ISO 9001 ISO 14001 ISO 45001 ISO 50001
Certified Company

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THE RAMCO CEMENTS LIMITED

RCL/MoEF&CC/R. RF-239/276 Dt. 28.11.2022

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 Clearance for Ravirala Limestone Mine (RF) of The Ramco Cements Limited for the period from April 2022 to September 2022 – Reg.

Ref: 1. EC Lr. No. SEIAA/AP/MIN/KRI/07/2020/1973/174.80 & 171.63 dated 05.03.2022.
2. EC Lr. No. J-11015/149/2008-IA II (M) dated 26.08.2009.
3. EC Lr. No. J-11015/18/2000-IA.II (M) dated 16.10.2002.

We are herewith submitting the Half-Yearly Compliance Report for Environmental Clearance for the period from April 2022 to September 2022 along with relevant enclosures for Ravirala Limestone Mine (RF), Jaggayyapet Mandal, Krishna District, Andhra Pradesh.

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

N. Ravi Shankar
Sr. President (Mfg.)
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. RAVISHANKAR)
Sr. President (Mfg.)
Encl.: a.a
Cc to: Central Pollution Control Board, Nisarga Bhavan, A-Block, 1st & 2nd Floors, Thimmaiah Road, 7th D-Main, Shivanagar, Bengaluru – 560 079.

HALF-YEARLY COMPLIANCE REPORT

Environmental Clearance Letter/s No. and Date	SEIAA/AP/MIN/KRJ/07/2020/1973/174.80 & 171.63 and dated 05.03.2022
Name of the Project	The Ramco Cements Limited (Formerly Madras Cements Ltd.,), Ravirala Limestone Mine (RF) – 1.20 to 2.75 Million TPA Capacity of Limestone
Period of Compliance Report	April 2022 to September 2022

A. Special Conditions:

S.No.	Condition	Compliance Status
i	The proposal shall not attract the following acts & Rules: a. Forest Act 1980, b. Wild life (Protection) Act,1972; c. CRZ Notification, 2011; d. The Eco sensitive areas as notified under Environment (Protection) Act,1986; e. Critically polluted areas as notified by CPCB and also shall not harm live stocks and human beings and disturb their activities.	The entire mining lease area is under Reserve Forest. Hence, a corrigendum request is made for this EC condition to exclude 'Forest Act 1980', from this list, vide our letter No. RCL/SEIAA/74/2021-2022 dated 09.03.2022.
ii	The total production during a scheme should be limited to the approved quantity as per Mining scheme / plan.	Being complied. Total production in the financial year 2022-2023 (up to September 2022) is 762647 MT as against the approved mining plan production of 2500000 MT.
iii	The project proponent shall maintain the setback distance 7.5 meters buffer zone all around the mine lease area for greenbelt development and other conditions are to be fulfilled.	Being complied. Greenbelt is being developed in this setback distance of 7.5 m buffer zone all around the mine lease boundary.
iv	The avenue plantation (tall plants), of at least 1.5 m height, for 1 km length of the approach road on either side of the road is to be developed and maintained. The entire plantation is to be completed in the first year itself.	Being complied. Avenue plantation of at least 1.5 m height on the approach road on either side of the road is being developed and maintained. The balance area will be completed within stipulated time.
v	The proponent is advised to ensure safety to animal and public life.	Being complied. • The nearest habitation from this mining lease is 1.9 km from the boundary of this mining lease. • All safety precautions are being taken for safety of animal and public life is being ensured.

B. Specific Conditions:

S.No.	Condition	Compliance Status
I	The proponent shall comply with the mining methodology mentioned in approved mining plan and Form - I.	Being complied. Mining is being carried out as per approved mining plan & as per Form - I.
ii	Greenbelt shall be developed along the boundary of mining lease area and also in back filled and reclaimed areas with tall growing native species in consultation with the local DFO / Agriculture Department. The proponent of mine shall carry mining operations in such a manner so as to cause least damage to the flora of the mining area and nearby areas. He shall take immediate measures for planting in the same area or any other area selected by authorities not less than twice the number of trees going to be felled by mining operations. He shall also take measures for restoration of other flora / fauna if damaged by mining operations. In case any felling or damage to fauna and flora is involved, prior permission shall be taken from the concerned regulatory authority, by the proponent, without which mining shall not be taken up.	Being complied. • Greenbelt is being developed along the Lease boundary. • Presently there is no backfilling area and greenbelt will be developed on backfilled area in due course of time with native species in consultation with DFO / Agriculture department. • All precautions are being taken for not damaging the flora and fauna in the mining area and nearby areas. • While obtaining the Forest Clearance, an area of 61.54 Ha handed over to Forest department as Compensatory Afforestation area (CA) at Azmapuram village of Pedda Adisarpally Mandal in Nalgonda District and paid an amount of Rs. 26.63 lakh towards Compensatory Afforestation Scheme.
iii	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Being complied. • Fugitive dust emissions are being controlled regularly. • Water spraying being done on haul roads, loading, unloading and transfer points and the same will be continued.
iv	The proponent shall take appropriate measures to ensure that the GLC shall comply with the revised NAAQ norms notified by MoE&F, GoI on 16.11.2009.	Being complied. All the precautions are being taken to maintain GLC values within NAAQ norms notified on 16.11.2009.
v	The following measures are to be implemented to reduce air pollution duringtransportation of mineral:- • Roads shall be graded to mitigate the dust emission. • Regulatory Authority prior concurrence shall be taken for this activity. • Water shall be sprinkled at regular interval on the main haul road and	Being complied. • Roads are graded to mitigate the dust emissions. • Is being followed. • Water is being sprinkled at regular intervals on the main

S.No.	Condition	Compliance Status
	other service roads by water sprinklers to suppress dust.	haul road and other service roads by permanent water sprinklers / mobile water sprinklers to suppress dust.
vi	The following measures are to be implemented to reduce Noise pollution:- • Proper and regular maintenance of vehicles and other equipment. • The proponent shall ensure that there shall be no excessive noise, while taking up mining activity. • Limiting time exposure of workers to excessive noise. • The workers employed shall be provided with protection equipment and earmuffs etc. • Speed of trucks entering or leaving the mine is to be limited to moderate speed of 25 kmph to prevent undue noise from empty trucks.	Being complied. • Regular maintenance of vehicles and other equipment is being done. • All precautions are being taken to reduce the noise levels, within the stipulated limits. • Rotation of workers is being made to limit the time exposure of workers to excessive noise levels. • Necessary personal protective equipments (such as earmuffs, earplugs, etc.,) are being provided to workers exposed to noise levels and ensured for wearing of the same. • Speed of the trucks entering or leaving the mine is being limited to moderate speed of 25 kmph to prevent undue noise from the empty trucks.
vii	Measures should be taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010; dt. 11.01.2010 issued by the MoE&F, GOI to control noise to the prescribed levels. Workers engaged in operations of HEMM, etc should be provided with ear plugs / muffs. Regulatory authority instructions be taken if there are any better alternatives.	Being complied. • Measures are being taken to comply with the provisions laid under Noise Pollution (Regulation and Control) (Amendment) Rules, 2010; dt. 11.01.2010 issued by the MoEF&CC, GOI to control noise to the prescribed levels. • Workers engaged in operations of HEMM, etc are being provided with ear plugs / muffs.
viii	The proponent shall not take-up mining activity unless he obtains the safety clearance certificate from the Govt. competent authority.	Being complied.
2)	**Water Pollution**	
i	As per records the source of water is Bore well. Total water requirement is 180 KLD, Out of that, 150 KLD is used for Water sprinkling on haul roads / dust suppression; 20.0 KLD is used for Development of green belt; 10.0 KLD is used for Domestic & others purpose.	• The source of water is Mine Pit Water. • Hence, a Corrigendum request is made for this EC condition to modify this condition, vide our letter No. RCL/SEIAA/74/2021-2022 dated 09.03.2022.

S.No.	Condition	Compliance Status
		• The quantity of water requirement will be adhered to 180 kLD, while implementing this expansion project.
ii	Garland drain and siltation ponds of appropriate size should be constructed for the working pit to arrest flow of silt and sediment. The water so collected should be utilized for watering the mine area, roads, greenbelt development etc. The drains should be regularly desilted, particularly after monsoon, and maintained properly. Prior concurrence of Regulatory Authority concerned shall be taken for this activity before taking up mining.	Being complied. • Garland drain of a cumulative length of 2651 m with a size of 2.0m*1.0m has been made towards the Southern lease boundary as well as all along the bottom of the waste dump. Two garland drains made along the Temporary dump with a length of 126 m and 97 m. • The drains follow the natural slope with a gradient about 1 in 100 ultimately leading to the desilting sump. • A mine sump is made to settle the suspended solids in the water. The water collected is being utilized for dust suppression in the mine area, haul roads and for greenbelt development, etc. within lease area and for irrigation purposes. • The drains are being regularly de-silted and maintained. Desilting is being carried out regularly. During the year 2022-2023, desilting was carried out during the month of May 2022 for a quantity of 63 tonne.
iii	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells by the project proponent in and around project area in consultation with Regional Director, CGWB, Southern Region, Hyderabad. Data thus collected should be sent at regular interval to MoEF, CGWA and CGWB, Southern, Region, Hyderabad.	Being complied. 4 Nos. of piezometers (3 Nos. are automatic and 1 No. is manual) are used to monitor ground water levels. There is no contamination and depletion has observed due to mining activity and the recorded data is being submitted to the RO – Ministry, CGWB along with half-yearly compliance reports regularly. Compiled data on ground water quality carried out by MoEF&CC approved external environmental agency is being submitted to the RO – Ministry, CGWB along with half-yearly compliance reports regularly.
iv	Suitable conservation measures to augment groundwater resources in the area shall be planned and	Being complied. 48 Nos. of rain water harvesting pits are made at colony & 4 Nos. of rain

S.No.	Condition	Compliance Status
	implemented in consultation with Regional Director, CGWB, Southern Region, Hyderabad. Suitable measures should be taken for rainwater harvesting in consultation with concerned Regulatory Authority.	water harvesting pits are made at associated cement plant for roof top collection to recharge ground water table.
v	Permission from the competent authority should be obtained for drawl of ground water, if any, required for this project.	Being complied. Obtained NOC from Panchayat Raj & Rural Development department, Government of Andhra Pradesh (nodal agency for Central Ground Water Authority) to utilize mine seepage water, vide Lr. No. PRR05-11028/45/2018-SLNA-GIS-CORD dated 13.11.2021, which is valid up to 12.11.2024 for all captive mines and Cement Plant.
3)	**Solid Waste**	
i	Topsoil, if any, shall be stacked properly with proper slope with adequate measures and should be used for plantation purpose.	Not applicable as there is no top soil.
ii	The following measures are to be adopted to control erosion of dumps:- • Retention / toe walls shall be provided at the foot of the dumps. • Worked out slopes are to be stabilized by planting appropriate shrub / grassspecies on the slopes. • Regulatory Authority prior concurrence shall be taken for this activity.	Being complied. • One in-active dump is available in this mine and retaining bund is provided all along the dump toe. • Plantation with native plants is done as part of stabilization on steps made at regular interval and also spreading seeds on these steps to allow natural growth of plant, so to prevent erosion. • Vegetation on the top and slopes of the dump is under progress, to prevent erosion. • Geo textile matting is initiated for dump slopes to avoid erosion.
iii	Waste oils, used oils generated from the EM machines, mining operations, if any, shall be disposed as per the Hazardous Wastes (Management, Handling, and transboundary movement) Rules, 2008 and its amendments thereof to the recyclers authorized by APPCB. APPCB shall monitor this aspect at regular intervals to prevent any harm to life and the proponent on his part, shall ensure that this activity shall be taken up regularly under the guidance of	Being complied. Waste oils and used oils generated from the EM machines, mining operations, is being used in cement plant for kiln light-up or being disposed to APEMC authorized vendors.

S.No.	Condition	Compliance Status
	Regulatory Authority, as decided by that Authority.	
iv	The proponent will be squarely responsible for proper implementation of solid waste management plan, prevention of air pollution, water pollution, and any other kind of pollution / health hazard.	Being complied. • Solid waste is only overburden (OB), which is being dumped separately with proper slope & adequate safeguards and will be utilized for reclamation. • Reclamation will be done as per the approved mining plan.

C. General Conditions:

S.No.	Condition	Compliance Status
i	This order is valid for a period of 7.87 years or the expiry date of mine lease or land lease period issued by the Government of A.P., whichever is earlier.	Being complied. • Part of the Mining Lease is covered with overburden dump. After removing this overburden dump for reclamation, detailed exploration will be carried out in this area. Accordingly, the reserves will be updated and the life of the mine will be increased. • Hence, Corrigendum request is made for this EC condition vide our letter No. RCL/SEIAA/74/ 2021-2022 dated 09.03.2022, to modify this condition as: o This order is valid for a period as per the life of mine approved by IBM or the expiry date of mine lease or land lease period issued by the Government of A.P., whichever is earlier.
ii	While giving CFE / CFO, the APPCB is to kindly ensure compliance of guidelines issued in G.O RT No 239 dt 16.04.2020 and Memo. No/ covid-19/2020/HMFW dt 18.04.2020 issued by Medical, Health and Family welfare department, Government of AP and the Ministry of Home Affairs order No 40-3/2020/DM-DA dt 15.04.2020 scrupulously.	Noted. All guidelines issued regarding COVID pandemic are being followed.
iii	The proponent shall scrupulously follow any conditions stipulated by Revenue department / Panchayat Raj / Municipal administration/local self government bodies (Gram panchayat / Gram secretariat) in ensuring safety to	Noted and will be adhered to.

S.No.	Condition	Compliance Status
	human and animal life. The APPCB to ensure the same while according CFE / CFO. The APPCB to ensure the same while according CFE / CFO.	
iv	Proponent shall ensure that there is no disturbance to flora and fauna. Serenity of nature must be protected at any cost.	Being complied. • The nearest habitation from this mining lease is 1.9 km from the boundary of this mining lease. • All safety precautions are being taken to prevent disturbance to the flora and fauna. • Serenity of nature is being protected.
v	In respect of government land for mining, the responsibility fixed on AD mines to check whether necessary clearances from revenue department are obtained.	Not applicable, as this mining lease is reserve forest.
vi	In case of patta land while granting mine lease ADMG should verify the land lease documents.	Not applicable, as this mining lease is reserve forest.
vii	In respect of forest land given in lease for mining, the proponent shall scrupulously adhere to the mining conditions stipulated by the government of Andhra Pradesh.	Being followed the mining conditions stipulated by the Government of Andhra Pradesh.
viii	Any change in mining plan / production / mining methodology the proponent shall apply afresh EC.	Will be adhered to, for any change in mining plan / production / mining methodology.
ix	While taking up mining activity the proponent shall meticulously follow approved mining plan / Form – I / EMP.	Being meticulously following up the measures mentioned in approved mining plan / Form – I / EMP.
x	Once in an year proponent shall conduct impact analysis on environment by reputed institute recognized by Director General, Mines and Safety.	It is proposed to conduct impact analysis on environment by Institute / organization recognized by MOEF&CC, once in five years. Corrigendum request is made for this EC condition vide our letter No. RCL/SEIAA/74/2021-2022 dated 09.03.2022, to modify this condition.
xi	"Consent for Establishment" & "Consent for Operation" shall be obtained from Andhra Pradesh Pollution Control Board under Air and Water Act to carry on mining.	Consent for Establishment and Consent for Operation for this expansion project obtained from AP Pollution Control Board.
xii	No change in mining technology and scope of working should be made without prior approval of the SEIAA, A.P. No further expansion or modifications in the mine shall be	Will be complied, accordingly.

S.No.	Condition	Compliance Status
	carried out without prior approval of the SEIAA, AP / MOEF&CC, GoI, New Delhi, as applicable.	
xiii	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment & Forests, its Regional Office, Chennai, SEIAA, A.P., Zonal Office of Central Pollution Control Board, Bangalore, District Collector and A.P. Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions including results of monitored data on their websites and shall update the same periodically.	Being complied. • Submitting six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment & Forests, its Regional Office, Vijayawada and AP Pollution Control Board, regularly. • Uploading the status of compliance of the environmental clearance conditions including results of monitored data on our company website and being updated regularly.
xiv	Post Environment Clearance Monitoring: It shall be mandatory for the project manager to submit half yearly compliance reports in respect of the stipulated prior EC terms and conditions in hard and soft copy to SEIAA on 1st June and 1st December of each calendar year. (Refer 10 (i) and 10 (ii) of S.O. 1533 (E) of Ministry of Environment and Forests Notification, New Delhi, dt 14th September, 2006.)	Being complied. Submitting this as part of half-yearly compliance report along with six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment & Forests, its Regional Office, Vijayawada and AP Pollution Control Board.
xv	The APPCB shall monitor the EC conditions stipulated by SEIAA as per GO MS No 120 dated 01.11.2018 of EFS&T Dept., and ensure the compliance.	Noted.
xvi	The proponent shall obtain prior permissions and continued guidance from regulatory authorities for all the above conditions wherever it is required.	Being complied. All necessary prior permissions from regulatory authorities for all the above conditions wherever it is required are being taken.
xvii	All safety norms as stipulated in various laws and statutes shall be scrupulously followed by the proponent. PCB shall ensure compliance to the conditions stipulated by SEIAA.	Being complied. All safety norms as stipulated in various laws and statutes are being scrupulously followed.
xviii	The Proponent shall follow G.O. Ms 107 dated 30.07.2016 of Industries &	Being complied.

S.No.	Condition	Compliance Status
	Commerce (Mines-II) Department wherever applicable.	
xix	Consent for Establishment" shall be obtained from Andhra Pradesh Pollution Control Board under Air and Water Act before the start of any activity / construction work at site.	Consent for Establishment and Consent for Operation for this expansion project obtained from AP Pollution Control Board.
xx	Officials from the Regional Office of MOEF&CC, Chennai / The SEIAA, Andhra Pradesh through the Regional Offices of Andhra Pradesh Pollution Control Board, who would be monitoring the implementation of environmental safeguards should be given full co-operation, facilities and documents / data by the project proponents during their inspection. A complete set of all the documents shall be submitted to the CCF, Regional Office to MOEF&CC, Vijayawada.	Noted. • Full co-operation, facilities and documents / data will be given during the inspections of Officials from the Regional Office of MOEF&CC, Vijayawada / The SEIAA, Andhra Pradesh through the Regional Offices of Andhra Pradesh Pollution Control Board. • A complete set of all the documents submitted to the Regional Office, MoEF&CC, Vijayawada, vide Lr. No. RCL/MoEF&CC/79/2021-2022 dated 11.03.2022.
xxi	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Being complied. 9 Nos. of ambient air quality monitoring stations are established in the nearby villages and 4 Nos. of stations are established in core zone. Ambient air quality monitoring is being carried out by MoEF&CC approved external environmental agency on fortnightly basis.
xxii	Data on ambient air quality should be regularly submitted to the Ministry including its Regional Office located at Chennai and the State Pollution Control Board / Central Pollution Control Board once in six months.	Being complied. Compiled data of ambient air quality monitoring collected during half-year period April 2022 to September 2022 by MoEF&CC approved external environmental monitoring agency is enclosed as Annexure – I.
xxiii	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	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.
xxvi	The project proponent shall ensure that no natural watercourse and/or	Not applicable. No natural watercourse and/or

S.No.	Condition	Compliance Status
	water resources shall be obstructed due to any mining operations. Necessary safeguard measures to protect the first order streams, if any, originating from the mine lease shall be taken.	water resources are being obstructed due to mining operations.
xxv	Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Being complied. • 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: o X-ray o ECG o Spirometry (lung function test) o Audiometry o Semi-auto analyser to carryout bio-chemical tests o Clinical lab for micro-biological tests (including sputum test) o Checking colour blindness o Dental chair o Ambulance
xxvi	A separate environmental management cell with suitable qualified personnel should be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	Being complied. • 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 - II.
Xxvii	The funds earmarked for environmental protection measures (Capital cost Rs. 39 Lakhs and Recurring cost Rs. 52 Lakhs /annum) should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Vijayawada.	Being followed. • The funds earmarked for environment protection are not diverted for other purposes. • The details of environmental protection expenditure for the financial year 2021-2022 and funds allotted for the financial year 2022-2023 are enclosed

S.No.	Condition	Compliance Status
		as Annexure - III.
xxviii	At least 2% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared in accordance to the MoEF&CC's office Memorandum No.F.No.22- 65/2017-IA.III, dated.01.05.2018 and submit to the SEIAA, A.P and Ministry's Regional Office, Vijayawada.	Corrigendum request is made for this EC condition vide our letter No. RCL/SEIAA/74/2021-2022 dated 09.03.2022, to modify this condition requesting for: • At least 1% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be Prepared -----.
xxix	The project proponent shall submit the copies of the environmental clearance to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied.
xxx	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the 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 State Pollution Control Board and SEIAA, A.P.	Complied. Published advertisements in 2 Nos. of newspapers (The Hans India – English & Sakshi – Telugu – vernacular language) on 11.03.2022 regarding the issuance of this Environmental Clearance order. The same is communicated to SEIAA-AP vide Lr. No. RCL/SEIAA/78/2021-2022 dated 11.03.2022.
xxxi	The SEIAA or any other competent authority may alter / modify the above conditions or stipulate any further condition in the interest of environment protection.	Noted.
xxxii	The proponent shall obtain all other mandatory clearances from respective departments before taking-up the mining activity.	Being complied. All necessary prior permissions from regulatory authorities for all the above conditions wherever it is required are being taken.
xxxiii	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
xxxiv	Concealing the factual data or failure to comply with any of the conditions mentioned above may result in	Noted.

S.No.	Condition	Compliance Status
	withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	
xxxv	The SEIAA may revoke or suspend the order, if implementation of any of the above conditions is not satisfactory. The SEIAA reserves the right to alter / modify the above conditions or stipulate any further condition in the interest of environment protection.	Noted.
xxxvi	SEIAA also reserves the right to cancel the EC issued at any time, if EC has been obtained by the proponent through suppression of any information or furnishing false information.	Noted.
xxxvii	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Being complied for the conditions stipulated as per Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986. Taken Public Liability Policy No. 0304008408 00 00 for the financial year 2022-2023.

(Signature)

HALF-YEARLY COMPLIANCE REPORT

Environmental Clearance Letter/s No. and Date	J-11015/149/2008-IA II (M) and dated 26.08.2009
Name of the Project	The Ramco Cements Limited (Formerly Madras Cements Ltd.,), Ravirala Limestone Mine (RF) – 0.50 to 1.20 Million TPA Capacity of Limestone
Period of Compliance Report	April 2022 to September 2022

A. Specific Conditions:

S.No.	Condition	Compliance Status
i.	The environmental clearance is subject to the condition, if any, stipulated by the IBM on the mining scheme submitted by the project proponent for its approval.	Noted. No condition is stipulated by IBM during the approval of Modified Mining plan for 1.20 million TPA limestone production.
ii.	No new two pits shall be simultaneously worked i.e., before the first pit is exhausted and reclamation work completed, no mineral bearing area shall be worked.	Being complied. Only one (existing) pit is in operation and the same pit will be continued for future also.
iii.	After exhausting the first mine pit and before starting mining operations in the next pit, reclamation and plantation works in the exhausted pit shall be completed so as to ensure that reclamation, forest cover and vegetation are visible during the first year of mining operations in the next pit. This process will follow till the last pit is exhausted. Adequate rehabilitation of mined pit shall be completed before any ore bearing area is worked.	Being complied. • Only one (existing) pit is in operation and the same pit will be continued for future also. • The backfilling will be initiated after exhaustion of mineral, as per approved mining plan.
iv.	Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.	Being complied. The total mining lease consists of only one mineral (limestone) bearing deposit.
v.	Hydro-geological study of the area shall be reviewed annually and results submitted to the Ministry and concerned agency in the State Govt. In case adverse effect on ground water quality and quantity is observed mining shall be stopped and resumed only after mitigating steps to contain any adverse impact on ground water is implemented. Specific hydro-geological studies shall be conducted at the end of mining plan period i.e. at the end of the 5th year of mining,	Being complied. • The Hydro-geological study of the area reviewed and specific hydro-geological study is conducted and final copy of the report submitted to the Regional Office, MoEF&CC vide Lr. No. MCL/MoEF/1486/2013 dated 28.05.2013. • Presently regular monitoring of water levels is being done and there is no adverse effect on ground water quality and

S.No.	Condition	Compliance Status
	before proceeding to undertake mining in the 6th year. The report shall be submitted to the Regional Office of the Ministry.	quantity from the mining activities and vice versa. • Further, State Ground Water Department has conducted the hydro-geological study and forwarded the report to Dept. of Panchayat Raj & Rural Development, Government of Andhra Pradesh (agency authorized to issue NOC for Andhra Pradesh projects). NOC (to carryout out the mining operations below water table & discharge of ground water) is accorded by PR&RD department, based on this report vide their letter No. PRR05-11028/15/2018-SLNA-GIS-CORD dated 07.07.2020. • Copy of the report (August 2019) prepared by Ground Water & Water Audit Department, Government of Andhra Pradesh is submitted to Regional Office, MoEF&CC, Chennai vide our Lr. No. RCL/MoEF&CC/R.RF-239/20 dated 25.05.2020.
vi.	The following shall be undertaken: i. The ground water observation network in the mining area shall be strengthened by constructing at least 4 piezometers which shall be constructed up to a depth of 50 m below ground level. ii. At least three piezometers may be installed with automatic water level recorders and increase the frequency of monitoring water levels to six hourly per day; iii. iii. Water recharging from roof top in the colony (if any within the lease or nearby) shall be undertaken.	Being complied. • 4 Nos. piezometers are constructed to measure Ground Water level up to the depth of 50 m. Out of which, 3 Nos. of piezometers are installed with Automatic Water Level recorder and 1 No. with portable water level indicator. • 48 Nos. of rain water harvesting pits are made at colony & 4 Nos. of rain water harvesting pits are made at associated cement plant for roof top collection to recharge ground water table, as on September 2022.
vii.	A 50 m barrier of no mining zone all along the side(s) facing the nallahs I streams passing through or adjacent the lease area shall be demarcated and thick vegetation of native species raised. Status of implementation shall be submitted to the Regional Office of	Not applicable as no nallah or stream is passing through or adjacent to the mining lease area.

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	the Ministry on half yearly basis. It shall be ensured that no silt originating from mining activity is transported in the nallah / surface water course.	
viii.	Need based assessment for the nearby villages shall be conducted to study economic measures which can help in upliftment of poor section of society. Income generating projects / tools such as development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self employment and jobs. Local employable youth shall be trained in skills relevant to the project for eventual employment in the project itself to the extent feasible.	Being complied. • Company is organizing various socio-economic activities for the surrounding villages. All the CSR activities for the nearby villages are being carried out as per the need basis of the local people (requirements collected from them), subjected to the budget availability. • CSR activities are being carried out for upliftment of local areas and account is being maintained. • These include village-wise, sector-wise (health, skill development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc.). • Children from the surrounding villages are studying in the school located in the cement plant colony. • Apprentice training with stipend is being given for local people who have completed Industrial Training Institute (ITI) certificate, regularly.
ix.	Land-use pattern of the nearby villages shall be studied and action plan for abatement and compensation for damage to agricultural land / common property land (if any) in the nearby villages, due to mining activity shall be submitted to the Regional office of the Ministry within six months. Annual status of implementation of the plan and expenditure thereon shall be reported to the Regional Office of the Ministry from time to time.	Being complied. • The entire mining lease area is in forest land and is surrounded by forest land as well as waste land. • There is no agriculture land in the vicinity of the mining lease area. Hence damage of agriculture land does not arise. • A study has been made on land-use pattern of the nearby villages and extract of the report is mentioned in EIA report.
x.	Maintenance of village roads through which transportation of ores are undertaken shall be carried out by the company regularly at its own	Being complied. • There is no transportation of ore through any village road. • A separate road is made on

S.No.	Condition	Compliance Status
	expenses. The roads shall be black topped.	company owned lands from mining lease to the cement plant for transportation of limestone.
xi.	Rain water harvesting shall be undertaken to recharge the ground water source. Status of implementation along with detailed plan shall be submitted to the Regional Office of the Ministry within six months and thereafter every year from the next consequent year.	Being complied. 48 Nos. of rain water harvesting pits are made at colony & 4 Nos. of rain water harvesting pits are made at associated cement plant to recharge ground water table, as on September 2022.
xii.	Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo textile matting or other suitable material and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.	Being complied. • One in-active dump is available in this mine. • Plantation with native plants is done as part of stabilization on steps made at regular interval and also spreading seeds on these steps to allow natural growth of plant, so to prevent erosion. • Vegetation on the top and slopes of the dump yard is under progress, to prevent erosion. • Geo textile matting is initiated for dump slopes to avoid erosion.
xiii.	Trenches / garland drains shall be constructed at foot of dumps and coco filters installed at regular intervals to arrest silt from being carried to water bodies. Adequate number of Check Dams and Gully Plugs shall be constructed across seasonal / perennial nallahs (if any) flowing through the ML area and silts arrested. Desilting at regular intervals shall be carried out. Garland drain of appropriate 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	Being complied. The following measures are being taken: • Garland drain of a cumulative length of 2651 m with a size of 2.0m*1.0m has been made towards the Southern lease boundary as well as all along the bottom of the waste dump. Two garland drains made along the Temporary dump with a length of 126 m and 97 m. • The drains follow the natural slope with a gradient about 1 in 100 ultimately leading to the desilting sump. • A mine sump with dimensions of 37m*25*5m is made to settle the suspended solids in the water. The water collected is being utilized for dust suppression in the mine area, haul roads and for greenbelt development, etc. within lease

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	constructed at the corners of the garland drains and de-silted at regular intervals.	area and for irrigation purposes. • Desilting is being carried out regularly. During the year 2022-2023, desilting was carried out in the month of May 2022 and a quantity of 63 tonne.
xiv.	Ground water in the core zone shall be regularly monitored for contamination and depletion due to mining activity and records maintained. The monitoring data shall be submitted to the regional office of the Ministry regularly. Further, monitoring points shall be located between the mine and drainage in the direction of flow of ground water shall be set up and records maintained.	Being complied. • 4 Nos. of piezometers (3 Nos. are automatic and 1 No. is manual) are used to monitor ground water levels. • There is no contamination and depletion has observed due to mining activity and the recorded data is being submitted to the RO, Ministry regularly. • The data is being submitted to the CGWB along with compiled data for period April-2022 to September 2022. Copy of this letter is enclosed as Annexure – IV. • Compiled data on ground water quality carried out by MoEF&CC approved external environmental agency (M/s Universal Enviro Associates, Hyderabad) for the period April-2022 to September 2022 is enclosed as Annexure – V.
xv.	Cultivable waste land (within 5 km of the lease) shall be identified and fodder farming or other suitable productive use of waste land shall be taken up in phased manner. Status of implementation shall be submitted to the Regional office of the Ministry.	Being complied. 30 acres of cultivable waste land is identified within 5 km of lease area and supplying water for irrigation for productive use & also to conserve ground water resources in the vicinity.
xvi.	Shelter Belt i.e., Wind Break of 30 m width and consisting of at least 5 tiers around lease facing the school / agricultural fields / human habitation etc. (if any in the vicinity) shall be raised.	Noted. There is no school / agricultural fields / human habitation, etc., in the vicinity of the mining lease area. The nearest habitation is about 1.9 km from mine, hence not applicable.
xvii.	Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools and other public amenities	Being complied. • Fugitive dust generation is controlled at the source. • Water is being sprayed on internal roads, muck piles and

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	located nearest to sources of dust generation as applicable) and records submitted to the Regional Office of the Ministry.	unloading points by mobile water tankers. • The nearest habitation is about 1.9 km from mine.
xviii.	Monitoring of soil samples for assessment of contamination due to mining activity (as applicable) shall be regularly conducted and records maintained.	Not applicable as there is no top soil.
xix.	Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore / dust takes place.	Being complied. With proper supervision regularly, it is ensuring that the vehicles are not overloaded. While transporting, the following measures are being taken: • 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 spillage of material.
xx.	Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV and health effects on exposure to mineral dust etc. shall be carried out. The company shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of Personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required.	Being complied. • Awareness programme on health & safety for workers of work related health hazards, training on malaria eradication, HIV and health effects on exposure to mineral dust etc., and precautionary measures like the use of PPE are also being imparted. • Protective respiratory devices are provided to the personnel working in dusty areas (near drilling and loading areas) and adequate training and information on safety and health aspects are being provided as part of Mines Vocational Training. • A full time qualified doctor who is trained in occupational health services is appointed. Occupational health checkup is being carried out for all mine workers at the time of joining and is periodically reviewed as per statute for all mine workers.
xxi.	Occupational Health Cell shall be created at the mining site office under	Being complied. • A full-fledged Occupational

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	the charge of an officer of adequate seniority who is a qualified person in occupational health.	Health Centre with a qualified Occupational Health Specialist with supporting staff is established with the following facilities: o X-ray o ECG o Spirometry (lung function test) o Audiometry o Semi-auto analyser to carryout bio-chemical tests o Clinical lab for micro-biological tests (including sputum test) o Checking colour blindness o Dental chair o Ambulance • Occupational health surveillance programme is taken up periodically and records are being maintained.
xxii.	Personnel exposure monitoring for dust shall be carried out for the workers. This shall include monitoring of mercury and hexavalent chromium.	Being complied. • Personal dust sampling is being carried out periodically and records are maintained. • There is no generation of any mercury and hexavalent chromium related dust in Limestone Mining Activities, hence this is not applicable.
xxiii.	Top soil / solid waste shall be stacked properly with proper slope and adequate safeguards and shall be utilized for backfilling (wherever applicable) for reclamation and rehabilitation of mined out area. Top soil shall be separately stacked for utilization later for reclamation and shall not be stacked along with over burden.	Not applicable with respect to top soil, as there is no top soil. Being complied. • Solid waste is only overburden (OB), which is being stacked separately with proper slope & adequate safeguards and will be utilized for reclamation. • Geo textile matting is initiated for dump slopes to avoid erosion. • Reclamation is not initiated as ultimate pit level is not reached.
xxiv.	Over burden (OB) shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 30 m, each stage shall preferably be of 10 m and overall slope of the dump shall not exceed	Being complied. • OB waste is being stacked separately and the total height of dump is 30 m. The height of each stage is about 10 m and slope is maintained as specified. Plantation has started on the

S.No.	Condition	Compliance Status
	28°. The OB dump shall be backfilled. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests on six monthly basis.	inactive slopes on the dump. • One more temporary dump is under progress, with a height of 15 m in the SE corner of mining lease. • Geo textile matting is initiated for dump slopes to avoid erosion. • The backfilling will be initiated after exhaustion of mineral, as per approved mining plan. • Saplings are planted on dump yard, along the mines ramps etc. to control the soil erosion and management of silt as preventive measure. • This is being submitted as part of half-yearly compliance report to RO, Ministry. The copy of this half-yearly compliance report is mailed to eccompliance-ap@gov.in, vide Notice from MoEF&CC, Chennai dated 13.08.2019.
xxv.	Slope of the mining bench and ultimate pit limit shall be as per the mining scheme approved by Indian Bureau of Mines.	Being followed as per IBM approved modified mining plan vide Lr. No. AP/KSN/MP/LST-2/Hyd, dated 17.03.2020.
xxvi.	Adequate plantation shall be raised in the ML area, haul roads, OB dump sites etc. Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO / Agriculture Department. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. The density of the trees shall not be less than 2500 plants per ha. The company shall involve local people with the help of self help group for plantation programme. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Regional Office of the Ministry every year.	Being complied. • Plantation activity has taken up in the ML area, along the road side which is going from mine pit to crusher, OB dump, etc., by planting different species including native species, in consultation with local Forest Department. • The plantation work is being carried out by involvement of local people. • An area of 10.09 Ha covered under plantation within ML by the end of September 2022.
xxvii.	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining	Being complied. • 4 Nos. of piezometers (3 Nos. are automatic and 1 No. is manual) are used to monitor ground water levels and the

S.No.	Condition	Compliance Status
	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 shall be regularly sent to MoEF, Central Ground Water Authority and Regional Director, Central Ground Water Board.	recorded data is being submitted to the Regional Office, Ministry regularly. • Copy of the letter addressed to CGWB regarding the water level data through piezometers for the period April 2022 to September 2022 is enclosed as Annexure – IV. • Compiled data on ground water quality analysis carried out by MoEF&CC approved external environmental monitoring agency (M/s Universal Enviro Associates Hyderabad) for the period April 2022 to September 2022 is enclosed as Annexure – V. • Monitoring is being carried out four times in a year – April - June, July - September, October - December and January - March.
xxviii.	Adequate air monitoring stations shall be established in areas of human habitations near the mine and the results of ambient air quality shall be maintained and regularly submitted to the Regional Office of the Ministry. The monitored data of criteria pollutants shall be regularly uploaded on the company's website and also displayed at project site.	Being complied. • The nearest habitation from the mine is 1.9 km. • 9 Nos. of ambient air quality monitoring stations are established in the nearby villages and 4 Nos. of stations are established in core zone. Ambient air quality monitoring is being carried out by MoEF&CC approved external environmental agency on fortnightly basis and compiled data for the period April 2022 to September 2022 is enclosed as Annexure – I. • The monitoring results are compiled and maintained. • The half-yearly compliance reports are being uploaded on the company's website.
xxix.	The waste water from the mine shall be treated to conform to the prescribe standards before discharging into the natural stream. The discharged water from the Tailing Dam (if any) shall be regularly monitored and report submitted to the Ministry of Environment & Forests, Central	Noted. There is no generation of waste water from the mine. Tailings are not generated from limestone mining activity; hence it is not applicable.

S.No.	Condition	Compliance Status
	Pollution Control Board and the State Pollution Control Board.	
xxx.	Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of ores and others shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. Transportation of ore shall be done only during day time. The vehicles transporting ores shall be covered with a tarpaulin or other suitable enclosures so that no dust particles / fine matters escape during the course of transportation. No overloading of ores for transportation shall be committed. The trucks transporting ore shall not pass through wild life sanctuary.	Being complied. A separate road on company's own land is made for transportation of limestone to crusher, which is not passing through any wild life sanctuary.
xxxi.	Prior permission from the Competent Authority shall be obtained for extraction of ground water, if any.	Being complied. NOC obtained to work below ground water table through Dept. of Panchayat Raj & Rural Development, Government of Andhra Pradesh (agency authorized to issue NOC for Andhra Pradesh projects) vide their letter No. PRR05-11028/15/2018-SLNA-GIS-CORD, dt. 07.07.2020. This order is valid up to 06.07.2023.
xxxii.	Action plan with respect to suggestions / improvements and recommendations made during public consultation / hearing shall be submitted to the Ministry and the State Govt. within six months.	Being complied. • Details enclosed in EIA report submitted to the Ministry for this proposal. • Improvement activities and recommendations made.
xxxiii.	A final mine closure plan, along with details of Corpus Fund, shall be submitted to the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.	Noted for compliance. The life of the mine as per approved modified Mining plan by IBM is up to year 2027-2028.

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 Ministry of Environment & Forests.	Being complied. • There is no change in the mining technology and scope of working. • Obtained EC for the expansion of the mine production from

S.No.	Condition	Compliance Status
		1.20 Million TPA to 2.75 Million TPA vide order No. SEIAA/AP/MIN/KRI/07/2020/ 1973/174.80 & 171.63 and dated 05.03.2022.
ii.	No change in the calendar plan including excavation, quantum of mineral and waste shall be made.	Being complied. • There is no change in the excavation of mineral and waste, till now. • Obtained EC for the expansion of the mine production from 1.20 Million TPA to 2.75 Million TPA vide order No. SEIAA/AP/MIN/KRI/07/2020/ 1973/174.80 & 171.63 and dated 05.03.2022. • The limestone production was 0.762 million tonnes and 0.0525 million cu.m. of waste done during the period of April 2022 to September 2022.
iii.	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.	Being complied. • Wet drilling is being practiced. • Water is being sprayed by mobile water tanker on haul road and permanent water sprinkling system is being operated on part of 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. • 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: o Moderate loading of tippers. o The body height of the vehicle is raised by 1 foot.
iv.	Four ambient air quality monitoring stations shall be established in the core zone as well as buffer zone for RPM, SPM, SO_2, NOx monitoring. Location of the stations should be	Being complied. 4 and 9 Nos. of ambient air quality monitoring stations are established in core and buffer zones respectively based on the

S.No.	Condition	Compliance Status
	decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the SPCB and regular (fortnightly) manual monitoring by MoEF&CC approved external environmental monitoring agency (M/s Universal Enviro Associates, Hyderabad) for PM_{10}, $PM_{2.5}$, SO_2, NOx and CO monitoring.
v.	Data on ambient air quality (RPM, SPM, SO_2, NOx) should be regularly submitted to the Ministry including its Regional office located at Bangalore and the State Pollution Control Board I Central Pollution Control Board once in six months. The monitored data of criteria pollutants mentioned above shall be regularly uploaded on the company's website and also displayed at project site.	Being complied. Data of the Ambient Air Quality is being submitted to the Regional Office, MoEF&CC located at Chennai and the SPCB regularly once in six months. Compiled data for the period Aril 2022 to September 2022 is enclosed vide Annexure – I.
vi.	Measures shall be taken for control of noise levels below 85 dB(A) in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs / muffs.	Being complied. • Vehicles are being maintained properly for control of noise level and the noise levels are well within the limit. • Compiled data of Noise levels measured in the financial year 2022-2023 is enclosed as Annexure – VI. • Ear plugs / muffs are provided to respective HEMM operators.
vii.	Industrial waste water (workshop and waste water 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.	Being complied. • Oil and Grease trap is installed at Workshop to separate oil & grease before letting waste water out. • Oil and Grease trap outlet water quality analysis is carried out by MoEF&CC approved external environmental agency for the period April to September 2022 is enclosed as Annexure – VII. • There is no generation of waste water from the mine.
viii.	Personnel working in dusty areas shall be provided with protective respiratory devices and they shall also be imparted adequate training and information on safety and health aspects.	Being complied. Personal Protective Equipment are being provided to the personnel working in dusty areas (near drilling and loading areas) and adequate training and information on safety and health aspects are

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		being provided as part of Mines Vocational Training.
ix.	Provision shall be made for the housing the labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Being complied. • Separate colony is constructed for contract workmen with all necessary infrastructure facilities like fuel for cooking, toilets, safe drinking water, medical health care, near cement plant during construction period and after construction all the structures were removed. • Potability certificates for RO plant inlet and outlet water samples are being maintained.
x.	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. • 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 - II.
xi & xiii.	The project authorities shall inform to the Regional Office of the Ministry 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. Date of financial closure for this project is not required as total funding for this project is from own funds.
xii.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the Ministry and its Regional Office located at Bangalore.	Being complied. The funds earmarked for environment protection are not diverted for other purposes. The details of environmental protection expenditure for the financial year 2021-2022 and funds allotted for the financial year 2022-2023 are enclosed Annexure - III.
xiv.	The Regional Office of the Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data / information / monitoring reports.	Being complied. • The copy of this half-yearly compliance report is mailed to eccompliance-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

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		provided.
xv.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bangalore, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests, Bangalore.	Being complied. • The copy of this half-yearly compliance report is mailed to eccompliance-ap@gov.in, vide Notice from MoEF&CC, Chennai dated 13.08.2019. • The same is also uploaded in PARIVESH portal. • Half-yearly compliance reports for CFO order are submitted to APPCB regularly. • Half-yearly compliance reports for EC orders are also uploaded in our company's website regularly.
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. The clearance letter shall also be put on the website of the company.	Noted. The clearance letter is uploaded to the company's website.
xvii.	State Pollution Control Board shall display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office / Tehsildar's Office for 30 days.	Noted.
xviii.	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and shall also be put on the website of the company along with the status of compliance of environmental clearance conditions. The same shall also be sent to the Regional Office of Ministry by e-mail.	Being complied. • Environmental statement for each financial year ending 31st March in Form-V is being submitted to the State Pollution Control Board regularly. • The Environment Statement in Form V for the year 2021-2022 is submitted vide our Lr. No. RCL/PCB-Form-V/238/171 dated 09.09.2022 and is uploaded on the website of the company. • The same is sent to Regional Office of Ministry through email.
xix.	The project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the 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	Complied. Advertised in Eenadu Telugu daily and The Hindu English daily on 09.09.2009 and a copy of the same is forwarded to RO, Bangalore vide Lr. No. MCL/MoEF/5041/2009 dt. 09.09.2009.

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	the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same shall be forwarded to the Regional Office of the Ministry located in Bangalore.	

(Signature)

HALF-YEARLY COMPLIANCE REPORT

Environmental Clearance Letter/s No. and Date	J-11015/18/2000-IA.II (M) and dated 16.10.2002
Name of the Project	The Ramco Cements Limited (Formerly Madras Cements Ltd.,), Ravirala Limestone Mine (RF) – 0.50 Million TPA Capacity of Limestone
Period of Compliance Report	April 2022 to September 2022

A. Specific Conditions:

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i.	APPCB's fresh consent should be obtained for producing 30.25 lakh tonnes / annum of limestone for the first five years prior to increase in already consented annual production capacity of 0.50 million tonnes.	Being complied. • In the financial year 2010-2011; EC, CFE & CFO are obtained for production enhancement from 0.50 million TPA to 1.20 million TPA. • In the financial year 2021-2022; EC, CFE & CFO are obtained for production enhancement from 1.20 million TPA to 2.75 million TPA. • During the financial year 2022-2023, the limestone production was 0.762 million Tonne (up to September 2022). • The latest CFO is accorded vide letter No. APPCB/VJA/VJA/488/ HO/CFO/2021 and dated 07.11.2022, which is valid up to 31.01.2028.
ii.	Top soil will be properly stacked at earmarked dump site(s) with adequate measures and should be used for reclamation and rehabilitation of mined out area.	Being complied. There is no top soil available in the mining lease area.
iii.	Check dams and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil and mineral dumps. The water so collected should be utilized for watering the mine area, roads, greenbelt development etc., and the drains should be regularly de-silted and maintained. Garland drain (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also	Being complied. • Garland drain of a cumulative length of 2651 m with a size of 2.0m*1.0m has been made towards the Southern lease boundary as well as all along the bottom of the waste dump, by September 2022. • The drains follow the natural slope with a gradient about 1 in 100 ultimately leading to the desilting sump. • A mine sump with dimensions A mine sump with dimensions of 48m*32m*5m is made to settle

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	provide adequate retention period to allow proper settling of silt material.	the suspended solids in the water, by September 2022. • The water collected is being utilized for watering the mine area, haul roads, greenbelt development, etc. within lease area. • The drains are being regularly de-silted and maintained. • Desilting is being carried out regularly. During the year 2022-2023, desilting was carried out in the month of May 2022 and the quantity desilted is 63 tonne.
iv.	A 30 m wide green belt all around the ML area should be developed by planting the native plant species in consultation with local DFO / Agricultural department. At least 1600 plant species/ha should be planted. Plantation should also be raised along the roads, OB dump sites etc.	Being complied. • Greenbelt of 30 m wide will be developed along the ML boundary in phase wise manner. • Total greenbelt area is 10.09 Ha within ML by the end of this half year period.
v.	Blasting operations should be carried out only during the day time. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Being complied. • Blasting operations are being carried out in day-time only. • Controlled blasting is being practiced by using advanced technology viz., Shock tube bottom initiation detonators to reduce ground vibrations.
vi.	Backfilling of excavated area should concurrently start from 7th year of operations.	Noted. • Backfilling is not initiated, as per approved mining plan. • The back filling will be initiated after exhaust of mineral.
vii.	A detailed decommissioning plan should be submitted to the MOEF 5 years in advance for approval.	Noted. • This will be submitted accordingly. • The life of the mine as per latest approved modified mining plan by IBM is up to year 2030-2031.
viii.	The drills should be attached with dust extraction system.	Being complied. All drills are provided with wet drilling system.
ix.	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing well and constructing new piezometers. Monitoring should be done four times in a year – Pre-monsoon (April-May), Monsoon	Being complied. • 4 Nos. of piezometers (1 are manual and 3 is automatic) are used to monitor ground water levels. • Ground Water level data is being submitted to the CGWA.

S.No.	Condition	Compliance Status
	(August), Post-Monsoon (November) and Winter (January). Data thus collected should be sent at regular intervals to MoEF and The Central Ground Water Authority.	• Copy of the letter addressed to CGWB regarding the water level data through piezometers for the period April to September 2022 is enclosed as Annexure – IV. • Compiled data on ground water quality analysis carried out by MoEF&CC approved external environmental monitoring agency (M/s Universal Enviro Associates, Hyderabad) for the period April to September 2022 is enclosed as Annexure – V. • Monitoring is being carried out four times in a year – Pre-monsoon (April-May), Monsoon (August), Post-Monsoon (November) and winter (January). • NOC obtained to work below ground water table through Panchayat Raj & Rural Development, Govt. of Andhra Pradesh (agency authorized to issue NOC on behalf of CGWA, Delhi for Andhra Pradesh projects) vide their letter No. PRR05-11028/15/2018-SLNA-GIS-CORD dated 07.07.2020. • The conditions stipulated in this NOC are being followed and yearly compliance reports will be submitted to the concerned.

B. General Conditions:

S.No.	Condition	Compliance Status
i.	No change in mining technology and scope of working should be made without prior approval of the MoEF	Being complied. There is no change in the mining technology and scope of working.
ii.	No change in the calendar plan including excavation, quantum of limestone, waste / OB dump should be made.	Being complied. • In the financial year 2010-2011; EC, CFE & CFO are obtained for production enhancement from 0.50 million TPA to 1.20 million TPA. • In the financial year 2021-2022; EC, CFE & CFO are obtained for production enhancement from 1.20 million TPA to 2.75 million TPA. • During the financial year 2022-

S.No.	Condition	Compliance Status
		2023, the limestone production was 0.762 million Tonne (up to September,2022). • During the financial year 2022-2023, the waste / OB handled was 0.0525 million Cu.m. • The latest CFO is accorded vide letter No. APPCB/VJA/VJA/488/ HO/CFO/2021 and dated 07.11.2022, which is valid up to 31.01.2028.
iii.	Three ambient air quality monitoring stations should be established in the core zone as well as buffer zone for SPM, RPM, SO_2, NOx and CO monitoring. Location of the ambient air quality stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the SPCB.	Being complied. 4 and 9 Nos. of ambient air quality monitoring stations are established in core and buffer zones respectively based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the SPCB and regular (fortnightly) manual monitoring by MoEF&CC approved external environmental monitoring agency (M/s Universal Enviro Associates, Hyderabad) for SPM, RPM, SO_2, NOx and CO monitoring.
iv.	Data on ambient air quality should be regularly submitted to the Ministry including its RO at Bangalore and the SPCB / CPCB once in six months.	Being complied. • Data of the Ambient Air Quality is being submitted to the Regional Office, MoEF&CC located at Chennai and the SPCB regularly once in six months. • Compiled data for the period April 2022 to September 2022 is enclosed vide Annexure – I. • Half-yearly compliance reports are being submitted to the Regional Office of Ministry located at Chennai on regular basis (up to the period October 2018 to March 2019). • Vide Notice from MoEF&CC, Chennai dated 13.08.2019, this copy of half-yearly compliance report is mailed to eccompliance-ap@gov.in.
v.	Adequate measures for control of fugitive emissions should be taken during drilling and blasting operations, loading and transportation of minerals etc.	Being complied. • Wet drilling is being practiced. • Water is being sprayed by mobile water tanker on haul road and permanent water sprinkling system is being operated on part

S.No.	Condition	Compliance Status
		of 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. • 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: o Moderate loading of tippers. o The body height of the vehicle is raised by 1 foot.
vi.	Adequate measures should be taken for control of noise levels below 85 dB(A) in the work environment.	Being complied. • Vehicles are being maintained properly for control of noise level and the noise levels are well within the limit. • Ear plugs / muffs are provided to respective HEMM operators. • Compiled data on noise levels measured for the year 2022-2023 is enclosed as Annexure – VI.
vii.	Vehicular emissions should be kept under control and regularly monitored.	Being complied. Vehicles are being maintained properly. Emission levels (pollution under control check) are being monitored regularly and kept under control.
viii.	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	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. • 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

S.No.	Condition	Compliance Status
		with supporting staff is established with the following facilities: o X-ray o ECG o Spirometry (lung function test) o Audiometry o Semi-auto analyser to carryout bio-chemical tests o Clinical lab for micro-biological tests (including sputum test) o Checking colour blindness o Dental chair o Ambulance
ix.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purposes. Year-wise expenditure will be reported to MoEF.	Being complied. • The funds earmarked for environment protection are not diverted for other purposes. • 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 -III.
x.	The RO of this Ministry located at Bangalore will monitor compliance of the stipulated environmental safeguards. The project authorities should send one set of EIA / EMP report and mining plan to them and extend full co-operation to the officer(s) of the RO by furnishing the requisite data / information / monitoring reports.	Necessary co-operation along with relevant data is being provided.
xi.	The project authorities should inform to the RO located at Bangalore as well as to the MoEF regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Date of financial closure for this project is not required as total funding for this project is from own funds.
xii.	SPCB should display a copy of the clearance letter at RO, District Industries Centre and Collector's Office / Tahsildar's office for 30 days.	Noted.
xiii.	The project authorities should advertise at least in two local newspapers widely circulated, one of which will be in vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has	Complied. Advertised in Eenadu Telugu daily and The Hindu English daily on 16.11.2002 and a copy of the same is forwarded to RO, Bangalore vide Lr. No. MCL/MINES/RF dt. 31.12.2002.

S.No.	Condition	Compliance Status
	been accorded environmental clearance and a copy of the clearance letter is available with the SPCB and also be seen at website of the MoEF at http://envor.nic.in and a copy of the same will be forwarded to the RO of this Ministry located Bangalore.	

(Signature)

ANNEXURE -

THE RAMCO CEMENTS LIMITED, KSR NAGAR

RAVIRALA LIMESTONE MINE (RF)

AMBIENT AIR QUALITY MONITORING DATA - CORE ZONE

PERIOD - APRIL -2022 to SEPTEMBER-2022

Location	Parameter	Month												Limit
		April-2022		May-2022		June-2022		July-2022		August-2022		September-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	70.2	70.2	73.5	74.0	68.3	65.3	50.9	58.3	53.8	60.2	55.1	63.1	100
	PM 2.5	28.4	28.3	29.8	29.8	27.6	26.4	20.6	23.5	21.8	24.3	22.3	25.4	60
	SO_2	18.2	16.3	19.3	17.3	17.9	19.2	18.2	12.9	16.9	15.3	17.2	16.3	80
	NO_X	20.9	18.9	22.0	19.9	20.2	21.9	20.9	15.5	19.6	17.9	19.9	18.9	80
	CO	654	656	654	701	623	549	596	527	587	538	612	512	2000
ML3 Tower Light Area	PM 10	71.6	65.1	74.6	69.2	65.4	68.9	52.7	52.7	54.1	58.3	56.2	59.2	100
	PM 2.5	28.7	26.6	29.9	28.3	26.6	27.8	21.1	21.6	21.7	23.8	22.5	24.2	60
	SO_2	17.9	15.8	20.2	19.6	16.3	18.3	17.9	13.6	15.6	16.2	16.3	17.2	80
	NO_X	21.5	18.3	23.8	22.1	19.0	21.4	21.5	16.1	19.2	18.7	19.9	19.7	80
	CO	636	639	681	736	654	558	581	512	563	546	586	556	2000
ML4 Tower Light Area	PM 10	72.7	69.3	70.1	71.2	62.9	65.2	54.3	53.9	55.2	61.2	56.3	62.3	100
	PM 2.5	29.2	28.5	28.1	29.3	25.8	26.6	21.8	22.2	22.1	25.2	22.6	25.6	60
	SO_2	17.3	16.3	19.9	20.2	17.2	15.6	16.2	12.8	16.8	15.9	17.4	16.8	80
	NO_X	20.2	19.5	22.8	23.4	19.8	18.5	19.1	16.0	19.7	19.1	20.3	20.0	80
	CO	659	655	712	721	629	563	562	496	591	522	541	539	2000
View Point Tower Light Area	PM 10	73.4	64.6	72.9	65.3	63.6	63.7	51.2	51.2	53.9	59.6	55.1	58.6	100
	PM 2.5	29.4	26.2	29.2	26.5	25.9	25.9	20.5	20.8	21.6	24.2	22.0	23.8	60
	SO_2	18.8	16.9	19.1	21.2	15.4	17.1	17.3	13.1	15.9	16.5	16.6	17.6	80
	NO_X	21.6	20.2	21.9	24.5	18.3	19.9	20.1	16.4	18.7	19.8	19.4	20.9	80
	CO	646	663	723	729	656	578	553	521	543	563	529	582	2000

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

ANNEXURE - I

ANNEXURE -

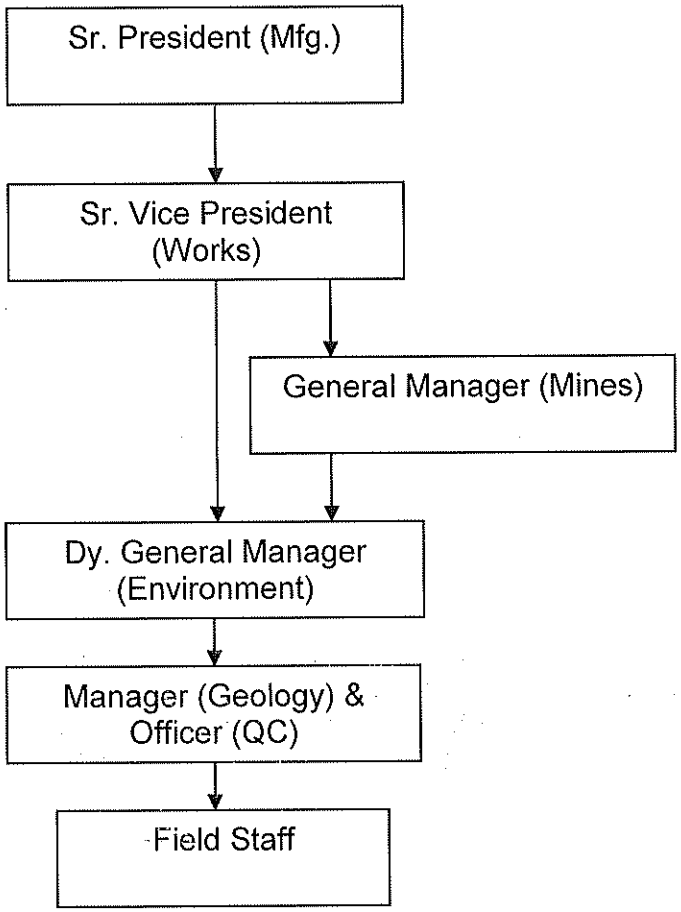
THE RAMCO CEMENTS LIMITED, KSR NAGAR
AMBIENT AIR QUALITY MONITORING DATA - BUFFER ZONE VILLAGES
PERIOD - APRIL -2022 to SEPTEMBER-2022

Location	Parameter	Month												Limit
		April-2022		May-2022		June-2022		July-2022		August-2022		September-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	56.3	53.2	60.6	55.9	53.9	49.6	50.6	42.9	52.3	45.3	53.9	53.6	100
	PM 2.5	22.9	21.4	24.6	22.5	21.9	20.0	20.5	17.3	21.2	18.3	21.9	21.6	60
	SO_2	14.5	15.2	15.7	16.8	14.3	14.3	12.1	11.2	13.2	13.9	14.1	14.2	80
	NO_X	17.1	17.9	18.3	19.5	16.9	17.0	14.7	13.9	15.8	16.6	16.7	16.9	80
	CO	221.0	224.0	236.0	236.0	248.0	212.0	213	198.0	231.0	221.0	246.0	232.0	2000
Jayanthipuram	PM 10	59.1	55.1	62.3	57.3	52.7	52.3	48.3	43.8	50.4	45.2	51.6	55.1	100
	PM 2.5	23.7	22.5	25.0	23.4	21.1	21.3	19.4	17.9	20.2	18.4	20.7	22.5	60
	SO_2	13.9	15.3	15.6	16.1	15.2	15.9	13.2	10.9	12.9	11.6	13.5	12.8	80
	NO_X	16.8	18.2	18.5	19.0	18.1	18.8	16.1	13.8	15.8	14.5	16.4	15.7	80
	CO	252.0	253.0	242.0	269.0	253.0	253.0	221	187.0	238.0	229.0	252.0	241.0	2000
Chillakallu	PM 10	57.6	56.8	61.3	60.2	54.6	58.2	47.6	50.6	49.3	53.1	51.8	54.6	100
	PM 2.5	23.3	23.0	24.8	24.4	22.1	23.6	19.2	20.5	19.9	21.5	20.9	22.1	60
	SO_2	14.6	15.9	16.3	16.3	16.2	14.6	11.9	11.1	12.4	11.8	12.6	12.9	80
	NO_X	17.3	19.0	19.0	19.4	18.9	17.7	14.6	14.2	15.1	14.9	15.3	16.0	80
	CO	249.0	258.0	281.0	246.0	296.0	241.0	212	201.0	239	234.0	247.0	236.0	2000
K.Agraharam Village	PM 10	54.5	57.3	56.2	61.3	53.5	59.5	41.2	52.7	43.6	54.1	45.9	57.9	100
	PM 2.5	22.0	23.4	22.6	25.0	21.6	24.3	16.6	21.5	17.6	22.1	18.5	23.6	60
	SO_2	15.8	15.6	16.9	16.9	15.3	17.3	10.6	12.3	11.6	12.5	13.7	13.5	80
	NO_X	18.9	18.0	20.0	19.3	18.4	19.7	13.7	14.7	14.7	14.9	16.8	15.9	80
	CO	251.0	246.0	274.0	289.0	283.0	276.0	237	212.0	246	238.0	249.0	245.0	2000
Jaggayyapet	PM 10	56.8	68.2	58.9	70.2	49.6	68.3	43.1	61.9	45.1	63.8	46.2	53.6	100
	PM 2.5	23.3	27.6	24.2	28.4	20.4	27.6	17.7	25.0	18.5	25.8	19.0	21.7	60
	SO_2	14.9	15.8	16.7	16.4	15.9	15.4	11.2	11.2	12.3	11.9	13.8	12.6	80
	NO_X	17.3	18.8	19.1	19.4	18.3	18.4	13.6	14.2	14.7	14.9	16.2	15.6	80
	CO	253.0	301.0	263.0	321.0	274.0	302.0	221.0	214.0	229	226.0	239.0	233.0	2000
Budawada	PM 10	62.3	57.3	65.3	59.3	50.6	57.6	45.2	55.4	47.2	57.1	48.3	58.3	100
	PM 2.5	24.6	23.6	25.8	24.4	20.0	23.7	17.9	22.8	18.6	23.5	19.1	24.0	60
	SO_2	14.7	15.3	15.3	16.7	16.2	14.6	12.3	12.9	12.8	12.6	13.1	12.7	80
	NO_X	17.5	17.9	18.1	19.3	19.0	17.2	15.1	15.5	15.6	15.2	15.9	15.3	80
	CO	265.0	253.0	279.0	263.0	289.0	248.0	245.0	222.0	253	241.0	256.0	248.0	2000
Vedadri	PM 10	59.5	55.1	63.2	57.1	48.3	53.2	47.3	47.9	48.6	49.6	49.6	52.7	100
	PM 2.5	24.3	21.9	25.8	22.7	19.7	21.2	19.3	19.1	19.8	19.7	20.2	21.0	60
	SO_2	15.8	16.3	16.8	17.1	15.4	15.3	10.6	12.3	11.6	12.8	12.9	13.1	80
	NO_X	18.1	19.1	19.1	19.9	17.7	18.1	12.9	15.1	13.9	15.6	15.2	15.9	80
	CO	263.0	247.0	286.0	258.0	291.0	246.0	214.0	211.0	218	223.0	238.0	247.0	2000
Pochampalli	PM 10	60.2	59.6	62.3	62.3	51.2	59.3	41.8	50.6	44.1	52.1	45.3	55.1	100
	PM 2.5	24.6	24.2	25.5	25.3	20.9	24.1	17.1	20.5	18	21.2	18.5	22.4	60
	SO_2	16.2	15.8	16.9	16.3	15.3	14.9	11.1	11.6	11.5	12.1	12.6	13.7	80
	NO_X	19.1	18.1	19.8	18.6	18.2	17.2	14.0	13.9	14.4	14.4	15.5	16.0	80
	CO	264.0	256.0	274.0	262.0	283.0	236.0	215.0	199.0	221	212.0	241.0	215.0	2000
Ravirala	PM 10	58.3	57.3	60.9	60.9	52.8	58.2	40.9	48.3	43.9	49.8	44.9	52.9	100
	PM 2.5	23.7	23.4	24.8	24.8	21.5	23.7	16.6	19.7	17.9	20.3	18.3	21.6	60
	SO_2	15.3	16.8	17.1	17.4	16.2	14.6	12.4	10.9	12.9	11.6	13.7	12.9	80
	NO_X	18.3	19.7	20.1	20.3	19.2	17.5	15.4	13.8	15.9	14.5	16.7	15.8	80
	CO	258.0	257.0	263.0	263.0	277.0	212.0	223.0	183.0	233	209.0	250.0	202.0	2000

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

ANNEXURE – II

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



THE RAMCO CEMENTS LIMITED

JAYANTHIPUAM GROUP OF LIMESTONE MINES

ENVIRONMENTAL PROTECTION ACCOUNT - CAPITAL & RECURRING EXPENDITURE DETAILS

Capital / Recurring	Description	For the year 2022-23, Lakh Rs.					Projected for 2023-24, 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
Recurring	Pollution Control - Nonel 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
	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

ANNEXURE - VI

ANNEXURE - IV

ISO 9001 ISO 14001 ISO 45001 ISO 50001
Certified Company

THE RAMCO CEMENTS LIMITED

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

RCL/CGWB/R. RF-239/281 Dt. 28.11.2022

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 Clearances for Ravirala Limestone Mine (RF) for the period from April 2022 to September 2022 – reg.

Ref: 1. EC Lr. No. SEIAA/AP/MIN/KRI/07/2020/1973/174.80 & 171.63 dated 05.03.2022.
2. EC Lr. No. J-11015/149/2008-IA II (M) dated 26.08.2009.
3. EC Lr. No. J-11015/18/2000-IA.II (M) dated 16.10.2002.

This has reference to the above cited Environmental Clearance letters issued by Ministry of Environment & Forests, New Delhi for Ravirala Limestone Mine (RF).

We herewith enclose the Water Level Data measured by Piezometers as part of Half-Yearly Compliance for Environmental Clearances for this Mining Lease located at Jaggayyapet Mandal, Krishna District, Andhra Pradesh for the period from April 2022 to September 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. RAVISHANKAR)
Sr. President (Mfg.)

Encl.: a.a

THE RAMCO CEMENTS LIMITED
RAVIRALA LIMESTONE MINE (RF)
WATER LEVEL DATA

1.PIEZOMETER DETAILS: Bore Well
Location: Ravirala,South Side of Lease
RL - (+)51.00m
Latitude - N 16^0 50' 27.6" Longitude - E80^0 07' 58.2"
Depth of well - 45.0 m

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	17.76
2	30.04.2022	17.81
3	16.05.2022	17.93
4	31.05.2022	18.25
5	16.06.2022	18.15
6	30.06.2022	17.95
7	16.07.2022	17.89
8	31.07.2022	17.71
9	16.08.2022	17.63
10	31.08.2022	16.21
11	16.09.2022	15.95
12	30.09.2022	15.21

2.PIEZOMETER DETAILS: Bore Well
Location: Ravirala,East Side of Mining Lease near
7-2 BH pillar
RL - (+) 61.00m
Latitude - N16^0 50' 20.4" Longitude - E80^0 08' 55.1"
Depth of well - 24.50 m

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	19.29
2	30.04.2022	19.38
3	16.05.2022	19.41
4	31.05.2022	19.52
5	16.06.2022	19.50
6	30.06.2022	19.43
7	16.07.2022	19.25
8	31.07.2022	18.45
9	16.08.2022	18.04
10	31.08.2022	17.85
11	16.09.2022	17.01
12	30.09.2022	16.91

3.PIEZOMETER DETAILS: New Bore Well
Location: Ravirala,West Side of Haul road
RL - (+) 44.00m
Latitude - N16^0 50' 33.2" Longitude - E80^0 08' 05.7"
Depth of well - 35.0 m

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	22.16
2	30.04.2022	22.49
3	16.05.2022	22.51
4	31.05.2022	22.98
5	16.06.2022	21.86
6	30.06.2022	21.76
7	16.07.2022	21.54
8	31.07.2022	21.29
9	16.08.2022	21.11
10	31.08.2022	20.95
11	16.09.2022	19.71
12	30.09.2022	19.25

4.PIEZOMETER DETAILS: New Bore Well

Location: Ravirala,South Side Near BH No.3-7A
RL - (+) 55.00m
Latitude - N16^0 50' 11.5" Longitude - E80^0 08' 39.5"
Depth of well - 50.0 m

S. No.	Date of Monitoring	Water Level (m), bgl
1	16.04.2022	26.49
2	30.04.2022	26.58
3	16.05.2022	26.89
4	31.05.2022	27.01
5	16.06.2022	26.86
6	30.06.2022	26.81
7	16.07.2022	26.73
8	31.07.2022	26.69
9	16.08.2022	26.65
10	31.08.2022	23.44
11	16.09.2022	20.65
12	30.09.2022	20.10

ANNEXURE - V

THE RAMCO CEMENTS LIMITED, KSR NAGAR
GROUND WATER QUALITY DATA - SURROUNDING VILLAGES
PERIOD - APRIL -2022 to SEPTEMBER-2022

S. No	Parameter	Unit	Dharmavarapadu Thanda Bore Well Water: July-2022 to Sep-2022	Chillakallu Open Well Water: July-2022 to Sep-2022	K.Agraharam Bore Well Water: July-2022 to Sep-2022	Pochampalli Bore Well Water: July-2022 to Sep-2022	Jayanthipuram Bore Well Water: July-2022 to Sep-2022	Ravirala Bore Well Water: July-2022 to Sep-2022	Vedadri Bore Well Water: July-2022 to Sep-2022	Budawada Bore Well Water: July-2022 to Sep-2022	Jaggayyapet Bore Well Water: July-2022 to Sep-2022	Limits
			W1	W2	W3	W4	W5	W6	W7	W8	W9	
1	p^H	-	7.6	7.4	7.5	7.2	7.6	7.8	7.5	7.6	7.9	6.5 - 8.5
2	Colour	Hazen	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5-15
3	Temperature	°C	26.3	27.6	26.5	28.0	28.3	29.1	27.6	28.2	27.4	--
4	Turbidity	NTU	1.0	1.2	1.1	1.3	1.7	1.8	1.4	1.6	1.9	1-5
5	Residual Chloride	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2-1
6	Dissolved Oxygen	mg/L	4.9	4.8	4.5	4.3	5.2	4.8	5.4	4.8	4.3	--
7	Total Suspended Solids	mg/L	28.9	27.2	29.3	26.8	27.2	31.2	39.3	34.5	35.3	--
8	Electrical Conductivity	µmhos/cm	912.0	868.0	939.0	823.0	929.0	861.0	886.0	899.0	736.0	--
9	Total Dissolved Solids	mg/L	539.0	537.0	558.0	469.0	553.0	551.0	539.0	558.0	527.0	500-2000
10	Total Hardness (as $CaCO_3$)	mg/L	238.0	269.0	288.0	212.0	296.0	231.0	269.0	262.0	251.0	200-600
11	Calcium Hardness	mg/L	135.0	131.0	139.0	102.0	174.0	151.0	163.0	137.0	111.0	--
12	Magnesium Hardness	mg/L	102.0	119.0	129.0	135.0	129.0	113.0	138.0	131.0	119.0	--
13	Calcium (as Ca)	mg/L	53.5	62.8	63.9	51.2	56.2	53.7	54.1	55.2	47.1	75-200
14	Magnesium (as Mg)	mg/L	32.7	25.1	26.3	25.1	31.2	18.2	25.2	29.1	23.6	30-100
15	Sodium (as Na)	mg/L	45.1	44.6	48.2	39.1	55.3	42.9	47.1	48.4	36.2	-
16	Potassium (as K)	mg/L	1.7	4.1	7.6	1.9	2.7	3.8	5.8	2.9	2.8	-
17	Chloride (as Cl)	mg/L	141.0	137.0	140.0	115.0	172.0	145.0	143.0	142.0	123.0	250-1000
18	Sulphate (as SO_4)	mg/L	35.2	39.1	43.5	37.2	44.1	35.2	35.8	35.3	33.7	200-400
19	Total Alkalinity (as $CaCO_3$)	mg/L	140.0	134.0	109.0	115.0	132.0	129.0	131.0	134.0	99.1	200-600
20	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	--
21	Chemical Oxygen Demand	mg/L	17.2	25.1	28.4	21.2	21.8	21.3	19.9	18.2	17.3	--
22	Oil & Grease	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--
23	Iron (as Fe)	mg/L	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.3
24	Fluoride (as F)	mg/L	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	1.0-1.5
25	Nitrate (as NO_3)	mg/L	0.8	1.2	0.8	0.3	0.6	0.6	0.6	0.3	0.4	45
26	Phosphates (as PO_4)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
27	Cyanide (as CN)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
28	Pesticides (as Malathoin)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
29	Phenolic Compounds (as C_6H_5OH	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
30	Manganese (as Mn)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
31	Chromium (as Cr^{+6})	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
32	Copper (as Cu)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	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	--
34	Aluminium (as Al)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
35	Cadmium (as Cd)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
36	Arsenic as As	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05-0.2
37	Boron (as B)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	2
38	Mercury (as Hg)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
39	Lead (as Pb)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1
40	Zinc (as Zn)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.5 - 15
41	Percent Sodium	%	48.2	46.2	38.7	35.9	45.1	40.3	41.4	36.9	37.3	-
42	Total Coliforms	MPN/100 mL	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	50-5000
43	Faecal Coliforms	MPN/100 mL	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	-
44	E.Coil	MPN/100 mL	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	-

THE RAMCO CEMENTS LIMITED, KSR NAGAR

GROUND WATER QUALITY DATA - SURROUNDING VILLAGES

PERIOD - APRIL -2022 to SEPTEMBER-2022

S. No	Parameter	Unit	Dharmavarapadu Thanda Bore Well Water:April-22 to June-22	Chillakallu Open Well Water: April-22 to June-22	K.Agraharam Bore Well Water: April-22 to June-22	Pochampalli Bore Well Water: April-22 to June-22	Jayanthipuram Bore Well Water:April-22 to June-22	Ravirala Bore Well Water: April-22 to June-22	Vedadri Bore Well Water: April-22 to June-22	Budawada Bore Well Water: April-22 to June-22	Jaggayyapet Bore Well Water:April-22 to June-22	Limits
			W1	W2	W3	W4	W5	W6	W7	W8	W9	
1	p^H	-	7.6	7.6	7.5	7.6	7.6	7.7	7.5	7.6	7.8	6.5 - 8.5
2	Colour	Hazen	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5-15
3	Temperature	^0C	29.6	28.7	29.0	29.7	29.6	28.3	28.1	27.6	29.0	--
4	Turbidity	NTU	1.5	1.3	1.6	1.8	1.3	1.6	1.3	1.5	1.1	1-5
5	Residual Chloride	mg/L	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2-1
6	Dissolved Oxygen	mg/L	4.7	3.8	3.6	3.6	4.3	4.5	4.9	4.6	4.8	--
7	Total Suspended Solids	mg/L	29.3	28.3	33.8	24.5	25.6	33.8	29.8	30.6	34.2	--
8	Electrical Conductivity	µmhos/cm	836.0	876.0	929.0	769.0	769.0	813.0	786.0	799.0	802.0	--
9	Total Dissolved Solids	mg/L	542.0	539.0	553.0	499.0	423.0	429.0	436.0	428.0	444.0	500-2000
10	Total Hardness (as $CaCO_3$)	mg/L	241.0	255.0	296.0	181.0	189.0	222.0	196.0	201.0	236.0	200-600
11	Calcium Hardness	mg/L	141.0	139.0	145.0	112.0	149.0	156.0	143.0	158.0	161.0	--
12	Magnesium Hardness	mg/L	112.0	122.0	136.0	113.0	40.0	66.0	53.0	43.0	75.0	--
13	Calcium (as Ca)	mg/L	53.5	62.3	63.9	45.2	52.6	50.2	54.1	52.9	45.6	75-200
14	Magnesium (as Mg)	mg/L	33.6	23.6	24.1	23.6	33.9	19.2	24.5	28.9	22.3	30-100
15	Sodium (as Na)	mg/L	45.3	44.1	49.6	36.2	55.1	41.2	45.1	43.8	33.6	-
16	Potassium (as K)	mg/L	1.4	4.2	7.6	1.5	3.5	4.1	5.6	3.1	2.8	-
17	Chloride (as Cl)	mg/L	142.0	139.0	145.0	118.0	162.0	141.0	152.0	145.0	123.0	250-1000
18	Sulphate (as SO_4)	mg/L	38.6	43.6	43.9	34.6	43.6	34.8	35.1	36.2	33.9	200-400
19	Total Alkalinity (as $CaCO_3$)	mg/L	128.0	131.0	111.0	124.0	129.0	122.0	106.0	101.0	95.8	200-600
20	BOD (for 3 days at 27 ^0C)	mg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	--
21	Chemical Oxygen Demand	mg/L	16.2	23.5	33.8	19.6	21.2	23.9	24.8	20.1	19.6	--
22	Oil & Grease	mg/L	<1.0	<1.0	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--
23	Iron (as Fe)	mg/L	0.17	0.15	0.22	0.09	0.17	0.09	0.13	0.18	0.06	0.3
24	Fluoride (as F)	mg/L	0.23	0.19	0.25	0.25	0.39	0.31	0.20	0.23	0.25	1.0-1.5
25	Nitrate (as NO_3)	mg/L	0.79	1.34	0.88	0.36	0.53	0.65	0.57	0.23	0.20	45
26	Phosphates (as PO_4)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
27	Cyanide (as CN)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
28	Pesticides (as Malathoin)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
29	Phenolic Compounds (as C_6H_5OH)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
30	Manganese (as Mn)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
31	Chromium (as Cr^{+6})	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
32	Copper (as Cu)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	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	--
34	Aluminium (as Al)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
35	Cadmium (as Cd)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
36	Arsenic as As	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05-0.2
37	Boron (as B)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	2
38	Mercury (as Hg)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
39	Lead (as Pb)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1
40	Zinc (as Zn)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.5 - 15
41	Percent Sodium	%	48.6	43.5	39.1	39.0	43.7	40.2	36.9	35.1	36.8	-
42	Total Coliforms	MPN/100 mL	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	50-5000
43	Faecal Coliforms	MPN/100 mL	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	-
44	E.Coil	MPN/100 mL	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	-

ANNEXURE - VI

THE RAMCO CEMENTS LIMITED, KSR NAGAR
NOISE LEVEL MONITORING - RAVIRALA LIMESTONE MINE
PERIOD - APRIL -2022 to SEPTEMBER-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	29.09.2022	Drilling area	71.2	< 75	63.9	< 70
2	29.09.2022	Loading area	71.9	< 75	62.8	< 70
3	29.09.2022	Haul road	70.9	< 75	62.8	< 70
4	29.09.2022	Unloading area	71.5	< 75	63.5	< 70
5	29.09.2022	Mines office	53.6	< 75	38.1	< 70
6	29.09.2022	Dumping area	51.4	< 75	40.7	< 70
7	29.09.2022	Pump house	63.9	< 75	45.4	< 70
8	29.09.2022	Weigh bridge	60.8	< 75	46.9	< 70
9	29.09.2022	Ravirala View point	65.9	< 75	46.8	< 70
10	29.09.2022	Near ML-4 Tower Light	60.6	< 75	45.3	< 70

THE RAMCO CEMENTS LIMITED, KSR NAGAR
AUTO GARAGE OIL & GREASE TRAP OUTLET WATER QUALITY DATA
Period - April 2022 to September 2022

S. No	Parameter	Unit	Month						Range / Average	Norm
			Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22		
1	p^H		7.79	7.83	7.91	7.99	7.91	7.84	7.79 - 7.99	5:5 - 9.0
2	Total Dissolved Solids	mg/L	912	923	936	926	938	921	929	2100
3	Total Suspended Solids	mg/L	77.3	78.9	79.6	78.3	76.9	75.4	77.8	100
4	Chemical Oxygen Demand	mg/L	129	136	129	132	129	136	132	250
5	BOD (for 3 days at 27 ^{o}C)	mg/L	40.6	42.3	41.6	40.3	42.3	43.1	41.9	100
6	Oil & Grease	mg/L	2.4	2.7	2.5	2.7	2.5	2.7	2.6	10

ANNEXURE - VII