



**F.No. J-11015/272/2007-IA. II (M)**  
**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**(IMPACT ASSESSMENT Division)**

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3<sup>rd</sup> Floor, Vayu Block,  
 Indira Paryavaran Bhawan,  
 Jor Bagh Road, Aliganj,  
 New Delhi-110003

**Dated: 30<sup>th</sup> July, 2020**

To,

M/s Steel Authority of India Ltd.  
 Shri Chanchal Mukhopadhyay  
 Chief General Manager (Mines)  
 Raw Material Division  
 Kiriburu Meghahatuburu Iron Ore Mines,  
 Kiriburu, Noamundi, West Singhbhum,  
 Jharkhand-833222

**Subject: Proposal for change in excavation & dispatch pattern of Kiriburu Meghahatuburu Iron Ore Mining project [ML Area 2897.499 Ha] of M/s Steel Authority of India Limited (SAIL), located at Villages Kiriburu, Meghahatuburu & Karampada Reserve Forest, Tehsil-Noamundi, District West Singhbhum, Jharkhand - EC under Para 7(ii) of EIA 2006.**

Sir,

This has reference to the proposal of M/s Steel Authority of India Limited vide **Proposal No: IA/JH/MIN/139875/2020** is for grant of EC under para 7(ii) of EIA Notification 2006 (as amended) for change in excavation & dispatch pattern by including excavation and dispatch of iron ore of tailings from tailing ponds of Kiriburu & Meghahatuburu Iron Ore Mine up to 2 MTPA (1MTPA each) keeping total production within approved production capacity of 16 MTPA. Kiriburu & Meghahatuburu Iron Ore Mine (amalgamated lease area 2897.499 ha) is located in Noamundi Tehsil, West Singhbhum District of Jharkhand and Karampada Reserve Forest (R.F.). The amalgamated lease under Kiriburu- Meghahatuburu Iron Ore Mine forms part of Survey of India topo-sheet no: F45H8 and F45H4 and is bounded by latitudes 22°02'10.71490" N & 22°07'51.23635" N and longitudes 85°13'51.19803" E - 85°18'11.08104" E. The project falls under seismic zone-II.

2. The PP applied online vide proposal No. IA/JH/MIN/139875/2020 dated 31<sup>st</sup> January, 2020 under para 7(ii) of EIA Notification 2006 (as amended) and submitted Form-2, approved Review of Mining Plan, letter of Intent(LOI) along with the Lease deed execution and Order of Ministry of



Mines. The proposal was placed in EAC meeting held during 26-27 February, 2020.

3. The PP submitted that two of SAIL's captive iron ore mines are Kiriburu Iron Ore Mine and Meghahatuburu Iron Ore Mine which are located in Noamundi Tehsil, West Singhbhum District of Jharkhand and Karampada Reserve Forest (R.F.). Earlier there were 3 leases (three Leases); Lease-I, Lease - II and Lease III (having two operating Mines - Kiriburu & Meghahatuburu) which have been amalgamated into one lease with area 2897.499 ha vide letter no. Kha .Ni (Chai)-31/2005 / 1750/M/Ranchi dated 23.10.2019 of Director Mines & Geology, Jharkhand Govt. of 2897.499 ha. The two mines continue to operate separately for administrative purposes and have their own quarries, beneficiation plants, material dispatch facilities and other infrastructure. Subsequent to promulgation of MMDR Amendment Act, 2015 and Mineral (Mining by Government Company) Rules, 2015, Department of Mines and Geology, Govt. of Jharkhand has extended the lease period of amalgamated lease of Kiriburu - Meghahatuburu Iron Ore Mines up to 27.03.2030 vide letter no ख- (चई). नि.31/2005/1255/एम., Ranchi dated 30.07.2019. Subsequently, lease deed of the amalgamated lease for the period up to 27.03.2030 has been executed on 25.10.2019. PP reported that the Stage-I FC over 247.5 ha for development of South and Central Blocks was granted by MoEFCC vide F. No. 8-537/1988-FC(pt.) dated 18.10.2010 and grant of Stage - II FC is under consideration by MoEFCC.

4. The PP submitted that previously Environmental Clearance was obtained vide letter no. J-11015/272/2007-IA.II(M) dated 23<sup>rd</sup> September, 2014 for proposed expansion included Increasing ROM iron ore production capacity to 16 MTPA (8.5 MTPA from Meghahatuburu and 7.5 MTPA from Kiriburu), Expansion and Modernization of the existing iron ore beneficiation plants capacities to 16 MTPA, Modernization of existing material handling facilities commensurate with increased production and Slime Beneficiation Plants for iron ore recovery from tailings.

5. The Project Proponent reported that Indian Bureau of Mines, Ranchi has approved the Review of Mining Plan for the period from 2020-21 to 2024-25 vide letter no. RAN/WSB/Fe/MP-09/2019-20 dated 27.01.2020 covering the above proposed changes under amalgamated lease of Kiriburu & Meghahatuburu Iron Ore Mines. Consent to Operate has been obtained from JSPCB, Ranchi vide letter no. JSPCB/HO/RNC/CTO-5913229/2019/2540 dated 24.12.2019 which is valid from 24.12.2019 to 31.12.2024. Certified Compliance report of Environmental Clearance has been obtained from the Regional Office, MoEF&CC, Ranchi vide letter no. 103/232/09/EPE/3698 dated 31.12.2019. Out of the total amalgamated lease of 2897.499 ha, presently the mining and allied activities are confined over 726.09 ha for which Stage - II Forest Clearances have been obtained from MoEFCC.



6. The Project Proponent informed that Ministry of Mines, Govt. of India have noted in their Order F.No. 16/30/2019-M.VI dated 16th September, 2019 that vast stocks of slimes and sub-grade ore are lying at mine pit heads of captive mines of SAIL and are liable to cause environmental hazards. Accordingly, Ministry of Mines, Govt. of India have accorded permission for selling of these low grade mineral (tailings and sub-grade ore) in the open market such that mineral can be exhausted and environmental hazards can be mitigated. The disposal of such stockpiles would enhance the availability of iron ore for the purpose of beneficiation and pelletisation and subsequent use for iron & steel making. Further, Ministry of Mines, Govt. of India has also directed concerned State Governments to allow SAIL to sell fresh iron ore up to 25% of total previous year production to mitigate the risk of possible shortage of iron ore on account of expiry of mining leases pertaining to merchant mining on 31.03.2020.

7. The PP submitted that due to the above reasons, it has proposed the following amendments:

- i. Excavation of iron ore from Kiriburu Iron Ore Mine at 7.5 MTPA including a provision of excavation of maximum upto 1 MTPA tailings from the tailing pond of Kiriburu for selling in the open market. The excavated tailings will be transported from the tailing pond to stacking yard and subsequently transported to SAIL's Kiriburu Railway Siding through internal roads over total 3.3 km distance and loading into wagons using payloaders for dispatch by rail.
- ii. Excavation of iron ore from Meghahatuburu Iron Ore Mine at 8.5 MTPA including a provision of excavation of maximum up to 1 MTPA tailings from the tailing pond of Meghahatuburu for selling in the open market. The excavated tailings will be transported from tailing pond to the stacking yard and subsequently transported to SAIL's Meghahatuburu Railway Siding through internal roads over total 6.5 km distance and loading into wagons using payloaders for dispatch by rail.
- iii. Despatch of excavated tailings by rail to external pellet conversion agencies for beneficiation & pelletization on conversion cost basis and consume the same in SAIL Steel Plants.

8. The PP submitted that the proposed change in scope of work does not have any significant adverse impacts on environment as revealed by the studies undertaken. Further, proposed pollution prevention control measures under the current proposal will further improve environmental quality and land use of the area and also maintain & improve socio-economic aspects of the region.

9. The PP submitted that in order to ascertain the likely impacts, if any, on the road infrastructure & air quality of the area, due to the proposed changes in the scope of work, specific environmental study viz., Air Quality Impact Prediction Study have been carried out through environmental



consultant M/s MECON Ltd. and incorporated in the enclosed addendum to EIA/EMP Report. It has been noted that the air quality impact prediction shows the resultant quality of air shall be within the permissible limits specified in the National Air Quality Standards. The proposed utilization of tailings from the tailing ponds of Kiriburu & Meghahatuburu will not only result in effective utilization of these low grade minerals/mineral rejects but will also eliminate environmental hazards associated with bulk storage of tailings.

10. The PP has reported that subsequent to the judgement of Apex Court dated 2.08.2017 in the matter of Common Cause vrs Union of India and Ors., the Government of Jharkhand issued demand of Rs. 308,36,46,118/- to Kiriburu Iron Ore Mine on 07.09.2017 and demand of Rs. 184,79,04,782/- to Meghahatuburu Iron Ore Mine on 07.09.2017 & 08.03.2018. Against this demand, SAIL had filed a Writ Petition bearing WP (C) No. 7016/2017 before Hon'ble High Court of Jharkhand at Ranchi. The matter was heard and Hon'ble High Court vide order dated 21.02.2018 referred the matter to Division Bench of the Jharkhand High Court since it involves substantial question of law. The matter is sub-judice before Division bench of the Hon'ble High Court of Jharkhand.

11. The PP vide its letter dated 15.05.2020 that the entire quantity of excavated tailings up to 1 MTPA (maximum) each from tailings ponds of Kiriburu and Megahatuburu Iron Ore Mines will transported by trucks to Kiriburu and Meghahatuburu Railway Sidings exclusively through SAIL's internal roads on which there is no other traffic other than SAIL's own. These roads do not cross any public road or come anywhere near any human habitation. These roads link only SAIL's installations (tailings dam, tailings pump houses) and traffic is usually limited to few small vehicles (2-wheelers, Jeeps, Marshall, Bolero etc.) and an occasional truck. These roads were constructed and being maintained by SAIL. PP has submitted the Photographs of the internal roads leading to the Tailings Ponds (Road Leading to Kiriburu Tailings Pond & Road Leading to Meghahatuburu Tailings Pond). PP also submitted the followings:

Mass balance for quantitative despatch scenario for lump, fines from in suite reserves and tailing pond before and after the present proposal shall be as follows"

**Comparative Mass balance as per Original EC Configuration and after the present proposal**

<b>Attribute</b>	<b>As per Original EC</b>	<b>As per Present Proposal</b>	<b>Remarks</b>
Lease Area	2897.499 ha	2897.499 ha	No change
Production Capacity	16 MTPA ROM	16 MTPA (ROM + Tailings not exceeding 2 MTPA) (Within the approved EC	Total production & handling of Mineral remain unchanged.



		capacity)	
Method of Mining	Category-A (Fully Mechanized category) as per the IBM guideline- Drilling, blasting, loading, mineral beneficiation & transportation	No change in Method of Mining form ROM. Only excavation from tailing pond for iron ore recovery for selling in open market / dispatch to outside pellet conversion agencies. No drilling & blasting for excavation of tailings from the Tailings Ponds.	Change in product mix by including excavation and despatch of tailings from tailing ponds about 2 MTPA (max.) keeping total production within approved EC capacity of 16 MTPA (7.5 MTPA from KIOM & 8.5 MTPA from MIOM) under Para 7(ii) of EIA Notification 2006.
OB Generation	~5.66 million m <sup>3</sup> /yr	~ 4.96 million m <sup>3</sup> / yr	Decrease in OB generation
Tailings Generation	~0.65 MTPA	~0.57MTPA	Decrease by 0.08 MTPA
Tailings excavation	Installation of Slime beneficiation plant & process	2 MTPA excavation for selling/pellet conversion	The disposal of tailings would enhance the availability of iron ore for the purpose of beneficiation and palletisation and useful for iron & steel making. Also, reduce the environmental load and effective management of Tailings Ponds.
Excavation: Tailings	0.6 MTPA	2 MTPA	Increase by 1.4 MTPA
Production	Processed Ore: Iron Ore Lumps + Fines ~13 MTPA (Lump proportion: ~ 20%)	Processed Ore: Iron Ore Lumps + Fines ~11 MTPA (Lump proportion: ~ 20%) & Tailings: 2 MTPA (max.)	Change in product mix.
Explosives Consumption	2430 t/yr	2125 t/yr	Decrease by 305 t/yr
Peak Water	11540 m <sup>3</sup> /day	10580 m <sup>3</sup> /day	Decrease by 960

Consumption			m <sup>3</sup> /day #
Mode of material despatch	100% by railway wagons	100% by railway wagons	No change
PM <sub>10</sub> Pollution Load	19.22 g/s	18.70 g/s	Decrease
# Less water consumption by beneficiation plants which will process less amount of ore			

**Impact on pollution load (increase/decrease) due to proposed excavation & dispatch plan needs to be submitted.**

Impact prediction has been carried out for the following two scenarios-

1. Configuration as per existing EC i.e. Mining of 16 MTPA of ore from pit area and transport via road /conveyor/rail.
2. Proposed Scenario i.e. mining of 14 MTPA of ore from pit area and excavation of 2.0 MTPA (max.) of tailings from tailings pond and transport of the same via road/rail.

#### Input Data

Parameter	Unit	Quantity as per the present EC	Quantity in future after proposed changes
Annual Production (Mining)	MTPA	16	14 ROM + 2 MTPA Tailings
Tailings transport	MTPA	0	2.0 (via Road/Rail)
ROM/Waste Ratio (Avg. 2020-21 to 2024-25 )	t/m <sup>3</sup>	2.82	2.82
OB	Mm <sup>3</sup> /Yr	5.66	4.96
Operating Hrs	Hrs/Day	24	24 (Mining) 12 (for subgrade transport)
Days of Operation	Days/Yr	300	300 (Mining) 225 (for subgrade transport)
Lease Area	km <sup>2</sup>	28.972	28.972
Loader volume	m <sup>3</sup>	8	8
Dumper Capacity	T	100	100
Truck Capacity	T	-	30
Avg Speed of Dumper	km/hr	15	15
Waste Moisture	%	15	15
Waste Silt Content	%	5	5
Waste Drop Height	m	2	2
Ore Moisture	%	10	10



Ore Silt Content	%	3	3
Ore Drop Height	m	2	2
Haul Road Moisture Content	%	20	20
Haul Road Silt Content	%	15	15
Mean wind Speed	m/s	2	2

After proposed changes, in addition to mining of 14 MTPA of ore (existing 16 MTPA), Tailings pond shall be excavated and material will be transported by road/railways at the rate of 2.0 MTPA maximum (1.0 MTPA max. each from Kiriburu and Meghahatuburu tailings ponds). Total iron ore production shall remain 16 MTPA as per EC. The estimated PM10 pollution loads from all the activities of Kiriburu and Meghahatuburu Mining operations before and after the proposed changes are as follows.

**PM Emission Load from various Mining Activities**

Sl. No.	Area/Activity	Emission rates (g/s)	
		(Existing)	(After Proposed changes)
1	From Kiruburu Mine including Emissions from Pits, OB Dumps and material handling	3.52	3.35
2	Meghahatuburu Mine including Emissions from Pits, OB Dumps and material handling	3.67	3.50
1	Emissions from haul roads during material transportation in and around mine pit	12.03	11.63
2	Tailings Excavation and Dispatch (@2 MTPA)	-	0.22
	Total	19.22	18.70
	<b>Net Change</b>	<b>-0.52 g/s (-2.71%)</b>	

An overall decrease in PM pollution load is anticipated due to present proposal.

12. The Committee is of the view that site visit could not be conducted due to COVID-19 pandemic and it may further take some time to become the situation to normal. In the meanwhile, it is suggested that proposal may be considered based on the information and technical studies, so far submitted by the PP and a compliance visit/re-confirmation from RO may be done within a year.

13. Based on the discussion held and document submitted by PP, the Committee recommended the proposal on 18<sup>th</sup> EAC meeting held on June 22, 23 & 24, 2020 for grant of EC under para 7(ii) of EIA Notification 2006 for the amendment in EC with additional specific conditions.



14. The Ministry of Environment, Forest & Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto and hereby accords the amendment in Environmental Clearance under the provisions thereof to the above mentioned proposal of M/s. Steel Authority of India Limited for Amalgamated lease (2897.499 ha) of Kiriburu-Meghahatuburu Iron Ore Mines of SAIL for Change in product mix by including excavation and dispatch of tailings from tailing ponds EC under para 7(ii) of EIA Notification 2006 for the amendment in EC subject to the following additional specific conditions:

- i. PP shall implement all the conditions specified in the EC letter no. J-11015/272/2007-IA.II (M) dated 23<sup>rd</sup> September, 2014 and subsequent amendments. Any non-compliance reported by the Regional officer or the Expert Committee, during the site visit, as proposed by the committee, EC may be modified or revoked.
- ii. Fines from the tailing dam shall not be excavated during the monsoon period.
- iii. Mitigative measures proposed for excavation and transportation of mineral shall be complied with including moist and covered.
- iv. The PP shall monitor the fugitive emissions by installing at least two AAQ monitoring stations along the transportation route.
- v. The stripping ratio and total excavation for each year shall remain same as approved in the previous EC. Any change in the same is with prior approval of the Ministry.

15. All other terms and conditions as prescribed in EC letter no. J-11015/272/2007-IA.II (M) dated 23<sup>rd</sup> September, 2014 shall remain the same. In addition to above, as per Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

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

17. 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.

18. The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air




(Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.

19. 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.

20. This issues with the approval of competent authority.

Yours faithfully,

  
(Sharath Kumar Pallerla)  
Director/Scientist 'F'


**Copy to:**

- 1). The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi
- 2). The Secretary, Department of Mines & Geology, Government of Jharkhand, Secretariat, Ranchi
- 3). The Secretary, Department of Environment, Government of Jharkhand, Secretariat, Ranchi
- 4). The Secretary, Department of Forest, Government of Jharkhand, Secretariat, Ranchi
- 5). The Chief Wildlife Warden of the State Govt. of Jharkhand, Ranchi
- 6). The Additional Principal Chief Conservator of Forests, Regional Office (ECZ), Bunglow no. A-2, Shyamali Colony, Ranchi, Jharkhand-834002.
- 7). The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- 8). The Chairman, Jharkhand State Pollution Control Board, Ranchi, Jharkhand
- 9). The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- 10). The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- 11). The District Collector, Singhbhum (West), Jharkhand.



12). Guard File

13). MoEF&CC website (PARIVESH Portal)

  
(Sharath Kumar Pallerla)  
Director/Scientist 'F'