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Certified Company

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

THE RAMCO CEMENTS LIMITED

RCL/MoEF&CC/JPM NB-239/67

Dt. 30.05.2022

Ministry of Environment, Forests and Climate Change,
Integrated Regional Office,
Green House Complex,
Gopala Reddy Road,
VIJAYAWADA – 520 010.

Dear Sir,

Sub: Submission of Half-Yearly Compliance Report for Environmental Clearances for Jayanthipuram Limestone Mine (North Band) of The Ramco Cements Limited for the period from October 2021 to March 2022 – Reg. Ref: EC Lr. No. J-11015/377/2006-IA.II(M) dated 18.05.2007.

We are herewith submitting the Half-Yearly Compliance for Environmental Clearance for the period from October 2021 to March 2022 along with relevant enclosures for Jayanthipuram Limestone Mine (North Band), Jaggayyapet Mandal, Krishna District, Andhra Pradesh.

Name, designation and contact details of person in-charge of environmental division are:

N. Ravi Shankar
Sr. President (Manufacturing)
Phone No. 08654 – 224400,
Fax No. 08654 – 222352,
e-mail: mcljpm@ramcocements.co.in

This is for your kind information and perusal please.


Thanking you,

Yours faithfully,
For The Ramco Cements Limited,
(Formerly known as Madras Cements Ltd.,)


(N.RAVI SHANKAR)

Sr. President (Manufacturing)

Encl.: a.a



HALF-YEARLY COMPLIANCE REPORT

Environmental Clearance Letter/s No. and Date	J-11015/377/2006-IA.II (M) and dated 18.05.2007
Name of the Project	Jayanthipuram Limestone Mine (North Band) of The Ramco Cements Limited (Formerly Madras Cements Ltd.,) – 1.8 Million TPA Capacity of Limestone.
Period of Compliance Report	1 st October 2021 to 31 st March 2022

A. Specific Conditions:

S.No.	Condition	Compliance Status
i.	Top soil shall be stacked properly with proper slope with adequate safeguards and shall be backfilled for reclamation and rehabilitation of mined out area.	Being complied. <ul style="list-style-type: none"> At present, no topsoil is available in this mining lease. Topsoil extracted from this mining lease was used for greenbelt development as well as for top layer on reclamation area in the mining lease.
ii.	Garland drains shall be constructed to arrest silt and sediment flows from soil and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, greenbelt development etc. The drains shall be regularly de-silted particularly after monsoon and maintained properly. Garland drain (size, gradient and length) shall be constructed for both mine pit and for waste dump and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and de-silted at regular intervals.	Being complied. Various measures taken are: <ul style="list-style-type: none"> Garland drains (5665 m*2.0m*1.5m) with a gradient of about 1 in 100 are made all along the waste dump - North Eastern side of the Lease area, Eastern side & Southern side of the ML area. Water collected through this garland drain is connected to the settling tank & water recharge pit over an area of 0.50 ha (South Eastern side of ML area). Drains and settling tank are de-silted regularly. Two sumps are made with sizes of 84m*65m*5.0m and 250m*53m*5.0m in pit 1 and one sump with 265m*127m*2.9m in pit 2.
iii.	Drilling and blasting shall be by using dust extractors / wet drilling.	Being complied. Wet drilling is being practiced. Controlled blasting is being done.
iv.	Plantation shall be raised in an area of 195.54 Ha including a greenbelt of adequate width by planting the native species around the ML area,	Being complied. <ul style="list-style-type: none"> An area of 65.82 ha within ML has been covered under plantation with native plant species up to March

S.No.	Condition	Compliance Status
	<p>roads, OB dump sites etc., in consultation with the local DFO / Agriculture department. The density of the trees shall be around 2500 plants per Ha. The company shall avoid plantation of mono culture species. Further greenbelt shall be developed in the North to NE direction of mine to protect the temple from dust emission. Fruit bearing species shall be planted by involving local people especially women with the help of self help groups.</p>	<p>2022.</p> <ul style="list-style-type: none"> • Saplings have been planted along Lease boundary, OB dump slopes and near ML 15 View point. • Greenbelt development will be further extended in a phased manner. • All saplings including fruit bearing species are planted and regular maintenance is being done by involving local people. • The plantation will be continued in phased manner up to conceptual stage. <p>An EC amendment request is submitted to the Ministry on 07.01.2015 for this condition because at the time of obtaining EC, the existing greenbelt area is 24.00 ha. As per approved Mining Plan and the proposed greenbelt area at the conceptual stage is 62.39 Ha. The same is mentioned in page Nos. 69 & 86 of Rapid EIA report.</p> <p>In page 1 of EC letter also, it is mentioned that 62.39 Ha of greenbelt area is to be developed, but in page no.2 of specific condition no. iv, it is mentioned that 195.54 Ha of greenbelt is to be developed. The proposed land use pattern at Conceptual stage specified that 62.39 Ha of greenbelt will be developed in EIA report and approved Mining Plan.</p> <p>Hence an EC amendment request is submitted to the Ministry on 07.01.2015 for amendment of specific condition no. iv, to amend the greenbelt area from 195.54 Ha to 62.39 Ha. EAC committee recommended to amend this condition in the meeting held on 28.10.2015 and the EC amendment order is awaited. We have requested to the MoEF&CC regarding the same vide letter No. RCL/MoEF&CC/237/388, dt. 02.03.2021. The extract of the EAC minutes and letter dated 02.03.2021 are enclosed as Annexure - I.</p>

S.No.	Condition	Compliance Status
v.	The company shall develop 50 m wide greenbelt barrier along the mine lease since distance between the last point of the mine and river is 1.0 km.	Being complied. The greenbelt developed with a width of 50 m along the mining lease boundary towards the River.
vi.	The company shall prepare Wild life conservation in consultation with CWLW / State Forest Department for implementation.	Noted. <ul style="list-style-type: none"> • Wild life conservation plan is not prepared as there is no wild life and Schedule - 1 species are present in the area as per the authenticated list of Flora and fauna by Forest Dept. and no wild life is observed after opening the mine in the subject area. • This mining lease area does not fall under forest area. There are some agriculture lands and public roads in between the nearest reserve forest and the subject mining lease area.
vii.	There shall be no advancement of mine benches laterally. Orientation of mine benches shall be across the strike to minimize the decline in the ground water level.	Being complied. There is no advancement of mine benches laterally and the movement of benches is across the strike only.
viii.	Risk assessment study shall be undertaken for entire north band and report submitted to the Ministry.	Being complied. <ul style="list-style-type: none"> • Risk assessment study is carried out and the report is incorporated in EIA / EMP report and submitted to the Ministry vide Lr. No. MCL/MoEF/4009/2007 dated 05.10.2007. • Risk assessment study is being reviewed regularly and updated up to August 2021.
ix.	The company shall develop pisciculture in the water body(s) after mining activity is over. A fisherman co-operative society shall be formed with the affected people as members and initial financial support by the company. The company shall involve local people in the afforestation programme.	Noted. <ul style="list-style-type: none"> • Pisciculture will be taken up at final stage of mining activities. • Local people are being engaged in greenbelt development activity.
x.	The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground water board.	Being complied. <ul style="list-style-type: none"> • Suitable ground water conservative measures are being taken up such as garland drains, check dams, recharge pit and rainwater harvesting pits etc. • The rain water collected in mine pit is being used for dust suppression,

S.No.	Condition	Compliance Status
		<p>greenbelt development and domestic purposes after settling of silt in mine sump and through settling tank.</p> <ul style="list-style-type: none"> • As part of the CSR activities, mine seepage water is being supplied to nearby villages in Jaggayyapet Mandal, to conserve the water resources in the vicinity. • A pond of 160 m * 30 m size (nearly 0.5 ha area) is made at SE corner of lease area which is helping ground water recharge in the nearby area and excess mine seepage water is being pumped into this pond. • Excess mine pit water is also being supplied for agricultural purposes for about 85 acres on need basis so as to conserve the ground water resources in the vicinity. • Check dam is constructed on Vagu outside the mining lease in the NW side to recharge groundwater in the surrounding area. • NOC obtained vide their letter Lr. No. PRR05-11028/14/2018-SLNA-GIS-CORD, date: 19.02.2021 to conduct the mining operations below ground water table from Dept. of Panchayat Raj & Rural Development, Government of Andhra Pradesh (agency authorized to issue NOC for Andhra Pradesh projects). The conditions stipulated in this NOC are being followed and yearly compliance reports are being submitted to the concerned. This order is valid up to 18.02.2024.
xi.	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing well and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – Pre-monsoon (April-May), Monsoon (August), Post-Monsoon (November) and Winter (January) and the data thus collected may be sent regularly to MOEF, Central Ground Water	<p>Being complied.</p> <ul style="list-style-type: none"> • Groundwater levels are being monitored regularly (at 4 locations) and readings are being recorded. • The ground water data for the period October 2021 to March 2022 is being submitted to the CGWB, copy is enclosed as Annexure – II. • Compiled data on Ground water quality carried out by MoEF&CC

S.No.	Condition	Compliance Status
	Authority and Regional Director, Central Ground Water Board.	<p>approved external environmental agency (M/s Universal Enviro Associates, Hyderabad) for the same period is enclosed as Annexure – III.</p> <ul style="list-style-type: none"> The monitoring is being carried out four times in a year – Pre-monsoon (April-May), Monsoon (August), Post-Monsoon (November) and Winter (January).
xii.	The company shall obtain forestry clearance under the Forest (Conservation) Act, 1980.	<p>Noted.</p> <p>Total mining lease area is non-forest area, hence not applicable.</p>
xiii.	Prior permission from the competent authority shall be obtained for drawl of ground water, if any.	<p>Being complied.</p> <ul style="list-style-type: none"> Permission obtained from the Dept. of Panchayat Raj and Rural Development Department, Government of Andhra Pradesh (agency authorized to issue NOC for Andhra Pradesh projects) for extraction of Ground water vide Letter No. PRR05-11028/45/ 2018-SLNA-GIS-CORD, dt. 13.11.2021 from the available quantity of water from the mine de-watering only. This clearance is common for our cement plant, thermal power plant, waste heat power plant, township and for four captive Mining Lease areas. This order is valid up to 12.11.2024.
xiv.	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operation & in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded.	<p>Being complied.</p> <ul style="list-style-type: none"> Vehicles are being maintained properly at our workshop located at cement plant. Vehicle emission levels are being monitored regularly and kept under control. With proper supervision regularly, it is ensuring that the vehicles are not overloaded. To avoid fine particles, escape while transporting, the following measures is being in practice: <ul style="list-style-type: none"> Transportation of mineral is being done by moderately loading the vehicles to avoid the spillage. The body height of the vehicle is raised by 1 foot to avoid the

S.No.	Condition	Compliance Status
		spillage of material.
xv.	A final mine closure plan along with details of Corpus Fund shall be submitted to the MOEF 5 years in advance of final mine closure for approval.	Being complied. <ul style="list-style-type: none"> The life of the mine is estimated up to the year of 2031-2032. The final mine closure plan along with other details will be submitted accordingly to MoEF&CC as suggested.

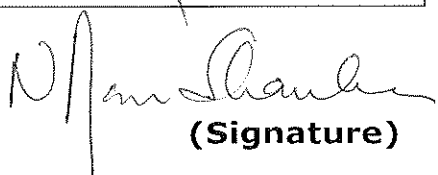
B. GENERAL CONDITIONS:

S.No.	Condition	Compliance Status
i.	No change in mining technology and scope of working shall be made without prior approval of the MoEF.	Being complied. No change in mining technology and the scope of working.
ii.	No change in the calendar plan including excavation, quantum of mineral and waste shall be made.	Being complied. <ul style="list-style-type: none"> No change in the calendar plan. In the financial year 2021-2022, the limestone production was 1.79 million tonne against production capacity of 1.80 million TPA. Waste of 8,55,600 cu.m generated during the financial year 2021-2022 against IBM approved quantity of 9,59,090 cu.m.
iii.	Conservation measures for protection of flora and fauna in the core & buffer zone shall be drawn up in consultation with the local forest and wildlife department.	Noted. <ul style="list-style-type: none"> There is no forest area in the mining lease and no endangered species in the mining lease area. Further submitted letter to Chief Wild Life Warden requesting their suggestions for conservative measures and reply is awaited.
iv.	Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for RPM, SPM, SO ₂ , NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive in consultation with State Pollution Control Board.	Being complied. 9 Nos. of ambient air quality monitoring stations are established in buffer zone and 4 Nos. of air quality monitoring stations are established in core zone based on the meteorological data, topographical features and environmentally and ecologically sensitive in consultation with State Pollution Control Board and regular (fortnightly) manual monitoring is being done through MoEF&CC approved external environmental monitoring agency for PM ₁₀ , PM _{2.5} , SO ₂ , NO _x monitoring.
v.	Data on Ambient Air Quality (RPM, SPM, SO ₂ , NO _x) should be regularly submitted to the Ministry	Being complied. Data of the Ambient Air Quality is being submitted to the Regional Office,

S.No.	Condition	Compliance Status
	including its RO located at Bangalore and the SPCB / CPCB once in six months.	MoEF&CC located at Chennai and the SPCB / CPCB regularly once in six months. Compiled data for the period October 2021 to March 2022 is enclosed as Annexure – IV.
vi.	Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.	<p>Being complied.</p> <ul style="list-style-type: none"> • Fugitive dust emissions are being controlled at the source. • Permanent water sprinkling system is being operated on main haul road leading to the limestone crusher. • Mobile water spraying tanker is being used to control dust emission on other main haul road leading to the limestone crusher. • Water is being sprayed on internal ramp roads, muck piles and unloading points (on dumps) by mobile water tankers. • Wet drilling is being practiced. • Water fogging system is being operated at limestone crusher dump hopper (limestone unloading point) to suppress the fugitive emissions. • To avoid spillage of material while transporting, the following measures are being in practice: <ul style="list-style-type: none"> ○ Moderate loading of tippers. ○ The body height of the vehicle is raised by 1 foot.
vii.	Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc., shall be provided with ear plugs / muffs.	<p>Being complied.</p> <ul style="list-style-type: none"> • Vehicles are being maintained properly for control of noise level and the noise level is well below the limit. • Ear plugs / muffs are provided to respective HEMM operators. • Compiled data of Noise levels measured in the financial year 2021-2022 is enclosed as Annexure – V.
viii.	Industrial waste water (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	<p>Being complied.</p> <ul style="list-style-type: none"> • Oil and Grease trap is installed at Workshop to separate oil & grease before letting wastewater out. • Samples of Oil and Grease trap outlet are being regularly analysed by MoEF&CC approved external environmental agency. • The data for the period October 2021 to March 2022 is enclosed as Annexure – VI. • There is no generation of

S.No.	Condition	Compliance Status
ix.	Personal working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.	wastewater from the mine. Being complied. Personal Protective Equipment are being provided to the personnel working in dusty areas and adequate training and information on safety and health aspects are being provided as part of Mines Vocational Training at our Ramco Mines Vocational Center.
x.	Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Being complied. <ul style="list-style-type: none"> • Occupational health surveillance programme is taken up periodically and records are being maintained. Corrective measures will be taken to the contractions due to exposures of dust, if needed. • A full-fledged Occupational Health Centre with a qualified Occupational Health Specialist with supporting staff is established with the following facilities: <ul style="list-style-type: none"> ○ 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
xi.	A separate environmental management cell with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the organization.	Being complied. <ul style="list-style-type: none"> • Environment management cell is established with qualified personnel to look after the environment management related activities and is reporting to Head of the Unit of the company. • The organization chart is enclosed as Annexure- VII.
xii. & xiv.	The project authorities shall inform to the RO located at Bangalore regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Noted. <ul style="list-style-type: none"> • Date of financial closure for this project is not required as the total funding for this project is from own funds. • The same is informed to the Regional Office on 02.06.2007.
xiii.	The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted	Being complied. <ul style="list-style-type: none"> • The funds earmarked for environment protection are not diverted for other purposes.

S.No.	Condition	Compliance Status
	for other purposes. Year-wise expenditure shall be reported to the Ministry and its RO located at Bangalore.	<ul style="list-style-type: none"> The details of environmental protection expenditure for the financial year 2021-2022 and funds allotted for the financial year 2022-2023 are enclosed as Annexure - VIII.
xv.	The RO of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should extend full co-operation to the officer(s) of the RO by furnishing the requisite data / information / monitoring reports.	<p>Being complied.</p> <ul style="list-style-type: none"> The copy of this half-yearly compliance report is mailed to ecompliance-ap@gov.in, vide Notice from MoEF&CC, Chennai dated 13.08.2019. The same is also uploaded in PARIVESH portal. Necessary co-operation along with relevant data is being provided.
xvi.	A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.	Noted.
xvii.	SPCB should display a copy of the clearance letter at RO, district industries centre and Collector's Officer / Tahsildar's office for 30 days.	Noted.
xviii.	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the SPCB and also at website of the MOEF at http://envor.nic.in and a copy of the same shall be forwarded to the RO of this Ministry located Bangalore.	<p>Complied.</p> <p>Advertised in "Eenadu" Telugu daily and "The Hindu" English daily on 27.05.2007 and copy of the same is submitted to RO, Bangalore vide Lr. No. MCL/Mines/North Band/165 dated 02.06.2007.</p>


(Signature)

approved by Indian Bureau of Mines (IBM) vide letter no 314(3)/2009-MCCM(CZ)/MP/MS/PMCP-9 dated 31.12.2009.

The mining is proposed on the hill top and the depth of the mine from hill top will be 24m. The method of mining will be opencast mechanized. The lease area of the mine is 293.12 ha which out of which 19.24 ha which was a private revenue land and 273.88 ha was forest land. Application for diversion of forest land was submitted on April, 18th, 2011. The mine will be captive to 2.5 MTPA Cement Plant. The water table is at a depth of 10m below ground level. Mining will not intersect the ground water table. No National Park/Sanctuary/Eco-sensitive Zone is located within 10 km radius of the mine. The Pada Vegu River and Bapu River are flowing at a distance of 1.5 and 2.0 km respectively. The OB will be dumped in the non-mineralised area with construction of garland drain to prevent spillage of waste. It was informed by the PP that mine site is located outside the Critically Polluted Area.

Baseline data was collected from March 2010 to May 2010. All environmental parameters are to be within permissible limits. Public Hearing was conducted on 26.4.2011. The PH was presided over by the District Collector, Chandrapur. Public hearing was conducted successfully and issues raised by public were addressed by the project proponent with commitment for implementation of development activities. Total cost of the project is Rs. 4232.71 lakhs.

The proposal of EC was earlier considered by the Committee in its meeting held during December 19-21, 2012 wherein the Committee recommended the project for environmental clearance subject to submission of the copy of Mining Plan with Progressive Mine Closure Plan has been approved by Indian Bureau of Mines. Accordingly, vide Letter No. NIMCO/EC/2013/102 dated May 2, 2013, the copy of the Mining Plan with Progressive Mine Closure Plan approved by Indian Bureau of Mines (IBM) was submitted by PP.

The Committee deliberated at length the information submitted by PP and **recommended** the proposal for Environmental Clearance for limestone mining at capacity 1.0 MTPA of M/s New India Mining Corporation Pvt. Ltd, located at village Chedwai, District Chandrapur in Maharashtra.

AMENDMENT OF ENVIRONMENT CLEARANCE

(2.62) J-11015/377/2006-IA.II(M) Jayanthipuram Limestone Mine (North Bond) Project of M/s Madras Cements Ltd at Village Jayanthipuram, Jaggayopetu Taluka in Krishna District in Andhra Pradesh.

The proposal of M/s Madras Cements Ltd. is for amendment of environmental clearance no. J-11015/377/2006-IAII(M) dated 18.05.2007 w.r.t. plantation area in the Point No. iv. of Specific Conditions of EC as – 'plantation shall be raised in an area

of 62.39 ha' in place of '195.54 ha'. The PP informed that the plantation area is specified as below, as per EC.

Page No. 1 of EC specifies that:

'Out of 256.64 ha of Mining lease area, area to be excavated is 122.53 ha. About 18.95 ha of area has been earmarked for waste dumps, 4.34 ha for bund, 1.50 ha for infrastructure, 4.06 ha for roads, 62.39 ha for afforestation & green belt development and 42.77 ha area will be reclaimed.'

Point No. iv of specific conditions of EC order specifies that:

'Plantation shall be raised in an area of 195.54 Ha including a greenbelt of adequate width by planting the native species around the ML area, roads, OB dump sites etc., in consultation with the local DFO / Agriculture department. The density of the trees shall be around 2500 plants per Ha. The company shall avoid plantation of mono culture species. Further greenbelt shall be developed in the North to NE direction of mine to protect the temple from dust emission. Fruit bearing species shall be planted by involving local people especially women with the help of self help groups'.

The PP informed that the greenbelt area is specified as 62.39 ha as per Mining Plan for the period 2005-06 to 2009-10 approved by IBM, Bangalore vide letter No. MP/AP/KSN/Lst-111-SZ dated 07.04.2006 (Page No. 70 – Financial Assurance Table). The same is incorporated in REIA / EMP report of the above subject EC. The PP also informed that Page No. 66 (Table 31 – Land Environment) and Page No. 86 (Afforestation Plan) of REIA / EMP report submitted for the subject EC, also specifies that plantation area is 62.39 ha only. The PP informed that the figure of 195.45 ha in the Point No. iv of Specific Conditions of subject EC order may be a typographical error.

The committee deliberated at length the information submitted by PP and **recommended** to amend the Point No. iv of Specific Condition of EC no. J-11015/377/2006-IA.II(M) dated 18.05.2007 in line with Page No. 1 of the EC letter, as 'Plantation shall be raised in an area of 62.39 ha'.

AMENDMENT OF TOR

(2.63). J -11015/133/2012-IA.II(M) Captive Limestone Mining Project of M/s ACC Ltd. Village Gollapalli, Mylavaram Mandalam, District Kadapa (YSR), Andhra Pradesh (997.08 ha).

The proposal is for amendment of TOR of Captive Limestone Mining production for 7.0MTPA (M.L. area 997.08 ha) located at Village Gollapalli, Vaddirala, G. Uppalapadu, Dhannawada, Chinna Venturla, Bestavemula, Mylavaram Mandalam,



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: mcljpm@ramcocements.co.in

THE RAMCO CEMENTS LIMITED

RCL/CGWB/JPM NB-239/72

Dt. 30.05.2022

Central Ground Water Board,
3-6-291, GSI Post, Bandlaguda,
Tirumala Residency Colony,
R. Krishnaiah Nagar,
Hyderabad-500 068.

Dear Sir,

Sub: Submission of Water Level Data for Environmental Clearance for Jayanthipuram Limestone Mine (North Band) for the period from October 2021 to March 2022 - reg.

Ref: EC Lr. No. J-11015/377/2006-IA.II(M) dated 18.05.2007.

This has reference to the above cited Environmental Clearance letter issued by Ministry of Environment & Forests, New Delhi for Jayanthipuram Limestone Mine (North Band).

We herewith enclose the Water Level Data measured by Piezometers as part of Half-Yearly Compliance for Environmental Clearance for this Mining Lease located at Jaggayyapet Mandal, Krishna District, Andhra Pradesh for the period from October 2021 to March 2022.

This is for your kind information and perusal please.

Thanking you,

Yours faithfully,
for The Ramco Cements Limited,
(Formerly known as Madras Cements Ltd.)

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

Encl.: a.a

**THE RAMCO CEMENTS LIMITED, JAYANTHIPURAM
WATER LEVEL DATA - JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)**

1. PIEZOMETER DETAILS:

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

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.10.2021	3.41
2	31.10.2021	3.44
3	16.11.2021	3.47
4	30.11.2021	3.65
5	16.12.2021	3.85
6	31.12.2021	4.05
7	16.01.2022	4.33
8	31.01.2022	4.41
9	16.02.2022	4.45
10	28.02.2022	4.51
11	16.03.2022	4.53
12	31.03.2022	4.68

2. PIEZOMETER DETAILS:

Location: North Band Open Well, Near Magazine
 RL - (+)40.01m
 Latitude - N16 51' 29.4"
 Longitude - E80 07' 19.3"
 Depth of well - 20.0 m

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.10.2021	0.98
2	31.10.2021	1.00
3	16.11.2021	1.02
4	30.11.2021	1.05
5	16.12.2021	1.00
6	31.12.2021	1.01
7	16.01.2022	1.05
8	31.01.2022	1.01
9	16.02.2022	1.03
10	28.02.2022	1.04
11	16.03.2022	1.10
12	31.03.2022	1.25

3. PIEZOMETER DETAILS:

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

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.10.2021	8.74
2	31.10.2021	8.80
3	16.11.2021	8.91
4	30.11.2021	8.99
5	16.12.2021	8.95
6	31.12.2021	8.99
7	16.01.2022	9.00
8	31.01.2022	9.25
9	16.02.2022	9.35
10	28.02.2022	9.58
11	16.03.2022	9.65
12	31.03.2022	9.71

4. PIEZOMETER DETAILS:

Location: North Band Pit-2 Area
 RL - (+)48m
 Latitude - N16 52' 39.0"
 Longitude - E80 06' 15.5"
 Depth of well - 50.0 m

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.10.2021	5.44
2	31.10.2021	5.25
3	16.11.2021	5.10
4	30.11.2021	5.21
5	16.12.2021	6.69
6	31.12.2021	6.93
7	16.01.2022	7.08
8	31.01.2022	7.10
9	16.02.2022	7.13
10	28.02.2022	7.14
11	16.03.2022	7.21
12	31.03.2022	7.24

THE RAMCO CEMENTS LIMITED, KSR NAGAR
JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
MINE DISCHARGE WATER QUALITY DATA
PERIOD - OCTOBER-2021 to MARCH-2022

S. No	Parameter	Unit	Month						Limits
			October-2021	November-2021	December-2021	January-2022	February-2022	March-2022	
1	p ^H		7.87	7.92	7.97	7.86	7.78	7.84	5.5 - 9.0
2	Total Suspended Solids	mg/L	51.6	50.6	52.3	53.6	50.2	52.3	100
3	Total Dissolved Solids	mg/L	959	912	935	949	929	937	2100
4	Chlorides (as Cl)	mg/L	279	299	301	323	312	326	1000
5	Sulphates (as SO ₄)	mg/L	75.3	61.6	63.5	65.1	60.6	58.3	1000
6	BOD (for 3 days at 27 °C)	mg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	30
7	Chemical Oxygen Demand	mg/L	16.80	15.40	15.90	16.70	15.90	16.60	250
8	Oil & Grease	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10
9	Iron (as Fe)	mg/L	0.34	0.29	0.35	0.38	0.32	0.31	3.0
10	Fluoride (as F)	mg/L	0.52	0.47	0.52	0.54	0.51	0.49	2.0

THE RAMCO CEMENTS LIMITED, KSR NAGAR
JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
AMBIENT AIR QUALITY MONITORING DATA - CORE ZONE
PERIOD - OCTOBER -2021 to MARCH-2022

Location	Parameter	Month												Limit
		October-2021		November-2021		December-2021		January-2022		February-2022		March-2022		
		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	58.1	48.9	53.5	46.3	51.2	51.2	54.2	53.8	58.3	55.3	61.6	100
	PM 2.5	23.1	23.6	19.8	21.7	18.7	20.8	20.7	22.0	21.7	23.7	22.3	25.0	60
	SO ₂	12.9	12.1	12.3	12.9	11.6	11.6	13.1	13.8	14.2	15.2	15.5	16.4	80
	NO _x	15.5	14.6	14.9	15.4	14.2	14.1	15.7	16.3	16.8	17.7	18.1	18.9	80
NB-Weigh Bridge-2	CO	563	562	474	489	452	471	478	501	512	521	529	540	2000
	PM 10	52.3	56.3	51.2	54.9	49.6	52.3	48.9	55.3	52.6	56.8	54.6	58.9	100
	PM 2.5	21.2	23.1	20.8	22.5	20.1	21.4	19.9	22.7	21.4	23.3	22.2	24.1	60
	SO ₂	13.6	13.2	11.9	13.7	11.1	12.9	13.9	13.9	15.3	13.5	16.2	14.5	80
Rest hall	NO _x	16.5	16.0	14.8	16.5	14.0	15.7	16.8	16.7	18.2	16.3	19.1	17.3	80
	CO	573	529	423	456	414	448	431	512	535	518	546	523	2000
	PM 10	53.6	55.2	50.3	52.1	48.6	50.6	47.1	53.6	54.5	60.2	56.2	62.6	100
	PM 2.5	21.9	22.5	20.6	21.2	19.9	20.6	19.3	21.8	22.3	24.5	23.0	25.5	60
Magazine Area	SO ₂	12.7	12.9	13.2	12.6	12.6	12.1	14.1	14.2	14.9	14.9	15.3	15.5	80
	NO _x	15.4	15.8	15.9	15.5	15.3	15.0	16.2	17.1	17.6	17.8	18.0	18.4	80
	CO	601	534	452	474	438	469	459	521	524	522	538	535	2000
	PM 10	57.9	51.7	47.9	56.2	45.6	54.9	47.3	54.1	58.3	58.9	60.2	61.4	100
Magazine Area	PM 2.5	23.7	20.9	19.6	22.7	18.7	22.2	19.3	21.9	23.8	23.8	24.6	24.8	60
	SO ₂	13.1	13.8	15.2	14.0	14.6	12.8	14.8	13.9	13.6	13.9	14.1	14.2	80
	NO _x	16.1	16.9	18.2	17.1	17.6	15.9	17.8	17.0	16.6	17.0	17.1	17.3	80
	CO	546	536	414	483	402	472	437	523	515	519	526	526	2000

Note: All values are mentioned in $\mu\text{g}/\text{m}^3$

**THE RAMCO CEMENTS LIMITED, KSR NAGAR
AMBIENT AIR QUALITY MONITORING DATA - BUFFER ZONE VILLAGES
PERIOD - OCTOBER -2021 to MARCH-2022**

Location	Parameter	Month												Limit
		October-2021		November-2021		December-2021		January-2022		February-2022		March-2022		
		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	
Dharmavarapupadu Tanda	PM 10	45.1	53.7	48.3	46.9	46.1	45.4	47.8	47.1	48.9	52.3	51.2	53.9	100
	PM 2.5	18.3	21.6	19.6	18.9	18.7	18.3	19.4	19.0	19.9	21.1	20.8	21.7	60
	SO ₂	11.9	12.8	10.6	12.1	10.4	11.9	10.9	12.6	12.5	13.5	13.1	13.1	80
	NO _x	14.5	15.5	13.2	14.8	13.0	14.6	13.5	15.3	15.1	16.2	15.7	15.8	80
	CO	201.0	212.0	198.0	196.0	201.0	184.0	209.0	191.0	223.0	205.0	226.0	215.0	2000
Jayanthipuram	PM 10	51.2	49.7	46.9	50.2	43.8	48.9	44.6	51.2	52.3	53.5	53.4	54.1	100
	PM 2.5	20.5	20.3	18.8	20.5	17.6	20.0	17.9	20.9	21.0	21.8	21.4	22.1	60
	SO ₂	12.9	13.5	11.2	10.6	10.8	11.1	11.2	11.6	11.6	12.9	12.4	13.2	80
	NO _x	15.8	16.4	14.1	13.5	13.7	14.0	14.1	14.5	14.5	15.8	15.3	16.1	80
	CO	182.0	215.0	179.0	178.0	211.0	169.0	218.0	176.0	241.0	223.0	248.0	229.0	2000
Chillakallu	PM 10	50.3	51.3	46.2	48.3	45.1	46.1	47.1	48.9	47.6	49.6	48.9	52.3	100
	PM 2.5	20.3	20.8	18.7	19.6	18.2	18.7	19.0	19.8	19.2	20.1	19.8	21.2	60
	SO ₂	12.8	12.9	10.9	12.3	11.2	11.9	14.2	12.4	12.9	12.1	13.2	12.4	80
	NO _x	15.5	16.0	13.6	15.4	13.9	15.0	16.9	15.5	15.6	15.2	15.9	15.5	80
	CO	212.0	231.0	186.0	191.0	202.0	187.0	204.0	193.0	215.0	208.0	221.0	216.0	2000
K.Agraharam Village	PM 10	49.8	51.9	47.1	47.1	44.9	45.3	45.3	47.3	53.5	54.3	55.2	55.2	100
	PM 2.5	20.1	21.2	19.0	19.2	18.1	18.5	18.3	19.3	21.6	22.2	22.2	22.5	60
	SO ₂	13.9	16.6	11.1	10.9	11.5	10.2	12.5	10.8	13.5	13.8	13.9	13.9	80
	NO _x	17.0	19.0	14.2	13.3	14.6	12.6	15.6	13.2	16.6	16.2	17.0	16.3	80
	CO	223.0	239.0	191.0	168.0	187.0	154.0	192.0	159.0	249.0	212.0	253.0	222.0	2000
Jaggayyapet	PM 10	51.2	47.2	45.4	48.8	42.1	47.6	44.9	48.6	52.9	51.2	53.6	52.3	100
	PM 2.5	21.0	19.1	18.7	19.7	17.3	19.2	18.5	19.6	21.7	20.7	22.0	21.1	60
	SO ₂	13.1	16.1	10.8	11.6	10.5	11.5	11.2	11.9	12.6	12.6	12.8	12.6	80
	NO _x	15.5	19.1	13.2	14.6	12.9	14.5	13.6	14.9	15.0	15.6	15.2	15.6	80
	CO	241.0	247.0	182.0	171.0	189.0	163.0	195.0	165.0	246.0	221.0	248.0	228.0	2000
Budawada	PM 10	55.1	53.5	50.3	51.6	47.3	50.2	48.6	52.3	50.6	49.8	52.7	51.6	100
	PM 2.5	21.8	22.0	19.9	21.2	18.7	20.6	19.2	21.5	20.0	20.5	20.8	21.2	60
	SO ₂	13.7	14.7	12.9	13.9	11.9	12.6	12.3	12.8	12.8	13.1	13.3	13.7	80
	NO _x	16.5	17.3	15.7	16.5	14.7	15.2	15.1	15.4	15.6	15.7	16.1	16.3	80
	CO	221.0	231.0	201.0	242.0	210.0	212.0	214.0	218.0	242.0	206.0	251.0	217.0	2000
Vedadri	PM 10	52.3	51.6	43.2	45.3	44.9	44.9	45.3	47.1	53.8	52.9	54.2	54.6	100
	PM 2.5	21.3	20.5	17.6	18.0	18.3	17.9	18.5	18.7	22.0	21.1	22.1	21.7	60
	SO ₂	12.1	13.9	11.1	12.8	10.6	12.9	11.1	13.2	12.1	13.5	12.6	13.9	80
	NO _x	14.4	16.7	13.4	15.6	12.9	15.7	13.4	16.0	14.4	16.3	14.9	16.7	80
	CO	242.0	226.0	174.0	169.0	180.0	158.0	186.0	164.0	219.0	208.0	223.0	219.0	2000
Pochampalli	PM 10	50.7	48.9	41.9	44.9	43.7	43.6	44.1	45.2	48.6	50.6	49.3	53.4	100
	PM 2.5	20.7	19.9	17.1	18.2	17.9	17.7	18.0	18.4	19.9	20.5	20.2	21.7	60
	SO ₂	13.4	14.3	10.2	11.9	10.1	11.6	10.9	11.9	12.7	12.6	12.9	12.8	80
	NO _x	16.3	16.6	13.1	14.2	13.0	13.9	13.8	14.2	15.6	14.9	15.8	15.1	80
	CO	179.0	229.0	169.0	162.0	169.0	156.0	174.0	163.0	221.0	198.0	229.0	201.0	2000
Ravirala	PM 10	53.2	48.6	42.7	43.1	44.0	42.7	45.2	44.9	51.1	48.7	53.5	49.6	100
	PM 2.5	21.7	19.8	17.4	17.6	17.9	17.4	18.4	18.3	20.8	19.9	21.8	20.2	60
	SO ₂	12.5	13.6	10.5	12.1	10.3	11.4	10.6	11.8	11.9	13.2	12.3	13.3	80
	NO _x	15.5	16.5	13.5	15.0	13.3	14.3	13.6	14.7	14.9	16.1	15.3	16.2	80
	CO	192.0	242.0	158.0	151.0	161.0	149.0	165.0	155.0	208.0	212.0	223.0	228	2000

Note: All values are mentioned in $\mu\text{g}/\text{m}^3$

Annexure: X

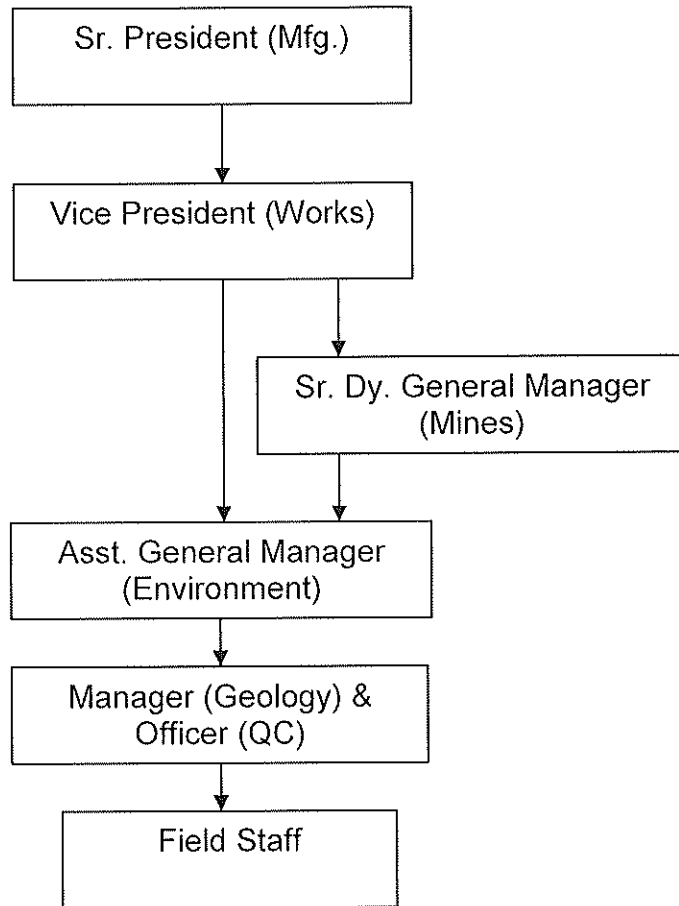
THE RAMCO CEMENTS LIMITED, KSR NAGAR
NOISE LEVEL MONITORING - JAYANTHIPURAM LIMESTONE MINE (NORTH BAND)
PERIOD - April -2021 to March-2022

Sl. No	Date of monitoring	Machine / Location	Noise Value dB(A)			
			Day time (6AM to 10PM)	Permissible Limit dB(A)	Night time (10PM to 6AM)	Permissible Limit dB(A)
1	22.09.2021	Drilling area	72.6	< 75	64.3	< 70
2	22.09.2021	Loading area	72.1	< 75	64.1	< 70
3	22.09.2021	Haul road	70.3	< 75	62.7	< 70
4	22.09.2021	Unloading area	70.4	< 75	62.9	< 70
5	22.09.2021	Mines office	51.5	< 75	38.3	< 70
6	22.09.2021	Crusher Hopper	62.9	< 75	54.6	< 70
7	22.09.2021	Sub Station	62.3	< 75	53.7	< 70
8	22.09.2021	Pump House	71.4	< 75	61.8	< 70
9	22.09.2021	Weigh Bridge	63.6	< 75	53.6	< 70
10	22.09.2021	PMC Camp	55.1	< 75	42.3	< 70

THE RAMCO CEMENTS LIMITED, KSR NAGAR
 AUTO GARAGE OIL & GREASE TRAP OUTLET WATER QUALITY DATA
 PERIOD - OCTOBER- 2021 TO MARCH- 2022

S. No	Parameter	Unit	Month						Range / Average	Norm
			October-2021	November-2021	December-2021	January-2022	February-2022	March-2022		
1	p ^H		7.87	7.81	7.87	7.81	7.89	7.84	7.81 - 7.89	5.5 - 9.0
2	Total Dissolved Solids	mg/L	996	981	999	965	958	942	974	2100
3	Total Suspended Solids	mg/L	82.7	80.6	83.5	81.9	82.9	79.6	81.9	100
4	Chemical Oxygen Demand	mg/L	149	139	142	135	141	138	141	250
5	BOD (for 3 days at 27 °C)	mg/L	43.1	42.7	43.5	42.9	43.5	42.9	43.10	100
6	Oil & Grease	mg/L	2.6	2.5	2.9	2.7	2.9	2.6	2.70	10

**THE RAMCO CEMENTS LIMITED, KSR NAGAR
ORGANIZATIONAL CHART OF ENVIRONMENTAL CELL**



THE RAMCO CEMENTS LIMITED
JAYANTHIPURAM GROUP OF LIMESTONE MINES
ENVIRONMENTAL PROTECTION ACCOUNT - CAPITAL & RECURRING EXPENDITURE DETAILS

Capital / Recurring	Description	For the year 2021-22, Lakh Rs.					Projected for 2022-23, Lakh Rs.				
		Jayanthipuram Limestone Mine (North Band)	Jayanthipuram Limestone Mine (South Band)	Ravirala Limestone Mine (Forest)	Ramco Budawada Limestone Mine (RF)	Total	Jayanthipuram Limestone Mine (North Band)	Jayanthipuram Limestone Mine (South Band)	Ravirala Limestone Mine (Forest)	Ramco Budawada Limestone Mine (RF)	Total
	Pollution Control - Noise detonators	12.23	3.75	5.96	2.13	24.070	12.00	6.00	8.00	0.50	26.50
	Pollution Control - Water Sprinkling	28.93	7.32	16.71	4.18	57.14	22.00	7.00	20.00	1.00	50.00
Recurring	Pollution Monitoring	1.71	1.59	1.55	1.29	6.124	1.80	1.60	1.60	1.30	6.300
	Wet drilling	0.60	0.20	0.37	0.05	1.22	0.60	0.40	0.70	0.10	1.80
	Greenbelt	8.80	12.45	5.93	8.37	35.550	7.00	10.00	4.00	5.00	26.000
	Reclamation	410.69	0.00	0.00	0.00	410.690	200.00	0.00	0.00	0.00	200.000
	Total	462.96	25.31	30.52	16.02	534.79	243.40	25.00	34.30	7.90	310.600