



Director
Non-Coal Mining
Ministry of Environment, Forests and Climate Change
Government of India,
Indra Paryavaran Bhawan, Jor Bagh
New Delhi-110003

TSLDEL/334/2018
Date: 28th March 2019

Sub: Request for amendment to existing Environment Clearance of Joda East Iron Mines No.J-11015/215/2008-IA.II(M)-11.03.2013, w.r.t modernization, under Section 7 (ii) of EIA Notification 2006, of beneficiation plant by setting up a 4.6 MTPA wet beneficiation plant and by reducing the capacity of the present wet beneficiation plant to 2.4 MTPA, thereby keeping the overall wet beneficiation throughput capacity the same as approved (7 MTPA) to cater the changing ore characteristics.

- Ref.: 1) Environmental Clearance in respect of Joda East Iron Mine accorded vide letter no. J-11015/215/2008-IA.II(M) dated: 11.03.2013.
- 2) Amendment of Environmental Clearance wrt Run of Mine (ROM) vide letter no J-11015/215/2008-IA.II(M) dated: 07.09.2018.
- 3) Request for amendment to EC of Joda East Iron Mines. for setting up a 4.6 MTPA wet beneficiation plant by reducing the capacity of the present wet beneficiation plant to 2.4 MTPA, thereby keeping the overall wet beneficiation throughput capacity the same as approved (7 MTPA) to cater the changing ore characteristics. vide Letter no: MD/ENV/216/100/18 dated 16.08.2018
- 4) MOEF&CC letter dated 22.10.2018 to Joda East Iron Mines of M/s Tata Steel Ltd, located at Village-Joda, Kamarjoda, Banspani, Khuntpani & Baitarini, Tehsil-Barbil, District-Keonjhar, Odisha (MLA:671.093 ha) (J-11015/215/2008-IA.II(M)-Consideration of amendment in EC w.r.t modernization of EC dated 11.03.2013 in respect of beneficiation plant.

Dear Sir,

Our proposal (Ref No 3 above) was placed before the EAC in its meeting held during September 28-19, 2018 wherein the committee deliberated the proposal and is of the view that the PP first needs to conduct the addendum study on pollution load w.r.t modernization of beneficiation plant for further consideration (copy of letter from MoEF as per Ref No 4 above informing EAC decision enclosed).

Further during the deliberations, the Committee suggested that since we have applied under Section 7 (ii), we should apply online under the same section after completion of the study. Therefore, we are hereby submitting our proposal online with the Addendum study conducted for the impact study of pollution load w.r.t to modernization of beneficiation plant along with all other relevant documents under clause 7(ii) of EIA notification 2006 as amended from time to time.

TATA STEEL LIMITED



: 2 :

In view of the above, may we request you to kindly issue necessary amendment to the existing Environmental Clearance of Joda East Iron Mine for installation of 4.6 MTPA beneficiation plant keeping overall beneficiation throughput capacity of 12 MTPA, the dry plant capacity of 5 MTPA and reducing the current wet plant capacity from 7 MTPA to 2.4 MTPA.

Thanking You

Yours faithfully

A handwritten signature in black ink, appearing to read 'Sateesh Singh'.

(Sateesh Singh)
Chief Resident Executive, Delhi

Encl:

1. Form-1 along with Addendum Study report and all relevant annexures.
2. All reference documents.

No. J-11015/215/2008-LA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhavan,
C.G.O. Complex, Lodi Road,
New Delhi-110 003.

Dated the 11th March, 2013

To

✓ M/s Tata Steel Limited
Jeevan Bharati Building
Tower-I, 10th Floor
124, Connaught Place
New Delhi- 110 001
Email: chanakya@tatasteel.com

Subject: Enhancement of Production of Joda East Iron Ore Mine and Beneficiation plant of M/s TATA Steel Ltd. located at District Keonjhar, Odisha - environmental clearance - regarding.

Sir,

This has reference to your letter No. TSLDEL/475/2010 dated 26-09-2011 and subsequent letters dated 18-05-2012 & 04-06-2012 on the subject mentioned above. The project was earlier prescribed Terms of Reference (TORs) by the Ministry of Environment and Forests on 25.11.2008 for undertaking detailed EIA study for the purpose of obtaining environmental clearance. The proposal is for enhancement of production of iron ore from 6 million TPA (ROM) to 12 million TPA (ROM) and expansion of beneficiation plant from 6 million TPA to 12 million TPA throughput. The earlier environmental clearance for 6 million TPA capacity was granted in June, 2008.

2. The mine lease area is 671.093 ha. This includes 608.906 ha of forest land. Forestry clearance has been obtained for 567.087 ha of forest land only. The mine is located between latitudes 21^o59'N to 22^o03'N and longitudes 85^o25' & 85^o27'E at an elevation of 679 m AMSL highest and 460 m AMSL lowest. Life of mine is 10 years. The mine lease area is 671.093 ha, which includes 608.906 ha of forestland. Baitarani river is at 2.5 km from the mine lease boundary and Kundra nallah is at a distance of 1.6 km. Mineral transportation will include 7 km by road and 140 km by rail. Mine working will be opencast and mechanised involving drilling and blasting. The mine working will not intersect the ground water table. The peak water requirement is estimated as 17,500 m³ /day, which will be obtained from Kundra nallah. Permission for the withdrawal of water from Kundra Nallah has been obtained for 8,531 kl/day only. No groundwater will be withdrawn. Area to be planted is 11 ha, out of which 8 ha will be on dumps. The slime generated from the wet beneficiation process is stored separately. At present there are two tailing dams. The slime dam where the tailings are being stored presently has a balance capacity of about 12 months. The proposed Manmora pit will have a capacity of about 3 to 4 years, thereafter the height of the existing dams will be raised and the exhausted mined out pits will be used to accommodate the slime

for the balanced period. The mining plan alongwith PMCP was approved by IBM vide letter no. 314(3)/2003-MCCM(C)/MP-11 dated 3rd December, 2005.

3. The baseline AAQ data for the winter season of 2011-12 was presented which showed the levels within permissible limit. It was stated that various steps have been taken for control of RSPM in the project area, which inter-alia included mobile water sprinklers, fixed water sprinklers along haul roads (about 1 km in length), use of dust suppression, making dry fog system more effective, use of chemicals for quick settling of slime etc. Various initiatives taken for water conservation were presented. The details of pipeline from Kundra Nallah to the project site were also presented. It was shown that the pipelines are laid along with hill slope and delivers water at the vertical head of 106 meters. The fluoride concentration in groundwater was reported as 0.3 mg/l.

4. No National park / Wildlife sanctuary / Biosphere reserve / Tiger reserve / Elephant reserve, etc., are reported to be located in the core and buffer zone of within 10 km of the periphery of the project site.

5. Public hearing has been held on 18.08.2011. The action plan for implementation of commitments made during public hearing was also presented and discussed which inter-alia included waste water management, supply of drinking water, education and health care facilities etc. It was reported that there is no court case pending against the project. An amount of Rs. 1,655 lakhs has been earmarked for environment protection measures and an amount of Rs. 30.82 crore has been earmarked for socio-economic measures.

6. The Ministry of Environment and Forests has examined the application in accordance with the EIA Notification, 2006 and hereby accords environmental clearance under the provisions thereof to the above mentioned for enhancement of production of iron ore from 6 million TPA (ROM) to 12 million TPA (ROM) and expansion of beneficiation plant from 6 million TPA to 12 million TPA throughout for 567.087 ha of forest land for which FC is available and 62.187 ha of non forest land, i.e. a total of 629.274 ha, subject to implementation of the following conditions and environmental safeguards.

A. Specific Condition

- (i) No mining activities will be allowed in forest area for which the FC is not available.
- (ii) The project proponent shall seek and obtain approval under the FC Act for diversion of the entire forest land located within the mining lease within a period of two years w.e.f. 01.02.2013, failing which the mining lease area will be reduced to the non forest area plus the forest area for which the project proponent has been able to obtain the FC at the end of this time period. In the case of reduction in mine lease area, the project proponent will need to get a revised mining plan approved from the competent authority for reduced area and enter into a new mining lease as per reduced lease area. The EC will be construed to be available for the mining lease area as per the revised mining lease deed.
- (iii) The project proponent shall abide by the guidelines dated 01.02.2013 vide no. 1-362/2012-FC put in place by the FC Division of MoEF in respect of cases of mines where at present the forest clearance is available to only a part of the forest land involved in the mine.

- (iv) Environmental clearance is subject to obtaining clearance as may be necessary under the Wildlife (Protection) Act, 1972 from the competent authority.
- (v) The project proponent shall obtain Consent to Establish and Consent to Operate from the State Pollution Control Board, Orissa and effectively implement all the conditions stipulated therein.
- (vi) The Company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter-alia provide for (i) Standard operating process / process to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions, (ii) Hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the EC conditions and (iii) System of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders.
- (vii) The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table. In case of working below the ground water table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.
- (viii) The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations.
- (ix) The top soil, if any shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.
- (x) As part of ambient air quality monitoring during operational phase of the project, the air samples shall also be analyzed for their mineralogical composition and records maintained.
- (xi) The water recovery and spill way system shall be so designed that the natural water resources are not affected and that no spill water from the plant goes into the Kundra nailah or any other water body.
- (xii) The filter cake shall be disposed at the earmarked site, which shall be above highest water table and shall be lined to prevent any leaching from the filter cake disposal site into groundwater. Efforts shall also be made to gainfully utilize the filter cake so generated in an environmentally compatible manner.
- (xiii) Effective safeguard measures such as conditioning of ore with water, regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, 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.

- (xiv) The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and should not be kept active for long period. There shall be one external OB dump having maximum projected height of 30m with three terraces of 10m each. The overall slope of the dump shall not exceed 27°. The OB dump should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.
- (xv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working, soil, OB and mineral dumps. 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.

Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and OB dump 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.
- (xvi) Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (xvii) Plantation shall be raised in an area of 11 ha including a 7.5m wide green belt in the safety zone around the mining lease by planting the native species around OB dump, reclaimed area, mine benches, along the roads etc. in consultation with the local DFO/Agriculture Department.
- (xviii) Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around crushing and screening plant, loading and unloading point and transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xix) The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- (xx) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing new piezometers during the operation. The periodic monitoring (at least four times in a

year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)) shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office Bhubneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.

- (xxi) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water, if any, required for the project.
- (xxii) The safeguard measures as suggested by the Central Groundwater Board vide letter No.21-4(231)/CGWA/SER/2010-1010 dated 11.06.2010 shall be effectively implemented.
- (xxiii) The project proponent shall practice suitable rainwater harvesting measures on long term basis and work out a detailed scheme for rainwater harvesting in consultation with the Central Groundwater Authority and submit a copy of the same to the Ministry of Environment and Forests and its Regional Office, Bhubneswar.
- (xxiv) Vehicular emissions shall 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.
- (xxv) No blasting shall be carried out after the sunset. Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xxvi) Drills shall either be operated with the dust extractors or equipped with water injection system.
- (xxvii) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (xxviii) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.
- (xxix) Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.
- (xxx) 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, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

- (xxxi) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear etc. spotted in the study area. All the safeguard measures brought out in the Wildlife Conservation Plan so prepared specific to this project site and approved by the Chief Conservator of Forests (Wildlife) shall be effectively implemented. A copy of Wildlife Conservation Plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar.
- (xxxii) The critical parameters such as RSPM (Particulate matter with size less than 10micron i.e., PM₁₀) and NO_x in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.
- (xxxiii) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.
- B. General conditions**
- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.
- (iii) Atleast four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10micron i.e., PM₁₀) and NO_x 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.
- (iv) Data on ambient air quality [(RSPM(Particulate matter with size less than 10micron i.e., PM₁₀) and NO_x) should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.

- (v) 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.
- (vi) 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.
- (vii) Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.
- (viii) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- (ix) 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.
- (x) 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 Ministry and its Regional Office located at Bhubaneswar.
- (xi) The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (xii) The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
- (xiii) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bhubneswar, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. 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 the Regional Office of the Ministry of Environment and Forests, Bhubneswar, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.

- (xiv) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla 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 proponent.
- (xv) The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tehsildar's Office for 30 days.
- (xvi) 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 concerned 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 with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment and Forests, Bhubaneswar by e-mail.
- (xvii) The project authorities should advertise at least in two local newspapers of the District or State in which the project is located and widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.
8. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
9. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
10. 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 thereunder and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Orissa and any other Court of Law relating to the subject matter.
11. 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. Saroj)
Director

- (i) The Secretary, Department of Environment, Government of Orissa, Secretariat, Bhubaneswar.
- (ii) The Secretary, Department of Mines and Geology, Government of Orissa, Secretariat, Bhubaneswar.
- (iii) The Secretary, Department of Forests, Government of Orissa, Secretariat, Bhubaneswar.
- (iv) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- (v) The Chief Conservator of Forests, Regional Office (E2), Ministry of Environment and Forests, A-3 Chandrashekharpur, Bhubaneswar-751023.
- (vi) The Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- (vii) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Mar & New Delhi-110001.
- (viii) The District Collector, District Keonjhar, Government of Orissa.
- (ix) EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
- (x) Monitoring File.
- (xi) Guard File.
- (xii) Record File.


(Dr. Saroj)
Director



By Speed Post/Online

No. J-11015/215/2008-IA.II(M)

Government of India

Ministry of Environment, Forest and Climate Change

Impact Assessment Division

Indira Paryavaran Bhavan,
Aliganj, Jor Bag Road,
New Delhi-110 003

Dated: 7th September, 2018

To,

M/s Tata Steel Limited

Jeevan Bharti Building, Lower I
10th Floor, 124 Connaught Circus,
New Delhi-110001

Te. No.: 011-23327072; FaxNo.: 011-23326265

Email: gm.office@tatasteel.com

Sub.: Joda East Iron Mine of M/s Tata Steel Limited, located at village-Joda, Kamarjoda, Banspani, Khutpani&Baitarini, Tehsil-Barbil, District-Keonjhar, Odisha (MLA: 671.093 ha). - Amendment in EC w.r.t. Run of Mine (ROM)

Reference: (i) Online Proposal no. IA/OR/MIN/61373/2013
(ii) Environmental Clearance vide No. J-11015/215/2008-IA.II (M), dated 11.03.2013.

Sir,

This has reference to your online application for amendment in Environmental Clearance vide no. J-11015/215/2008-IA.II(M) dated 11.03.2013 w.r.t. Run of Mine (ROM). The mine is located at village-Joda, Kamarjoda, Banspani, Khutpani&Baitarini, Tehsil-Barbil, District Keonjhar, Odisha in Mine lease area of 671.093ha

2. The Ministry has granted the Environmental Clearance vide letter no. J-11015/215/2008-IA.II(M) dated 11.03.2013 for production capacity of 12.0 Million TPA of Iron Ore (ROM) and beneficiation plant of 12 MTPA of throughput in the mine lease area of 671.093 ha.

3. The proposal was earlier considered by the EAC in its meeting held during October 23-24, 2017 wherein the Committee deliberated on the proposal and sought the opinion of the representative of Ministry of Mines (an EAC Member) on the issues of change in ROM definition. The Expert Member (representative of Ministry of Mines) apprised the Committee that the term 'Run of Mines (ROM)' is a basic terminology in mining and invariably used in mining plans prepared for various mines. However, this term has been recently defined under Mineral (Other than Atomic and Hydrocarbon Energy Minerals) Commission Rules 2016 (MCR, 2016) and as such there is no change

in the essence of ROM being used earlier (before defining it in MCR 2016) in Mining Plans and the definition incorporated recently in MCR 2016. Hence, there is no Modified Definition of ROM introduced in MCR 2016. The application made by the applicant, requesting MoEF&CC to issue Corrigendum to ECs issued to it in the instant as well as earlier proposals in view of Modified Definition of ROM introduced in Mineral (Other than Atomic and Hydrocarbon Energy Minerals) Concession Rules 2016, is not tenable. In view of the above, the Committee made detailed deliberations on the proposal and noted that the matter related to definition of ROM is a basic issue related to a mining statute viz. MCR, 2016 which is notified by Ministry of Mines. Hence, the applicant should have obtained clarification on the issue from the administering Ministry viz. Ministry of Mines or its technical body namely, Indian Bureau of Mines, as the case may be, before applying for EC amendment or corrigendum. In view of the above, the Committee suggested that the earlier proposal may also be kept on hold till clarity emerges on the issue. The instant proposals (3) along with earlier proposal of Joda East Mine lease, Odisha of M/s Tata Steel Limited were deferred.

4. The Project Proponent, vide letter dated 27.12.2016, has submitted the application for amendments in the EC. Project proponent mentioned that Ministry of Mines vide GSR No. 279(E) dated 04.03.2016 has notified the Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession Rules, 2016 wherein the 'run-of-mine' has been defined which means that the raw unprocessed or uncrushed material in its natural state obtained after blasting or digging, from the mineralized zone of lease area. Project proponent mentioned that as per this definition of ROM, all material excavated out of the mineralized zone of the lease area, becomes ROM which includes the plant feed, subgrade, mineral rejects, waste etc. Therefore, the ambit of the term ROM, as per this new definition is wider than the understanding with which it was referred in the Mine Pan and the EIA documents. Hence, the capacity mentioned in the EC in terms of ROM also needs to be corrected in order to enable to operate at the same level.

5. Project Proponent has also mentioned that the environmental clearance dated 11.06.2013 has been granted on the basis of EIA/EMP Report and approved mine plan/mining scheme by Indian Bureau of Mines on 02.07.2010 The details of ROM, waste and total excavation are provided year-wise and as below in tables:-

Table: Year-wise ROM and development (in Million Tonnes)

Year	ROM	Subgrade	Waste	Old Dump Rehandling	Total Excavation
2010 -11	6	0.58	0.22	0.86	7.66
2011-12	10.6	1.44	0.42	1.22	13.68
2012-13	12	2.66	0.52	0.45	15.63
2013-14	12	0.60	0.49	0.71	13.80
2014-15	12	0.86	0.68	0.36	13.90

6. The project proponent submitted the mining plan including total excavation. The amended environmental clearance would be in line with the excavation plan given for

approval. Project Proponent also mentioned that there would be no increase in area, no change in technology, no increase of production capacity, and no increase in the Pollution Load due to the requested amendments as there would be no deviation from the excavation plan and the Environment Protection and mitigations are in place for the Total Excavation 13.90 MTPA which was duly considered by the EAC while granting the Environmental Clearance.

7. Project Proponent reported that the Consent to Operate has been granted by the SPCB, vide Order No. 2523/IND-I-CON-184, dated 22.02.2017 Mining Plan/Scheme of Mining has been approved by Regional Controller of Mines, IBM, Bhubaneswar, vide letter No. MS/FM/41-ORI/BHU/2017-18/2890, dated 21.02.2018 Stage-II Forest Clearance over 567.087 ha has been granted by the Ministry vide letter no. F.No.8-32/1993-FC (vol. II), dated 24.09.2007.

8. Project Proponent reported that the mine is in operation since 1956 and mentioned that presently the mine is in operation with due compliance of the Hon'ble Supreme Court Order dated 02.08.2017 in W.P.(C) No-114/2014. The details are as follows:

S. No.	Issue	PP's submission
1.	Compliance of Order dated 02.08.2017 in CWP no. 114/2014 of Hon'ble Supreme Court.	In compliance to the order of the Hon'ble Supreme Court on dated 02.08.2017 in WPC No. 114/2014, the project proponent has paid the compensation amount of Rs. 243, 64,11,380/- (Rupees Two Hundred and forty-three crores sixty-four lakhs eleven thousand three hundred eighty only) on date 22.12.2017 being the price thereof as compensation under Section 21(5) of MMDR Act, 1957 for alleged production without/in excess of the Environment clearance as rationalised by the CEC as per the demand Notice No. 4138/ Mines dated 02.09.2017 issued by the Deputy Director of Mines, Joda Circle, Dist. – Keonjhar
2.	Details of demand if any raised by Dept. of Mining and Geology, Govt. of Odisha.	Demand was raised by the Deputy Director of Mines, Joda Circle, Dist.–Keonjhar, vide letter No. 4138/Mines dated 02.09.2017 amounting of Rs. 243,64,11,380/- (Rupees Two Hundred and forty-three crores sixty-four lakhs eleven thousand three hundred eighty only) on or before 31.12.2017 in pursuance to the para 225 of the Order dated 02.08.2017 of Hon'ble Supreme Court in WPC No. 114/2014.
3.	Details of payment, if any made to Dept. of Mines and Geology, Govt. of Odisha.	Payment has been done by project proponent with an amount of Rs. 243, 64,11,380/- (Rupees Two Hundred and forty-three crores sixty-four lakhs eleven thousand three hundred eighty only) on date 22.12.2017 through net banking vide transaction reference number 425530481, 425534469,425537844 paid through HDFC

		Bank.
4.	Validity of mine lease.	Lease period has been extended upto 31.03.2030 vide letter No. III (A) SM-13/2012/3283/S&M, Bhubaneswar dated 18.04.2015 issued by department of Steel & Mines, Govt. of Odisha in compliance with MMDR Amendment Act 2015.
5.	Status of Mine whether working or not	This is a working mine.
6.	Details of the past production of mines since its inception, duly authenticated by Dept. of Mines and Geology, Govt. of Odisha.	The year wise production figures from 1993-94 is submitted by the PP.

9. Based on the recommendation of the EAC, the Ministry vide letter dated 14.12.2017, has requested the Ministry of Mines and IBM to provide the clarifications/comments as sought by the EAC. In this regard PP vide letter dated 18.04.2018 has requested to expedite the amendment proposal of EC and also submitted the comments of IBM vide their letter dated 07.02.2018. The IBM had endorsed the letter to Ministry of Mines. The IBM has submitted the following comments: -

- (i). It is to clarify that it is incorrect to conclude that the definition of Run of Mine (ROM) has been changed consequent to its definition in Mineral (Other than Atomic and Hydrocarbons Energy Minerals) Concession Rules, 2016.
- (ii). The Run of Mine (ROM) is a general term used in Mining field adopted to indicate the material handling from the mineralized zone.
- (iii). ROM is defined in Mineral (Other than Atomic and Hydrocarbons Energy Minerals) Concession Rules, 2016 as under:- "Run-of-Mine (ROM) means the raw un processed or uncrushed material in its natural state obtained after blasting or digging from the mineralized zone of lease area", this includes the saleable ore mined after processing, intercalated waste (the gangue minerals within the mineralized zone) and mineral rejects/subgrade mineral.
- (iv). However, it is pragmatic to consider total rock excavation from the point of view of Environmental Clearance, rather than the production of saleable fraction of ore or the ROM (the blasted material from ore zone inclusive of mineral reject, intercalated waste or gangue minerals, if any).
- (v). It is also clarified that total rock excavation may differ to generate same amount of ROM on year to year bases.

- (vi). During the approval of Mining Plan the total excavation including ROM ore from which saleable fraction is produced are taken into consideration.
- (vii). IBM has concluded that it will be appropriate to accord Environmental Clearance based on the maximum total volume/tonnage of excavation or rock handling for the period under consideration.

10. Based on the comments of IBM, the proposal was reconsidered by the EAC in its meeting held during June 21-22, 2018 wherein the Committee is of the view that the EC was granted based on the EIA/EMP Report and approved mining plan wherein the details of production of ore, mineral rejects, ROM, Sub-grade minerals, overburden and total excavation were mentioned. EAC noted that there would be no increase in area, no change in technology, and no increase of production capacity envisaged as reported by the Project Proponent, accordingly the committee recommended the proposal for inclusion of following para in the EC letter,

“The Committee clarified that there is no change in the definition of ROM and the Environmental Clearance was granted for 12.0 Million TPA of Iron Ore (ROM) as mentioned in EIA/EMP Report and approved mining plan. The PP shall handle the material other than ROM as per approved mining plan and EIA/EMP report submitted to the Ministry”.

11. The Committee also noted that the project proponent has submitted the details of the past production of mines which is not duly authenticated by Dept. of Mines and Geology, Govt. of Odisha. In this regard the Project Proponent shall submit the details of the past production since inception of mines duly authenticated by Dept. of Mines and Geology, Govt. of Odisha and compliance of Ministry's OM dated 30.05.2018. In this context, PP has submitted the production details of the mine and affidavit dated 20/06/2018. The matter was examined based on the production details submitted by Deputy Director Mines, Joda Circle, District: Keonjhar, Odisha vide their Memo no. 3139/ Mines, dated: 11.07.2018 and it is noted that PP has not enhanced the production details after grant of EC on 11.03.2013. The PP has submitted the affidavit dated 20.06.2018 in compliance of Ministry's O.M. dated 30/05/2018. The undertaking inter-alia mentioned that "Tata Steel Limited would comply with all the statutory requirements and Judgement of Hon'ble Supreme Court dated 2nd August, 2017 in the Writ Petition (Civil) No 114 of 2014 in the matter of Common Cause versus Union of India and Ors. with respect to Joda East Iron Mine owned and operated by it."

12. The matter has been examined in the Ministry and the said EC of M/s Tata Steel Limited of even no. dated 11.03.2013 is hereby amended w.r.t. Run of Mine (ROM) and included the following para, "The Committee clarified that there is no change in the definition of ROM and the Environmental Clearance was granted for 12.0 Million TPA of Iron Ore (ROM) as mentioned in EIA/EMP Report and approved mining plan. The PP shall handle the material other than ROM as per approved mining plan and EIA/EMP report submitted to the Ministry along with following specific condition as below:

- (i) This Environmental Clearance will not be operational till such time the Project

Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors..

- (ii) Department of Mining & Geology, State Government shall ensure that mining operation shall not commence till the entire compensation levied, 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 the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
 - (iii) Monitoring of Ambient Air Quality to be carried out based on the 2009 Notification, as amended from time to time by the Central Pollution Control Board.
 - (iv) The pollution due to transportation load on the environment will be effectively controlled & water sprinkling will also be done regularly. Vehicles with PUC only will be allowed to ply. The mineral transportation shall be carried out through covered trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate for all the vehicles from authorized pollution testing centre; Washing of all transport vehicle should be done inside the mining lease.
 - (v) The activities and budget earmarked for Corporate Environmental Responsibility (CER) shall be as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 and the action plan on the activities proposed under CER shall be submitted to the Regional Office of the Ministry and State Pollution Control Board.
13. All other terms and conditions mentioned in this Ministry's EC letter no. J-11015/215/2008-IA.II(M) dated 11.03.2013 shall remain the same.
14. This issues with the approval of the Competent Authority.

Yours faithfully,


(Dr. R. B. Lal)

Scientist 'E' / Addl. Director

Copy to:

- 1). **The Secretary**, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi
- 2). **The Secretary**, Department of Environment, Government of Odisha, Secretariat, Bhubaneswar.

- 3). **The Secretary**, Department of Mines and Geology, Government of Odisha, Secretariat, Bhubaneswar.
- 4). **The Secretary**, Department of Forests, Government of Odisha, Secretariat, Bhubaneswar.
- 5). **The Chairman**, Central Pollution Control Board, PariveshBhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- 6). **The Chief Wildlife Warden** of State Government of Odisha, Bhubaneswar.
- 7). **The Additional Principal Chief Conservator of Forests (C)**, Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandersekharpur, Bhubaneswar – 751023.
- 8). **The Member Secretary**, Odisha State Pollution Control Board, PariveshBhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- 9). **The Controller General**, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- 10). **The Member Secretary**, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- 11). **The District Collector**, District- Keonjhar, State of Odisha.
- 12). **Guard File.**
- 13). **MoEF&CC Website.**


(Dr. R. B. Lal)

Scientist 'E'/Additional Director



Director
Ministry of Environment, Forests and Climate Change
Government of India,
Indra Paryavaran Bhawan, Jor Bagh
New Delhi-110003

MD/ENV/216/100/18
Date: 16.08.2018

Sub: Request for Amendment to Environmental Clearance of Joda East Iron Mine for setting up a 4.6 MTPA wet beneficiation plant by reducing the capacity of the present wet beneficiation plant to 2.4 MTPA, thereby keeping the overall Wet beneficiation throughput capacity the same as approved (7 MTPA) to cater to the changing ore characteristics.

Ref.: Environmental Clearance in respect of Joda East Iron Mine accorded vide letter no. J-11015/215/2008-IA.II(M) dated: 11.03.2013

Dear Sir,

Joda East Iron Ore Mine (JEIM) was granted EC for enhancement of ROM production from 6 MTPA to 12 MTPA of ROM and beneficiation of 12 MTPA (5 MTPA Dry Processing and 7 MTPA Wet Processing) vide Ministry Letter no. J-11015/215/2008-IA. II(M), dated 11th March 2013 (**Annexure-A**).

As per the Environmental Clearance, we had set up the beneficiation plants for 12 MTPA, 5 MTPA ROM to be processed through a dry processing plant and 7 MTPA to be processed in a wet processing facility.

Joda East iron deposit has different lithologies like hard ore, lateritic ore, friable ore, powdery ore of variable grades. Geological ore body model is the basis for evaluating the ore types using Fe & Alumina grades to determine the feed of Run of Mine (ROM) for dry and wet processing to optimize the extraction. The products of these two plants are blended to meet the product quality requirements from our captive steel plants. The flexibility to feed suitable material based on ore body model also ensures optimized extraction resulting in conservation of natural resource.

Based on the disposition of the ore as per the geological model of Joda East Iron Mine, the low Fe high Alumina ores will require to be mined in future for sustained mining activity. The existing dry and wet plants cannot process these ore types due to process constraint. Tata Steel envisages to set up a wet processing facility of 4.6 MTPA capacity suitable to beneficiate such low-grade Fe. The above proposal is also mentioned in the Final EIA-EMP report, Chapter-2;2.8: Conceptual Expansion plan. Relevant pages of EIA/EMP report is enclosed as **Annexure-B**.

Quote:

"The average feed alumina in future to the wet beneficiation plant will be about 4.0% which will call for a sophisticated beneficiation process to be adopted. TATA Steel is in process of testing of high alumina iron ore samples for designing of suitable beneficiation flow sheet. After finalization of flow sheet, beneficiation plant will be equipped with additional facility for treatment of high aluminous ore. The possible beneficiation equipment will be jigs, spirals, hydrocyclone and floatation units, etc".

TATA STEEL LIMITED

Mines Division Noamundi-833 217 India

Tel 91 9234301340 Fax 91 6596 290737

Registered Office Bombay House 24 Homi Bhabha Street Fort Mumbai 400 001 India

Tel 91 22 66658382 Fax 91 22 66657724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



Unquote:

We have accordingly been exploring and post the research and testing, we have now finalized the beneficiation process which will enable us to process low grade iron ore also. Consequent to the establishment of new beneficiation facility (for low Fe high alumina ROM) the overall feed to the existing wet plant plus proposed new 4.6 MTPA beneficiation plant will be within 7 MTPA as per existing EC capacity. The flexibility to feed suitable quality of ores to the respective wet processing facility will ensure optimum extraction and conservation of the natural resources.

Based on the quality (grade) of ROM the feed of the present and proposed wet plant will be varied maintaining the overall wet processing EC limit of 7 MTPA throughput. This will enable Tata Steel to mine and process 12 MTPA iron ore ROM in a sustainable manner going forward. We are submitting the Form-1 along with necessary documents (**Annexure-C**).

In view, of the facts mentioned above, we request you to kindly process our application to issue amendment to the existing Environmental Clearance under section 7.2 of EIA Notification, 2006 in respect of Joda East Iron Mine for setting up the 4.6 MTPA beneficiation plant within the overall beneficiation throughput capacity of 12 MTPA (dry plant capacity of 5 MTPA and wet plant capacity of 7 MTPA) without public hearing as there is no increase in capacity, production, lease area, pollution load etc.

Thanking You

Yours faithfully
F: Tata Steel Limited

(Manish Mishra)
General Manager (OMQ)

Encl: Form-I along with Annexures.

TATA STEEL LIMITED

Mines Division Noamundi 833 217 India
Tel:91 9224301340 Fax:91 6596 290737

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Tel:91 22 66692262 Fax:91 22 66637724

Corporate Identity Number L27180MH1957PLC000260 Website www.tatasteel.com

By Speed Post/online

No. J-11015/215/2018-IA.II (M)

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

Indira Paryavaran Bhavan,
Vayu Wing, 3rd Floor, Aliganj,
Jor Bagh Road, New Delhi-110 003

Dated: 22nd October, 2018

To,

M/s Tata Steel Limited

Jeevan Bharti Building, Tower I
10th Floor, 124 Cannought Circus,
New Delhi -110001

Email: gm.office@tatasteel.com

Sub.: Joda East Iron Mine of M/s Tata Steel Limited, located at Village-Joda, Kamarjoda, Banspani, Khutpani & Baitarini, Tehsil-Barbil, District-Keonjhar, Odisha (MLA: 671.093 ha) (J-11015/215/2008-IA.II.(M) - Consideration of Amendment in EC w.r.t. modernization of EC dated 11.03.2013 in respect of beneficiation plant -regarding.

Sir,

This is with reference to the above mentioned proposal of amendments in Environmental Clearance vide no. J-11015/215/2008-IA.II(M) dated 11.03.2013 w.r.t. modernization of EC in respect of beneficiation plant. The mine is located at village-Joda, Kamarjoda, Banspani, Khutpani & Baitarini, Tehsil-Barbil, District-Keonjhar, Odisha in Mine lease area of 671.093ha.

2. The Committee noted that the Ministry has granted the Environmental Clearance vide letter no. J-11015/215/2008-IA.II(M) dated 11.03.2013 for production capacity of 12.0 Million TPA of Iron Ore (ROM) and beneficiation plant of 12 MTPA of throughput in the mine lease area of 671.093 ha. Further, the Ministry vide letter dated 07.09.2018, has also clarified the issues w.r.t. run of mine.

3. Project Proponent reported that the Joda East Iron Ore Mine was granted EC for enhancement of ROM production from 6 MTPA to 12 MTPA of ROM and beneficiation of 12 MTPA (5 MTPA dry processing and 7 MTPA wet processing). As per the Environmental Clearance, PP had set up the beneficiation plants for 12 MTPA, 5 MTPA ROM to be processed through a dry processing plant and 7 MTPA to be processed in a wet processing facility. Joda East iron deposit has different lithologies like hard ore, lateritic ore, friable ore, powdery ore of variable grades. Geological ore body model is the basis for evaluating the ore types using Fe & Alumina grades to determine the feed of Run of Mine (ROM) for dry and wet processing to optimize the extraction. The products of these two plants are blended to meet the product quality requirements from our captive steel plants. The flexibility to feed suitable material based on ore body model also ensures optimized extraction resulting in conservation of natural resource. Based on the disposition of the ore as per the geological model of Joda East Iron Mine, the low Fe high Alumina ores will require to be mined in future for

sustained mining activity. The existing dry and wet plants cannot process these ore types due to process constraint. Tata Steel envisages to set up a wet processing facility of 4.6 MTPA capacity suitable to beneficiate such low-grade Fe.

4. The proposal was placed before the EAC in its meeting held during **September 28-29, 2018** wherein the Committee deliberated the **proposal and is of the view that the PP first needs to conduct the addendum to the impact study on pollution load w.r.t. modernization of beneficiation plant. The Committee deferred the proposal and may consider after submission of the above mentioned study.**

5. Keeping these in view, you are requested to submit the above mentioned information online to the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, 3rd Floor, Vayu Wing, Aliganj, Jor Bagh Road, New Delhi- 110003 for further necessary action on the matter.

Yours faithfully,


(Dr. R. B. Lal)

Scientist 'E' / Addl. Director

Copy to:-

- 1. The Additional Principal Chief Conservator of Forests (C),** Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandrasekharpur, Bhubaneswar - 751023.
- 2. Guard File.**
- 3. MoEF&CC Website.**


(Dr. R. B. Lal)

Scientist 'E' / Addl. Director

