PUBLIC HEARING SUMMARY

OF

DRAFT EIA / EMP REPORT

FOR

MOTHAIYANUR LIMESTONE MINES

GO.No.	G.O. 211	G.O.1086	G.O.76
Extent	50.84 Ha	4.865 Ha	8.005
Location	Chinnagoundanur Village, Sankari District, Salem District Tamil Nadu		
Production	0.5 MTPA	0.012 MTPA	0.61 LTPA
Depth	75m	75m	40m
ToR	SEIAA-TN/F.No.6733/SEAC/ToR-632/2019 dated 12.07.2019	SEIAA-TN/F.No.6567/SEAC/ToR-630/2019 dated 12.07.2019	SEIAA-TN/F.No.6856/SEAC/ToR-847/2019 dated 17.02.2021
ToR validity Extension	TO24B0000TN5476378A dated 16.07.2024	TO24B0000TN5791761A dated 16.07.2024	TO24B0000TN5779670A dated 25.06.2024
Baseline Monitoring	Winter Season (Dec 2023 – Feb 2024)		

PROJECT PROPONENT

THE INDIA CEMENTS LTD.

Coromandal Towers, No.93 Santhome High Road,
Karpagam Avenua, R.A.Puram, Chennai

CONSULTANT

CREATIVE ENGINEERS & CONSULTANTS

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S.No 1(a), Category – B1

JULY 2024

SUMMARY

1.1 INTRODUCTION:

The India Cements Limited (ICL) has initiated action towards obtaining environmental clearance for their Mothaiyanur Limestone Mines namely, G.O.No.211 , G.O.No.1086, and G.O.No.76 located in Chinnagoundanur Village, Sankari Taluk, Salem District, Tamil Nadu. Since the above mining leases are contiguous and adjacent to each other, the mining operations are planned on a contiguous working basis.

Considering that all the projects are limestone mines which is a major mineral with lease area <250Ha, they fall under Sector 1(a) i.e.; Mining of Minerals under Category B1 and as per MoEF & CC notification, this proposal necessitates preparation of EIA/EMP report along with public hearing and the PP has initiated action towards the same.

As such combined draft EIA report with separate EMP measures is prepared for these 3 leases **(**G.O.No.211,G.O.No.1086 and G.O.No.76) based on standard and additional Terms of Reference issued by SEIAA, Tamil Nadu and is in conformance of the generic structure prescribed by MOEF&CC in their notification of September 2006 and the approved review of mining plan.Their lease details are provided below:

Details of Mothaiyanur Limestone Mines

G.O. No	Village	Survey No	Extent		Type of land
			Acre	Ha	
211	Chinnagoundanur	15/1, 16/2,18, 25/2 etc	125.57	50.84	Non-forest Patta land
1086	Chinnagoundanur	17,23/1,24/1,25/1, 33/1B part, 33/2, 33/3, 33/4, 51/2B part, 52/5 part, 153/2	12.02	4.865	Non-forest Patta and Revenue land
76	Chinnagoundanur	48,63,66	19.77	8.005	Non-forest land

Presuming that Environmental Clearance is to be obtained at the stage of lease renewal only, application for obtaining EC was initially submitted to MoEFCC in year 2014 and subsequently mining operations were stopped as per MoEFCC directions and Terms fo Reference under violation category was appplied. Though GO 211, GO 76 falls under violation category, factually no production violation is involved while considering the base 1993-94 production level. In case of GO 1086 there is no limestone production from year 2014-15 and as such it is not a violation case. NOC is issued by Commissionerate of Geology & Mining, Guindy, Chennai in this regard.

1.2 STATUTORY APPROVALS:

Particulars	GO 211	GO 1086	GO 76
A. Mining Lease Details			
Period	Up to 31.03.2030 as per MMDR Amended Act, 2015		
B. Review of Mining Plan Approval Details			
Period	2024-25 to 2028-29	2023-24 to 2027-28	2022-23 to 2026-27
Approval authority	Regional Controller of Mines, IBM, Chennai		
Letter no	NO TN/SLM/LST/ROMP-1727.MDS dated 15.12.2023	NO TN/SLM/LST/ROMP-1698.MDS dated 19.12.2022	NO TN/SLM/LST/ROMP-1678.MDS dated 15/12/2021
C. Terms of reference			
Issued by	SEIAA, Tamil Nadu, Panagal building, Chennai		
Letter no	SEIAA-TN/F.No.6733/ SEAC/ TOR-632/2019 dated 12.07.2019	SEIAA-TN/F.No.6567/SEAC/TOR-630/2019 dated 12.07.2019	SEIAA-TN/F.No.6856/SEAC/TOR-847/2019 dated 17.02.2021
Amendment/ Corrigendum if any	--	SEIAA-TN/F.No.6567/SEAC/TOR-630/CORRIGENDUM/2023 dated 28.07.2023	SEIAA-TN/F.No.6856/SEAC/TOR-847/2019/Amendment dated 28.11.2022
ToR validity Extension	• SEIAA-TN/F.No.6733/ SEAC/TOR-632/Ext/ dated 26.09.2022 • TO24B0000TN5476378A dated 16.07.2024	• SEIAA/TN/F.No.6567/SEAC/TOR-630/Extn/2019 dated 26.09.2022 • TO24B0000TN5791761A dated 16.07.2024	TOR Identification No. TO24B0000TN5779670A dated 25.06.2024
Baseline Data Collection	Winter Season (Dec 2023 – Feb 2024)		

As per TOR Condition, EIA/EMP report is prepared for this proposal. Salient details of the report is given below.

2.1 SITE DESCRIPTION:

Table No.1: SITE DETAILS

S.No	Particulars	Details
1	Name of the Project	Mothaiyanur Limestone Mines (G.O.211, G.O.1086 and G.O.76)
2	Location of the project	Chinnagoundanur village, Sankari taluk, Salem district, Tamil Nadu
3	Latitude & Longitude	**Latitude:** 11°29'45.1684"N to 11°28'49.6096"N **Longitude:** 77º48'04.5933"E 77°47'30.3248"E
4	Mining Lease area	Mothaiyanur Limestone Mines (G.O.211) – 50.84 Ha Mothaiyanur Limestone Mines (G.O.1086) – 4.865 Ha Mothaiyanur Limestone Mines (G.O.211) – 8.005 Ha
5	Type of land	Patta Land

Table No.2: Environmental Setting of the Study Area

S.No	PARTICULARS	GO-211	GO-1086	GO-76
1	Mine site topography	271 to 310 RL	280 to 310 RL	271 to 310 RL
2	Nearest highway	Salem to Coimbatore Highway (NH-47) – 2.95Km – SE	Salem to Coimbatore Highway (NH-47) – 3.3Km – SE	Salem to Coimbatore Highway (NH-47) – 2.9Km – SE
3	Nearest Railway station	Sankari Durg Railway Station (by road) – 8.7km, SE	Sankari Durg Railway Station (by road) – 9.0 km, SE	Sankari Durg Railway Station (by road) – 8.8 km, SE
4	Nearest Airport	Salem Airport – 43Km (NE)	Salem Airport – 43Km (NE)	Salem Airport – 43.5Km (NE)
5	Nearest major water bodies	Cauvery River- 7.0 km, NW Sarabhanga River – 6.3Km, NW Mettur East Bank canal – 4.5Km, NW	Cauvery River- 7.2 km, NW Sarabhanga River – 6.5Km, NW, Mettur East Bank canal – 4.7Km, NW	Cauvery River- 7.0 km, NW Sarabhanga River – 6.1Km, NW, Mettur East Bank canal – 4.7Km, NW
6	Nearest town/City	Sankari - 8.0 km, E	Sankari - 8.2 km, E	Sankari - 8.0 km, E
7	Nearest villages	Mothaiyanur - < 0.5km - W Chinna mothaiyanur - <1.0km - E Reddipalayam - 1.2km - NW	Mothaiyanur - < 0.5km – W Chinna mothaiyanur - <1.0km – E, Reddipalayam - 1.4km - NW	Mothaiyanur - < 0.5km - W Chinna mothaiyanur - <1.0km – E, Reddipalayam - 1.5km - NW
8	Notified Archaeologically important places, Monuments	Sankagiri Fort – 7.0 Km (East)	Sankagiri Fort – 7.3 Km (East)	Sankagiri Fort – 7.1 Km (East)
9	Local Places of Historical and Tourism Interest	Sankagiri Fort – 7.0 Km (East)	Sankagiri Fort – 7.3 Km (East)	Sankagiri Fort – 7.1 Km (East)
10	Environmental sensitive areas, Protected areas as per Wildlife Protection Act, 1972 *	Nil	Nil	Nil
11	Reserved / Protected Forests	Suriyamalai Reserve Forest – more than 60m from the mine workings on the north,	Suriyamalai Reserve Forest – more than 280m	Suriyamalai Reserve Forest – more than 1.3Km from the mine workings on the north,
12	Defence Installations	Nil within 10 km radius	Nil within 10 km radius	Nil within 10 km radius
13	Seismic Zone	Zone – II (Least Active)	Zone – II (Least Active)	Zone – II (Least Active)
16	Other Industries in the study area	ICL's sankari cement plant, Veerachipalayam limestone mines, Karumapurathanur limestone mines, quarries in Mangarangampalayam		

Table No.3: TECHNICAL DESCRIPTION

S.No	Particulars	GO.No.211	GO 1086	GO 76
1	Geological reserve	8.06 Mil.T	0.3087 Mil.T	4.72 Mil.T
2	Mineable reserve	4.47 Mil.T	0.1978 Mil.T	0.69 Mil.T
3	Method of Mining	Opencast mechanized method with drilling, controlled blasting, loading with excavators , tipper transportation. Rock breakers will be used as and when necessary.		
4	Peak Production	0.5 MTPA	0.012 MTPA	0.61 Lakh TPA
5	Lease period	Renewed as per MMDR Amended Act, 2015 upto 31.03.2030	Renewed as per MMDR Amended Act, 2015 upto 31.03.2030.	Renewed as per MMDR Amended Act, 2015 upto 31.03.2030.
6	Waste Generation and Management	• Waste Quantity – 3.749 Mil.T • Mineral Reject – 0.889 Mil.T • Will be dumped in the dumps within the lease area	• Waste Quantity – 0.068 Mil.T • Mineral Reject – 0.030 Mil.T • Will be dumped in the dumps within the lease area	• Waste Quantity – 0.039 Mil.T • Mineral Reject – 0.060Mil.T • Will be dumped in the dumps within the lease area
7	Ultimate Mine depth	75m	75m	40m
8	Manpower	122	13	16
9	Water Requireme & source	Requirement – 50KLD Source - Rain water collected and stored in the mine pit.		
10	Power Requirement	This mine is a fully mechanized mine, all machineries are diesel operated and power required for office and etc will be drawn from Tamil Nadu Electricity board.		
11	Site services	Mine office, first aid room, rest shelters, toilets etc. are already available as semi-permanent structures.		
12	Project cost	Rs. 99 lakhs	Rs.12.95 Lakhs	Rs.4.9 Lakhs

3.1 EXISTING ENVIRONMENTAL SCENARIO:

The studies and data collection have been carried out systematically and meticulously as per relevant IS codes, CPCB and MoEF&CC guidelines and as per approved ToR during **Winter Season (December 2023 – February 2024)** For the purpose of this study, the area has been divided into two zones, namely, core and buffer zones. Core zone is considered as the total combined lease area, while buffer zone encompasses an area of 10 km radius distance from the periphery of core zone. Based on 2011 census data, in the 10km radius there are 29 Rural villages & 6 urban areas and from 3 Taluks (Sankari,Tiruchengode, Omalur) and 2 Districts (Salem & Namakkal).

Table No.4: SOCIAL, ECONOMIC AND DEMOGRAPHIC PROFILE OF THE STUDY AREA

Details	Population	Percentage
A. Gender-wise distribution		
Male Population	157406	51.1
Female Population	150858	48.9
Total	**308264**	**100.0**
B. Caste-wise population distribution		
Scheduled Caste	45268	14.6
Scheduled Tribes	126	0.0
Other	263122	85.4
Total	**308264**	**100.0**
C. Literacy Levels		
Total Literate Population	199459	64.7
Others	108805	35.3
Total	**308264**	**100.0**
D. Occupational structure		
Main workers	152561	49.5
Marginal workers	11257	3.7
Total Workers	**163818**	**53.2**
Total Non-workers	**144446**	**46.8**
Total	**308264**	**100.0**

3.2.1 EXISTING ENVIRONMENTAL QUALITY:

Table 5: Baseline Data

A) AMBIENT AIR QUALITY	**Monitoring Location –** 6 locations		
PARAMETER	**RESULT (µg/m3)**		***LIMIT (µg/m3)**
Location	**Core Zone**	**Buffer Zone**	
Particulate Matter (Size <10 µm)	40.7 – 51.2	42.5 – 61.1	100
Particulate Matter (Size <2.5 µm)	19.1 – 25.1	20.1 – 29.9	60
Sulphur Dioxide (as SO_2)	4.2 – 6.5	4.4 – 7.1	80
Nitrogen Dioxide (as NO_2)	9.7 – 13.1	9.9 – 16.3	80
Conclusion: The existing Ambient Air Quality levels for PM10, PM2.5, SO2 and NO2, are within the NAAQ standards prescribed CPCB limits of 100 µg/m3, 60 µg/m3, 80 µg/m3 & 80 µg/m3. The CO values in all the locations were found to be below detectable limit. Silica values in the study area are found to be below detectable limit. (Detection limit – 0.05 mg/m3)			
B) WATER QUALITY	**Monitoring Location –** 6 locations (borewells)		
PARAMETER	**Result**		***LIMIT (µg/m3)**
pH at 25 ˚C	7.35 – 7.89		**6.5-8.5**
Total Dissolved Solids, mg/L	224 – 1246		**2000**
Chloride as Cl-, mg/L	33.27 – 332.66		**1000**
Total Hardness (as CaCO3), mg/L	154.84 – 539		**600**

Total Alkalinity (as CaCO3), mg/L	41.16 – 470.40	**600**
Sulphates as SO42-, mg/L	68.49 – 379.34	**400**
Iron as Fe, mg/L	0.02 – 0.06	**0.3**
Nitrate as NO3, mg/L	2.45 – 5.64	**45**
Fluoride as F, mg/L	0.44 – 0.68	**1.5**
Conclusion: The water quality of ground water is found to be within the prescribed Permissible limits of IS: 10500 Norms in the absence of an alternative source as per Drinking Water Specifications.		

C) NOISE LEVELS	**Monitoring Location –** 6 locations		
PARAMETER	**RESULT dB(A)**		***LIMIT (µg/m3)**
	Day Equivalent	**Night Equivalent**	
Core Zone	47.2	43.7	**90**
Buffer Zone	48.2 – 52.0	41.4 – 43.7	**Day Equivalent - 55dB(A), Night Equivalent - 45dB(A)**
*Permissible noise for industrial workers as laid down by CPCB (at 8 hrs Exposure Time). While comparing with the MoEF&CC Norms, the monitored ambient noise levels are generally within the limit values.			

D) SOIL QUALITY	**Monitoring Location –** 5 locations
PARAMETER	**Range of values**
pH	7.02 – 7.66
Electrical Conductivity (µmho/cm)	47.86 – 102.2
Organic matter (%)	196 – 448
Total Nitrogen (mg/kg)	196 – 448
Phosphorus (mg/kg)	0.92 – 2.27
Sodium (mg/kg)	352 – 836
Potassium (mg/kg)	510 - 962
Soil is of Silt Loam Type.	

3.2.2 LAND EVIRONMENT:

Landuse pattern study carried out through remote sensing satellite data around the 10km buffer zone shows that 17.50 % of the study area is agriculture land and 19.50 % are fallow land. Land with scrub constitutes 27.32 %, lands without scrub constitute 2.75 % and waterbodies constitute 3.74 %, Scrub / Reserve Forest constitute 17.98 % and Mining area Constitute 1.77 %.

3.2.3 BIOLOGICAL ENVIRONMENT:

Flora: Major part of the lease area is already used for mining and allied activities and as such free from any major natural vegetation. Plantation carried out in the lease area and few local

shrubs are mostly found in the area. Major part of the study area is of fallow and scrubby type. Agriculture is restricted to water resource area and mostly monsoon dependent. In general, agricultural seems to be prominent in the western side of the lease area proximate to Cauvery river, its tributary and irrigated areas. Suriya malai reserve forest is of scrub forest type with mostly shrubs and bushes only

Fauna: There is no Wild Life Sanctuary or National Park within the study area of 10 km. Domesticated animals are commonly found. No wild mammalian species was directly sighted during the field survey. The Suriya malai reserve forest was observed north of the mine boundary. Deer, Rabbit and two schedule – I species namely Pea fowl and Monitor lizard are located in the suriya malai forest which is located within the buffer zone. Towards conservation of Schedule-I species, Rs.10.0 Lakhs will be spent on a combined basis for all the leases of ICL and its cement plant. The various measures will be undertaken in consultation with the DFO.

3.2.4 HYDROLOGICAL STUDY:

Hydrogeological study was conducted by the Climate and Environmental Research Group (CERG), University of Madras. Vertical electrical sounding (VES) , pumping test have been carried out in the area. There is no hydraulic continuity between the limestone and the country rocks in the adjoining core and buffer zone areas and this is due to the fact that the limestone is a hard rock and acts as a ground water barrier which arrests the occurrence, movement and distribution of the groundwater either from the limestone to country rock or vice versa.

The mine pit is actually acting as a rainwater harvesting structures. This is being facilitated to induce the groundwater recharge in this area**.** The collected rain water is being utilized for greenbelt development of the area and water sprinkling in the haul road for dust suppression. The remaining water of the mine is being pumped to the nearby agriculture which will induce the groundwater table of shallow aquifer in the nearby area.

This hydrogeological study concluded that the mining operations will not have any adverse impact on the groundwater and the aquifers present in and around the lease area.

4.1 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Since the overall production is also less the equipments to be deployed are also mostly common and less. As such the impact assessment and the management measures are also planned on a common basis.

4.1.1 AIR ENVIRONMENT:

The principal sources of air pollution in general due to mining and allied activities will be Excavation, Drilling, Movement of HEMM such as Excavators, tippers etc., Loading and unloading operation and transportation. In case of this mine, the following measures are & will be adopted to control impact on the air quality due to mining operations in the lease area:

- Regular wetting of transport road using mobile water tanker.
- Transportation through dedicated black topped road to Sankari Cement Plant.
- Avenue Plantation.
- Wet drilling / Covering of drill holes with wet clothes
- Proper maintenance of roads.
- Avoiding overloading of tippers & Transportation of material by tarpaulin covered trucks
- Proper maintenance of HEMM to minimize gaseous emission
- Setting up of tyre washing facility in the lease area exit.
- Vehicular emission tests with digital smoke meter.
- Development of green belt/ plantation in various areas within the mine lease area etc.

By adoption of all these measures, no adverse impact on air quality is envisaged due to this expansion project.

The cumulative impact on air quality due to the proposed project is estimated using AERMOD View Gaussian Plume Air Dispersion Model.

The post project added concentrations with baseline figures even at worst scenario, show that the cumulative values of ambient air quality with respect to PM_{10} are in the range of 53.8 μg/m3 to 62.1 μg/m3 and with respect to PM2.5 are in the range of 26.2 μg/m3 to 30.9 μg/m3 which are within the statutory limits in each case.

For preservation of environment in this mine strict enforcement of management schemes will be undertaken for taking corrective actions, as needed. By adopting the effective implementation of all the mitigative measures, no adverse impact on Air quality due to the mining operation in this lease area is expected.

4.1.2 WATER ENVIRONMENT:

The total water requirement will be 50.0 KLD. This comprises 2.0 KLD for domestic use, 30.0KLD for dust suppression by water sprinkling, wet drilling and 18 KLD for greenbelt and plantation. The water requirement is met from rainwater collected in the mine pit.

In the mining project, there will be no process effluent. The various mitigative measures proposed towards control of water pollution is provided below:

- Common workshop for all the leases of the proponent is present in the mines office and the same will be used for this project also. The workshop effluent will be passed through oil and grease trap. The treated water is reused within the workshop. The oil from the oil storage tank is safely disposed to CPCB authorized re-processor.
- With regards to domestic waste water, septic tank with soak pit facility will be used.
- Surface runoff management structures such as garland drains and earthern bunds already exist along mine haul roads, mine periphery and around dumps. Based on the mine and dump movement during future workings these drains will be suitably re-oriented and further strengthened.
- Plantation of native species on dump tops and slopes with geo-matting to arrest and prevent erosion will be made.
- Within the lease area, the rainwater falling within the mine pit area is made to drain to the mine sump in the lowest level of working through proper bench slopes towards the peripheral drains in the bench end. Mine sump itself acts as a good rain water harvesting pit. Collected water will be used for watering of haul roads, greenbelt and plantation, etc.
- Outside the lease area, various measures such as rooftop rainwater harvesting structures in the Schools, desilting of nearby village ponds, etc. are being carried out.
- There are no surface water bodies nearby and as such there will not be any impact on this front.

  These measures will be continued in the future also.

4.1.3 NOISE ENVIRONMENT:

During mining operation there will be noise generation due to working of excavators, movement of vehicles, etc. However, it will be felt near the active working area only and at away from its

source it will get reduced. Due to natural attenuation effects and implementing mitigative measures like proper greenbelt development, design / maintenance of machines, Providing earplugs to workers exposed to higher noise levels etc., post project noise levels are expected to be well within the prescribed limits.

Avenue plantations already exist along peripheral portions of the mining lease areas. Further greenbelt and afforestation will be planned and executed in future to abate noise and dust propagation in the area.

4.1.4 VIBRATION:

During mine workings, blasting & vibration effects will be controlled by adopting following measures.

- Carrying out controlled blasting using Nonel delay detonator.
- Optimum design for burden and spacing.
- Reducing explosive charge per delay to minimum.
- Using rock breaker wherever possible
- Proper care and supervision during blasting by a competent and experienced person to be carried out.
- Besides, different blasting time for both the projects is suggested and the timing is to be mentioned in the display board in the mines entrance.

By adoption of above measures, it will be ensured that ground vibrational levels due to blasting will be maintained within the prescribed DGMS conditions of 10 mm/s for the domestic houses/structures.

4.1.5 IMPACT ON LAND ENVIRONMENT:

The entire lease area is in ICL Possession. Progressively the waste dumps will be stablised with compaction and reclaimed with dump plantation & ultimately it will be ensured that the entire waste dumps are properly reclaimed and vegetated. In the post mining stage, top mined out benches will be reclaimed and the remaining mined out area will be left as water body which will recharge the ground water. Green development will be carried out progressively around the lease periphery, all the available undisturbed area & along the mineral transport area . Infrastructures will be dismantled and reclaimed. Progressively the waste dumps will be

stablised with compaction and reclaimed with dump plantation & ultimately it will be ensured that the entire waste dumps are properly reclaimed and vegetated.

4.1.6 BIOLOGICAL ENVIRONMENT:

About 34,595 plants have already been planted so far since the commencement of the mining operations covering a total area of 26.903Ha in mining leases of ICL. Besides, outside the lease area also plantation is carried out over an area of 9.72Ha with a total of 13,185 plants.

Necessary mitigative measures like dust suppression, proper maintenance of equipment's, greenbelt and plantation etc., will be carried out to prevent dust generation & any further impact on the vegetation or agricultural activity nearby. Greenbelt / Plantation will be carried out to enhance the vegetative growth and aesthetic in the safety zone area.

Suriyamalai Reserve Forest is located north of GO 211. Air quality model studies and post project noise estimation show that there is no adverse impact due to mining operations on the same. To prevent dust propagation, it is proposed to erect a green net/tin sheet in the northern side of the lease area. Regular periodic monitoring near the RF area will be carried out to ensure the same.

4.1.7 SOCIO ECONOMIC ENVIRONMENT:

In Sankari area, the ICL's mining and cement plant operations has resulted in employment opportunities. So far the proponent has spent about Rs.180 lakhs for various community development activities. In future various social welfare activities will be continued to improve the physical and social infrastructures of the local community.

Towards futures socio-economic development of the surrounding area, the proponent has earmarked an amount of Rs.15.0 Lakhs under Corporate Environmental Responsibility. The activities identified under CER will be implemented in a phased manner in the nearby Government school. In consultation with the locals based on the need & priority it will be implemented.

By carrying out systematic and scientific mining and implementing all the environmental mitigative measures it will be ensured that there will be no adverse impact on this front.

4.1.8 IMPACT ON LOCAL LOGISTICAL SYSTEM DUE TO PROJECT:

Limestone output from this mine and adjoining leases are transported through private dedicated black topped road of ICL to Sankari cement plant. During the project operations, there is 4 trips of truck transport per hour. Considering that the transportation occurs in the proponent's own dedicated road and considering the implementation of the below mentioned mitigation measures, no major impact is envisaged in the logistical front.

- Water sprinkling on mineral in the transport vehicles before transporting, so that no dust nuisance during transport will arise.
- Plantation on either side of the transport road in consultation with the concerned department.
- Proper maintenance of transport road.
- Proper maintenance of transport vehicles.
- Avoiding overloading of material.
- Covering of loaded vehicles with tarpaulins sheet.
- Keeping traffic regulators at vulnerable locations.
- Limiting of speed
- Installation of barriers at vulnerable locations

4.1.9 WASTE MANAGEMENT:

There is no process effluent generation from this mine. Hence no liquid waste is generated. Single use plastics/ use and throwaway plastics will be banned in the site as directed by the Tamil Nadu Government vide GO(Ms)No.84 regarding ban on use of plastic products. The employees will be encouraged to use compostable material or reusable material.

5.1 ENVIRONMENTAL MONITORING PROGRAME:

Regular, systematic and sustained programme schedules for implementation and monitoring of various control measures are devised with clear cut guidelines of various concerned plans for keeping a continuous surveillance on the various environmental quality parameters in the area.

A common environment cell is available at ICL Sankari for the cement plant and mines. This cell undertakes effective monitoring, ensure implementation of various environmental control

measures effectively and oversee various environmental management schemes.The India Cements Ltd. will conduct regular Environmental monitoring for various parameters and the same are submitted to statutory authorities.

In this proposal implementation of mitigative measures, like provision of mobile water tankers, greenbelt plantation, monitoring of environmental parameters, providing safety gadgets etc involves capital as well as recurring expenses. This being an existing mine, various measures are already in place. Additionally, towards EMP measures, Rs.15.6 Lakhs is allocated under capital cost. Besides, Rs.45.0 Lakhs per annum will be spent under recurring cost. All the recurring cost of maintenance of pollution control measures, environmental monitoring etc., will be met from revenue.

7.1 CONCLUSION:

Systematic and scientific mining of the ore with proper and timely execution of various environment management plan suggested in the report will ensure maintenance of future environmental quality within statutory limits. By judicious implementation of the well laid Environmental Management System (EMS) as given in the report, it will be possible to achieve an environmentally sustainable industrial growth without any hindrance to the surrounding environment.

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