



**State Level Environment Impact Assessment Authority, Jharkhand.**

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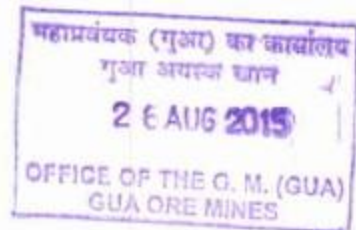
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Letter No.- EC/ SEIAA / 2015-16 / 694/ 2015/ 1291

Ranchi, Date: 17/08/15

To: **Sri A.K. Verma,**  
**General Manager (Mines),**  
Gua Ore Mines, SAIL,  
Raw Material Division,  
P.O- Gua, District- Singhbhum (West),  
Jharkhand – 833213.



**Sub.: Environmental Clearance for the project “Topailore Iron Ore Mining Project of Gua Ore Mines of M/S SAIL at Village- Topailore, Tehsil- Noamundi, Dist.- West Singhbhum, Jharkhand”.**

Sir,

It is in reference to the project “Topailore Iron Ore Mining Project of Gua Ore Mines of M/S SAIL at Village- Topailore, Tehsil- Noamundi, Dist.- West Singhbhum, Jharkhand” submitted by you for seeking prior Environmental Clearances (EC).

The proposal was appraised by State Level Expert Appraisal Committee (SEAC) and recommended for grant of Environmental Clearance in its meeting held on 20<sup>th</sup> to 23<sup>rd</sup> July, 2015.

SAIL had applied to MoEF vide its letter no.- RMD/K/E&C/11/246 dated 19.11.2011 for grant of ToR's. MoEF vide its letter no.- J-11015/272/2011-IA-II(M) dated- 25.07.2012 prescribed the ToR's. Since the area of the iron ore lease is 14.16 Ha the file was transferred to SEIAA, Jharkhand by MoEF & CC vide its letter no.- J-11015/272/2011-IA-II (M) dated 9<sup>th</sup> February, 2015.

Topailore Iron Ore Mine, under Raw Materials Division (RMD) of SAIL, is part of the Gua Group of Mines which also includes Durgaburu Lease – the main iron ore mining lease, Jhillingburu I Iron Ore & Maganese Ore Mining Lease, and Jhillingburu II Iron Ore & Manganese Ore Mining Lease. Topailore mine is closed since 1971. The present proposal envisages resumption of open cast mining of iron ore @ 6,00,000 t/yr. The iron ore will be used by SAIL for steel manufacture in the company's steel plants.

Topailore mining spread over 14.160 Ha, is located in Noamundi Tehsil- of West Singhbhum district of Jharkhand State. The lease is entirely located in Ghatkuri Reserve Forest (R.F) under Gua Range of Saranda Forest Division. The lease area forms part of Survey of India toposheet no: 73 F/8 and is bounded by latitudes 22° 12'00" to 22° 12'130" N and longitudes 85° 22'00" to 85° 22'30" E. The lease area can be approached by all weather metalled roads viz. Jamda-Thalkobad road. The nearest railway station, both for passenger as well as goods trains is Gua which is located on the Rajkharsawan-Barajamda-Gua broad gauge branch line of SE Railway. The line joins the Howrah-Mumbai main line at Rajkharsawan Junction. The leasehold is well connected with Tatanagar (147 km away) by metalled road as well as by rail route via Chaibasa and Noamundi and

can also be approached through metalled and unmetalled roads from Manoharpur railway station on Howrah-Mumbai main line.

The mining lease for Topailore was granted in favour of Indian Iron & Steel Company Ltd (IISCO) with effect from 09.03.1970 for 30 years. The renewal application was filed on 06.03.1999 for another 20 years. Presently the mine is under the control of the Raw Materials Division (RMD) of Steel Authority of India Limited (SAIL), which took over IISCO in 2006. The lease is under Deemed Renewal under the provision of Mineral Concession Rules, 1960.

The lease hold has been divided into three areas designated as Area - 1, Area - 2 and Area - 3 for operational convenience. Area 1 comprises of the western part of the lease at the toe of Durgaiburu's fines Dump; Area 2 is the northern part of the lease; Area 3 comprises of the southern and eastern parts of the lease.

In the initial 5 years, only Areas 1 and 2 will be worked as Area - 1 is adjacent to Durgaiburu's Fines Dump and there is a chance of slides down to the other 2 areas. The reserves in Area - 3 are not much. Pit blending by working two areas will lead to better quality of ROM ore.

The mine will be worked by means of opencast mechanized method of mining using pay-loader (2 nos. 2 m<sup>3</sup> capacity), dozer (2 nos. 320 HP capacity) and dumper (7 nos. 10 t capacity). No drilling and blasting will be required. In the first year of operation, 0.08 Mt of iron ore will be mined. The rated capacity of the mine (0.6Mt/yr) will be achieved in the 2<sup>nd</sup> year. It is expected that annually about 12,000 t of sub-grade fines (< 54 % Fe), i.e. ~2% of the excavated ore, will also be generated, which will be blended with higher grade material. Regular sampling will ensure the exact pattern of blending.

Two quarries are proposed to be worked simultaneously. These will be designated as Quarry 1 and Quarry 2 and located in Area 1 and Area 2 respectively. Maximum height of each bench will be 6 m and average width of each bench will be 10 m. At any time one bench in each quarry will be worked. However 2 more benches will be kept developed in each of the quarries. The pit slope will not exceed 30°. Additional precautions such as avoidance of manual mining, guarding against wash off due to precipitation by provision of garland drains / dam etc. will be adopted.

The mine will be worked only during day time with a single working shift.

Proposed fuel requirements of Topailore mine is expected to be 60 kl/yr.

As part of the modernization of Gua Ore Mines a beneficiation plant will be set up in Durgaiburu ML. The ore from Topailore ML will be sent to this beneficiation plant by covered conveyors.

The mine shall employ 45 persons (5 office staff, 7 highly skilled workers, 8 skilled workers, 7 semiskilled workers, and 18 unskilled workers). On any given day about 31 persons are expected to be on duty.

Since the mine shall operate only during day-time and shall use only diesel powered machinery, only about 1.5 kw electrical power shall be required for the office, canteen and rest shelters and that too only during day time. The power shall be drawn from the grid.

Peak water demand of the Topailore Mine is expected to be 63 m<sup>3</sup>/d of which 61 m<sup>3</sup>/d will be drawn from Karo River and 2 m<sup>3</sup>/d shall be recycled water.

State Level Environment Impact Assessment Authority (SEIAA), Jharkhand in its meeting held on 13.08.2015 discussed the project proposal along with recommendations made by SEAC and decided to grant EC to the project.

Following the decision of SEIAA, as mentioned above, Environmental Clearance is hereby issued to the project **"Topailore Iron Ore Mining Project of Gua Ore Mines of M/S SAIL at Village-Topailore, Tehsil- Noamundi, Dist.- West Singhbhum, Jharkhand"** alongwith the following conditions-

**A. Specific Conditions**

1. This Environmental Clearance is valid subject to the following condition below –  
That this project has-
  - a. Obtained all legal rights to operate at concerned place.
  - b. Complied with all existing concerned laws of the land and
  - c. Complied with the decisions of SEIAA on the issue of Environmental Clearance till date.
2. The Environmental Clearance is subject to renewal of mining lease as per rule 24A of mineral concession Rule 1960 and all other Statutory Conditions as imposed by various agencies / District Authorities are complied with.
3. At the time of obtaining Consent to establish/ Consent to Operate, PP should submit site map duly signed by PP and DMO to JSPCB & SEIAA.
4. At the time of obtaining consent to operate, PP will erect boundary pillars to demarcate boundary of lease. GPS reading, backward – forward bearing & pillar to pillar distance is to written on each pillar. Pillar wise list will be submitted to SEIAA and JSPCB before issue of Consent to Establish/ Consent to Operate.
5. All the conditions stipulated by the State Pollution Control Board in their NOC shall be effectively implemented.
6. Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna.
7. Necessary permission from the Forest Department for transportation of mineral through the forest road shall be revalidated before restarting mining operation.
8. The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below the ground water table, prior approval of the Ground Water Directorate, Government of Jharkhand / Central Ground Water Board shall be obtained. Benches height and slope shall be maintained as per approved Mining Plan.
9. The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of the first order and the second order streams, if any emanating/passing through the mine lease area during the course of mining operation.
10. Top soil should be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.
11. The entire waste generated shall be backfilled and there shall be no external over burden dump left at the end of the mine life. The entire backfilled area shall be reclaimed by plantation. The back filling should be carried out in such a manner that it is restored to the normal ground level. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted

to Jharkhand State Pollution Control Board, Ranchi and its nearest Regional Office on six monthly basis.

12. Catch drains and siltation ponds of appropriate size should be constructed for the working pit, temporary OB dumps, if any and mineral dumps to arrest flow of silt and sediment. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted, particularly after monsoon, and maintained properly.
13. Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and temporary dumps and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.
14. Dimension of the retaining wall at the toe of temporary dumps and OB benches within the mine to check run-off and siltation should be based on the rain fall data.
1. Plantation shall be raised in the 7.5m wide green belt in the safety zone around the mining lease by planting the native species around ML area, backfilled and reclaimed area, around water body, roads etc. in consultation with the local DFO/Agriculture Department. Greenbelt shall be developed all along the mine lease area and haul roads. The Project proponent shall do tree plantation in at least 33% of the space, preferably along the periphery and in vacant space. Fast growing and local species will be planted. In case land is not available within the lease area or it is not possible to plant trees due to nature of land then PP will do necessary afforestation at other places / land.
15. Regular water sprinkling should be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
16. The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Ground Water Directorate, Government of Jharkhand / Central Ground Water Board/ Authority.
17. The project authorities should obtain prior approval of the competent authority for drawl of water required for the project.
18. Suitable rainwater harvesting measures shall be planned and implemented in consultation with the Ground Water Directorate, Government of Jharkhand / Central Ground Water Board / Authority.
19. Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.
20. Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
21. Drills shall either be operated with dust extractors or equipped with water injection system.
22. Effective safeguard measures should be taken to control fugitive emissions so as to ensure that RSPM (PM10 and PM 2.5) levels are within prescribed limits.
23. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained.
24. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, septic tanks,

safe drinking water, medical health care, etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

25. Proper safety measures as per statutory requirement are to be implemented around the mined out Pit prior to closure of site.
26. A final mine closure Plan along with corpus fund duly approved by Competent Authority shall be submitted to the Jharkhand State Pollution Control Board, Ranchi and to concerned DMO in advance of final mine closure for approval.
27. Consent to operate should be obtained from JSPCB before starting production from the mine.

#### **B. General conditions**

1. No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.
2. No change in the calendar plan including excavation, quantum of iron ore and waste should be made.
3. The Project proponent shall maintain register for production and dispatch and submit return to the Board.
4. The Project proponent shall not cut trees / carry out tree felling in leased out area without the permission of competent authority.
5. Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for SPM / RSPM (PM<sub>10</sub> and PM<sub>2.5</sub>) levels, SO<sub>2</sub> & NO<sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.
6. Regular monitoring of ground water level and quality should be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should be carried out four times in a year i.e. January, April-May, August, November and the data thus collected may be sent regularly to Jharkhand State Pollution Control Board, Ranchi and its nearest Regional Office / Ground Water Directorate, Government of Jharkhand / Central Ground Water Board / Authority.
7. The Project proponent shall make all internal roads pucca and shall maintain a good housekeeping by regular cleaning and wetting of the haul roads and the premises. Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
8. Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.
9. Industrial wastewater (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of effluents from workshop.
10. Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.

11. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed. Dispensary facilities for First Aid shall be provided at site.
12. A separate environmental management cell with suitable qualified personnel should be set up under the control of a senior Executive, who will report directly to the Head of the organization.
13. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Jharkhand State Pollution Control Board, Ranchi. PP shall carry out CSR activities as per Government Guidelines (%of Profit / turnover).
14. The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purposes. Year-wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.
15. The Jharkhand State Pollution Control Board, Ranchi directly or through its Regional Office, shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) by furnishing the requisite data / information / monitoring reports.
16. The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Jharkhand State Pollution Control Board, Ranchi and to its concerned Regional Office.
17. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to Jharkhand State Pollution Control Board and its concerned Regional Office. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the project shall be monitored and displayed at a convenient location near the main gate of the company in the company in the public domain.
18. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parishad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the project proponent. JSPCB should display a copy of the clearance letter at the Regional Office, District Industry Centre and DC's, Circle Officer's Office for 30 days. The project authorities should also advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the Jharkhand State Pollution Control Board.
19. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the Jharkhand State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along the status of compliance of EC conditions and shall also to the concerned Regional Office of JSPCB by e-mail.
20. All statutory clearances shall be obtained before start of mining operations.

**C. Other points**

1. The Authority reserves the right to add any new condition or modify the above conditions or to revoke the clearance if conditions stipulated above are not implemented to the satisfaction of Authority or for that matter for any other Administrative reason.
2. 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.
3. The Environmental Clearance accorded shall be valid for the period of renewal of lease (generally 20 years) / life of mine or for 30 years whichever is less. The PP shall not increase production rate and alter lease area during the validity of Environmental Clearance.
4. In case of any deviation or alteration in the project proposed from those submitted to SEIAA, Jharkhand for clearance, a fresh reference should be made to SEIAA to assess the adequacy of the conditions imposed and to incorporate any new conditions if required.
5. The above stipulations would be enforced among others under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 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 Jharkhand and any other Court of Law relating to the subject matter.
6. 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.



Member Secretary  
State Level Environment Impact  
Assessment Authority, Jharkhand.