



**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(Impact Assessment Division)**

To,

The Asst. Vice President & Head- Environment  
Shree Cement Ltd.

Shree Cement Ltd. Bangur Nagar, Post Box No. 33, Beawar 305901,  
Rajasthan, India, Shree Cement Ltd. Bangur Nagar, Post Box No. 33,  
Beawar 305901, Rajasthan, India, Ajmer, Daman and Diu-305901

**Subject:** Grant of Environmental Clearance (EC) to the proposed Project Activity  
under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC)  
in respect of project submitted to the Ministry vide proposal number  
IA/GJ/MIN/73109/2018 dated 17 Nov 2021. The particulars of the environmental  
clearance granted to the project are as below.

- |   |   |
|---|---|
| 1. EC Identification No.                      | <b>EC22A001GJ186980</b>   |
| 2. File No.                                   | IA-J-11015/23/2018-IA-II(M)   |
| 3. Project Type                               | New   |
| 4. Category                                   | A   |
| 5. Project/Activity including<br>Schedule No. | 1(a) Mining of minerals   |
| 6. Name of Project                            | Proposed Mudhvay Sub-Block B for<br>Mineral Limestone Mining of 4.38 Million<br>TPA limestone (ROM basis: 12.88 Million<br>TPA which includes 4.38 Million TPA<br>limestone production, 8.14 Million TPA<br>over-burden & 0.36 Million TPA inter-<br>burden excluding top-soil), Mining Lease<br>area of 233.5 ha and installation of 1200<br>TPH capacity crusher near Village<br>Mudhvay, Tehsil Lakhpur, District<br>Kachchh, Gujarat by M/s Shree Cement<br>Limited Unit: Bhuj Cement Plant |
| 7. Name of Company/Organization               | Shree Cement Ltd.   |
| 8. Location of Project                        | Gujarat   |
| 9. TOR Date                                   | 12 Apr 2018   |

The project details along with terms and conditions are appended herewith from page  
no 2 onwards.

Date: 04/04/2022

(e-signed)  
**Pankaj Verma**  
Scientist E  
IA - (Non-Coal Mining sector)

*Note: A valid environmental clearance shall be one that has EC identification  
number & E-Sign generated from PARIVESH. Please quote identification  
number in all future correspondence.*

*This is a computer generated cover page.*

**IA-J-11015/23/2018-IA-II (M)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**Impact Assessment Division**

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2<sup>nd</sup> Floor, Prithvi Block  
Indira Paryavaran Bhawan  
Jor Bagh Road, Aliganj  
New Delhi-110003  
Date: 4<sup>th</sup> April, 2022

To

M/s Shree Cement Limited  
Bangur Nagar, Post Box No.33  
Beawar – 305 901, Ajmer  
Rajasthan

**Sub: Proposal for Environmental Clearance for Proposed Mudhvay Limestone Mine with the production capacity of 12.18 MTPA (ROM) [4.38 MTPA limestone production, 8.14 MTPA over-burden & 0.36 MTPA inter-burden excluding top-soil] and installation of 1200 TPH Crusher in the mine lease area of 233.5 ha located at Village Mudhvay, Taluka Lakhpat, District Kachchh, Gujarat by M/s Shree Cement Limited- reg.**

Sir,

This has reference to the proposal no. IA/GJ/MIN/73109/2018 for Environmental Clearance for Mudhvay Limestone Mine with the production capacity of 12.18 MTPA (ROM) [4.38 MTPA limestone production, 8.14 MTPA over-burden & 0.36 MTPA inter-burden excluding top-soil] and installation of 1200 TPH Crusher in the mine lease area of 233.5 ha located at Village Mudhvay, Taluka Lakhpat, District Kachchh, Gujarat by M/s Shree Cement limited.

**EAC Meeting Details:**

EAC Meeting	47 <sup>th</sup> EAC Meeting
Date of Meeting	7 <sup>th</sup> to 9 <sup>th</sup> March 2022

**2. Project details:**

Name of the Proposal	Proposed Mudhvay Sub-Block 'B' Limestone Mine by Shree Cement Limited with Limestone production capacity of 4.38 Million TPA, Over-burden 8.14 Million TPA, Inter-burden 0.36 Million TPA & Top soil 0.44 Million TPA [Total Excavation-12.88 Million TPA excluding Top soil/ Total Excavation- 13.32 Million TPA including Top soil] and installation of 1200 TPH capacity Crusher within a Mining Lease Area of 233.5 ha	
Location	Village	Mudhvay
	Tehsil/Taluka	Lakhpat

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	District	Kachchh
	State / UT	Gujarat
	Latitudes	23° 42' 43.6432" N to 23° 43' 59.9313" N
	Longitudes	68° 41' 11.9388" E to 68° 41' 53.2506" E
	SoI Toposheet No.	F42C9 (41 A/9), F42C10 (41 A/10), F42C13 (41A/13), F42C14 (41 A/14)
Company's Name	Shree Cement Limited	
Accredited Consultant and certificate no.	Vimta Labs Ltd. Certificate No. NABET/EIA/1720/SA 088 Validity: 8 <sup>th</sup> February, 2022	
KML file	Submitted	
Seismic zone	V	

### 3. Category details:

Category of the project	Category "A", Project or Activity 1(a) – 3 for Mining of Mineral
Provisions	EIA Notification dated 14 <sup>th</sup> September 2006
Mining lease Area	233.50 ha
Additional information	Narayan Sarovar Wildlife Sanctuary is 3.3 km in South direction and Eco-Sensitive Zone is 2.4 km in South direction from ML area

### 4. ToR/EC Details:

ToR Proposal No.	IA/GJ/MIN/73109/2018
Online application date for Form-I	20 <sup>th</sup> February, 2018
ToR Letter No.	J-11015/23/2018-IA.II(M)
ToR grant Date	12 <sup>th</sup> April, 2018
Production capacity	Production Capacity of 4.38 Million TPA
Soil	Topsoil: 0.44 Million TPA
Waste	OB: 8.14 Million TPA, IB: 0.36 Million TPA
Total Excavation	Total excavation is 12.88 Million TPA excluding Topsoil of 0.44 Million TPA/ Total excavation is 13.32 Million TPA including Topsoil of 0.44 Million TPA
Crusher	1200 TPH
EIA/EMP uploaded on	17 <sup>th</sup> November, 2021
Previous EAC Meeting	43 <sup>rd</sup> EAC Meeting held during 14 <sup>th</sup> to 16 <sup>th</sup> Dec. 2021

### Additional Details Sought:

The proposal for Environmental Clearance was considered in the 43<sup>rd</sup> EAC meeting held during 14<sup>th</sup> to 16<sup>th</sup> December, 2021. The ADS was generated on 24.12.2021. The project proponent submitted the reply on 11.02.2022 which is as follows:

**ADS Point 1: The project proponent needs to submit the revised data for air quality modeling, noise and vibration indicating clearly the sources and the receptors within the mine boundary and the predictive concentration at the mine boundary particularly towards the Narayan Sarovar Wildlife Sanctuary.**

**Reply:** The revised air quality modeling for Mudhvay Limestone mine of Shree Cement Ltd. were carried out with incorporation of additional discrete receptors within the ML area and towards Narayan Sarovar Wildlife Sanctuary for clearly predicting the dispersion of incremental concentration due to the mining activity of proposed mine. Separate scenario has been considered to predict the incremental concentration due to the activity of mines using surface mining technology. The noise modeling has been revised considering all noise generating activity of mines, and the impact on nearby habitations and Narayan Sarovar Wildlife Sanctuary has been predicted. The reference document of Air dispersion modeling study and Noise dispersion modeling study is submitted with the ADS reply. The Mudhvay mine is a virgin mine with no mining operations. The vibration modeling will be carried out immediately after commencement of mining operations.

**ADS Point 2: The project proponent needs to submit the noise and vibration monitoring data due to crusher as well as quarrying including the transportation within the mine lease boundary in the direction of Narayan Sarovar Wildlife Sanctuary.**

**Reply:** SCL Mudhvay mine planned to excavate the over burden by use of surface miner, hydraulic excavator and dumpers. If compact and hard overburden is encountered, controlled blasting will be carried out otherwise overburden will be excavated without use of drilling & blasting and will send to crusher. The noise dispersion model has been carried out due to the activity of various sources like blasting, drilling, haul road movement, shovel, dumpers, dozers, surface miners and crushers. It is observed that the predicted resultant noise levels due to the proposed mining activity at the villages located nearby mine lease area ranges from 51.96 db(A) [including baseline level {48.8 dB(A)} & incremental level {3.16 dB(A)}] at Mudhvay village located at 1.2 km towards SW direction from the core activity zone to 47.85 db(A) [including baseline level {46.4 dB(A)} & incremental level {1.45 dB(A)}] at Malda village located at 2.6 Km towards NE direction from the core zone. Thick patch of greenbelt will be developed for 200m along the southern periphery of the mine lease boundary (as suggested by Hon'ble EAC), which will act as a barrier resulting in low dispersion of noise outside the mine lease area.

The majority of the quarrying operations will carry out in northern side of the ML area. The proposed crusher will be located in the northern corner of the ML area, which is adjacent to the proposed integrated cement plant. Whereas, Narayan Sarovar Wildlife Sanctuary is located further south to ML area. The mined out limestone will be transferred through conveyor belt to the cement plant. There is also consideration of surface miner in place of crusher which further reduces the impact of Noise to a greater extent on nearby villages and the Narayan Sarovar wild life sanctuary when compared with the conventional method of mining technologies that includes Crushing, Screening, Blasting and Drilling. The detailed modeling report is submitted with the ADS reply.

Since, this is proposed Greenfield limestone mining project, thus, the monitoring of Vibration due to Blasting & operation of crusher and HEMM's would not be carried out, same will be done while mine will be in operation. However, details of Broad Blasting Parameter are submitted with the ADS reply.

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**ADS Point 3:** The project proponent needs to submit a table containing 3 year breakup for EMP for public hearing concerns indicating the controlled measures suggested with its efficacy for reduction in air and noise emissions. The project proponent- should also indicate what measures are suggested along with design and cost.

**Reply:** Environmental Management Plan (EMP) proposed for public hearing concerns indicating the controlled measures suggested for 3 Years along with the budgetary breakup of cost are prepared for reduction of air and noise emissions & impact is submitted with the ADS reply.

**ADS Point 4:** The project proponent needs to incorporate a study on nocturnal animals in the approved Wildlife Conservation Plan and submit accordingly.

**Reply:** The study on nocturnal animals has been carried out by the Gujarat Institute of Desert Ecology (GUIDE) and supplementary budgetary provisions for conservation of nocturnal animal (fauna) has been approved by Chief Wildlife Warden, Gujarat vide Letter No.WLP/T.32/C/873-74 dated 28.01.2022.

About Rs. 17.52 Lacs additional budget was estimated for implementation of the nocturnal conservation plan, other than Rs. 109 Lacs Wildlife Conservation Plan budget approved by PCCF vide Letter no.WLP/32/C/298-99/2021-22 dated 16.09.2021 for 4 years.

Copy of the approval letter along with budgetary provisions is submitted with the ADS reply.

**5. Lease Details:**

Letter of Intent	Letter of Intent was granted vide Letter. No. MCR-102016-2146-CHH dated 21 <sup>st</sup> June 2017 and further extended the validity of LOI up to 20 <sup>th</sup> June 2022 vide letter no MCR-102016-2146-CHH dated 18 <sup>th</sup> June 2020.
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**6. Mining plan details:**

Mining Plan(approved by Indian Bureau of Mines/DMG)	Mining Plan Approval obtained from Indian Bureau of Mines, Gandhinagar vide letter 684(4)(1)/MP-109/2018-GNR dated 21 <sup>st</sup> March 2018
<b>Mining Parameters</b>	<b>Quantitative Description</b>
Bench Height	10 m
Bench Width	30 m
Method of Mining	Fully mechanized opencast
Overall pit slope	45°
Drilling/Blasting	The production of mineral involves surface miner, excavation, crushing, loading & transportation activities. No drilling will be conducted for limestone mining. Over burden will also be excavated by Hydraulic excavator without use of drilling & blasting. However, if required, drilling & blasting will be done, if compact & hard over burden is encountered which cannot be excavated without blasting.

RoM output size	-90 mm
Life of mine	64 years
Transportation details	It is proposed to load limestone by wheel loader into the dumper and dumper will transport it to impact crusher of 1200 TPH. Crushed limestone will be sent to the proposed adjacent cement plant by covered conveyor belt. The material will be dispatched to the stock piles located within proposed cement plant premises, through the covered belt conveyor.
Dumpers capacity	55 tonner

#### 7. Land Area Breakup:

Private land	90.50 ha is private agriculture land (Santhani land).
Government land	143 ha
Total Mining lease area (MLA)	233.50 ha

#### 8. Nearest village / town/ highway/railway station / water bodies

Particulars	Particular's Name	Distance &Directions
Nearest village	Mudhvay village	0.5 km, SSW
Nearest town	SK Verma Nagar	3.6 km, SSE
Nearest highway	GJ SH-6 (Lakhpat - Tithal) GJ SH-42 (Lakhpat - Bhachau) NH-8A (Naliya-Narayan Sarovar Road)	2.3 km, W 11.3 km, E 14.3 km, SW
Nearest railway station	Naliya railway station	54 km, S
Water bodies	1. Koriyani dam 2. MudhvayNala 3. Kali Nadi 4. KapurasiNadi 5. Godhatad Dam 6. Kori Creek 7. Arabian sea	1.2 km, SW 2.0 km, SW 4.1 km, NE 4.3 km, W 5.0 km, SSW 4.7 km, NW 28.0 km, SW

#### 9. Water requirement

Total water requirement	150 KLD @ TDS of 300 ppm
Source	Ground water and mine pit including dewatering within the ML area
Permission	CGWA application is submitted vide Letter No. 21-4/7457/GJ/MIN/2021 Dtd. 31 <sup>st</sup> May 2021

#### 10. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/Environmental Sensitivity Zone	Yes/No	Details of Certificate/ letter/Remarks
Forest Land	Mudhvay RF is 0.1 km, S	Not applicable
National Park	Nil within 10 km radius	
Wildlife Sanctuary	Core zone of Narayan Sarovar	

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	Wildlife Sanctuary is 3.3 km in South direction and Eco-Sensitive Zone is 2.4 km in South direction from ML area	
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Schedule-1 species	Yes/No	Details of Certificate/letter/Remarks
Schedule-I species	Yes	One Mammal i.e. Chinkara ( <i>Gazellabennettii</i> ), one Reptile i.e. Monitor Lizard ( <i>Varanusbengalensis</i> ) and two bird i.e. Indian Peafowl ( <i>Pavocristatus</i> ) and Eurasian spoonbill ( <i>Platalealeucorodia</i> )
Wildlife Conservation Plan		A detailed environment management and conservation plan is approved by Principal Chief Conservator of Forests (PCCF) vide Letter no.WLP/32/C/298-99/2021-22 dated: 18th September 2021 and about Rs.109 Lakhs of budget is allocated for 4 years. A supplementary plan for Wildlife Conservation activities for nocturnal animal is approved by Principal Chief Conservator of Forests (PCCF) vide Letter no. WLP/T.32/C/873-74/2021-22 dated 28.01.2022 and about Rs. 17.52 Lakhs of budget is allocated for 3 years

#### 11. Greenbelt & plantation details:

Proposed area for greenbelt & plantation	173.8 ha
Budget for green plant & plantation till the end of life of mine.	Capital Rs. 117.32 Lakhs and recurring Rs. 11 Lakhs per annum
Budget for nursery	
<b>Particulars for Greenbelt &amp; plantation</b>	<b>Area covered (in Ha)</b>
7.5 m barrier & non-mineralized zone	Total greenbelt will be 18.80 ha including 14.00 ha will be developed as 200 safety zone plantation in southern part of mine lease towards Narayan Sarovar Wildlife Sanctuary
50 m safety zone of nallah, roads, electric lines	
500 m safety zones of nearest habitation villages	

#### 12. Baseline details

Baseline Data (Air / Water / Noise / Soil / Ground water table/ others)	
Period of baseline data collection	Winter Season (1 <sup>st</sup> December 2019 to 29 <sup>th</sup> February 2020)
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Winter Season

#### Ambient Air Quality Results

a	No. of Ambient Air Quality (AAQ) Monitoring Locations				12	
b	Details of AAQ Monitoring					
	Criteria Pollutants	Unit	Minimum Value	Maximum Value	98 <sup>th</sup> Percentile Value	Prescribed Standard

PM <sub>10</sub>	µg/m <sup>3</sup>	34.5	57.7	57.1	100
PM <sub>2.5</sub>	µg/m <sup>3</sup>	14.9	29.5	29.5	60
SO <sub>2</sub>	µg/m <sup>3</sup>	12.5	20.7	20.6	80
NO <sub>2</sub>	µg/m <sup>3</sup>	16.5	30.2	29.4	80
CO	µg/m <sup>3</sup>	146	344	327	2000
O <sub>3</sub>	µg/m <sup>3</sup>	5.0	16.8	15.8	100
NH <sub>3</sub>	µg/m <sup>3</sup>	<20.0		<20.0	400
Pb	µg/m <sup>3</sup>	<0.1		<0.1	1.0
BaP	ng/m <sup>3</sup>	<0.1		<0.1	1.0
As	ng/m <sup>3</sup>	<1.0		<1.0	6.0
Ni	ng/m <sup>3</sup>	<1.0		<1.0	20
C <sub>6</sub> H <sub>6</sub>	µg/m <sup>3</sup>	<1.0		<1.0	5

- Criteria Pollutants: - (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, other parameters specific to sector)  
- Unit:-(Micro Gram per Meter Cube, Nano Gram per Meter Cube, Mili Gram per Meter Cube, NA)

### Water Quality Analysis Results

a.	No. of Ground Water Monitoring Locations		3 Locations		
b.	Details of Ground Water Monitoring				
Criteria Pollutants: - (pH, TSS, TDS, Total Hardness, Chlorides, Fluoride, Heavy Metals, other parameters specific to the sector)					
Criteria Pollutants	Unit	Maximum Value	Minimum Value	98 Percentile Value	Prescribed Standard
pH	-	7.67	7.31	-	6.5 – 8.5 (NR)
TDS	mg/l	1760	598	-	500 (2000)
Total Hardness	mg/l	598.8	293.6	-	200 (600)
Chlorides	mg/l	648.6	167.5	-	250 (1000)
Fluoride	mg/l	0.7	1.0	-	1.0 (1.5)
- Unit: - (mg/l, NA)					

a.	No. of Surface Water Monitoring Locations		6 Locations	
b.	Details of Surface Water Monitoring			
- Parameter: - (pH, DO, BOD, COD, other parameters specific to the sector)				
- Unit: - (mg/l, NA)				
Criteria Pollutants	Unit	Maximum Value	Minimum Value	Classification of inland water body (ISO10500)
pH	-	7.81	7.08	B
DO	mg/l	5.9	5.1	B
BOD	mg/l	<3	<3	B
COD	mg/l	90	10	
EC	µg/S	70201	1095	

Ground Water Table	
i	Range of Water Table Pre-Monsoon Season (Meters Below Ground Level (m bgl)):
	From 12 mbgl

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	To	14 mbgl
ii	Range of Water Table Post-Monsoon Season (Meters Below Ground Level (m bgl)):	
	From	10 mbgl
	To	12 mbgl
iii	Whether Ground Water Intersection will be there (Yes / No)?	Yes. Application of CGWA permission for groundwater withdrawal was submitted on 31 <sup>st</sup> May 2021 vide application no. 21-4/7457/GJ/MIN/2021 and same is under process.

### Noise Monitoring Observations

a.	No. of Ambient Noise Monitoring Locations	12 Locations			
b.	Details of Noise Monitoring (Multiple Entries Allowed)				
	Parameter	Unit	Maximum Value	Minimum Value	Prescribed Standard
	L <sub>day</sub>	dB(A)	52.8	41.9	55
	L <sub>night</sub>	dB(A)	48.5	38.3	45
	<ul style="list-style-type: none"><li>- Parameter: - (Leq(Day), Leq(Night))</li><li>- Unit :- (A-weighted decibels (dB(A)))</li></ul>				

### Soil Characteristics

a.	No. of Soil Monitoring Locations ( <i>Multiple Entries Allowed</i> )	8 Locations		
	<b>Parameter</b>	<b>Unit</b>	<b>Maximum Value</b>	<b>Minimum Value</b>
	pH	-	8.3	7.3
	Nitrogen	kg/ha	127.6	40.7
	Phosphorus	kg/ha	290.8	46.4
	Potassium	kg/ha	162.8	42.1
	Electric Conductivity	μS/cm	534	110
- Parameter :- pH, N(Nitrogen), P(Phosphorus), K(Potassium)				

### 13. Public Hearing Details:

Advertisement for PH with date	25.07.2021
Date of PH	01.09.2021
Venue	Moti Mudhvay, common plot, besides primary school, Mudhvay village, Koriyani Post, Lakhpat Tehsil, Kachchh, Gujarat
Chaired by	Additional District Magistrate
Main issues raised during PH	Major issues raised in the PH are for provision for Agriculture & Compensation of land losers, Animal husbandry, employment, Skill development, health, education, Community Welfare & Infrastructure Development, drinking water and plantation etc.
Budget proposed for addressing issues raised during PH	Out of the total capital cost (Rs. 247.5 Crores) of the project, Rs. 495.00 Lakhs has been earmarked towards activities as per the Compliance of issues raised during public hearing as

	environmental, socio-economic management plan for three years based on local needs.
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**14. Court case details:**

Court Case	No court case is pending against the project
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**15. Details of the EMP:**

<b>Mudhvay Sub block- "B" Limestone Mine (ML Area: 233.5 ha.)</b>			
<b>A</b>	<b>Air Quality Monitoring and Management</b>		
	<b>Mitigative Measures</b>	<b>Capital (Rs. Lakhs)</b>	<b>Annual Recurring Cost (Rs. Lakhs)</b>
1	Water tanker for water sprinkling on haul roads and mining areas/activities.	40	5
2	Operation & Maintenance of Motor Grader & Soil Compactor for haul road maintenance	15	3
3	Pollution Control Device (Bag filter at Crusher) Equipment and its installation Cost, Operation & Maintenance	50	2.5
	<b>Sub Total</b>	<b>105</b>	<b>10.5</b>
	<b>Monitoring</b>		
1	CAAQM Stations (2 online each 35 Lakhs)	70	7
2	2 Ambient Air Quality Monitoring Stations at Mine Site and Mine Crusher Site (2 Nos. RDS & FPS @ Rs. 2.0 Lacs each)	4	1
3	Fugitive dust emission monitoring (2 Nos. HVS @ Rs. 1.0 Lacs)	1	0.6
	<b>Sub Total</b>	<b>75</b>	<b>8.6</b>
<b>B</b>	<b>Water Quality Monitoring and Management (Rain Water Harvesting in ML Area)</b>		
	<b>Mitigative Measures</b>		
1	Garland Drain around waste dump (L*W*D = 800 m x 1 m x 1 m & 250 m x 1 m x 1 m and 450 m x 1 m x 1 m)	4.84	0.24
2	Retaining Wall around waste dump (L*W*D = 800 m x 1 m x 1 m & 100 m x 1 m x 1 m and 200 m x 1 m x 1 m)	32.28	0.32
3	Construction of Protective Bunds along the water reservoir	5	0.1
	<b>Sub Total</b>	<b>42.12</b>	<b>0.6648</b>
	<b>Monitoring</b>		
1	Installation of 2 Piezometers along the periphery in the premises	2	0.2
2	Ground water quality analysis (1 locations * 4 times in a year)	-	0.2
3	Workshop Waste Water Quality Analysis (monthly) as well as maintenance of oil-water separators	1	0.65
	<b>Sub Total</b>	<b>3</b>	<b>1.05</b>
<b>C</b>	<b>Noise and Vibration Monitoring and Management</b>		

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<b>Mitigative Measures</b>			
1	Procurement of one Blast Vibration Measuring Instrument	5	-
	<b>Sub Total</b>	<b>5</b>	<b>-</b>
<b>Monitoring</b>			
1	Peak Particle Velocity Monitoring for nearest habitation i.e. Mudhvay, Koriyani&Maldo Villages	-	1
2	Ambient Noise Monitoring (4 locations * monthly frequency)	0.5	0.2
3	Work Place Noise Level Monitoring (4 Locations * quarterly frequency)	-	0.1
5	Providing Ear muffs/plus to workers working in high noise area	0.5	0.05
	<b>Sub Total</b>	<b>1</b>	<b>1.35</b>
<b>E</b>	<b>Occupational Health Camps for Employee and Mine Worker</b>	10	1
	<b>Sub Total</b>	<b>10</b>	<b>1</b>
<b>F</b>	<b>Skill Development &amp; Vocation Training for Employee &amp; mine worker</b>	10	0.5
	<b>Sub Total</b>	<b>10</b>	<b>0.5</b>
<b>G</b>	<b>Greenbelt and Plantation Development</b>		
1	Plantation on backfilled area of 155 ha with total 2,32,500 saplings from 6 <sup>th</sup> year onwards upto the life of mine @ 1500 plants per ha	104.63	10.0
2	7.5 meter Greenbelt along the mine lease periphery (4.8 ha.) and 200 meter safety zone (14.0 ha.) covering total area of 18.8 ha from 1 <sup>st</sup> to 5 <sup>th</sup> year @ 1500 plants per ha with total saplings of 28,200	12.69	1
	<b>Sub Total</b>	<b>117.32</b>	<b>11</b>
	<b>Grand Total (A+B+C+D+E+F+G)</b>	<b>368.44</b>	<b>34.66</b>

#### 16. Details of project cost and employment:

<b>Particulars</b>	<b>Budget (Rs. In Crore)</b>
Capital Cost for Environment Protection	3.684
Budget for addressing the Public Hearing issues	4.95
Total Cost for EMP	8.634
Recurring Cost for EMP	0.3466
Project Cost	247.5
Employment	46 nos.

#### 17. Observation and Recommendation of the Committee:

The proposal for Environmental Clearance was considered in the 47<sup>th</sup> EAC Meeting (Non-Coal Mining) held during 7<sup>th</sup> to 9<sup>th</sup> March 2022. After detailed presentation by the Project proponent and the Consultant, the Committee **recommended** the proposal for grant of Environmental Clearance for Proposed Mudhvay Limestone Mine with the production capacity of 12.18 MTPA (ROM) [4.38 MTPA limestone production, 8.14 MTPA over-burden & 0.36 MTPA inter-burden excluding top-soil] and installation of 1200 TPH

Crusher in the mine lease area of 233.5 ha located at Village Mudhvay, Taluka Lakhpat, District Kachchh, Gujarat of M/s Shree Cement limited subject to the compliance of following Specific conditions in addition to all Standard conditions applicable for non-coal mining projects.

18. The Ministry has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto; and after accepting the recommendations of 47<sup>th</sup> EAC meeting held during 7<sup>th</sup> to 9<sup>th</sup> March 2022 hereby accords the above-mentioned Environmental Clearance for Proposed Mudhvay Limestone Mine with the production capacity of 12.18 MTPA (ROM) [4.38 MTPA limestone production, 8.14 MTPA over-burden & 0.36 MTPA inter-burden excluding top-soil] and installation of 1200 TPH Crusher in the mine lease area of 233.5 ha located at Village Mudhvay, Taluka Lakhpat, District Kachchh, Gujarat of M/s Shree Cement limited along with the following specific conditions and standard conditions subject to compliance of conditions and environmental safeguards mentioned below:

#### **A. Specific conditions**

- (i) The Environmental Clearance (EC) will be functional only after the execution of mine lease deed.
- (ii) The project proponent had already agreed that 200 m from the southern boundary towards North which is nearest to the Eco Sensitive Zone of Narayan Sarovar Wildlife Sanctuary will be treated as non-mining zone and will cover the area/boundary with greenbelt using diverse species for eco value addition. The project proponent shall ensure the compliance of the mentioned condition.
- (iii) The project proponent shall install sensors for vibration and noise on the south and south east boundaries of the mine lease area to record noise and vibration during blasting, drilling and operations of crushers, surface miners, loaders and dumpers. It should be ensured that noise levels and levels of vibration must not exceed the prescribed standards.
- (iv) The EMP budget for addressing public hearing concerns should be reviewed annually and a report on targets achieved and expenditure completed shall be submitted to the Ministry annually. The EMP budget also should include plantation in nearby villages, 200 m plantation on the safety zone, and creation of RWH structures as well as air and water pollution control measures.
- (v) The project proponent shall ensure the mining operations for only two shifts due to the presence of Narayan Sarovar Wildlife Sanctuary in the vicinity of the mine lease area.
- (vi) The Project Proponent shall carry out the plantation with the survival rate of not less than 90% by planting 10 ft seedlings. Casualties should be replaced with new saplings every year and be counted separately other than the total proposed saplings. PP shall complete the peripheral plantation within 6 months from the start of mining operations. The data for such saplings should be furnished during six monthly compliance report along with the progressive plantation.

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- (vii) The Project Proponent should explore the possibility of using CNG/electric vehicles instead of Diesel for cleaner production options to reduce the emission.
- (viii) The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on Silicosis shall be carried through regular occupational health check-up every year for mine workers.
- (ix) The Project Proponent shall also organize employment-based apprenticeship/ internship training program every year with appropriate stipend for the youth and other programs to enhance the skill of the local people. The data should be maintained for the training imparted to the persons and the outcome of the training, for the assessment of the training program should be analyzed periodically and improved accordingly.
- (x) The Project Proponent shall strictly follow the mitigation measures provided in MoEF&CC Office Memorandum No.Z-11013/57/2014-IA.II(M), dated 29<sup>th</sup> October, 2014.
- (xi) The Project Proponent should install the continuous ambient air quality monitoring stations in such numbers as per the scientific study and in consultation with CPCB.

## **B. Standard conditions**

### **I. Statutory compliance**

- (1) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
- (2) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.
- (3) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
- (4) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project.
- (5) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the Project.
- (6) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board/Committee.

- (7) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.
- (8) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made there under in respect of lands which are not owned by it.
- (9) The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
- (10) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.
- (11) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
- (12) State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.
- (13) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change ([www.parivesh.nic.in](http://www.parivesh.nic.in)). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.
- (14) The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

## **II. Air quality monitoring and preservation**

- (1) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO<sub>2</sub>, CO and SO<sub>2</sub> etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

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- (2) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.

### **III. Water quality monitoring and preservation**

- (1) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
- (2) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (3) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
- (4) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without

justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

- (5) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
- (6) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
- (7) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
- (8) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.

#### **IV. Noise and vibration monitoring and prevention**

- (1) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
- (2) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
- (3) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held



responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

## **V. Mining plan**

- (1) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form of Short Term Permit (STP), Query license or any other name.
- (2) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.
- (3) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.

## **VI. Land reclamation**

- (1) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.
- (2) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

- (3) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.
- (4) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
- (5) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.
- (6) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
- (7) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.
- (8) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

## **VII. Transportation**

- (1) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular

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emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

- (2) The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

### **VIII. Green Belt**

- (1) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.
- (2) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
- (3) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.
- (4) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.
- (5) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

## IX. Public hearing and human health issues

- (1) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEFCC Regional Office and DGMS on half-yearly basis.
- (2) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.
- (3) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).
- (4) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities ,(c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1), Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be

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affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEFCC annually along with details of the relief and compensation paid to workers having above indications.

- (5) The Project Proponent shall ensure that 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.
- (6) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
- (7) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

#### **X. Corporate Environment Responsibility (CER)**

- (1) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.
- (2) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEFCC and its concerned Regional Office.

#### **XI. Miscellaneous**

- (1) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
- (2) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (3) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEFCC & its

concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.

- (4) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEFCC.
- (5) The concerned Regional Office of the MoEFCC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEFCC officer(s) by furnishing the requisite data / information / monitoring reports.

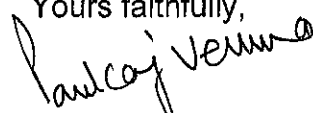
19. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

20. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attracts action under the provisions of Environment (Protection) Act, 1986.

21. 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 made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Rajasthan and any other Court of Law relating to the subject matter.

22. 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.

23. This issues with the approval of Competent Authority.

Yours faithfully,  
  
(Pankaj Verma)  
Scientist E


**Copy to**

1. The Secretary, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
2. The Secretary, Department of Environment, Government of Gujarat, Gujarat.
3. The Secretary, Department of Forests, Government of Gujarat, Gujarat.
4. The Secretary, Department of Mines and Geology, Government of Gujarat, Gujarat.
5. The Additional Principal Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3, Ravishankar Nagar, Bhopal-462016.

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6. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum— Office Complex, East Arjun Nagar, Delhi—110032.
7. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhavan, Sector 10-A, Gandhinagar Gujarat-382010.
8. The Member Secretary, Central Ground Water Authority, A2, W— 3 Curzon Road Barracks, K.G. Marg, New Delhi—110001.
9. The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur— 440 001.
10. The District Collector, Kachchh.
11. Guard File.
12. PARIVESH

  
(Pankaj Verma)  
Scientist E