	37.9	37.2	38.6	42.1	40.2	NS
42	Total Coliforms	MPN/100 mL	72.1	70.4	74.1	73.5	83.1	81.4	85.1	83.9	Shall not be present in any 100ml.
43	Faecal Coliforms	MPN/100 mL	25.3	24.9	27.3	26.9	32.7	30.6	35.2	33.5	Shall not be present in any 100ml.
44	E.Coil	MPN/100 mL	16	18	22	20	25	27	31	29	Shall not be present in any 100ml.

THE RAMCO CEMENTS LIMITED, KSR NAGAR
SURFACE WATER QUALITY DATA - JAYANTHIPURAM LIMESTONE MINE (SOUTH BAND)
PERIOD - APRIL 2020 TO MARCH 2021

S. No	Parameter	Unit	Upstream				Downstream				Limits
			Apr-20 to Jun-20	Jul-20 to Sep-20	October-2020 to Dec-2020	Jan-2021 to March-2021	Apr-20 to Jun-20	Jul-20 to Sep-20	October-2020 to Dec-2020	Jan-2021 to March-2021	
1	pH	-	7.39	7.43	7.49	7.56	7.39	7.47	7.51	7.63	6.5 - 8.5
2	Colour	Hazen	<2	<2.0	<2	<2.0	<2	<2.0	<2	<2.0	5-15
3	Temperature	°C	27.9	28.3	29.6	30.6	28.9	27.7	28.3	29.8	NS
4	Turbidity	NTU	2.1	2.3	2.5	2.4	2.6	2.4	2.5	2.6	1-5
5	Residual Chloride	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.2-1
6	Dissolved Oxygen	mg/L	3.4	3.2	3.3	3.2	3.70	3.5	3.70	3.6	NS
7	Total Suspended Solids	mg/L	42	40.2	41	40.6	40.6	38.4	39.4	38.1	NS
8	Electrical Conductivity	µmhos/cm	718	702	723	714	814	801	784	774	NS
9	Total Dissolved Solids	mg/L	365	347	351	349	535	529	531	539	500-2000
10	Total Hardness (as CaCO ₃)	mg/L	165	153	159	163	241	221	214	217	200-600
11	Calcium Hardness	mg/L	92.9	90.6	93.6	92.7	136	118	119	121	NS
12	Magnesium Hardness	mg/L	81.6	80.7	82.7	84.6	119	107	108	109	NS
13	Calcium (as Ca)	mg/L	36.3	33.6	35.1	36.8	54.6	52.9	53.6	52.7	250-1000
14	Magnesium (as Mg)	mg/L	17.1	15.3	17.3	18.3	23.9	22.7	23.1	22.9	30-No Relaxation
15	Sodium (as Na)	mg/L	34.5	35.3	36.3	37.1	51.6	50.9	52.7	53.6	NS
16	Potassium (as K)	mg/L	1.03	1.07	1.09	1.08	1.04	1.02	1.04	1.05	NS
17	Chloride (as Cl)	mg/L	97.1	95.4	96.3	95.4	138	129	121	119	250-1000
18	Sulphate (as SO ₄)	mg/L	24.6	23.9	24.9	25.6	42.3	40.6	41.6	43.9	200-400
19	Total Alkalinity (as CaCO ₃)	mg/L	78.9	77.6	78.6	79.3	118	109	111	121	200-600
20	BOD (for 3 days at 27 °C)	mg/L	<4	<4.0	<1	<1	<4	<4.0	<1	<1	NS
21	Chemical Oxygen Demand	mg/L	24.1	23.6	25.1	25.9	26.5	25.8	27.1	28.3	NS
22	Oil & Grease	mg/L	<1.0	<1.0	<0.1	<0.1	<1.0	<1.0	<0.1	<0.1	NS
23	Iron (as Fe)	mg/L	0.12	0.14	0.15	0.17	0.12	0.11	0.13	0.14	0.3 No Relaxation
24	Fluoride (as F)	mg/L	0.24	0.22	0.23	0.25	0.21	0.2	0.22	0.22	1.0-1.5
25	Nitrate (as NO ₃)	mg/L	0.75	0.71	0.74	0.76	1.02	1.03	1.05	1.05	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	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<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	%	31.6	32.9	35.1	36.9	34.1	33.7	36.1	37.3	NS
42	Total Coliforms	MPN/100 mL	72	70	68.4	69.3	87	85	89	91.2	Shall not be present in any 100ml.
43	Faecal Coliforms	MPN/100 mL	24	22	25	27	32	31	34	36	Shall not be present in any 100ml.
44	E.Coil	MPN/100 mL	12	11	13	15	18	16	18	19	Shall not be present in any 100ml.

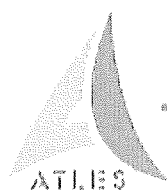
THE RAMCO CEMENTS LIMITED
MINE DISCHARGE WATER QUALITY DATA
PERIOD - APRIL 2020 TO MARCH 2021

S. No	Parameter	Unit	JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)												Limits	
			May'2020	Jun'2020	Jul'2020	Aug'2020	Sep'2020	Oct'2020	Nov'2020	Dec'2020	Jan'2021	Feb'2021	Mar'2021			
I.	JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)															
1	p ^H		7.48	7.73	7.69	7.56	7.58	7.63	7.59	7.63	7.67	7.79	7.83	7.83	5.5 - 9.0	
2	Total Suspended Solids	mg/L	37.90	36.10	35.30	37.80	39.10	42.30	40.60	42.70	43.10	46.30	48.90	48.90	10	
3	Total Dissolved Solids	mg/L	939.00	921.00	902.00	929.00	901.00	927.00	902.00	921.00	942.00	974.00	992.00	992.00	100	
4	Chlorides (as Cl)	mg/L	271.00	271.00	254.00	261.00	245.00	251.00	243.00	252.00	271.00	292.00	312.00	312.00	2100	
5	Sulphates (as SO ₄)	mg/L	80.40	86.10	82.30	80.40	78.30	80.60	78.40	79.30	81.20	84.60	86.30	86.30	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	14.10	15.40	14.70	15.30	16.70	17.30	16.90	15.40	15.90	17.10	18.20	18.20	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	0.21	0.20	0.24	0.21	0.25	0.27	0.29	0.31	0.35	0.37	0.37	1000	
10	Fluoride (as F)	mg/L	0.63	0.72	0.58	0.62	0.58	0.59	0.61	0.58	0.54	0.59	0.62	0.62	30	
II.	JAYANTHIPURAM LIMESTONE MINE (SOUTH BAND)															
1	p ^H		7.63	7.82	7.75	7.61	7.53	7.59	7.52	7.59	7.62	7.69	7.71	7.71	5.5 - 9.0	
2	Total Suspended Solids	mg/L	61.20	61.60	58.90	52.30	50.60	52.70	50.60	52.30	53.70	56.30	58.60	58.60	10	
3	Total Dissolved Solids	mg/L	768.00	753.00	742.00	786.00	749.00	753.00	724.00	713.00	725.00	721.00	735.00	735.00	100	
4	Chlorides (as Cl)	mg/L	182.00	187.00	178.00	186.00	174.00	182.00	174.00	169.00	174.00	192.00	201.00	201.00	2100	
5	Sulphates (as SO ₄)	mg/L	82.90	83.20	80.90	72.10	70.60	72.30	69.30	67.10	69.60	72.30	73.50	73.50	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	14.80	14.20	13.50	14.10	13.90	14.20	13.50	12.90	13.50	13.40	14.00	14.00	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	0.21	0.21	0.19	0.15	0.17	0.19	0.17	0.15	0.17	0.22	0.24	0.24	1000	
10	Fluoride (as F)	mg/L	0.54	0.58	0.52	0.45	0.41	0.43	0.41	0.39	0.42	0.44	0.45	0.45	30	
III.	RAVIRALA LIMESTONE MINE															
1	p ^H		7.48	7.39	7.43	7.47	7.51	7.57	7.48	7.53	7.59	7.67	7.74	7.74	5.5 - 9.0	
2	Total Suspended Solids	mg/L	48.90	46.10	45.90	47.10	45.90	47.30	49.60	47.10	48.30	51.20	53.50	53.50	10	
3	Total Dissolved Solids	mg/L	712.00	698.00	654.00	712.00	698.00	712.00	723.00	714.00	729.00	763.00	758.00	758.00	100	
4	Chlorides (as Cl)	mg/L	179.00	174.00	168.00	174.00	159.00	164.00	182.00	174.00	186.00	184.00	192.00	192.00	2100	
5	Sulphates (as SO ₄)	mg/L	85.30	82.10	80.60	83.90	81.60	83.90	85.10	83.90	85.10	83.40	85.10	85.10	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	14.10	13.60	12.90	13.60	12.10	13.20	15.10	14.20	15.60	16.90	17.30	17.30	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	0.32	0.30	0.41	0.40	0.47	0.49	0.42	0.49	0.45	0.48	0.48	1000	
10	Fluoride (as F)	mg/L	0.65	0.59	0.57	0.64	0.52	0.55	0.57	0.52	0.57	0.57	0.62	0.62	30	

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

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

S. No.	LOCATION	TO ACCOMMODATE	PIT NUMBERING	No. OF PITS	ROOF TOP AREA (m ²)	PAVED AREA (m ²)	UNPAVED AREA (m ²)
I.	COLONY AREA						
1	C+ Qtrs buildings(C+1 -C+8)	Building roof top & Open yard	10, 11, 12, 13	4	1200		
2	New school building	Building roof top & Open yard	1, 2, 3, 4	4	3075		
3	Occupational Health Centre	Building roof water	6, 7	2	200		
4	New Administration building	Building roof top & Open yard	9	1	540		
5	Reading room	Building roof top water	8	1	120		
6	D40 area	D40 quarter open yard	23	1			500
7	B Type quarter area (near B2 1 No. and B4 backside 1 No.)	School ground	21, 22	2			1000
8	C30	Open yard	15	1			200
9	Near Volley Ball ground	East of play ground	16	1		200	
10	Near culvert @ Cricket ground	Open land near C ground	5	1			3000
11	Bachelor hostel area	Rain water collection pit through natural ground	14, 20	2		550	
12	CMD guest house area	Building roof top & Open yard	17, 18, 19	3	1000		
13	D - 1 block Apartment	D41 - D44 block roof top and open land	39	1	200		
14	D - 2 block Apartment	D45 - D48 block roof top and open land	40	1	200		
15	D - 3 block Apartment	D49 - D52 block roof top and open land	41	1	200		
16	D - 4 block Apartment	D53 - D56 block roof top and open land	42	1	200		
17	D - 5 block Apartment	D57- D60 block roof top and open land	43	1	200		
18	D - 6 block Apartment	D61 - D64 block roof top and open land	44	1	200		
19	D - 7 block Apartment	D64 - D68 block roof top and open land	45	1	200		
20	E - 1 Block Apartment	E41 - E52 block roof top and open land	27, 28	2	295		
21	E - 2 Block Apartment	E53 - E64 block roof top and open land	25, 26	2	295		
22	F - 1 Block Apartment	F75 - F86 block roof top and open land	29, 30	2	293		
23	F - 2 Block Apartment	F87 - F98 block roof top and open land	31, 32	2	293		
24	F - 3 Block Apartment	F99 - F110 block roof top and open land	33, 34	2	293		
25	F - 4 Block Apartment	F111 - F122 block roof top and open land	35, 36	2	293		
26	F - 5 Block Apartment	F123 - F134 block roof top and open land	37, 38	2	293		
27	STP Area	Rain water collection pit through natural ground	46	1		400	1000
28	C-Type quarters area	Rain water collection pit through natural ground	47	1			500
29	C-18 Quarter backside	Rain water collection pit through natural ground	48	1			1000
30	E3& E4 Block Apartments	Roof tp and open land	49	1	305		
	COLONY TOTAL			48			
II.	PLANT AREA						
31	CCR	Roof top and open land	1	1	1100		
32	Mines office	Roof top and open land	2, 3	2	350		
33	Thermal Power Plant area	Cooling tower building surrounding surface water	4	1			
	PLANT TOTAL			4			
	Total			52	11345	1150	7200



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ISO : 17025:2017, ISO 9001 : 2015 - CERTIFIED ORGANISATION
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Our Vision:
Never Manipulate- Calculate
Never Access - Observe
Never Depict - Design



PAGE 1 OF 1

TEST REPORT

Test Report Reference: Job No. ATLES/WA/2020/2009051443

ULR No: TC53322000000667F

Date : 06/09/2020

Issued To, The Ramco Cement Ltd,
Jayanthipuram, Jaggaiahpet, Krishna Dist, Andhra Pradesh - 521175.

Your Ref.:- Letter No : Letter No./Nil, Your Requisition Dated On: 05-09-2020

Name of Work :- Testing of Water Sample for the Drinking Purpose-Reg

Dear Sir,

Vide subject and reference cited above, the Test Results Report is as follows:-

PARTICULAR OF SAMPLE (S)

Nature of Sample :- Drinking Water
Sample No.(S) Details :- Sample-3
Quantity Approx :- 1 Sample
Packing/Container :- Plastic Bottle
Date of Sample receipt in the Lab :- 05/09/2020
Date of Testing :- 05/09/2020 To 06/09/2020
Condition of Sample :- Acceptable

TEST RESULT OF DRINKING WATER

Sr.No	Name of Test	Test Method	Test Result	Specification as per IS 10500:2012	Unit
1	pH	IS 3025 (Part 11)	7.78	6.5-8.5	
2	Total hardness as CaCO ₃	IS 3025 - Part 21 : 2009 (RA)	80	200, Max	mg/l
3	Turbidity	IS 3025 (Part 10)	1.0	1, Max	NTU
4	Colour	IS 3025 (Part 4)	2.0	5, Max	Hazen
5	Odour	IS 3025 (Part 5)	Agreeable	Agreeable	---
6	Total Dissolved Solids	IS 3025 (Part 16)	465	500, Max	mg/l
7	Electrical conductivity (EC)	IS 3025 (Part 14)	715	Not Specified	µS/cm
8	Calcium as Ca	IS 3025 : Part 40 : 1991	17.6	75, Max	mg/l
9	Chlorides as Cl	IS 3025 : Part 32 : 1988	35.7	250, Max	mg/l
10	Fluorides as F ⁻	IS 3025 (Part 60)	0.1	1.0, Max	mg/l
11	Iron as Fe	IS 3025 (Part 53)	0.1	0.3, Max	mg/l
12	Magnesium as Mg	IS 3025 (Part 46)	8.8	30, Max	mg/l
13	Nitrates as NO ₃	IS 3025 (Part 34)	1.0	45, Max	mg/l
14	Sulphates as SO ₄	IS 3025 (Part 24)	49.5	200, Max	mg/l
15	Total alkalinity as CaCO ₃	IS 3025 (Part 23)	52	200, Max	mg/l
16	Free residual Chlorine	IS 3025 (part 26)	0.2	0.2, Min	mg/l

Remark: The above source of water issuitable for direct drinking purpose

Prepared By

Verify By

Authorised Signatory

This report is subjected to the term and conditions mentioned overleaf.

Corporate Office : Annoor Test Labs and Engg. Services Pvt. Ltd
2/90, Venus Bazar, Opp. Union Bank, Sri Nagar Colony, Gannavaram-521101, Krishna Dt., A.P.
Ph : 08676-256700, 9908056677, 7093910033, Email : services@annoorlabs.com
CIN : U74140AP2014PTC095031 GSTIN : 37AAMCA8360L1Z3



IAS-ANZ

C





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Never Access - Observe
Never Depict - Design



R.O water

PAGE : 1 OF 1

TEST REPORT

Test Report Reference: Job No. ATLES/WA/2020/2009051443/b

Date : 06/09/2020

Issued To, The Ramco Cement Ltd,
Jayanthipuram, Jaggaiahpet, Krishna Dist, Andhra Pradesh.-521175.

Your Ref.:- Letter No : Nil, Your Requisition Dated On: 05-09-2020

Name of Work :- Testing of Water Sample for the Drinking Purpose-Reg

Dear Sir,

Vide subject and reference cited above, the Test Results Report is as follows: -

PARTICULAR OF SAMPLE (S)

Nature of Sample :- Drinking Water
Sample No.(S) Details :- Sample-3
Quantity Approx :- 1 Sample
Packing/Container :- Plastic Bottle
Date of Sample receipt in the Lab :- 05/09/2020
Date of Testing :- 05/09/2020 To 06/09/2020
Condition of Sample :- Acceptable

TEST RESULT OF DRINKING WATER

Sr.No	Name of Test	Test Method	Test Result	Specification as per IS 10500:2012	Unit
1	Ecoli	IS 5887:Part 1	0/100	0/100	MPN
2	Coliform		0/100	0/100	MPN
3	H2S Vial Test	Visual Test	Negative	negative	--

Prepared By

Verify By

Authorised Signatory

This report is subjected to the term and conditions mentioned overleaf.



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Corporate Office : Annoor Test Labs and Engg. Services Pvt. Ltd
2/90, Venus Bazar, Opp.UNION Bank, Sri Nagar Colony, Gannavaram, Krishna Dt., A.P-521101.
Ph : 08676-256700, 9908056677, 7093910033, E-mail : services@annoorlabs.com, info@annoorlabs.com
CIN : U74140AP2014PTC095031 GSTIN : 37AAMCA8360L1Z3

**THE RAMCO CEMENTS LIMITED,
NOISE LEVEL MONITORING - JAYANTHIPURAM LIMESTONE MINES
PERIOD - APRIL 2020 TO MARCH 2021**

Sl. No	Date of monitoring	Name Of the Mine	Machine / Location	Day time (6AM to 10PM)	Permissible Limit dB(A)	Night time (10PM to 6AM)	Permissible Limit dB(A)
1	13.08.2020	Ravirala Limestone Mine (Reserve Forest)	Drilling area	73.6	< 75	67.4	< 70
2			Loading area	72.9	< 75	66	< 70
3			Haul road	72	< 75	62	< 70
4			Unloading area	73.6	< 75	64.1	< 70
5			Mines office	61.3	< 75	43	< 70
6			Dumping area	62	< 75	42.5	< 70
7			Pump house	68.8	< 75	49.7	< 70
8			Weigh bridge	67.7	< 75	60.5	< 70
9			Ravirala View point	69.5	< 75	61.2	< 70
10			Near ML-4 Tower Light	62.6	< 75	58	< 70
1	27.08.2020	Jayanthipuram Limestone Mine (North Band)	Drilling area	72.8	< 75	67	< 70
2			Loading area	73.2	< 75	68.1	< 70
3			Haul road	72	< 75	63.5	< 70
4			Unloading area	72.1	< 75	66.2	< 70
5			Mines office	54.3	< 75	41.2	< 70
6			Crusher Hopper	72.2	< 75	62	< 70
7			Sub Station	65.4	< 75	58.6	< 70
8			Pump House	71.5	< 75	64.9	< 70
9			Weigh Bridge	68.2	< 75	60.6	< 70
10			PMC Camp	59.7	< 75	51.3	< 70
1	26.08.2020	Jayanthipuram Limestone Mine (South Band)	Drilling area	72.9	< 75	68.7	< 70
2			Loading area	72.1	< 75	66	< 70
3			Haul road	69.8	< 75	62.6	< 70
4			Unloading area	72.5	< 75	63.7	< 70
5			Mines office	70.2	< 75	50	< 70
6			Dump Yard	61.3	< 75	58.6	< 70
7			RSMS Camp	68.7	< 75	53.8	< 70
8			R&B road	70.6	< 75	53.5	< 70
9			Pump House	67.8	< 75	55.4	< 70
10			SB Bund Area	60	< 75	47.8	< 70
1	14.09.2020	Ramco Budawada Limestone Mine (Reserve Forest)	Drilling area	73.8	< 75	58.6	< 70
2			Loading area	72.5	< 75	58.1	< 70
3			Haul road - 1	71	< 75	49.8	< 70
4			Haul road - 2	69.8	< 75	50	< 70
5			Rest Shelter	65.4	< 75	41	< 70

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

BLASTING REPORT

NB1 - BSTLS

Date : 02/01/2021 Time : 12:55 pm. Blast No. : JPM/172/D/20-21
 Distance of Instrument from Blast site : 100 mtrs.
 Distance of village from Blast site : 600 mtrs.
 Blast Location : Pit-I ML17 IV Bench East
 No. of Holes : 21
 Bench Height (Mtrs) : 8.5
 Total Meterage (Mtrs) : 8.2
 Avg. Depth of Holes (Mtrs) : 173.40 (one hundred and seventy
 Burden (Mtrs) : 3 three point four zero only
 Spacing (Mtrs) : 4.5
 ROM Blasted (Expected Tons) : 5800 MT
 Production (Ton / Mtr) : 33.44

Explosive & Accessories Used

Non Cap Sensitive 83mm (Kg) : -

Solar Cap Sensitive 83mm (Kg) : 125

ANFO (Kg) : 1150

IED (Nos) : 04

EDD (Nos) : -

Kel cord cord (Mtrs) : 100

Nonels (Nos) : 21

Boost 25 mm (Kg) : -

Emul Cast Booster (Kg) : 6.60

Powder Factor (Tons / Kg) : 5.0

Total Explosive : 1281.60 kgs

Max charge/delay : 165 kgs Charge / hole : 55 kgs.

Remarks : Blasting site is not in danger zone.

P.P.V : 0.762 mm/sec

ABOP : 112.3 dB(L) at 1.545 sec

Fly Rock distance : 7 mtrs.

Direction of Instrument from Blast site : South Side.

Blasting Foreman

Asst. Manager (D&B)

Mines Manager

2/01/2021

C. Anay
21

Time Long at 12:55:40 January 2, 2021
 Trigger Source Geo: 0.510 mm/s, Mic: 131 dB(L)
 Range Geo: 254 mm/s
 Record Time 2.0 sec at 1024 sps
 Job Number: 252
 Notes
 Location: JPM LST Mine, Pit 1, ML18,4th Bench East
 Client: M/s. The Ramco Cements Limited
 User Name: S.Ravi Kumar
 General:

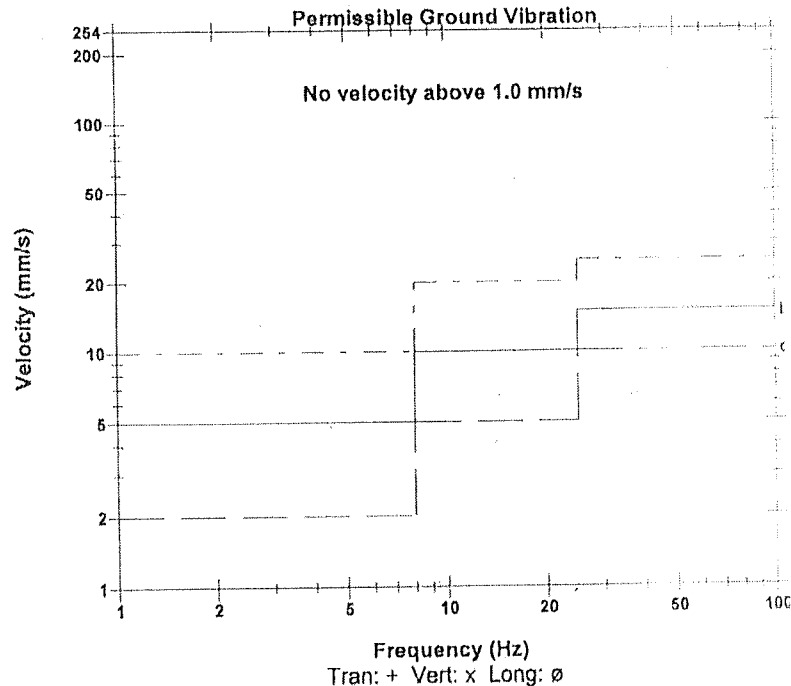
Serial Number BE15430 V 10.72-1.1 Minimate Blaster
 Battery Level 6.0 Volts
 Unit Calibration February 24, 2020 by UES New Delhi
 File Name _TEMP.EVT

Microphone Linear Weighting
 PSPL 112.3 dB(L) at 1.545 sec
 ZC Freq 4.0 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 477 mv)

	Tran	Vert	Long	
PPV	0.762	0.381	0.762	mm/s
ZC Freq	43	>100	43	Hz
Time (Rel. to Trig)	0.246	-0.025	0.208	sec
Peak Acceleration	0.0265	0.0265	0.0398	g
Peak Displacement	0.00298	0.00186	0.00341	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.4	7.4	Hz
Overswing Ratio	3.7	3.6	3.5	

Peak Vector Sum 0.861 mm/s at 0.208 sec

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures

MicL

Long

Vert

Tran

0.0

1.0

2.0

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

Sensor Check

.....Tayanthipuram.....LIMESTONE MINE
THE RAMCO CEMENTS LIMITED

BLASTING REPORT

SB 1 - BSTLS

Date: 07/01/2021 Time: 12:40pm Blast No.: JPM/178/D/20-21
Distance of Instrument from Blast Site: 100 mtrs.
Distance of Village from Blast Site: 650 mtrs.
Blast Location of Village: Pit - II, II Bench South/West

No. of Holes : 32
Bench Height (Mtrs) : 9
Total Meterage (Mtrs) : 288.80 (Two hundred and Eighty
Avg. Depth of Holes (Mtrs) : 9.0 Eight point Eight zero
Burden (Mtrs) : 3
Spacing (Mtrs) : 4.5 only)
ROM Blasted (Expected Tons) : 9720 MT
Production (Ton / Mtr) : 33.65

Explosive & Accessories Used

Non Cap Sensitive 83mm (Kg) : -
Sole Cap Sensitive 83mm (Kg) : 250
ANFO (Kg) : 1750

IED (Nos) : 02

EDD (Nos) : -

cord (Mtrs) : -

Nonels (Nos) : 32

Boost 25 mm (Kg) : -

Lead East Booster (Kg) : 9

Powder Factor (Tons / Kg) : 4.82

Total Explosive : 2009 kgs

Max Charge/delay: 193 kgs

Remarks: Blasting Site is not

Nonels :

1. Supremecet 13mt - 19 nos
2. Supremecet 14mt - 13 nos
- 3.
- 4.

Charge/hole: 64 kgs.
in danger zone.

P.P.V: 2.16 mm/sec

ABCP: 128.4 dB(L) at 0.946 sec

Fly Rock distance: 7 mtrs

Direction of Instrument from Blast Site: North Side

Blasting Foreman

Asst. Manager (D&B)

Mines Manager

Time Long at 12:13:04 January 7, 2021
 Trigger Source Geo: 0.510 mm/s, Mic: 131 dB(L)
 Range Geo: 254 mm/s
 Record Time 2.0 sec at 1024 sps
 Job Number: 256
 Notes
 Location: Jayantipuram Lst Mine, Pit-3, 3rd Bench/W
 Client: M/s. The Ramco Cements Limited
 User Name: S.Ravi Kumar
 General:

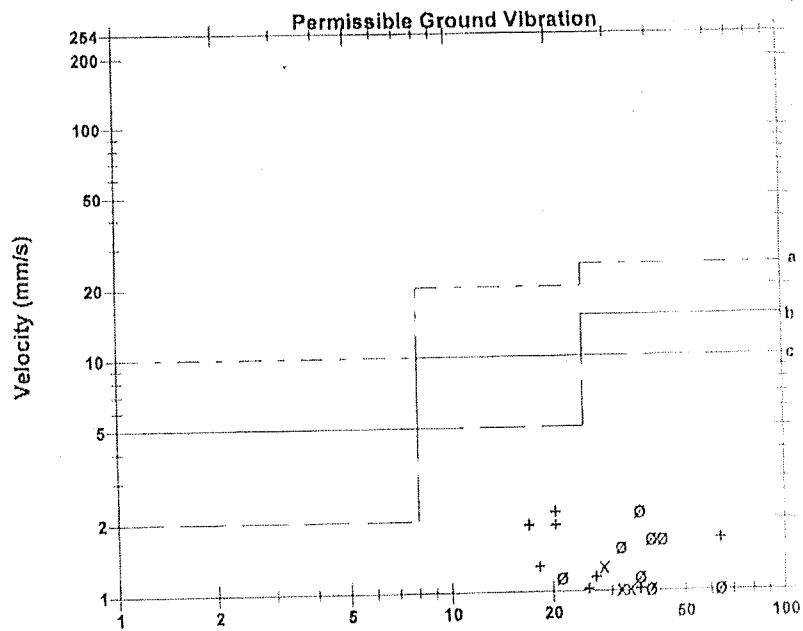
Serial Number BE15430 V 10.72-1.1 Minimate Blaster
 Battery Level 5.9 Volts (Battery Low)
 Unit Calibration February 24, 2020 by UES New Delhi
 File Name _TEMP.EVT

Microphone Linear Weighting
 PSPL 128.4 dB(L) at 0.946 sec
 ZC Freq 9.1 Hz
 Channel Test Passed (Freq = 19.7 Hz Amp = 497 mv)

	Tran	Vert	Long	
PPV	2.16	1.27	2.16	mm/s
ZC Freq	20	28	37	Hz
Time (Rel. to Trig)	0.222	0.235	0.087	sec
Peak Acceleration	0.0663	0.0398	0.0663	g
Peak Displacement	0.0134	0.00589	0.00980	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.6	7.5	7.4	Hz
Overswing Ratio	3.6	3.6	3.5	

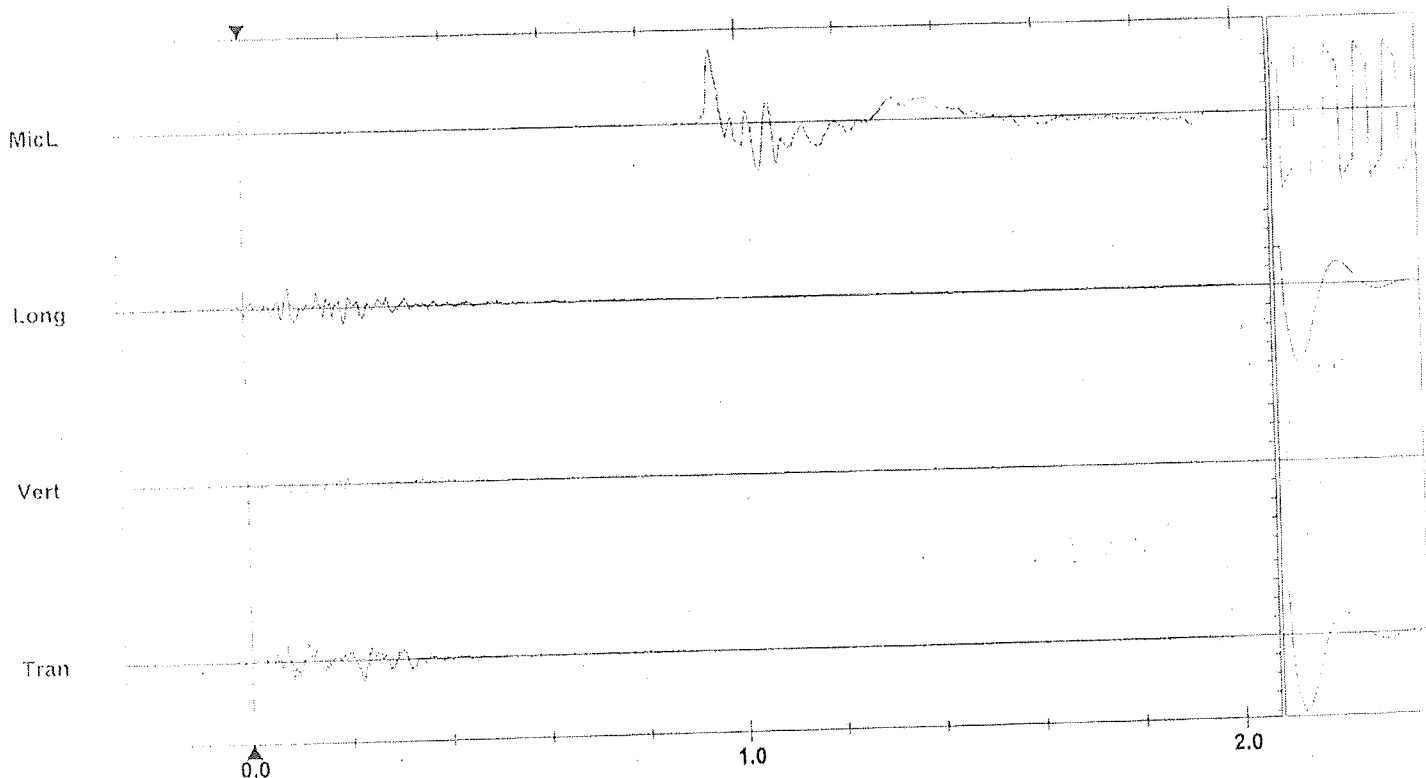
Peak Vector Sum 2.59 mm/s at 0.088 sec

DGMS India (A)



Frequency (Hz)
 Tran: + Vert: x Long: o

- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.00 mm/s/div Mic: 20.0 pa.(L)/div
 Trigger =

Sensor Check

.....Ravirala.....**LIMESTONE MINE**
M/S THE RAMCO CEMENTS LIMITED
MADRAS CEMENTS LTD.,

BLASTING REPORT

RR1 - BSTLS

Date : 17.06.2020

Blast No. :

RR/013/10/20-21

Blast location : Ravirala II Bench (North)
No. of Holes : 33
Bench height (Mtrs) : 9
Total meterage (Mtrs) : 290.70 (Two hundred and ninety point
Avg. depth of holes (Mtrs) : 8.8
Burden (Mtrs) : 3 Seven zero only).
Spacing (Mtrs) : 4.75

ROM blasted (Expected Tons) : 10300 MT

Production (Ton/mtr) : 35.43

Explosive & assessories used

Kelvox Boost 83mm (Kg) : 50

ANFO (kg) : 1750

IED (nos) : 02

EDD (Nos) : -

Premier Cord (Mtrs) : -

Nonels (Nos) : 33

Book 25 mm (Kg) : -

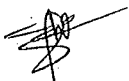
Ennel Powergel boost (Kg) : 9.90

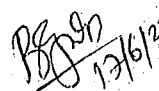
Powder factor (Tons/Kg) : 5.69

Total Explosive : 1809.90 Kg's.

Remarks : Blasting site is not in danger zone.


Blasting Foreman


Asst. Manager (D&B)


Mines Manager.

Date/Time Long at 10:40:29 June 17, 2020
 Trigger Source Geo: 0.510 mm/s, Mic: 131 dB(L)
 Range Geo : 254 mm/s
 Record Time 2.0 sec at 1024 sps
 Job Number: 197

Notes

Location: Ravirala LST Mines, 2nd Bench North
 Client: M/s. The Ramco Cements Limited
 User Name: S.Ravi Kumar
 General:

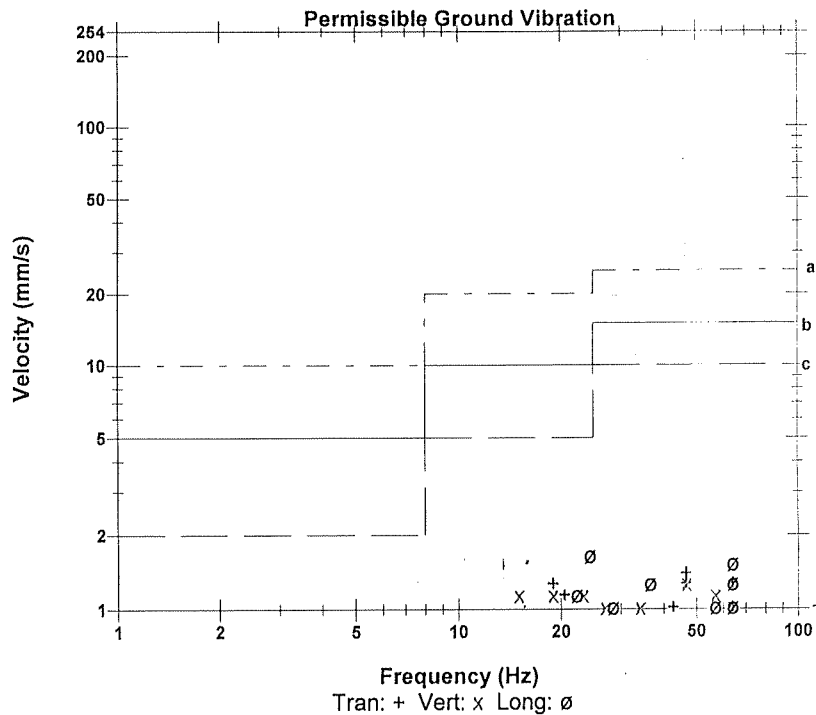
Microphone Linear Weighting
 PSPL 117.4 dB(L) at 0.902 sec
 ZC Freq 16 Hz
 Channel Test Passed (Freq = 20.1 Hz Amp = 456 mv)

	Tran	Vert	Long	
PPV	1.40	1.27	1.65	mm/s
ZC Freq	47	47	24	Hz
Time (Rel. to Trig)	0.168	0.108	0.116	sec
Peak Acceleration	0.0663	0.0398	0.0928	g
Peak Displacement	0.00850	0.0107	0.00806	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.8	7.3	7.4	Hz
Overswing Ratio	3.5	3.6	3.5	

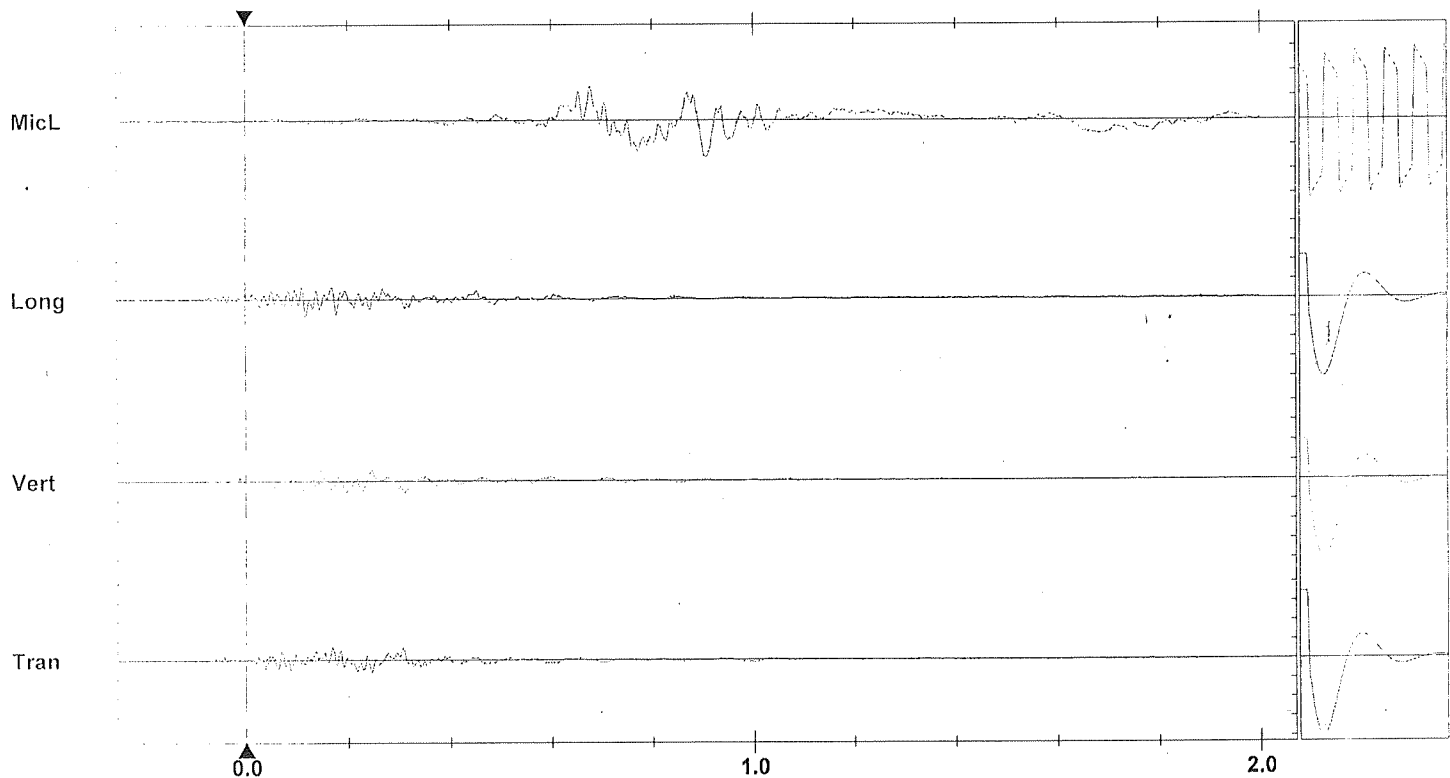
Peak Vector Sum 2.01 mm/s at 0.168 sec

Serial Number BE15430 V 10.72-1.1 Minimate Blaster
 Battery Level 5.9 Volts (Battery Low)
 Unit Calibration February 24, 2020 by UES New Delhi
 File Name _TEMP.EVT

DGMS India (A)



- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures



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

Sensor Check

..... Ramco Budawadei Limestone Mine
M/s THE RAMCO CEMENTS LIMITED
MADRAS CEMENTS LTD.,

BLASTING REPORT

RB1- BSTCS

Date : 29.06.2020 Time : 12:30pm Blast No. :
Distance of Instrument from village: 4 km RB/03/10/20.21
Distance of Instrument from Blast site: 100 mtrs.
Blast location : I Bench East / North (Ramp)
No. of Holes : 30
Bench height (Mtrs) : 4 to 4.5
Total meterage (Mtrs) : 126.70 (One hundred and twenty
Avg. depth of holes (Mtrs) : 4.2
Burden (Mtrs) : 3 Six point Seven zero out
Spacing (Mtrs) : 3

ROM blasted (Expected Tons) : 2830

Production (Ton/mtr) : 22.33

Explosive & accessories used

Kelux 90 Boost 83mm (Kg) : 175 (Cap Sensitive)

ANFO (kg) : 750

IED (nos) : 02

EDD (Nos) : -

Premier Cord (Mtrs) : -

Nonels (Nos) : 30

Book 25 mm (Kg) : -

Powergel boost (Kg) : -

Powder factor (Tons/Kg) : 3.0

Nonels

Exel 8mt - 15 nos

Exel 9mt - 15 nos

Total Explosive: 925 Kg's.

Max charge/delay: 90 Kgs Charge/hole: 30 Kgs

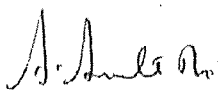
Remarks: Blasting site is not in danger zone.

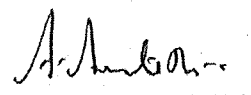
P.P.V: 0.635 mm/sec

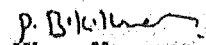
ABOP: 136.2 dB (LL) at 0.002 sec

Ely Rock distance: 7 mtrs

Direction of Instrument from Blast Site:


Blasting Foreman


Asst. Manager (D&B)


Mines Manager

Date/Time: MicL at 12:29:07 June 29, 2020
 Trigger Source: Geo: 0.510 mm/s, Mic: 131 dB(L)
 Range: Geo: 254 mm/s
 Record Time: 2.0 sec at 1024 sps
 Job Number: 199

Serial Number: BE15430 V 10.72-1.1 Minimate Blaster
 Battery Level: 5.8 Volts (Battery Low)
 Unit Calibration: February 24, 2020 by UES New Delhi
 File Name: Q430IUI.OJO

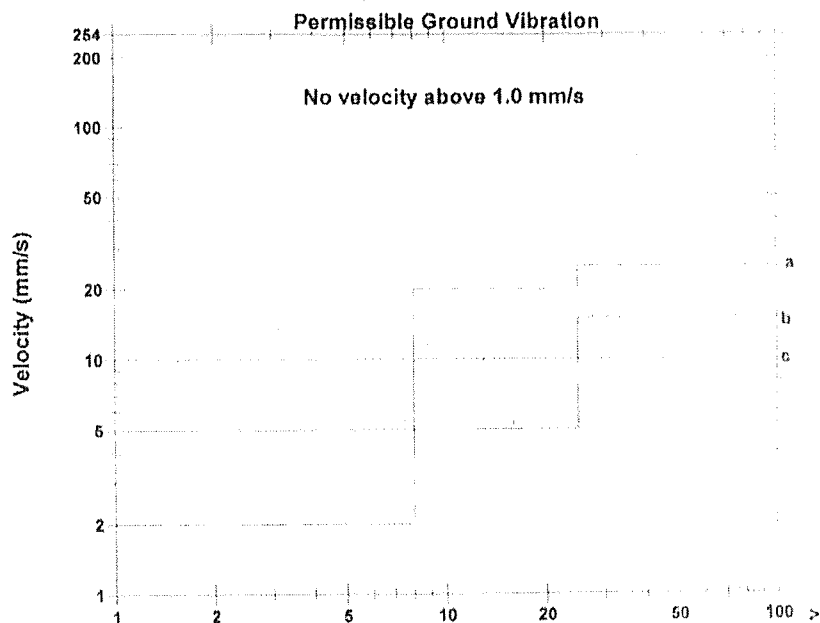
Notes:
 Location: Ramco Budawada 1st Bench South Ramp
 Client: M/s. The Ramco Cements Limited
 User Name: S.Ravi Kumar
 General:

Microphone: Linear Weighting
 PSPL: 136.2 dB(L) at 0.002 sec
 ZC Freq: N/A
 Channel Test: Passed (Freq = 20.1 Hz Amp = 477 mv)

	Tran	Vert	Long	
PPV	0.635	0.508	0.381	mm/s
ZC Freq	>100	>100	>100	Hz
Time (Rel. to Trig)	0.022	0.021	0.054	sec
Peak Acceleration	0.0398	0.0398	0.0265	g
Peak Displacement	0.00074	0.00062	0.00050	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.5	7.4	7.4	Hz
Overswing Ratio	3.6	3.5	3.6	

Peak Vector Sum: 0.783 mm/s at 0.022 sec
 N/A: Not Applicable

DGMS India (A)



Frequency (Hz)
 Tran: + Vert: x Long: ø

- a) Industrial Buildings
- b) Domestic houses/structures
- c) Historic objects, sensitive structures

MicL

Long

Vert

Tran

0.0

1.0

2.0

Time Scale: 0.20 sec/div Amplitude Scale: Geo: 2.00 mm/s/div Mic: 50.0 pa.(L)/div
 Trigger = ▶ ◀

Sensor Check



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

THE RAMCO CEMENTS LIMITED

RCL/PCB/27/2021-2022

30th June 2021

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 2020-2021 - Reg.

Ref: CFO order for mines No. APPCB/HO/UH-IV/CFO:VJA/Auto Renewal-8/2016,
dated 08.12.2016.

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 2020-2021:

- Jayanthipuram Limestone Mine (North Band)
- Jayanthipuram Limestone Mine (South Band)
- Ravirala Limestone Mine (RF)
- Ramco Budawada Limestone Mine

This is for your kind information please.

Thanking you,

Yours faithfully,
for The Ramco Cements Limited,


(N RAVI SHANKAR)
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].

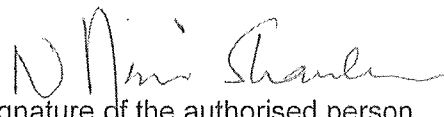
Quantity in Metric Tonnes (MT) and numbers

1	Name and address of the producer or manufacturer or refurbisher or dismantler or recycler	The Ramco Cements Limited, Kumarasamy Raja Nagar - 521 457, Jaggayyapet (M), Krishna Dist Capitive Limestone Mines: a. Jayanthipuram Limestone Mine (North Band) b. Jayanthipuram Limestone Mine (South Band) c. Ravirala Limestone Mine (RF) d. Ramco Budawada Limestone Mine									
2	Name of the authorised person and complete address with telephone and fax numbers and e-mail address	N Ravi Shankar, Sr. President (Mfg.), The Ramco Cements Limited, Kumarasamy Raja Nagar - 521 457, Jaggayyapet (M), Krishna Dist. Telephone: 08654 – 224400 to 04, Fax: 08654 – 222352, e-mail: mcljpm@ramcocements.co.in									
3	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										
	Details of the above										
3(A)*	BULK CONSUMERS: Quantity of e-waste	Cumulative quantity of generation in the financial year 2020-2021 for cement plant, thermal power plant & limestone mines: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Type</th><th style="width: 30%;">Quantity</th><th style="width: 30%;">No.</th></tr> </thead> <tbody> <tr> <td>E-waste</td><td>Nil</td><td></td></tr> <tr> <td>Printer Cartridges</td><td>0.10538 Tonne</td><td></td></tr> </tbody> </table>	Type	Quantity	No.	E-waste	Nil		Printer Cartridges	0.10538 Tonne	
Type	Quantity	No.									
E-waste	Nil										
Printer Cartridges	0.10538 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 2020-2021, e-waste is not disposed to any external agency, as the quantity is very low.						
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 31.03.2021 with respect to cement plant, thermal power plant & limestone mines: <table><tr><td>Type</td><td>Quantity</td></tr><tr><td>E-waste</td><td>1.129 Tonne</td></tr><tr><td>Printer Cartridges</td><td>0.15996 Tonne</td></tr></table>	Type	Quantity	E-waste	1.129 Tonne	Printer Cartridges	0.15996 Tonne
Type	Quantity							
E-waste	1.129 Tonne							
Printer Cartridges	0.15996 Tonne							

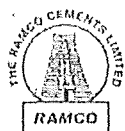
✓ Enclose the list of recyclers to whom e-waste have been sent for recycling.

Place: KSR Nagar
Date: 30.06.2021


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.



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

THE RAMCO CEMENTS LIMITED

RCL/PCB/38/2020-2021

06th January 2021

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 2020
– Reg.

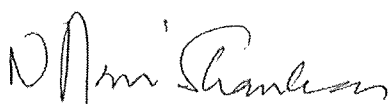
Ref: Authorization Lr. No. PCB/RO-VJA/BMW/W&A/2018-625 dated 15.09.2018.

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 2020 to December 2020.

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

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 (CBMWTF)]

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	Jaggiahpet 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° 52' 28.7" E - 80° 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. PCB/RO-VJA/BMW/W&A/ 2018-625 dated 15.09.2018 valid up to 30.09.2021.
	(xi) Status of Consents under Water Act and Air Act	Valid up to: 31.01.2022
2	Type of Health Care Facility	
	(i) Bedded Hospital	No. of Beds: 04 – 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: 31.12.2021
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 2020 is enclosed as Annexure – I.

S. No.	Particulars																																					
5	Details of the Storage, treatment, transportation, processing and Disposal Facility	For Generation, Segregation & Safe Disposal of BMW																																				
	(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><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><tr><td>Incinerators</td><td></td><td></td><td></td></tr><tr><td>Plasma Pyrolysis Autoclaves</td><td></td><td></td><td>Not authorized</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></table>	Type of treatment equipment	No. of units	Capacity, kg/day	Quantity treated or disposed in kg per annum	Incinerators				Plasma Pyrolysis Autoclaves			Not authorized	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
Type of treatment equipment		No. of units	Capacity, kg/day	Quantity treated or disposed in kg per annum																																		
Incinerators																																						
Plasma Pyrolysis Autoclaves				Not authorized																																		
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																																		
	(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 2020 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><tr><th></th><th>Quantity generated</th><th>Where disposed</th></tr><tr><td>Incineration ash</td><td></td><td></td></tr><tr><td>ETP sludge</td><td></td><td>Not authorized</td></tr></table>		Quantity generated	Where disposed	Incineration ash			ETP sludge		Not authorized																											
		Quantity generated	Where disposed																																			
Incineration ash																																						
ETP sludge		Not authorized																																				
	(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.																																				
7	Details trainings conducted on BMW																																					

S. No.	Particulars	
	(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? 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 01.01.2020 to 31.12.2020.

Date: 06.01.2021
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 2020 to December 2020)

Sl. No	Month	Weight (in kilogram) of Used Linen & Dressing material (Yellow)	Weight (in kilogram) of Used 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-20	8.5	6.3	1.2	1.1
2	Feb-20	9	6.3	1.5	1
3	Mar-20	9.5	6.9	1.4	1
4	Apr-20	2.3	1.65	0.7	0.5
5	May-20	2.85	2.7	0.65	0.45
6	Jun-20	2.7	1.55	0.5	0.3
7	Jul-20	3.75	1.6	0.3	0.25
8	Aug-20	10.25	5.8	1.7	1.3
9	Sep-20	9.1	4.4	1	0.8
10	Oct-20	13.20	8.00	1.10	0.30
11	Nov-20	7.60	8.10	0.60	0.50
12	Dec-20	10.50	7.50	0.60	0.10
	Grand Total	89.25	60.80	11.25	7.60
	Monthly average	7.44	5.07	0.94	0.63

Annexure :: I-K

**THE RAMCO CEMENTS LIMITED, KSR NAGAR
CSR EXPENDITURE FOR THE FINANCIAL YEAR 2020-2021**

Clause	Sub_clause	Tran_amount
Promotion of Healthcare including Preventive Healthcare	Donation of medical aid, instruments	20850.00
	Distribution Of Supportive Medicines for Covid 19 Cases	1496485.81
	Expenses relating to other medical camps	228084.00
	Free distribution of medicines for people	59048.25
	Donation to activities of medical trusts	86185.00
	Total	1890653.06
Making Available Safe Drinking Water	Construction of water point with platform for DP.Thanda villagers	22659.00
	Laying of water pipelines for drawing water & supply of domestic water	5610206.00
	Installation of RO Water Plant at Jayanthipuram & DP.Thanda villages, Krishna Dist. AP.	1269070.00
	Total	6901935.00
Promotion of Education	Provision of financial support for needy	215462.00
	Construct of infrastructure for schools & colleges	2293812.00
	Skill development	356400.00
	Ramco Apprenticeship to the unemployed persons	1332820.00
	Total	4198494.00
Rural Development Projects	laying of internal roads in the villages	575489.00
Protection of National Heritage, Art and Culture	Expenses incurred to uphold importance of national heritage	83705.56
Eradication of Hunger	Other relief measures, food distribution to needy	145010.00
Measures for the Benefit of Armed forces	Contribution to the welfare fund	25000.00
Total		13820286.62

**THE RAMCO CEMENTS LIMITED, KSR NAGAR
CSR EXPENDITURE FOR THE FINANCIAL**

Year	Amount, Rs.
2003-2014 (11 years)	40579555.44
2014-2015	5417753.13
2015-2016	4240135
2016-2017	8560037.82
2017-2018	10530418.37
2018-2019	10254827.83
2019-2020	8476147.31
2020-2021	13820286.62
Total for 18 years (2003-2021)	101879161.52
Average for 18 years (2003-2021)	5659953.418

THE RAMCO CEMENTS LTD, KSR NAGAR
AUTO GARAGE OIL & GREASE TRAP OUTLET QUALITY
PERIOD - APRIL 2020 TO MARCH 2021

Parameter	Unit											Norm	Average / Range	Min.	Max.
		Jun'2020	Jul'2020	Aug'2020	Sep'2020	Oct'2020	Nov'2020	Dec'2020	Jan'2021	Feb'2021	Mar'2021				
p ^H		7.84	7.79	7.81	7.79	7.65	7.71	7.64	7.69	7.71	7.78	5.5 - 9.0	7.64 - 7.84	7.64	7.84
Total Dissolved Solids	mg/L	936	921	946	921	914	929	912	935	958	966	2100	933.8	912	966
Total Suspended Solids	mg/L	90.6	93.4	91.6	85.4	83.1	85.6	83.2	85.1	87.9	83.6	200	87.0	83.1	93.4
Chemical Oxygen Demand	mg/L	135	146	135	129	134	146	129	134	129	131	250	134.8	129	146
BOD (for 3 days at 27 °C)	mg/L	36.2	39.1	37.6	35.4	38.9	39.7	38.2	39.6	37.1	38.7	100	38.1	35.4	39.7
Oil & Grease	mg/L	2.0	1.8	1.6	1.9	2.1	2.7	2.5	2.7	2.5	2.6	10	2.2	1.6	2.7

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

THE RAMCO CEMENTS LTD., KSR NAGAR

AMBIENT AIR QUALITY MONITORING DATA - BUFFER ZONE VILLAGES

(PERIOD - APRIL 2020 TO MARCH 2021)

Location	Parameter	May'2020		Jun'2020		Jul'2020		Aug'2020		Sep'2020		Oct'2020		Nov'2020		Dec'2020		Jan'2021		Feb'2021		Mar'2021		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		
Dharmavarapud u Tanda	PM 10	48.3	54.9	49.6	48.1	45.6	45.9	47.1	42.3	48.5	40.6	50.6	43.1	52.1	40.6	49.3	42.9	48.6	43.7	49.3	45.9	52.7	48.3	47.18	100
	PM 2.5	19.6	22.3	19.9	19.3	18.5	18.6	19.1	17.2	19.7	16.5	20.3	17.3	21.1	16.3	19.9	17.3	19.5	17.6	19.8	18.5	21.2	19.6	19.05	60
	SO ₂	12.3	12.9	12.3	12.1	11.1	11.3	12.3	10.9	11.9	11.2	12.7	11.9	12.9	12.0	12.4	12.7	13.5	13.5	14.1	12.6	14.5	13.7	12.49	80
	NO _x	15.5	16.1	14.6	14.2	13.7	13.5	15.3	13.2	15.0	14.1	16.1	14.7	17.1	14.1	15.0	15.3	15.8	15.8	16.4	14.9	16.3	15.9	15.12	80
	CO	262.0	245.0	221.0	213.0	207.0	207.0	229.0	201.0	213.0	212.0	221.0	236.0	236.0	236.0	186.0	196.0	181.0	189.0	192.0	191.0	189.0	199.0	210.55	2000
Jayanthipuram	PM 10	54.3	56.3	51.6	50.2	49.3	48.4	51.2	44.1	50.3	42.3	52.7	45.9	54.2	42.1	50.6	44.1	52.7	45.6	53.7	46.7	55.1	51.2	49.66	100
	PM 2.5	22.4	23.2	20.6	20.1	20.3	19.9	21.1	18.2	20.2	17.0	21.3	18.6	21.8	17.0	20.3	17.7	21.6	18.7	22.0	19.1	22.5	20.6	20.19	60
	NO ₂	13.6	11.6	12.6	12.2	11.9	10.4	12.4	11.0	12.1	12.3	13.1	12.7	13.5	11.8	12.7	12.8	13.1	12.9	14.7	13.5	15.3	14.8	12.77	80
	SO _x	16.3	14.3	15.1	15.3	14.1	14.2	15.6	14.2	15.2	13.9	16.4	14.5	17.9	14.0	15.6	15.7	15.7	15.5	17.3	16.1	17.1	17.2	15.51	80
	CO	248.0	274.0	212.0	220.0	202.0	210.0	242.0	198.0	229.0	189.0	236.0	214.0	249.0	189.0	189.0	174.0	196.0	191.0	192.0	212.0	223.0	226.0	215.23	2000
Chillakallu	PM 10	56.3	57.1	58.3	57.1	52.1	55.3	55.1	50.6	52.9	47.3	54.1	49.3	55.7	45.1	48.4	48.3	49.3	49.3	51.2	51.2	53.9	55.6	52.43	100
	PM 2.5	22.6	22.9	23.4	23.3	20.9	22.2	22.1	20.3	21.3	19.1	21.8	19.9	22.6	18.4	19.8	19.8	20.1	20.1	20.8	20.8	21.9	22.7	21.22	60
	SO ₂	14.1	13.5	13.1	12.9	12.1	11.9	12.9	10.5	12.7	11.9	12.9	12.8	13.4	12.2	11.9	13.1	12.7	13.9	13.5	14.1	14.2	14.6	12.95	80
	NO _x	17.0	16.4	14.9	13.9	13.9	12.7	15.0	13.2	15.4	14.2	16.5	14.9	17.3	14.7	14.6	15.8	15.1	16.3	15.9	16.5	17.3	17.1	15.39	80
	CO	268.0	211.0	221.0	202.0	215.0	174.0	236.0	165.0	227.0	173.0	241.0	221.0	252.0	198.0	201.0	189.0	213.0	196.0	226.0	201.0	241.0	223.0	213.36	2000
K.Agraharam Village	PM 10	56.9	60.3	60.1	61.4	54.7	58.1	58.6	52.4	55.3	50.1	57.1	52.1	59.2	49.1	47.3	46.2	49.6	48.6	48.9	49.3	49.6	53.4	53.56	100
	PM 2.5	23.4	24.8	24.3	24.8	22.5	23.9	24.1	21.6	22.6	20.5	23.3	21.1	23.8	19.7	19.2	18.8	20.1	19.7	19.9	20.0	20.1	21.7	21.81	60
	SO ₂	13.9	13.1	11.9	12.3	11.7	11.5	12.6	10.8	12.3	11.2	13.2	12.6	14.0	12.1	12.6	12.6	13.4	13.4	14.1	13.5	14.8	14.9	12.84	80
	NO _x	17.3	16.5	15.2	15.1	14.5	14.1	15.0	13.7	15.3	14.5	16.2	15.1	17.2	14.6	15.7	15.7	15.6	15.6	16.3	15.7	18.2	17.4	15.66	80
	CO	174.0	231.0	201.0	206.0	189.0	191.0	192.0	184.0	189.0	179.0	201.0	216.0	228.0	200.0	187.0	191.0	193.0	174.0	185.0	182.0	189.0	198.0	194.55	2000
Jaggayyapet	PM 10	64.3	65.1	65.3	63.1	60.2	62.7	65.3	55.1	60.6	52.7	65.9	53.9	67.1	50.2	56.3	57.4	58.2	59.3	61.2	61.2	63.7	64.6	60.61	100
	PM 2.5	25.7	26.0	26.2	25.3	24.1	25.1	26.1	22.0	24.4	21.2	26.7	21.8	27.2	20.2	23.1	23.5	23.5	23.9	24.7	24.7	25.8	26.0	24.42	60
	SO ₂	14.1	14.2	13.5	13.1	12.5	12.6	13.1	11.6	12.4	10.9	13.1	11.9	13.7	11.3	13.4	13.4	12.1	12.7	13.6	14.2	14.1	14.3	12.99	80
	NO _x	16.7	16.8	16.9	16.7	14.6	16.9	15.6	15.0	15.7	15.2	16.3	16.0	17.5	15.4	16.2	16.2	14.8	15.4	16.3	16.9	17.9	18.0	16.23	80
	CO	291.0	286.0	312.0	301.0	287.0	275.0	312.0	254.0	301.0	248.0	327.0	256.0	342.0	229.0	259.0	241.0	267.0	252.0	254.0	271.0	263.0	289.0	278.05	2000
Budawada	PM 10	54.3	54.9	52.7	51.9	50.1	50.6	52.7	48.1	50.7	47.1	53.4	49.6	55.6	47.1	51.6	46.3	53.4	47.1	55.1	49.3	57.1	52.6	51.42	100
	PM 2.5	21.9	22.1	21.1	20.8	20.2	20.4	21.2	19.4	20.2	18.7	21.8	19.9	22.4	18.9	20.9	18.8	21.7	19.2	22.4	20.1	23.2	21.4	20.76	60
	SO ₂	13.7	12.1	12.6	12.2	11.8	10.9	12.5	10.1	11.9	11.1	12.9	12.3	13.6	11.6	12.9	12.8	13.5	13.1	14.2	12.9	13.9	13.6	12.55	80
	NO _x	17.3	15.7	14.7	14.2	13.9	13.4	15.2	12.7	15.9	14.1	16.9	14.7	17.2	14.2	14.2	16.1	16.0	15.9	15.5	16.6	15.3	16.9	15.42	80
	CO	228.0	251.0	223.0	218.0	214.0	206.0	229.0	202.0	215.0	189.0	219.0	213.0	229.0	203.0	198.0	198.0	212.0	201.0	209.0	212.0	212.0	223.0	213.82	2000
Vedadri	PM 10	52.4	51.3	53.6	52.7	49.3	49.3	53.1	47.4	51.7	46.9	54.1	47.6	56.3	45.4	50.3	47.9	51.2	48.6	53.2	49.3	55.1	51.9	50.85	100
	PM 2.5	21.4	21.0	21.6	21.1	20.2	20.2	21.7	19.4	21.3	19.3	22.0	19.2	22.5	18.4	20.1	19.1	20.5	19.5	21.3	19.8	22.5	21.1	20.60	60
	SO ₂	14.0	13.2	11.9	11.7	11.2	10.6	12.7	10.4	12.1	11.2	13.4	12.4	13.9	11.8	12.6	12.1	13.4	12.8	14.1	13.4	14.7	14.1	12.62	80
	NO _x	17.7	16.9	14.1	14.3	13.8	13.2	14.8	14.0	15.8	13.9	16.7	14.6	17.8	14.1	15.1	14.6	16.0	15.4	16.7	16.0	18.8	17.5	15.54	80
	CO	249.0	245.0	242.0	217.0	235.0	209.0	245.0	191.0	239.0	178.0	246.0	226.0	252.0	211.0	186.0	177.0	193.0	189.0	186.0	196.0	192.0	215.0	214.50	2000
Pochampalli	PM 10	60.1	59.3	60.1	58.4	57.2	56.3	60.1	53.1	58.3	50.6	60.2	52.4	63.1	50.6	52.9	51.6	53.5	52.7	54.5	53.4	56.2	55.7	55.92	100
	PM 2.5	24.7	24.4	24.1	23.5	23.5	23.1	24.7	21.8	23.7	20.6	24.6	21.1	25.8	20.3	21.8	21.3	21.9	21.6	22.3	21.8	22.9	22.7	22.83	60
	SO ₂	13.1	13.4	12.1	11.3	11.9	11.2	13.1	10.3	12.2	11.4	13.7	12.1	13.8	11.9	11.7	12.2	12.1	13.5	13.2	12.9	14.2	13.8	12.50	80
	NO _x	15.5	15.8	14.8	14.1	13.6	13.9	15.9	14.0	16.2	14.8	16.5	14.9	17.3	14.2	14.7	15.2	14.4	15.8	15.5	15.2	17.3	18.0	15.35	80
	CO	252.0	212.0	212.0	201.0	201.0	187.0	229.0	179.0	218.0	183.0	229.0	212.0	236.0	201.0	201.0	176.0	217.0	169.0	226.0	174.0	214.0	189.0	205.36	2000
Ravirala	PM 10	56.9	57.3	59.1	57.1	54.5	55.3	51.2	51.9	50.4	49.3	52.9	51.7	55.9	49.3	49.6	48.6	51.2	49.9	52.3	51.2	54.6	53.2	52.88	100
	PM 2.5	22.7	22.9	23.8	22.9	21.7	22.1	20.4	20.7	20.3	19.8	21.3	20.8	22.4	19.8	20.2	19.8	21.1	20.6	21.5	21.1	22.0	21.3	21.33	60
	SO ₂	13.4	12.1	12.7	11.6	11.7	10.7	12.6	10.1	12.3	11.5	13.9	12.6	14.5	11.5	12.9	12.9	13.6	13.8	13.9	14.1	14.1	14.7	12.78	80
	NO _x	16.1	14.8	15.6	15.2	13.2	14.5	15.8	12.5	15.1	14.3	16.2	15.1	17.9	14.9	15.3	15.3	15.7	15.9	16.0	16.2	18.2	18.6	15.56	80
	CO	249.0	223.0	217.0	222.0	209.0	204.0	234.0	190.0	221.0	174.0	242.0	201.0	251.0	198.0	185	174.0	193.0	187.0	201.0	192.0	223.0	202.0	208.73	2000

Note: All values are mentioned in µg/m³

THE RAMCO CEMENTS LTD., KSR NAGAR
CORE ZONE AIR QUALITY MONITORING DATA - JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
PERIOD - APRIL 2020 TO MARCH 2021

Location	Parameter																									Average	Limits
		May'2020		Jun'2020		Jul'2020		Aug'2020		Sep'2020		Oct'2020		Nov'2020		Dec'2020		Jan'2021		Feb'2021		Mar'2021					
		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				
Mines office	PM 10	55.1	54.9	58.7	56.3	53.8	52.7	50.6	55.9	53.1	48.9	55.7	51.6	57.1	49.2	53.5	59.6	62.4	57.8	63.5	59.3	65.3	62.6	56.25	100		
	PM 2.5	22.4	22.3	23.6	22.6	21.8	21.4	20.5	22.5	21.3	19.7	22.6	20.8	23.0	19.8	21.6	24.0	25.1	23.2	25.5	23.8	23.6	22.1	22.42	60		
	SO ₂	13.1	13.1	12.3	12.3	11.6	11.9	10.6	12.3	11.9	11.2	12.9	12.1	13.5	11.1	12.9	12.9	14.2	13.7	13.5	12.9	14.2	13.7	12.63	80		
	NO _x	16.3	16.3	16.1	17.1	14.2	15.6	13.8	14.7	15.2	14.1	16.2	14.3	17.1	13.5	15.5	15.5	16.5	16.0	15.8	15.2	16.9	16.2	15.55	80		
	CO	612.0	611.0	592.0	592.0	576.0	571.0	529.0	561.0	542.0	513.0	562.0	521.0	574.0	501.0	539.0	561.0	569.0	547.0	576.0	521.0	589	536.0	558.86	2000		
Workshop	PM 10	56.2	58.6	56.1	59.1	54.6	57.3	52.1	57.9	54.9	50.6	56.3	52.7	58.9	48.3	56.1	57.1	59.7	60.2	61.5	61.2	64.2	63.9	57.16	100		
	PM 2.5	23.2	24.1	22.5	23.8	22.5	23.6	21.5	23.7	21.9	20.1	22.5	21.2	23.9	19.4	22.5	22.9	24.4	24.6	25.2	25.0	24.1	24.2	23.04	60		
	SO ₂	13.4	13.9	13.5	13.5	12.1	12.4	11.1	13.1	12.7	11.7	13.5	11.6	13.7	10.6	11.6	13.4	12.6	12.1	12.9	13.2	13.2	14.1	12.72	80		
	NO _x	16.1	16.6	15.9	16.9	14.9	15.5	13.8	15.8	16.1	14.9	17.1	15.2	18.4	14.1	14.5	16.3	15.2	14.7	15.5	15.8	16.7	16.3	15.74	80		
	CO	623.0	623.0	601.0	613.0	581.0	598.0	540.0	612.0	589.0	527.0	601.0	534.0	612.0	492.0	529.0	589.0	592.0	539.0	589.0	569.0	592.0	582.0	578.50	2000		
Substation	PM 10	59.6	57.1	60.3	53.7	57.1	51.6	49.3	60.6	58.2	52.3	60.2	53.9	52.4	50.6	52.4	60.6	63.5	55.6	60.2	57.3	61.2	59.5	56.69	100		
	PM 2.5	23.9	22.9	24.4	21.6	22.9	20.7	19.8	24.9	24.0	21.5	24.2	21.8	25.3	20.3	21.4	24.8	25.8	22.6	24.5	23.3	25.2	24.8	23.21	60		
	SO ₂	12.7	12.7	12.9	12.9	11.5	11.6	10.9	12.9	13.1	10.1	12.6	12.3	13.1	10.9	12.1	12.9	13.7	13.9	14.1	14.2	15.1	13.9	12.73	80		
	NO _x	15.6	15.6	17.3	13.3	13.3	15.0	14.1	13.8	15.9	16.8	12.9	15.4	14.6	16.5	13.9	14.8	15.6	16.1	16.3	16.5	16.6	16.8	17.1	15.48	80	
	CO	616.0	635.0	584.0	521.0	574.0	518.0	501.0	623.0	596.0	489.0	612.0	512.0	636.0	484.0	546.0	607.0	623.0	559.0	612.0	542.0	623.0	563.0	571.64	2000		
Magazine Area	PM 10	58.6	53.9	59.7	52.1	55.3	50.9	47.1	61.7	57.3	45.9	60.0	49.6	63.1	47.1	58.1	64.4	57.1	62.1	59.3	61.3	61.2	62.7	56.75	100		
	PM 2.5	24.1	22.2	24.1	20.9	22.8	21.0	19.4	24.6	23.3	18.7	24.0	19.9	25.8	19.1	23.6	26.1	23.2	25.2	24.1	24.9	25.2	26.3	23.11	60		
	SO ₂	13.6	13.6	13.6	13.2	12.1	12.8	11.0	13.4	12.4	10.5	13.2	11.9	14.0	10.4	11.7	13.7	14.5	12.8	13.9	12.1	15.4	13.6	12.88	80		
	NO _x	17.0	17.0	16.9	13.9	14.6	13.1	14.4	16.6	15.9	12.8	16.1	15.2	17.1	14.0	14.8	16.8	16.7	15.0	16.1	14.3	16.3	15.4	15.45	80		
	CO	623.0	641.0	574.0	586.0	554.0	576.0	540.0	601.0	571.0	499.0	592.0	536.0	602.0	492.0	563.0	596.0	607.0	582.0	613.0	591.0	642.0	602.0	581.05	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 2020 TO MARCH 2021

Location	Parameter	May'2020												Jun'2020												Jul'2020		Aug'2020		Sep'2020		Oct'2020		Nov'2020		Dec'2020		Jan'2021		Feb'2021		Mar'2021		Average	Limits
		May'2020		Jun'2020		Jul'2020		Aug'2020		Sep'2020		Oct'2020		Nov'2020		Dec'2020		Jan'2021		Feb'2021		Mar'2021																							
		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	I Fort- night	II Fort- night																
Mines office	PM 10	53.9	58.1	52.3	57.3	50.5	56.1	53.1	53.1	52.1	51.5	53.9	52.3	55.6	50.6	57.9	52.7	61.2	55.9	65.1	57.9	68.2	60.6	55.90	100																				
	PM 2.5	21.9	23.6	21.2	23.0	20.5	22.8	21.6	21.4	20.9	20.8	21.8	21.2	22.4	20.3	23.3	21.2	24.6	22.5	26.2	23.3	27.3	24.6	22.56	60																				
	SO ₂	12.9	13.4	13.1	13.1	11.8	11.9	12.7	10.5	11.4	11.4	12.3	12.3	13.4	11.6	12.9	12.7	13.9	13.8	13.9	15.1	14.8	15.8	12.94	80																				
	NO _x	16.6	16.6	16.2	17.1	15.4	15.7	15.0	13.1	13.5	15.1	14.6	16.2	15.9	15.4	15.5	15.3	16.2	16.1	16.2	17.4	16.8	18.6	15.84	80																				
Pump House	CO	671.0	561.0	621.0	592.0	618.0	558.0	623.0	512.0	546.0	521.0	551.0	536.0	574.0	521.0	586.0	586.0	592.0	612.0	621.0	627.0	642.0	634.0	586.59	2000																				
	PM 10	54.6	53.1	54.3	58.6	52.1	52.9	55.9	49.6	50.6	47.1	52.7	53.6	54.9	51.4	56.8	53.9	62.8	62.7	66.3	62.3	67.9	64.6	56.30	100																				
	PM 2.5	22.5	21.9	22.2	23.9	21.5	21.8	23.0	20.3	20.1	19.3	21.2	21.4	22.1	21.0	22.8	21.6	25.7	25.6	27.1	25.5	28.6	26.1	22.96	60																				
	SO ₂	13.1	13.1	12.9	12.8	11.6	11.6	12.1	10.1	11.9	10.9	11.6	11.6	12.8	10.9	13.1	13.5	14.8	14.6	15.1	13.2	16.2	14.5	12.82	80																				
Haul Road	NO _x	15.5	15.8	17.1	18.2	16.0	14.9	15.3	13.7	13.9	15.0	13.9	15.9	15.2	14.3	16.0	16.4	17.4	17.2	17.7	15.8	18.2	16.3	15.90	80																				
	CO	618.0	582.0	618.0	586.0	592.0	574.0	629.0	501.0	589.0	542.0	542.0	542.0	556.0	519.0	549.0	549.0	576.0	598.0	613.0	631.0	629.0	642.0	580.77	2000																				
	PM 10	57.1	54.6	59.2	56.3	55.3	51.3	57.3	45.4	53.2	43.4	55.1	51.9	57.1	49.3	59.3	57.1	60.6	59.3	59.7	65.1	63.5	61.2	56.01	100																				
	PM 2.5	22.9	21.9	23.8	22.5	22.2	20.6	23.0	18.7	21.9	17.4	22.4	21.0	23.0	19.8	24.3	23.4	24.7	24.1	24.3	26.5	25.6	28.4	22.84	60																				
Loading Area	SO ₂	13.9	12.9	13.5	12.6	12.1	11.7	13.1	11.1	10.9	11.1	12.9	12.7	13.9	11.4	14.2	12.8	12.9	13.9	14.2	14.5	15.1	15.3	13.03	80																				
	NO _x	16.6	15.8	16.3	17.9	14.9	15.3	15.8	14.8	12.8	15.3	14.7	15.3	16.2	14.9	16.9	15.5	15.3	16.3	16.6	16.9	17.1	18.9	15.91	80																				
	CO	613.0	574.0	635.0	571.0	586.0	563.0	601.0	525.0	563.0	512.0	512.0	512.0	539.0	502.0	563.0	563.0	582.0	606.0	591.0	609.0	602.0	623.0	570.32	2000																				
	PM 10	58.2	57.1	57.3	57.9	54.6	55.8	56.6	50.3	51.7	48.1	53.6	54.6	55.9	52.7	57.3	55.4	64.1	61.6	60.6	60.6	64.1	68.3	57.11	100																				
	PM 2.5	24.0	23.5	22.9	23.4	22.5	23.0	23.3	20.1	21.0	19.1	21.4	22.0	22.6	21.3	23.3	22.5	26.0	25.0	24.6	24.6	26.3	27.3	23.17	60																				
	SO ₂	13.4	14.1	12.6	13.5	11.5	12.1	13.4	11.3	12.1	12.2	13.1	12.3	14.2	11.7	13.6	13.1	15.1	12.1	15.7	12.1	16.3	13.9	13.15	80																				
	NO _x	16.4	17.5	16.4	18.6	15.3	17.1	16.3	13.7	14.2	15.9	14.0	14.6	16.1	13.9	16.7	16.2	17.3	14.3	17.9	14.3	18.3	17.1	16.00	80																				
	CO	621.0	568.0	620.0	589.0	591.0	549.0	634.0	498.0	529.0	531.0	529.0	524.0	541.0	512.0	578.0	578.0	596.0	592.0	628.0	607.0	640.0	624.0	576.32	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 2020 TO MARCH 2021

Location	Parameter	Average																								Limits
		May'2020		Jun'2020		Jul'2020		Aug'2020		Sep'2020		Oct'2020		Nov'2020		Dec'2020		Jan'2021		Feb'2021		Mar'2021				
		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			
Mines Office	PM 10	57.1	57.1	54.2	57.1	52.7	52.7	54.1	49.1	52.3	47.4	55.7	49.6	57.3	46.4	60.2	53.6	62.3	56.8	63.5	57.3	66.2	60.3	55.59	100	
	PM 2.5	23.2	23.2	21.7	23.3	21.4	21.4	22.0	19.6	21.2	18.9	22.3	19.9	23.0	18.6	24.3	21.6	25.0	22.8	25.5	23.0	26.9	24.8	22.44	60	
	SO ₂	13.4	14.1	11.3	12.1	10.9	11.5	11.8	10.0	12.6	9.7	13.7	11.2	12.4	10.4	13.5	11.7	14.2	12.5	15.3	13.2	16.8	14.1	12.56	80	
	NO _x	16.6	17.8	16.3	16.1	14.6	14.1	14.1	12.7	14.9	13.0	15.6	13.9	16.3	12.8	16.1	14.3	16.5	14.8	17.6	15.5	20.1	17.3	15.50	80	
ML3 Tower Light Area	CO	601	571	586.0	523.0	556.0	518.0	563.0	492.0	515.0	502.0	526	521	536.0	489.0	572.0	589.0	589.0	582.0	612.0	596.0	624.0	589.0	556.91	2000	
	PM 10	58.6	60.4	55.9	59.3	53.0	55.1	56.9	52.4	49.6	50.6	54.6	52.4	52.1	48.4	57.3	57.1	59.6	55.3	65.1	58.2	67.9	62.4	56.46	100	
	PM 2.5	24.1	24.9	22.8	24.1	21.8	22.7	23.4	21.1	19.9	20.8	22.1	21.2	21.3	19.5	23.0	22.9	24.4	22.6	26.6	23.8	27.8	25.2	23.00	60	
	SO ₂	14.1	14.6	12.5	13.5	11.9	11.1	12.3	10.4	11.9	10.6	12.9	10.9	13.8	10.7	14.1	12.3	14.9	12.9	16.2	14.1	17.6	15.2	13.11	80	
ML4 Tower Light Area	NO _x	16.8	17	16.5	16.9	14.9	15.0	15.5	13.4	13.7	13.7	14.9	12.3	15.9	12.0	17.0	15.2	17.5	15.5	18.8	16.7	21.2	18.6	15.86	80	
	CO	521	584	569.0	529.0	542.0	501.0	551.0	474.0	501.0	509.0	542	513	541.0	494.0	581.0	523.0	592.0	612.0	601.0	605.0	635.0	623.0	551.95	2000	
	PM 10	56.3	62.9	53.1	57.6	50.8	53.9	53.5	48.6	50.3	52.3	53.9	53.9	51.6	50.6	59.6	52.7	62.4	56.2	59.6	60.2	63.4	64.6	55.82	100	
	PM 2.5	22.6	25.2	21.3	23.2	20.4	21.6	21.5	19.9	20.3	21.3	21.8	21.8	20.7	20.4	24.4	21.6	25.4	22.9	24.3	24.5	25.1	26.3	22.57	60	
View Point Tower Light Area	SO ₂	13.5	15.3	11.6	12.6	10.8	10.9	12.4	9.8	12.3	9.1	13.2	11.6	14.2	10.9	13.9	11.9	14.1	12.8	15.4	13.2	16.3	13.9	12.71	80	
	NO _x	16.4	18	15.9	15.3	13.8	14.6	15.1	13.0	15.1	12.9	15.4	14.2	16.8	13.9	16.6	14.6	16.5	15.2	17.8	15.6	19.3	16.9	15.59	80	
	CO	612	574	515.0	514.0	498.0	497.0	523.0	481.0	523.0	521.0	523	540	539.0	512.0	563.0	574.0	557.0	581.0	592.0	596.0	652.0	612.0	549.95	2000	
	PM 10	55.9	65.1	50.6	58.6	48.6	54.2	51.4	50.2	47.1	49.1	53.4	51.6	52.7	48.3	55.4	59.3	58.9	57.7	61.2	59.3	63.6	61.7	55.18	100	
View Point Tower Light Area	PM 2.5	23	26.8	20.5	23.4	20.0	22.3	21.2	20.6	19.3	19.7	21.4	20.8	21.3	19.7	22.5	24.1	23.9	23.4	24.8	24.1	29.6	27.1	22.70	60	
	SO ₂	13.7	14.7	13.1	11.7	11.2	10.2	12.7	9.5	11.7	11.4	12.4	12.1	13.7	11.3	14.2	13.1	13.5	13.6	16.7	14.9	18.4	16.2	13.18	80	
	NO _x	17.1	17.7	16.8	16.7	14.1	14.1	15.6	11.6	14.6	14.1	15.6	13.5	16.7	13.1	17.3	16.2	15.7	15.8	18.9	17.1	22.9	19.5	16.12	80	
	CO	603	563	532.0	543.0	491.0	520.0	514.0	471.0	519.0	511.0	549	524	552.0	502.0	546.0	582.0	553.0	605.0	585.0	612.0	612.0	624.0	550.59	2000	

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 2020 TO MARCH 2021

Location	Parameter													Average	Limits										
		May'2020	Jun'2020	Jul'2020	Aug'2020	Sep'2020	Oct'2020	Nov'2020	Dec'2020	Jan'2021	Feb'2021	Mar'2021													
		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								
Drilling Area	PM 10	53.1	55.9	50.1	58.3	48.4	52.1	49.3	55.3	45.3	53.1	47.1	52.7	49.2	50.1	55.3	53.9	56.9	57.1	58.9	59.3	62.3	64.3	54.00	100
	PM 2.5	21.6	22.5	20.1	23.6	19.7	21.2	19.9	22.5	18.4	21.6	19.1	21.3	19.8	20.1	22.3	21.7	22.9	23.0	23.7	23.8	24.8	25.3	21.77	60
	SO ₂	13.5	13.4	13.2	14.3	12.1	12.1	13.8	11.9	12.9	12.9	13.2	13.1	13.5	12.5	14.3	13.5	15.7	14.2	16.9	13.5	17.3	14.6	13.75	80
	NO _x	16.4	16.1	17.1	16.3	14.9	14.9	16.3	14.2	15.7	15.3	16.9	16.9	17.1	13.1	16.9	16.1	18.0	16.5	19.2	15.8	21.2	18.3	16.51	80
Loading Area	CO	592.0	582.0	612.0	609.0	571.0	567.0	562.0	501.0	529.0	498.0	542.0	512.0	552.0	486.0	558.0	479.0	568.0	512.0	589.0	524.0	592.0	536.0	548.77	2000
	PM 10	54.9	57.1	52.3	60.1	50.6	54.6	52.6	51.6	50.1	49.8	52.1	53.6	53.4	49.4	58.6	52.4	60.6	53.6	63.4	54.2	64.8	60.6	55.02	100
	PM 2.5	22.6	23.4	21.0	24.5	20.8	22.5	21.5	21.3	20.1	20.0	20.9	21.6	21.6	19.8	23.5	21.0	24.8	21.9	25.9	22.2	27.1	21.6	22.25	60
	SO ₂	13.9	17.1	13.9	15.1	12.7	13.0	13.2	10.8	13.0	13.2	12.9	12.9	13.4	12.1	14.5	13.2	13.9	12.1	15.6	14.2	16.8	15.3	13.76	80
Haul Road-1	NO _x	17.3	20.1	16.3	17.2	15.6	15.9	15.9	14.0	15.1	16.7	16.1	16.0	17.4	14.0	17.4	16.1	16.5	14.7	18.2	16.8	20.3	19.2	16.67	80
	CO	563.0	567.0	598.0	587.0	549.0	551.0	522.0	521.0	528.0	502.0	536.0	523.0	523.0	454.0	551.0	421.0	567.0	523.0	514.0	529.0	556.0	532.91	2000	
	PM 10	55.3	56.8	53.9	58.7	51.2	53.9	53.5	50.4	51.9	52.7	55.4	55.1	57.1	51.4	60.3	56.1	58.3	57.9	59.6	52.1	61.5	59.3	55.56	100
	PM 2.5	22.2	23.3	21.8	23.5	20.5	21.6	22.0	20.2	20.9	21.2	22.3	22.2	23.1	21.0	24.7	22.9	23.7	23.6	24.3	21.2	25.6	24.3	22.55	60
Haul Road-2	SO ₂	14.1	14.9	12.9	14.9	11.9	12.7	12.1	11.6	12.8	12.1	14.1	13.7	14.7	13.0	15.2	14.0	14.2	14.5	13.6	12.9	15.8	13.6	13.60	80
	NO _x	16.7	18.1	17.8	16.5	15.8	15.4	14.2	14.3	15.0	15.1	17.2	16.7	18.0	13.8	17.9	16.7	16.6	16.9	16.0	15.3	21.4	16.2	16.44	80
	CO	568.0	574.0	601.0	612.0	570.0	567.0	541.0	511.0	539.0	478.0	529.0	501.0	542.0	472.0	589.0	468.0	596.0	501.0	572.0	496.0	601.0	515.0	542.86	2000
	PM 10	54.9	62.3	51.6	62.3	49.3	59.4	51.6	57.1	48.4	55.8	50.2	51.6	52.4	47.1	55.9	51.7	61.2	52.7	60.3	60.3	65.9	65.6	55.80	100
Haul Road-2	PM 2.5	22.6	24.9	21.1	25.2	20.3	24.5	20.6	23.5	19.8	22.8	20.5	20.7	21.0	19.0	22.7	21.0	24.8	21.4	24.5	24.5	25.5	25.1	22.55	60
	SO ₂	13.6	15.1	13.0	15.2	12.0	13.0	13.2	10.1	13.0	11.6	13.6	12.9	14.0	11.9	14.9	12.8	13.1	13.4	15.1	15.1	16.9	16.7	13.65	80
	NO _x	17.2	17.2	16.5	16.1	16.1	15.1	16.0	13.0	15.2	15.1	16.9	16.4	17.5	13.0	18.0	15.9	15.3	15.6	17.3	17.3	22.9	19.3	16.50	80
	CO	571.0	579.0	622.0	624.0	562.0	563.0	534.0	520.0	526.0	498.0	547.0	536.0	551.0	469.0	592.0	454.0	589.0	489.0	573.0	513.0	614.0	521.0	547.59	2000

Note: All values are mentioned in µg/m³



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

THE RAMCO CEMENTS LIMITED

RCL/PCB/28/2021-2022

30th June 2021

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 2020-2021 - Reg.

Ref: CFO order for mines No. APPCB/HO/UH-IV/CFO:VJA/Auto Renewal-8/2016, dated 08.12.2016.

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 2020-2021:

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

This is for your kind information please.

Thanking you,

Yours faithfully,
for The Ramco Cements Limited,

(N RAVI SHANKAR)
Sr. President (Mfg.)

Encl.: As above.

Form-4

(See rules 5(6) and 22 (2))

**FORM FOR FILING ANNUAL RETURNS
BY THE OCCUPIER OR OPERATOR OF FACILITY**(To be submitted by occupier/operator of disposal facility to State Pollution Control Board/Pollution Control Committee by 30th June of every year for the preceding period April to March)

1	Name and address of the generator / operator of facility	:	Limestone Mines of The Ramco Cements Limited, Kumarasamy Raja Nagar - 521 457, Jaggayyapet (M), Krishna Dist														
2	Name of the authorized person and full address with telephone and fax number	:	N Ravi Shankar, Sr. President (Mfg.), The Ramco Cements Limited, Kumarasamy Raja Nagar - 521 457, Jaggayyapet (M), Krishna Dist. Telephone: 08654 – 224400 to 04, Fax: 08654 – 222352,														
3	Description of hazardous waste	:	<table border="1"> <tr> <td>Physical form with description</td> <td></td> </tr> <tr> <td>Paint Sludge</td> <td rowspan="3">Not applicable</td> </tr> <tr> <td>Containers</td> </tr> <tr> <td>ETP sludge</td> </tr> <tr> <td>Waste Oil</td> <td>Liquid</td> </tr> <tr> <td>Waste Grease</td> <td>Semi-liquid</td> </tr> <tr> <td>Waste Hi-chrome Grinding Media</td> <td>Solid</td> </tr> <tr> <td>Waste Lead Acid Batteries</td> <td>Solid</td> </tr> </table>	Physical form with description		Paint Sludge	Not applicable	Containers	ETP sludge	Waste Oil	Liquid	Waste Grease	Semi-liquid	Waste Hi-chrome Grinding Media	Solid	Waste Lead Acid Batteries	Solid
Physical form with description																	
Paint Sludge	Not applicable																
Containers																	
ETP sludge																	
Waste Oil	Liquid																
Waste Grease	Semi-liquid																
Waste Hi-chrome Grinding Media	Solid																
Waste Lead Acid Batteries	Solid																
4	Quantity of hazardous wastes (in MTA)	:	<table border="1"> <tr> <td>Type of hazardous waste</td> <td>Quantity (in Tonnes /KL)</td> </tr> <tr> <td>(a) Paint sludge</td> <td rowspan="3">Not applicable</td> </tr> <tr> <td>(b) E.T.P sludge</td> </tr> <tr> <td>(c) Containers</td> </tr> <tr> <td>Waste Oil</td> <td rowspan="3">Not applicable as the waste oil generated in the financial year 2020-2021 in limestone mines is totally re-used within the premises.</td> </tr> <tr> <td>Waste Hi-chrome Grinding Media</td> </tr> <tr> <td>Waste Lead Acid Batteries</td> </tr> </table>	Type of hazardous waste	Quantity (in Tonnes /KL)	(a) Paint sludge	Not applicable	(b) E.T.P sludge	(c) Containers	Waste Oil	Not applicable as the waste oil generated in the financial year 2020-2021 in limestone mines is totally re-used within the premises.	Waste Hi-chrome Grinding Media	Waste Lead Acid Batteries				
Type of hazardous waste	Quantity (in Tonnes /KL)																
(a) Paint sludge	Not applicable																
(b) E.T.P sludge																	
(c) Containers																	
Waste Oil	Not applicable as the waste oil generated in the financial year 2020-2021 in limestone mines is totally re-used within the premises.																
Waste Hi-chrome Grinding Media																	
Waste Lead Acid Batteries																	
5	Description of Storage	:	<table border="1"> <tr> <td>ETP sludge In barrels</td> <td> Separate waste oil storage tank with a capacity of 3.5 kL is provided, till its reuse / disposal. Waste hi-chrome grinding media is stored in drums, placed in closed sheds. Waste lead acid batteries are stored in closed room. </td> </tr> </table>	ETP sludge In barrels	Separate waste oil storage tank with a capacity of 3.5 kL is provided, till its reuse / disposal. Waste hi-chrome grinding media is stored in drums, placed in closed sheds. Waste lead acid batteries are stored in closed room.												
ETP sludge In barrels	Separate waste oil storage tank with a capacity of 3.5 kL is provided, till its reuse / disposal. Waste hi-chrome grinding media is stored in drums, placed in closed sheds. Waste lead acid batteries are stored in closed room.																
6	Description of Treatment	:	<table border="1"> <tr> <td>Sending out to</td> <td>No treatment facility is available.</td> </tr> </table>	Sending out to	No treatment facility is available.												
Sending out to	No treatment facility is available.																

		TSDf	Presently disposing to APPCB authorized vendors / buy-back to the suppliers.			
7	Details of transportations	:	Name & address of consignee	Mode of packing	Mode of transportation	Date of transportation
			Not applicable, as the waste oil generated in the limestone mines is totally re-used within the premises, in the financial year 2020-2021.			
8	Details of disposal of hazardous waste	:	Name & address of consignee	Mode of packing	Mode of transportation	Date of transportation
			Not applicable, as the waste oil generated in the limestone mines is totally re-used within the premises, in the financial year 2020-2021.			
9	Quantity of used materials sent back to the manufacturers* and others#	:	Name and type of material sent back to Manufacturer	Not applicable, as no material is sent back to the manufacturers or others in the financial year 2020-2021.		
			Manufacturers			
			Others*			

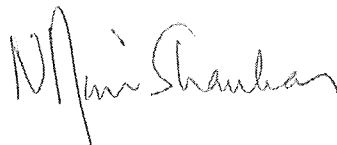
* delete whichever is not applicable

enclose list of other agencies.

Date : 30.06.2021

Place : KSR Nagar

Signature



Designation: Sr. President (Mfg.)

THE RAMCO CEMENTS LIMITED
JAYANTHIPUAM GROUP OF LIMESTONE MINES
ENVIRONMENTAL PROTECTION ACCOUNT - RECURRING EXPENDITURE DETAILS - FINANCIAL YEAR 2020-2021

Capital / Recurring	Description	For the year 2020-2021, Lakh Rs.					For the year 2019- 2020, Rs	Projected for 2021-2022, Lakh Rs.				
		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)	Ramco Budawada Limestone Mine (RF)	Total
Recurring	Pollution Control - Nonel detonators	9.99	2.83	4.53	0.316	17.666	1766615	10.00	3.00	6.90	0.50	20.40
	Pollution Control - Water Sprinkling	17.78	4.02	11.63	0.05	33.48	3348000	18.00	6.00	20.00	1.00	45.00
	Pollution Monitoring	1.65	1.48	1.56	1.20	5.890	589000	1.73	1.56	1.64	1.28	6.210
	Wet drilling	0.60	0.20	0.37	0.05	1.22	122000	0.60	0.40	0.70	0.10	1.80
	Greenbelt	8.40	27.38	9.85	10.33	55.960	5596000	3.54	4.33	2.15	2.41	12.43
	Reclamation	128.23	0.00	0.00	0.00	128.230	12823000	150.00	0.00	0.00	0.00	150.00
	Total	166.65	35.91	27.94	11.95	242.45	24244615	183.87	15.29	31.39	5.29	235.84