

No. J-11015/202/2010 -IA.II (M)
Government of India
Ministry of Environment, Forests & Climate Change
IA-II (Coal Mining) Division

Indira Paryavaran Bhawan,
Jorbagh Road,
New Delhi-110003
Dated: 24th December, 2014

To,

M/s Gujarat Power Corporation Limited
6th Floor, Block no. 6 & 8,
Udyog Bhavan, Sector-11
Gandhinagar - 382011

Sub. : Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha) and Khadsaliya-I (1 MTPA in 711.42.47 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14.92 ha) of M/s Gujarat Power Corp. Ltd., Dist. Bhavnagar, Gujarat - Environmental Clearance - reg.

Sir,

This is with reference to letter no. GPCL/Mining/MOEF/31880 dated 21.04.2010 along with the application for Terms of Reference (TOR) and this Ministry's letter dated 23.3.2011 and modification 30.5.2011 for granting TOR. The extension of TOR accorded on 14.5.2013. Reference is also invited to the letter no GPCL/MIN/38789 dated 30.11.2013 and subsequent letter nos. dated 20.02.2014; 02.06.2014; 12.09.2014 and 18.09.2014 for environmental clearance on the above-mentioned subject.

2. The Ministry of Environment, Forests & Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance for **Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha) and Khadsaliya-I (1 MTPA in 711.42.47 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14.92 ha) of M/s Gujarat Power Corp. Ltd., Dist. Bhavnagar, Gujarat.** The proposal was considered in the 12th EAC meeting held on 27th - 28th February, 2014 and reconsidered in the 21st EAC meeting held on 18th -19th September, 2014. The proponent has informed that:

- It is an open cast lignite mine of M/s Gujarat Power Corp. Ltd, to which Ministry accorded TOR vide Letter No.: J-11015/202/2010-IA.II(M) dated 23.3.2011 and modification of ToR was on 30.5.2011. The extension of ToR validity upto 30.03.2014 was accorded on 14.5.2013.
- The latitude and longitude of the project :
Ghogha-Surka: 21^o36'00" - 21^o38'45"N, 72^o11'55" - 72^o15'00"E
Khadsaliya-II : 21^o33'15" - 21^o36'30"N, 72^o13'40" - 72^o15'25"E
Khadsaliya-I : 21^o31'25" - 21^o33'15"N, 72^o13'30" - 72^o14'55"E
- The land usage of the project will be as follows:

Pre-mining (Satellite image analysis supports by ground truth)

Classes	Ghogha-	Khadsaliya-II	Khadsaliya -I	TOTAL
	Area (km ²)			
Wasteland	8.78	6.26	4.44	19.48
Sea-Water	-	-	-	-
Settlement	0.54	0.14	0.26	0.94
Salt Land	-	-	-	-



Salt Farms	-		-	-
Mangroves	-		-	-
Water bodies	0.04	0.07	0.03	0.14
Agriculture	1.98	2.78	1.60	6.36
Fallow Land	3.72	1.90	1.59	7.21
Mud Land	-		-	-
Mining Area	0.17	0.67	0.01	0.85
Total	15.23	11.82	7.93	34.98

Post- Mining

Land use	Ghogha-Surka	Khadsaliya-II	Khadsaliya -I	TOTAL
Plantation	423	339	265	1027
Proposed Pond	50	35	41	126
Pasture/Agriculture, river, canal, roads, external OB dump etc.	882	540	405	1827

- iv. Total geological reserve: 110.18 million tonne (MT) [Ghogha-Surka : 60.68 MT; Khadsaliya-I : 27.00 MT; Khadsaliya-II : 22.50 MT]. Per cent (%) of extraction: 100 %.
- v. Total Mineable reserve 90.57 MT [Ghogha-Surka : 54.68 MT; Khadsaliya-I: 21.60 MT; Khadsaliya-II : 14.29 MT]
- vi. Total Extractable reserve 90.57 MT [Ghogha-Surka: 54.68 MT; Khadsaliya-I: 21.60 MT; Khadsaliya-II : 14.29 MT].
- vii. **Range of ground water level:** Ground water level varies from 2 to 5 m in western part of mining blocks and 2 to 10 m in the buffer zone. Total estimated water requirement about 1.524 MLD. [Ghogha-Surka : 0.702 million litre per day (MLD) (Potable water: 0.062 MLD and for Other mining activities: 0.64 MLD); Khadsaliya-I : 0.352 MLD (Potable water: 0.042 MLD and for Other mining activities: 0.31 MLD); Khadsaliya-II : 0.47 MLD (Potable water: 0.03 MLD and for Other mining activities: 0.44 MLD)].
- viii. Total No. of Seams is 8. [Ghogha-Surka: One; Khadsaliya-I: Four Khadsaliya-II : Three].
- ix. Thickness of seams to be worked on [Ghogha-Surka : Seam thickness varies from 11.95 m to 0.08 m; Khadsaliya-I : Seam thickness varies from 12.96 m to 0.03 m ; Khadsaliya-II : Seam thickness varies from 8.40 m to 0.4 m].
- x. **Grade of coal:** Proposed Project is to Mine Lignite - Equivalent to 'F'. **Stripping ratio:** [Ghogha-Surka: 1:9.32 (Tonnes: M³); Khadsaliya-I : 1:8.81(Tonnes : M³); Khadsaliya-II : 1:23.26 (Tonnes : M³)].
- xi. Maximum **thickness of seams:** [Ghogha-Surka : 11.95 m; Khadsaliya-I : 12.96 m ; Khadsaliya-II : 8.4m].
- xiv. **Method of mining:** Mechanized Open Cast mining using conventional mining and ancillary equipment.
- xv. **Life of mine :** [Ghogha-Surka : 25 Years; Khadsaliya-I : 22 Years; Khadsaliya-II : 20 Years]
- xvi. There is one **external OB** dumps; [Ghogha-Surka : One external OB dump in an area of 159.85 ha with height of 60m and of 511.36 M³cm; Year of backfilling from 4 Year onwards.; Khadsaliya-I : Nil; Khadsaliya-II : Nil].
- xvii. There are three **internal OB** dumps; [Ghogha-Surka : One internal OB dump in an area of 16.10 ha with height of 5m and of 1.15 M³cm; Khadsaliya-I : One internal OB dump in an area of 83.72 ha with height of 50m and of 190.47 M³cm; Khadsaliya-II : One internal OB dump in an area of 96.78 ha with height of 60m and of 332.32 M³cm].
- xviii. **Final Mine Voids** with depth; [Ghogha-Surka : 16.10 ha with 110 m depth; Khadsaliya-I : 83.72 ha with 72 m depth; Khadsaliya-II : 96.78 ha with 109 m depth].

- xix. Total **quarry area**: 1962.8 Ha; [Ghogha-Surka : 962.3 Ha; Khadsaliya-I : 447.8 Ha; Khadsaliya-II : 552.7 Ha].
- xx. **Backfilled quarry** area of 1837 ha shall be reclaimed with plantation: Ghogha-Surka: 912.3 Ha; Khadsaliya-I : 517.9 ha; Khadsaliya-II : 406.8 ha.
- xxi. A void of 125.8 ha at a depth of upto 110 m (approx) which is proposed to be converted into a water body. [Ghogha-Surka : 50.0 Ha; Khadsaliya-I : 41.0 Ha; Khadsaliya-II : 34.8 Ha].
- xxii. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xxiii. **Transportation**: Lignite transportation from mine pits to lignite stack yard from where lignite after necessary blending shall be transported to adjacent pithead TPP by closed conveyor system has been envisaged.
- xxiv. There is **R & R** involved. There are 666 PAFs.
- xxv. Total **capital Cost** of Rs. 618.71 Crore: [Ghogha-Surka: Rs. 263.28 Crore; Khadsaliya-I : Rs. 157.97 Crore; Khadsaliya-II : Rs. 197.46 Crore.]
- xxvi. **CSR cost**: Rs. 5 per Ton of lignite mined.
- xxvii. Total **R&R Cost** is Rs. 35.92 Crore. : [Ghogha-Surka : Rs.26.69 Crore; Khadsaliya-I : Rs. 8.22 Crore; Khadsaliya-II : Rs. 1.01 Crore]
- xxviii. Environmental Management cost shall be 2% of the capital cost.
- xxix. **Approvals**: Date of approval of mine plan, mine closure plan, status & date; [**Ghogha-Surka** : The Mining Plan for 2.25 MTPA has been approved by Ministry of Coal vide letter no.13016/3/2009-CA-1 dated 22.12.2009. **Mine closure** approval : [**Ghogha-Surka**: The mining plan including closure plan was approved vide MoC's letter no. 13016/3/2009-CA-1 dated 22.12.2009; **Khadsaliya-I** : The mining plan including closure plan was approved vide MoC's letter no. 48024/2/94/CML/CA-1 dated 18.12.2009; **Khadsaliya-II**: The mining plan including closure plan was approved vide MoC's letter no. 48024/8/2003-Lig/CA-1 dated 14.01.2010]
- xxx. **Board's approval**: [**Ghogha-Surka**:88 Meeting of the Board of Directors of GPCL held on 01.03.2007; **Khadsaliya-I**:88thMeeting of the Board of Directors of GPCL held on 01.03.2007; **Khadsaliya-II**:88thMeeting of the Board of Directors of GPCL held on 01.03.2007.]
- xxxiv. **River/Nallha** flowing near or adjacent to the proposed mine. [**Ghogha-Surka** : The Malesari river (seasonal) flows in the southern part of the ML area. A branch canal is passing in the eastern part of the lease area; **Khadsaliya-I**: The Ramdasia river (seasonal) flow from west to east side within lease area in northern part. A branch canal is passing from north to south direction within lease area; **Khadsaliya-II**: The Ramdasia river (seasonal) passes through south east corner of mining lease area. A branch canal is passing from north to south direction.]
- xxxv. The ground water studies have been conducted by Gujarat Water Resources Development Corporation Limited as well as by National Institute of Hydrology, Roorkee. It has been reported that the effect will be to a lesser extent.
- xxxvi. **Forest Issues**: No forest land involved in the mining area
- xxxvii. **Wildlife issues**: There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xxxviii. Total **afforestation** plan shall be implemented covering an area of 1383.45 ha as follows:
- Reclaimed external OB dump in 159.85 ha: [Ghogha-Surka: 159.85 Ha; Khadsaliya-I: Nil; Khadsaliya-II: nil;].
 - Internal dump in 196.6 ha: [Ghogha Surka:16.1 Ha; Khadsaliya-I : 83.72 Ha ; Khadsaliya-II : 96.78 Ha]
 - Green belt in 1027 ha: [Ghogha-Surka : 423 Ha; Khadsaliya-I : 265 Ha; Khadsaliya-II : 339 Ha;]
 - Void in 126 ha with a depth of in 10 m which is proposed to be converted into water body: [Ghogha-Surka: 50 Ha; Khadsaliya-I: 41 Ha; Khadsaliya-II: 35 Ha.]
- xxxix. There are no **court cases/violation** pending.
- xl. **Public Hearing**: Public hearing was held on 19.07.2013 at the near Jain Derasar, Ghogha

Bunder, Ghogha, Dist: Bhavnagar, Gujarat. The issues raised during the Public Hearing were regarding initiatives taken for the construction of wall by using stone, greenbelt and tree sapling, mitigation measures for dust separation, Shatrunji canal, employment to locals, electricity to the farmers etc. The proponent has given assurances to address the issues raised during the Public Hearing.

3. The proponent further informed that:

- i. **Lignite mine will be exclusively used from these mines to BECL pit head Padva power plant:** GPCL had submitted Irrevocable Indemnity bond on 22 December, 1997 to the Ministry of Coal, GoI. In response to this MoC vide letter no. 40024/1/94/-CML dated 15-10-1997 laid down the condition '3(ii) *The mining of lignite shall be undertaken in by the applicant party themselves and the lignite to be mined out shall be for exclusive generation of power*'' Industries & Mines Department, Govt. of Gujarat Order No. MCR -(G-11)1318-CHH-1 dated 4 Ju, 1998 condition No. 2.(j)'. *The lessee shall use all the Lignite excavated from the said area for captive use in its proposed Ghogha Thermal Power Plant in Bhavnagar District in Gujarat State*'.
- ii. **CRZ Map:** CRZ Map Prepared by Space Application Centre (ISRO), Ahmedabad has been submitted
- iii. **Use of Circulating Fluidized Bed Combustion (CFBC) technology for de-sulphurization of SO₂ emission:** limestone will be injected in to the CFB boiler for sulphure capture. Bharat Heavy Electrical Limited (BHEL) has designed, CFB Boiler that can reduce SO₂ up to 92-95%. FGD Technology reduces SO₂ emissions. Spray dry scrubber 85-92%, Wet limestone scrubber 92-98%, Seawater scrubbing 85-98%.
- iv. **Transport by conveyor the possibility for opting Conveyor system for transporting lignite:** GPCL has also worked out the estimated cost through Macmet Operation as mentioned below: Budgetary Price Rs. 92 crores + taxes, etc. Estimated transportation cost: Rs. 30 per ton.
- v. According to National Institute of Hydrology, Roorkee, the level difference between the coast and mining area, presence of clay layers and concluded that the mining in the lease area (as per plan) should not induce any sea water intrusion in the area. NIH, Roorkee recommended that, as per the mining plan, Shatrunji canal has to be shifted towards the eastern border of the mining lease area. Further, the water discharge in the canal be maintained throughout the year (which is only during summer season presently). Also the access pumped groundwater from the mining area may be discharged into the canal for seepage and thereby recharge of the aquifer between the mining boundary and the sea coast. This measure will further reduce the chances of sea water ingress, if any.

4. The proposal was re-considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in 21st EAC meeting held on 18th -19th September, 2014 for granting Environmental Clearance. The Ministry of Environment, Forests and Climate Change hereby accords Environmental Clearance for the above-mentioned **Ghogha-Surka Lignite Mine (2.25 MTPA in 1355 ha) and Khadsaliya-I (1 MTPA in 711.42.47 ha) and Khadsaliya-II Lignite Mine (0.75 MTPA in 914.14.92 ha) of M/s Gujarat Power Corp. Ltd., Dist. Bhavnagar, Gujarat** under the provisions of the Environmental Impact Assessment Notification, 2006 and amendments thereto and Circulars issued thereon and subject to the compliance of the following specific conditions, in addition to the general conditions mentioned below:

A. Specific Conditions:

- i. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.
- ii. The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.



- iii. The coal from this mine will be exclusively used for Padwa Power Plant.
- iv. Necessary Clearances from CRZ angle should be obtained, as applicable.
- v. Flu gas De-Sulfurization (FGD) Plant be installed in the Power Plant for sulphur removal.
- vi. A sturdy stonewall should be built around the toe wall.
- vii. Proper terracing of the dump slope, with maximum bench height of 30 meters should be provided.
- viii. The overburden dump slopes should be planted with grasses.
- ix. The vehicles must be maintained and checked thoroughly at least once a week by the competent / skilled technical personnel authorized for pollution centre.
- x. Road signals/signage should be provided at each and every turning point (haul roads) especially for the guidance of the drivers at the night.
- xi. Overburden and lignite should be placed in specifically designated dumps or stockpile sites.
- xii. Lignite will be transported through Conveyor belt.
- xiii. Land acquisition should be as per land acquisition Act.
- xiv. Water discharge in the canal be maintained throughout the year. Also the access pumped ground water from the mining area may be discharged into the canal for seepage and thereby recharge the aquifer between the mining boundary and the sea coast.
- xv. Mine water should be treated with brine before discharged into sea.
- xvi. The mine void should be backfilled to ground level which shall be used for agriculture purpose or may be used as per the outcome of consultation with the villagers and the state Government
- xvii. Out of the 107 Ha to be backfilled, 50 Ha should be left as external dump with an height of 10 m. All external O.B. dumps will be rehandled into the mine void and internal dump brought to the ground level. Only one final mine void will be left in Khadsaliya-II of depth of about 10 m. The PP shall submit the rehandling plan to the Ministry.
- xviii. There shall be no diversion of any rivers/natural water bodies/ nallahs etc. and should be protected.
- xix. An additional provision for the annual maintenance of girl's toilet/sanitation, as a part of CSR activity, shall be made.
- xx. Lignite transportation from mine pits to lignite stack yard from where lignite after necessary blending shall be transported to adjacent pithead TPP by closed conveyor system has been envisaged.
- xxi. The depth of the internal void shall be 40 m from the ground level and should be adequate for fishery purpose.
- xxii. The production shall be within the same Mining Lease area.
- xxiii. The OB shall be completely re-handled at the end of the mining. The rest of the area will be back filled upto the ground level and covered with about a meter thick top soil and put to use.
- xxiv. Garland drains be provided.
- xxv. The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation.
- xxvi. Everybody in the core area should be provided with mask for protection against fugitive dust emissions.
- xxvii. Dust mask to be provided to everyone working in the mining area.
- xxviii. The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.
- xxix. People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.
- xxx. OB shall be stacked at one earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forests & Climate Change and its concerned Regional office on yearly basis.
- xxxi. Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50%

safety margin over and above the peak sudden rainfall 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.

- xxxii. Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- xxxiii. Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- xxxiv. Drills shall be wet operated.
- xxxv. The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads,
- xxxvi. Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
- xxxvii. A Progressive afforestation plan shall be implemented covering an area of **1027** ha at the end of mining, which includes reclaimed External OB dump area (159.85 ha), Internal OB dump area (180.50 ha), along roads and Green belt (1027 ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.
- xxxviii. An estimated total 512.51 Mm³ of OB will be generated during the entire life of the mine. Out of which 511.36 Mm³ of OB will be dumped in one external OB Dumps an earmarked area covering 159.85 ha of land with height of 60 m. 1.15 Mm³ of will be one internal OB dump in covering an area of 16.10 ha with height of 5 m. The maximum height of external OB dump for hard OB will not exceed 90 m. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self- sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.
- xxxix. The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.
 - xl. Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.
 - xli. The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.
 - xlii. No groundwater shall be used for mining operations.
 - xlili. Of the total quarry area of 1962.8 ha. the backfilled quarry area of 1837 ha shall be reclaimed with plantation and a void of 126 ha at a depth of 10 m which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
 - xliv. Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests & climate change and the Central Pollution Control Board quarterly within one month of monitoring.
 - xlv. The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
 - xlvi. Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.



- xlvi. Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
- xlvi. Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.
- xlix. For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF&CC and its concerned Regional office
 - i. A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environmental Clearance.
 - ii. The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.
 - iii. Corporate Environment Responsibility:
 - a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
 - d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

B. General Conditions

- i. No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.
- ii. No change in the calendar plan of production for quantum of mineral coal shall be made.
- iii. Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM₁₀, PM_{2.5}, SO₂ and NO_x monitoring. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.
- iv. Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ and NO_x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.
- v. Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
- vi. Industrial wastewater (workshop and wastewater from the mine) shall 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 before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.

- vii. Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
- viii. Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EPA Rules, 1986.
- ix. Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.
- x. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.
- xi. A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- 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 this Ministry and its concerned Regional Office.
- xiii. The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days 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 may also be seen at the website of the Ministry of Environment, Forests & Climate Change at <http://envfor.nic.in>.
- xiv. A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.
- xv. A copy of the environmental clearance letter shall be shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days.
- xvi. The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM₁₀, PM_{2.5}, SO₂ and NO_x (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.
- xvii. The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.
- xviii. The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- xix. The Environmental statement for each financial year ending 31 March in For -V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail.

5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.



6. The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent

7. The proponent is required to obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

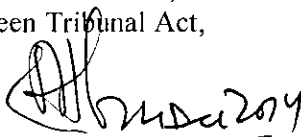
8. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

9. The Proponent shall setup an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.

10. 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 attract action under the provisions of Environment (Protection) Act, 1986.

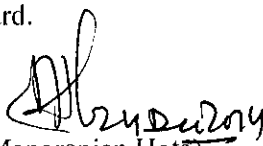
11. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.

12. 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.


(Dr. Manoranjan Hota)
Director

Copy to:

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Gujarat, Secretariat, Gandhi agar 382010.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal – 462016.
4. Member Secretary, Gujarat State Pollution Control Board, Paryavaran Bhavan, Sector 10-A, Gandhinagar – 382010.
5. Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. District Collector, Bhavnagar, Government of Gujarat.
8. Monitoring File 9. Guard File 10. Record File 11. Notice Board.


(Dr. Manoranjan Hota)
Director

