

Your (Half Yearly Compliance Report) has been Submitted with following details

Proposal No	IA/OR/MIN/9648/2007
Compliance ID	618282578
Compliance Number(For Tracking)	EC/M/COMPLIANCE/618282578/2025
Reporting Year	2025
Reporting Period	01 Dec(01 Apr - 30 Sep)
Submission Date	01-12-2025
RO/SRO Name	Shri Senthil Kumar Sampath
RO/SRO Email	agmu156@ifs.nic.in
State	ODISHA
RO/SRO Office Address	Integrated Regional Offices, Bhubaneswar
Note:- SMS and E-Mail has been sent to Shri Senthil Kumar Sampath, ODISHA with Notification to Project Proponent.	



**Deputy Director General of Forests (C),
Ministry of Env., Forest and Climate Change,
Integrated Regional Office,
A/3, Chandrasekharpur,
Bhubaneswar – 751023
Email: roez.bsr-mef@nic.in**

MD/ENV/ 400 /106 / 2025

Date: 14.11.2025

Ref: Environmental Clearance letter no. J-11015/888/2007-IA. II (M), dated: 21.12.2011 & its Amendment dated 7th September 2018.

Sub: Submission of Half-yearly compliance status report of Environmental Clearance conditions for the period April 2025 – September 2025 in respect of Khondbond Iron & Manganese Mine, M/s Tata Steel Limited.

Dear Sir,

Kindly find attached herewith the half-yearly compliance status report in respect of the stipulated Environmental Clearance conditions of Khondbond Iron & Manganese Mine, M/s Tata Steel Limited for the period from **April 2025 – September 2025**. Also, the compliance for the same period vide office memorandum no. Z-11013/57/2014-IA. II (M), dated 29.10.2014, is also attached herewith as Annexure - A.

We trust that the measures taken towards environmental safeguards comply with the stipulated environmental conditions. We look forward to your further guidance which will certainly help us in our endeavor to further improve our Environmental Management practices.

Thanking you,

Yours faithfully,
f: M/s Tata Steel Limited

Area Manager (Environment), OMQ

Encl.: As above

Copy to : The Chairman, Central Pollution Control Board, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700107 (W. B.)
: The Member Secretary, State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit – VIII, Bhubaneswar – 751012 (Odisha)
: The Regional Officer, SPCB, College Road, Baniapata, Keonjhar – 758001 (Odisha)

TATA STEEL LIMITED

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Tel 91 9262699402

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Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com

**Point wise compliance Environmental Clearance
of**

Khondbond Iron and Manganese Mine Tata Steel Ltd.

EC no J-11015/888/2007. IA. II (M), dated 21st Dec. 2011 and its amendment dated 7th Sept.2018
Production: Iron 08 MTPA (ROM) and beneficiation plant 08 MTPA and Manganese Mine 0.1MTPA (ROM)
(April 2025 – September 2025)

Sl. No.	EC Condition	Compliance Status as on date
Specific Condition		
1	No mining shall be carried out in the forestland without obtaining requisite prior forestry clearance under the Forest (Conservation) Act, 1980 for forestland involved in the project. The environmental clearance is subject to grant of forestry clearance.	Complied. The mining is restricted to only 453.150 ha. 136.15 ha broken prior to enactment of the Forest (Conservation) Act,1980 and mining in remaining 317ha started only after issuance of final order by the Govt. of Odisha vide letter no. F. No. 8-98/2004/FC dated: 09.08.2006 (317 ha. fresh + 136.15 ha broken prior to 1980) after prior approval from the Central Government vide letter no. F. No. 8-98/2004/FC dated: 09.08.2006. The total area of Khondbond has mine lease area of 978ha. Out of which the mine has obtained the Stage -II forest clearance of 453.150ha vide letter no. F. No. 8-98/2004/FC dated: 09.08.2006 (317 ha. fresh + 136.15 ha broken prior to 1980). All the mining operations are restricted within same. For the rest of area, forest diversion proposal is applied and are at advanced stage of approval.
2	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.	Complied The Consent to Establish was obtained from the State Pollution Control Board, Odisha vide letter no. 18102/INDII/CTE-6725 dated 28.09.2022. The latest Consent to operate issued by letter no. 3570/IND-I-CON-1127 dated 11.03.2022 is valid till 31.03.2026.
3	The environmental clearance is co-terminus to mining lease and the proponent shall obtain fresh Environmental Clearance at the time of renewal of mine lease in accordance with the provisions of the EIA Notification, 2006 as amended subsequently.	A fresh Environmental Clearance will be obtained at the time of lease renewal, in accordance with the prevailing laws applicable at the time of application.
4	The mining operations shall be restricted to above ground water table in the iron ore zone and it should not intersect the ground water table. In case of working below the ground water table in the iron ore zone, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydrogeological study shall be carried out.	Noted and complied. However, in iron mine, the lowest working depth of the mine is 630 RL which is above the ground water table 555AMSL - 553AMSL. But in manganese mine the ground water table has been breached during the life of mine for which dewatering NOC had been granted from CGWA vide letter no. CGWA/NOC/MIN/REN/1/2021/6494 and its second renewal is granted via NOC number CGWA/NOC/MIN/REN/2/2025/11165 valid upto 19.07.2026. A detailed Hydro-Geological study was submitted prior to obtaining NoC.


Project Director
Khondbond Iron Mine

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Sl. No.	EC Condition	Compliance Status as on date
5	The Company shall submit within 3 month their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard Operating process/ procedure to bring into focus any infringements/ deviation/ violation of environmental or forest norms /conditions, (ii) Hierarchical system or administrative order of the company to deal with environmental issues and ensuring compliance EC conditions and (iii) System of reporting of noncompliance / violation environmental norms to the Board of Director of the company and/ or stake holders or shareholders.	Noted and complied vide letter No. MD/ENV/775 /106/2012, Dated. 20.03.2012. Tata steel Ltd. has various committee to address all the environmental issues adequately. (i) Standard Operating Procedures have been stipulated and is being followed stringently. (ii) An environment cell has been established with senior leadership at apex to drive towards sustainability and to deal with environmental issues and ensuring compliance EC conditions. (iii) Compliance Manager, an online system to monitor timely completion of compliance is utilized for tracking and reporting non-compliance / violation environmental norms to the Board of Director of the company and/ or stake holders or shareholders.
6	A safety zone of 50m shall be left as no mining zone and no waste shall be dumped within this safety zone along the side of Suna Nadi (Kundra Nallah) and the Kakrapani nallah flowing adjacent to the mine lease area.	Before this condition was given, there exists an old waste dump within the 50m distance from Kundra nallah and that has been stabilized by plantation along with garland drains and toe walls. However, at present no mining activity is being carried out within the safety zone of 50m along the side of Kundra nallah.  <i>Fig 1: Kundra Nallah</i>
7	The project proponent shall ensure that no natural watercourse and/or water resources 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 from the mine lease area during the course of mining operation.	Complied. No natural watercourse or water resources are obstructed due to our mining operations. Further, no first order and the second order streams are emanating from the mine lease area.
8	The topsoil, 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.	Noted and complied. An area of 0.50 ha has been identified for storage of topsoil. Topsoil that is generated is used for plantation of saplings and vetiver plantation.  <i>Fig2: Topsoil site at OB Dump</i>

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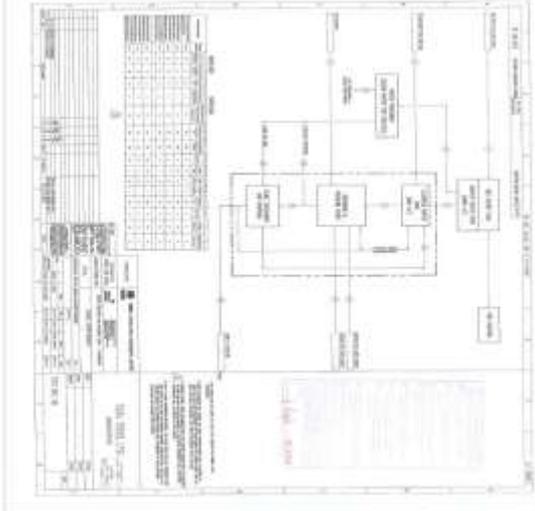
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<p>9</p>	<p>The project proponent shall carry out conditioning of the ore with water to mitigate fugitive dust emission, without effecting flow of ore in the ore processing and handling areas.</p>	<p>Noted and complied.</p> <p>The Mineral Processing plant is equipped with adequate number of dust suppression systems along the conveyor belt system and transfer points.</p>  <p><i>Fig 3: Dry Fog System and closed conveyors of Beneficiation Plant</i></p> <p>The Crushing and Screening Plants are also equipped with dust suppression systems to reduce fugitive dust.</p>  <p><i>Fig 4: Dust Suppression System at transfer points</i></p>
<p>10.</p>	<p>The effluent from the ore beneficiation plant shall be treated in the tailing thickener and the tailings slurry shall be transported through a closed pipeline to the tailing ponds.</p>	<p>Noted and complied.</p> <p>The effluent from the ore beneficiation plant is first sent to High-Rate thickener where the excess water is recovered and recirculated into the plant for processing purpose and the remaining slurry with tailing is then sent for final disposal of the slime in the tailing dam through closed pipeline.</p>  <p><i>Fig 5: High-rate Thickener</i></p>

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11.	The tailing ponds shall be lined HDPE lining.	<p>Noted and complied. HDPE liners have been installed in the slime Dam.</p>  <p><i>Fig 6: HDPE liners in Slime Dam</i></p>
12.	The decanted water from the tailing dam shall be recirculated and there should be zero discharge from the tailing dam.	<p>Noted and complied.</p> <p>The decanted water from the tailing dam is recovered and recirculate in the processing plant. High-rate thickener is utilized for increased re-circulation of water from slime and reduce freshwater dependability.</p>  <p><i>Fig 7: Flowchart of route of re-circulated water</i></p>
13.	Appropriate technology shall be used for maximum recovery of ore in order to reduce slurry discharge and to increase the life of the tailing ponds.	<p>Noted and shall be complied.</p> <p>A High-rate thickener has been installed. It works on the principle of removal of excess water from slime getting generated during beneficiation process.</p>  <p><i>Fig 8: High-rate Thickener</i></p>
14.	The project proponent shall constitute on emergency management Team under the control of project in charge to deal with the emergency situation pertaining to the tailing pond for the timely and	<p>Noted and complied.</p> <p>Emergency management team which consists of security personnel's are responsible for continuous patrolling of the area for observation of any emergency pertaining to the tailing ponds. Also, mock</p>

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	<p>effective control of emergency situation, it shall be ensured that training programme and mock drill shall be organised for the employees.</p>	<p>drills are organised for the employees for control of emergency in regard with tailing dam.</p>
<p>15.</p>	<p>The Over burden (OB) generated during the mining operations shall be stacked at earmarked dump site (s) only and it should not be kept active for a long period of time and its phase-wise stabilisation shall be carried out. Backfilling shall commence from the fifth year onwards. There shall be six over burden (four for iron and two for manganese ore). Proper terracing of the OB dumps shall be carried out so that the overall slope of the dumps shall be maintained to 28°. The overburden dumps shall 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. Out of the total excavated area of 763.665ha, an area of 758.665 ha shall be reclaimed and afforested. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self- sustaining. Compliance status shall be submitted to the Ministry of Environment and Forest and its regional office located at Bhubaneswar on six monthly basis.</p>	<p>Currently all Over burden (OB) is being handled as per approved mine plan. The land use and land cover shall be abided which includes the earmarked storage of OB. Total backfilling during the FY 25 is 0.814 Ha. OB dumps are scientifically being vegetated with suitable native species and Miyawaki method of plantation. Total number of plantations for FY 26 H1 is 6283 upto date covering an area of 0.4789 ha.</p> <div style="display: flex; justify-content: space-around;">  </div> <p align="center"><i>Fig 9: Plantation at OB dump</i></p>  <p align="center"><i>Fig 10: Coir matting at subgrade Dump</i></p>

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<p>16.</p>	<p>Catch drains and siltation ponds of appropriate size should be constructed around the tailing ponds, mine working, soil, OB and mineral dump(s) to prevent run off of water and flow of sediments directly into the Suna Nadi (Kundra Nalla), the Jalpa Nadi, the Baitarni River, the Karo Nadi, the kakrapani nalla, the kundru nalla, the Dalko nalla, the kashi nalla, the Tapodihi nalla, the Teherei nalla, the Achanda nalla and other water bodies. 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 the monsoon and maintained properly. Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed around the tailing ponds, mine pit, soil, OB and mineral dump(s) to prevent run off of water and flow of sediments directly into the Suna Nadi (Kundra Nalla), the Jalpa Nadi, the Baitarni River, the Karo Nadi, the kakrapani nalla, the kundru nalla, the Dalko nalla, the kashi nalla, the Tapodihi nalla, the Teherei nalla, the Achanda nalla and other water bodies and sump capacity should be designed keeping 50% safety margin over and above the 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 shall be constructed at the corners of the garland drains and desilted at regular intervals.</p>	<p>Catch drains, siltation ponds are made along with toe wall and garland drains in and around mine dumps areas to prevent surface runoff. The catch drains are constructed based on peak sudden rainfall data along with 50% safety margin to prevent overflow of any kind. Timely cleaning and de-siltation of these check dams and siltation ponds are done prior to monsoon for checking flow of sedimentation.</p> <div data-bbox="678 609 1460 929"></div> <p style="text-align: center;"><i>Fig 11: Sedimentation and siltation ponds in Iron Part of Khondbond Mine</i></p> <div data-bbox="678 963 1508 1467"></div> <p style="text-align: center;"><i>Fig 12: Sedimentation and siltation ponds in Manganese Part of Khondbond Mine</i></p>
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17.	Dimension of retaining wall at the toe of the OB dumps and benches within the mine to check run-off and siltation should be based on the rainfall data.	<p>All the retaining walls at the toe of OB dumps are made adequately. All the siltation ponds and garland drains are made based on rainfall data for adequate surface runoff management.</p>  <p><i>Fig 13: Retaining Wall</i></p>
18.	All the retaining walls at the toe of OB dumps are made adequately. All the siltation ponds and garland drains are made based on rainfall data for adequate surface runoff management	<p>Noted and shall be complied at end of mine life. This being the activity at the end of mine life has been incorporated in progressive mine closure plan.</p>
19.	Plantation shall be raised in an area of 965.018 ha including a 7.5 wide green belt in the safety zone around the mining lease by planting the native species around reclaimed area, mine benches, water body, tailing ponds, along the roads etc. In consultation with the local DFO/Agriculture Department. The density of the tree should be around 2500 plants per hectare. Greenbelt shall be developed all along the mine lease area in a phased manner and shall be completed within first five	<p>Noted and complied. Plantation is done in the mines. Total number of plantations for FY 26 H1 is 6283 upto date. The method employed is a mix of Miyawaki and traditional plantation.</p>  <p><i>Fig 14: Plantation of native species</i></p>
20.	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 point. 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.	<p>Noted and being complied.</p> <p>Regular water sprinkling is being carried out by use of mobile water sprinklers around the crushing and screening plant, loading and unloading area and haul roads. Regular monitoring of ambient air quality is being done and the results are within the permissible limits as prescribed by the Central Pollution Control Board. Fog cannons are being used for arresting fugitive dust emissions. Also, the wet plant is equipped with dry fog system for control of dust emission.</p>

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Fig 15: Fixed and Mobile water sprinkling



Fig 16: Dust Suppression System at transfer points

Regular Ambient Air Monitoring is being done through three CAAQM stations installed at strategic locations of mines. The data is being continuously transmitted to Odisha State Pollution Control Board server on real time basis.

21. Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained.

Noted and complied.
Regular monitoring of Kundra Nallah is being carried out and records are maintained.

22. 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.

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Fig 17: Rainwater Harvesting System at Khondbond Mine

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		S.no.	RWH System	Numbers	Recharge Quantity (m ³)
		1.	Ground Water Structure	4	66000
		2.	Recharge Well	2	34560
			Total		100560
23.	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining 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 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 Director, Central Ground Water Board. If at any stage, it is observed that the ground water table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.	Noted and complied. Regular ground water level with quality as per defined frequency is being submitted to CGWA. Network of observation borewells has been made as per CGWA guidelines for Ground water level monitoring.			
24.	The ground water quality around the tailing pond shall be monitored regularly and time series data generated. It shall be ensured that the groundwater quality is not affected adversely due to the project.	Noted and complied.			
25.	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water required for the project.	Noted and complied. The mine has valid surface water drawl permission of 19020 KLD from water resource division vide letter no 3300, dated: 11.02.2016.			
26.	Appropriate mitigative measures should be taken to prevent pollution of the Baitarni River, the Suna Nadi and the Karo Nadi in consultation with State Pollution Control Board.	Noted and complied. To prevent pollution of surrounding rivers during rains, all the mitigative measures are taken such as toe wall, garland drains, check dams, settling pits etc.			
					

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Fig 18: Garland Drains and Check Dams

27.	The Project proponent shall practise suitable rainwater harvesting measures on long term basis and work out a detailed scheme for rainwater harvesting in consultation with the Central Ground Water Authority and submit a copy of the same to the MoEFCC and its Regional Office, Bhubaneswar.	<p>Four nos. of Rainwater Harvesting Ponds and Two nos. of Ground Water Recharge structures have been constructed after conducting a hydrogeology study. The water recharge potential of the RWH structures are as follows:</p> <table border="1" data-bbox="794 801 1508 1048"> <thead> <tr> <th>S.no.</th> <th>RWH System</th> <th>Numbers</th> <th>Recharge Quantity (m³)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Ground Water Structure</td> <td>4</td> <td>66000</td> </tr> <tr> <td>2.</td> <td>Recharge Well</td> <td>2</td> <td>34560</td> </tr> <tr> <td colspan="3">Total</td> <td>100560</td> </tr> </tbody> </table>	S.no.	RWH System	Numbers	Recharge Quantity (m ³)	1.	Ground Water Structure	4	66000	2.	Recharge Well	2	34560	Total			100560
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1.	Ground Water Structure	4	66000															
2.	Recharge Well	2	34560															
Total			100560															
28.	Vehicular emission shall be kept under control and regular monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	Noted and complied. PUC for checking of emission for all the vehicles are carried out once in every six months. Moreover, outside transportation of mineral is carried out through tarpaulin covered trucks after passing through Wheel washing system at dispatch gate. Further, overloading of trucks is restricted to prevent spillage of material.																
29.	No transportation of ore outside the mine lease area shall be carried out after sunset.	Transportation of ore is being made as per District Collector Keonjhar's order.																
30.	No blasting shall be carried out after sunset. Blasting operation shall be carried 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.	Blasting is being carried out during daytime only. Controlled Blasting is being carried out for control of ground vibrations and to arrest fly rocks, as per the recommendations of CIMFR, Dhanbad.																
31.	Drills shall either be operated with Dust extractors or equipped with water injection system.	<p>Wet drilling is practiced ensuring no fugitive dust emission takes place. Drills have been provided with dust injection system.</p> 																

Fig 19: Water Injection system in Drill equipment

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<p>32.</p>	<p>Mineral handling plant 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.</p>	<p>The Mineral Handling plant has been equipped with dry fog system along with closed conveyor at all loading and unloading points including transfer points.</p>  <p><i>Fig 20: Picture of Dry Fog System and closed conveyors of Beneficiation Plant at Khondbond</i></p> <p>A waterless dust extraction system has been installed at conveyor belts for controlling fugitive dust emission.</p> 
<p>33.</p>	<p>Sewage treatment plant shall be installed for the colony. ETP shall also be provided for workshop and wastewater generated during mining operation.</p>	<p>Khondbond Iron and Manganese Mine does not have any colony. However, a Sewage Treatment Plant (STP) of 10 KLD installed and operational in mine area for the treatment of waste-water generated. Khondbond doesn't have any separate colony. Mine and for wastewater from workshop, oil and grease separation pits are provided. Effluent Treatment plant (ETP) of 7 KLD has been installed at workshop. Photographs are attached.</p>  <p><i>Fig 21: 10 KLD STP at Khondbond Iron and Manganese Mine</i></p> <p><i>Fig 22: 7 KLD ETP at Khondbond Iron and Manganese Mine</i></p>

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34.	During operation of the project, special emphasis shall be given to minimise risks and hazards due to manganese poisoning.	Noted and is being complied as directed. Medical tests were conducted for assessing the exposure to manganese poisoning for persons working in the Manganese Pit. Proper training was also provided to the people most vulnerable to manganese exposure.
35.	Pre-placement of medical examination and periodical examination of the workers engaged in the project shall be carried out and record maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Complied. Pre-placement medical examination and periodical examination of the workers engaged are being conducted and record maintained. The schedule of Periodical Medical Examination is once in every 3 years for the employees of age more than 40 years and once in 5 years for the employees of age less than 40 years.
36.	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.	Noted and complied. During construction and other jobs at Khondbond, local labours are engaged, which are from nearby villages. Thus, residential facility is not required. However, various amenities such as canteens for food, a safe drinking water facility, toilets, medical facility with site medical officer etc are provided. A sewage treatment plant of 10KLD is also operational in area.
37.	Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to Ministry of Environment and Forests and its Regional Office, Bhubaneswar.	Noted and complied. Digital processing of the entire lease area was carried by high resolution satellite imagery. M/s DCS Consultants, (Authorized organisation of ORSAC) was engaged for the work.
38.	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely sloth bear, elephant, godhi etc. spotted in the study area. The critical habitats if any within the impact zone shall be individually identified and the conservation plan prepared specific to this project in consultation with the state forest and wildlife deptt. Should effectively address the same. All the safeguard measures brought out in the wildlife conservation plan prepared specific to this project site shall be effectively implemented in consultation with the state forest and wildlife deptt. A copy of approved wildlife conservation plan shall be submitted to the Ministry and its Regional office, Bhubaneswar within three months.	Noted and complied. Khondbond is an operational mining area of Tata Steel and various precautionary measures are taken for conservation and protection of endangered flora and fauna like Miyawaki Plantation, Sal Plantation, installation of niche bird box at appropriate places etc. Additionally, multiple awareness sessions towards Environment Protection are carried out both internally and with the local populace. The mine has approved wildlife management 843/1 WLSSP-100/2016; dated 28th January 2016 and various measures are taken with state forest and wildlife department as and when required. The approved copy of wildlife management plan is already submitted to Ministry and its Regional office, Bhubaneswar.
39.	The entire mining lease area shall be fenced by erecting solar power electric fencing all around it. The fencing so erected shall be maintained	Noted and being complied.



Fig 23: Environment Awareness Sessions

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	<p>properly and the cost towards erection and maintenance of the solar power electric fencing shall be borne by the project proponent out of the project cost.</p>	<p>The Khondbond mine lease comprises of 875.198 ha of forest land including Sabik Forest. Area having surface right and forest clearance are being fenced with solar electric fence. Lease boundary of 4 km length has been successfully fenced.</p>  <p><i>Fig 24: Solar Fencing around lease boundary</i></p>
<p>40.</p>	<p>The critical parameters such as RSPM (Particulate matter with size less than 10 microm i.e., PM10) and NOx 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. J20012/1/2006-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.</p>	<p>Noted and complied.</p> <p>The critical parameters like RSPM and NOx in ambient air are being monitored regularly. Peak particle velocity at the time of blasting is also monitored regularly at 300m distance as per rules of IBM. Quality of discharged water (TDS, DO, PH, and total suspended Solids (TSS) is also being monitored.</p> <p>All the environmental monitoring data is being uploaded on the Company's website as part of this report and displayed on a display board at the main entrance gate of the mine.</p>  <p><i>Fig 25: Display of environmental information in public domain</i></p>
<p>41.</p>	<p>A final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment and Forests 5 years in advance of final mine closure for approval.</p>	<p>A progressive mine closure plan approved by IBM is in place. The final mine closure plan along with details of Corpus fund will be submitted to the Ministry of Environment and Forests 5 years in advance.</p>

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Sl. No.	EC Condition	Compliance Status as on date
General Condition		
1.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	There is no change in mining technology and scope of work mentioned while obtaining prior environmental clearance. No change in mining technology and scope of work will be undertaken without prior approval of the Ministry of Environment and Forests in future.
2.	No further expansion or modification in the plant shall be carried out without prior approval of the MoEF&CC.	There is no expansion or modification undertaken in the plant as mentioned, while obtaining prior environmental clearance. For any expansion or modification in future prior approval shall be sought from MoEF&CC.
3.	No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.	Calendar plan (IBM Approved Mining Plan) prepared for the mine is being strictly adhered to and we are well within the limits specified in Mining Plan as well as EC and CTO granted capacity.
4.	At least 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 10 micron i.e. PM10) and NOx 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.	Noted and complied. Ambient Air Quality monitoring is regularly carried out at six different stations within the core and buffer zone. Two continuous ambient air quality monitoring stations with PM10 and PM2.5, CO, SO2 and NOx are installed in core zone and one at buffer zone. 
5.	Data on ambient air quality [(RSPM (particulate matter with size less than 10 micron i.e. PM10) and NOx] 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.	RSPM (Particulate matter with size less than 10micron i.e, PM10) and NOx in ambient air are being monitored as per standard guidelines and the reports are submitted to Regional office, Bhubaneswar and MoEF&CC on half yearly basis and SPCB, Odisha on monthly basis.
6.	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.	Fugitive dust emissions from all the sources are controlled regularly. Effective water sprinkling is being done on haul roads, loading and unloading and at transfer points. Mist cannons are also installed at transfer points. Dry Fog System is being used in plant areas to avoid generation of fugitive dust.

Fig 26: CAAQM station in Khondbond Mine

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		 <p align="center"><i>Fig 27: Fixed Mist Cannon at transfer points</i></p>
7.	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.	Regular noise monitoring is done at different work areas. High noise areas are earmarked and people working there are provided with ear protection equipment and the system is ensured by certification to ISO 45001 and regular field audits.
8.	Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the Standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	Oil and Grease separation pits have been provided to take care of effluents from the workshop. A 7KLD ETP is also installed which treats industrial wastewater. The quality of the treated water is tested on monthly basis and the parameters meet the prescribed standard. There is no wastewater generation from the mine.
9.	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.	Adequate dust masks are provided to employees engaged in dusty areas. It is also ensured that they use the same. Respirable dust survey at different locations is done regularly. The employees are also given regular awareness training on safety and health aspects as part of implementation process of ISO 45001 systems. Further, employees undergo Lung Function Tests during the Periodical Medical Examination. Periodical Medical Examination of employees and contractor workers are organised regularly to observe any contractions due to exposure to dust and other occupational hazards. Personal Dust Sampling (PDS) is conducted at the workplace to assess the dust levels in the environment where employees are working.
10.	A separate environmental management cell with suitable qualified personnel should be setup under the control of a Senior Executive who will report directly to the Head of the Organization.	A separate environmental management cell is in place with the people having relevant qualification on environmental science. The Head of the environment department reports to General Manager i.e. the head of the organization.



Fig 28: PDS carried out in plant

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11.	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.	Funds allocated for environmental management are spent only for environment related purposes and not diverted to any other purpose. During the year FY 25 an amount Rs. 1663.49 lakhs for a period of October 2024 till March 2025 has been spent towards environmental protection measures at Khondbond.
12.	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closing and final approval of the project by the concerned authorities and the date of start of land development work.	This is a running mine. No specific date of start of land development work can be assigned. However, the copy of the Environmental Clearance has been sent to the Regional Office, Bhubaneswar AND MoEF&CC for kind information.
13.	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.	We extend full co-operation to the officers of the Regional Office during their visit and furnish the required data, information and monitoring reports.
14.	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.	Six monthly reports are submitted regularly on the status of implementation of the stipulated environmental safeguards to the Regional Office, Bhubaneswar, MoEF&CC, Central Pollution Control Board and State Pollution Control Board. Further, the six-monthly compliance report along with the monitoring results are uploaded in Tata Steel's website and updated periodically.
15.	A copy of the clearance letter shall be sent by the 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 proponent.	Complied. The clearance letter is sent to all the mentioned stakeholders and is also available to public on the website of the company.
16.	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.	Noted and complied.

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17.	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.	Complied. The environmental statement for each financial year ending 31st March in Form-V is submitted to the concerned State Pollution Control Board as per the Environment (Protection) Rules, 1986. Additionally, the statement along with the status of compliance of environmental clearance conditions has been uploaded on the company's website and shared with the Regional Office of the Ministry of Environment and Forests, Bhubaneswar via e-mail.
18.	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.	Complied. We have published the clearance information in two widely circulated local newspapers, including one in the vernacular language, within 7 days of issuance. The advertisement mentioned the availability of the clearance letter with the State Pollution Control Board and on the Ministry's website, and a copy has been sent to the Regional Office at Bhubaneswar.