

# **SIX MONTHLY ENVIRONMENTAL CLEARANCE COMPLIANCE REPORT**

*[Period of EC Compliance- October, 2021 to March, 2022]*

## **Status of the implementation of the stipulated environmental safeguards**

Environmental Clearance granted by MoEF&CC Vide order no. J-11015/272/2007-IA. II (M) dated 23.09.2014 & EC amendment Order No. J-11015/272/2007-IA. II (M) dated 30.07.2020

of

**Kiriburu – Meghahatuburu Iron Ore Mine (Mining lease Area- 2897.499 ha)**

**Category of Project – “A”**

**[Iron Ore Production (ROM): 16.0 MTPA (Kiriburu Mine- 7.5 MTPA & Meghahatuburu Mine- 8.5 MTPA)]**

**P.O. – KIRIBURU, PIN: 833222  
DIST.: SINGHBHUM (WEST)  
JHARKHAND STATE**

Under



**Steel Authority of India Limited  
Bokaro Steel Plant**

**PROJECT DETAILS****KIRIBURU-MEGHAHATUBURU IRON ORE MINES**

SAIL- Bokaro Steel Plant operate two of their own captive iron ore mines namely Kiriburu Iron Ore Mine (KIOM) and Meghahatuburu Iron Ore Mine (MIOM) which are located in Karampada Reserve Forest (R.F.), Noamundi Tehsil, West Singhbhum District of Jharkhand. Earlier there were 3 (three) Mining Leases i.e. Lease-I, Lease - II and Lease III (in which two operating Mines - Kiriburu & Meghahatuburu are existing). Now these leases 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 separate quarries, beneficiation plants, material despatch facilities and other infrastructure running independently. The Kiriburu Iron Ore Mine is in operation since grant of lease i.e. from 1960 and subsequently, Meghahatuburu Iron Ore Mine was developed in 1985.

SAIL had earlier proposed to increase the production of the two mines without increase in lease area. The 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 Modernisation of the existing iron ore beneficiation plants capacities to 16 MTPA, Modernisation of existing material handling facilities commensurate with increased production and setting up Slime Beneficiation Plants for recovery of iron rich material from tailings. The proposal had received Environmental Clearance from MoEFCC vide their letter no. J-11015/272/2007-IA.II(M) dated 23rd September, 2014. Further, EC was amended by MoEFCC, New Delhi vide letter No. J-11015/272/2007-IA.II (M) dated 30.07.2020 under para 7 (ii) of EIA Notification, 2006 (as amended) for Change in Product Mix by including excavation and dispatch of tailings from tailing ponds keeping the total production 16 MTPA ROM (14 MTPA ROM + 2 MTPA tailings).

**KEY STATUTES FOR OPERATION OF MINES**

SI	Approvals	Act/ Rules/ Notification/OM	Status/Validity
01	Mining Lease	MMDR Act, 1957 (amended in 2015/2021)/ MCR, 1960 and amended in 2016/2021	Mining Lease Deed executed for 2897.499 ha & valid till 2030
02	Mining Plan/ Review of Mining Plan	MMDR/ MCR/ MCDR, 2021	Valid / Plan reviewed by IBM
03	Environmental Clearance	EIA Notification, 2006	Granted on 23.09.2014 & amended on 30.07.2020
04	Forest Clearance	FC Act, 1980 & as amended	Stage-II Fc exists for 726.09 ha Stage-I FC exists for additional 247.5 ha
05	Consent to Establish (CTE)	Air & Water Act	Obtained from JSPCB, Ranchi
06	Consent to Operate (CTO)	Air & Water Act	Obtained from JSPCB, Ranchi & valid till 31.12.2024

**Status of Compliance to Conditions Stipulated in Environmental Clearance**  
(Vide order no. J-11015/272/2007-IA. II (M), dt.23.09.2014) & (Vide order no. J-11015/272/2007-IA. II (M) dated 30.07.2020) of  
**Kiriburu - Meghahatuburu Iron Ore Mines, BSL-SAIL**  
(Period: For October, 2021 to March, 2022)

**A. Specific Conditions**

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
(i)	Environment clearance is subjected to obtaining clearance, if any, under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.	<ul style="list-style-type: none"> <li>No notified National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve are located within 10 km from the Mining Lease boundary. Hence it is not applicable to this mining project.</li> </ul>
(ii)	No Mining activities will be allowed in forest area for which the Forest clearance is not available.	<ul style="list-style-type: none"> <li>Mining &amp; Allied activities are restricted to 726.09 ha for which forest clearances have been obtained from MoEF&amp;CC.</li> </ul>
(iii)	The Project proponent will seek and obtain approval under the FC Act, 1980 for diversion of the entire forest land located within the mining lease within a period of the two years from 01.02.2013 i.e. the date of issue of guidelines by FC vide there letter F. No 11-362/2012-FC, 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 period. 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.	<ul style="list-style-type: none"> <li>MoEF&amp;CC vide F.No.11-599/2014-FC, dated 01.04.2015 has issued revised guidelines by suppression of the guideline issued vide F. No. 11-362/2012-FC, dated 01.02.2013.</li> <li>AS per these revised guidelines, in case of existing mining leases in part or in full, where approval under Section 2 of FC Act for a part of the forest land has only been obtained, Central Government accorded general approval under Section 2(iii) of the FC Act for the remaining area of the forest land falling within such mining leases and directed State Governments to realize NPV from the user agency within a period of one year from the date of issue of this letter for entire forest land falling in the mining lease, in case NPV of such forest land has not already been realised.</li> <li>Subsequently, MoEF&amp;CC vide guidelines dated 31.03.2016, extended the deadline for payment of NPV up to 30.09.2016.</li> <li>NPV amount of Rs. 91,74,32,187/- (Rupees Ninety-one crore seventy-four lakh thirty-two thousand one hundred eighty-seven) was deposited on 22.10.2019 through RTGS by UTR no. SBINR52019102200122381 in Jharkhand</li> </ul>

Period: October, 2021 to March, 2022

3 | Page

  
 कमलेश राय  
 Kamlesh Rai  
 मुख्य महाप्रबंधक (खान)  
 CGM (Mines), KIOM

  
 R. P. SELVAM  
 C.G.M. (M) MIOM

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>CAMPA fund for the balance forest area 879.609 ha of amalgamated lease of Kiriburu-Meghahatuburu Iron Ore Mines under protest without prejudice to its right and contentions in Writ Petition WP(C) No. 5695 of 2016.</p> <p><b><u>ANNEXURE 1- PAYMENT RECIEPT OF NPV PAID TOWARDS CAMPA FUND</u></b></p>
(iv)	<p>The project proponent shall complete all the tasks as per the action plan submitted with budgetary provisions during the public hearing held on 24.11.2012. Major issues raised during public hearing were related to employment of tribal villagers on priority basis, financial assistance to village women so that they can be self-employed, clean water availability, construction of a bridge over Koina River at Kumdi village, environmental protection measures, construction of Pucca road for villagers and repair of roads in the region.</p>	<ul style="list-style-type: none"> <li>• Kiriburu-Meghahatuburu Iron Ore Mines have taken up the task for engaging tribal from local villages through 4 nos. of registered Co-operative Labour Societies at mines.</li> <li>• The Self Employment Centers i.e., KIRAN at Kiriburu and "SOUBHAGYA" at Meghahatuburu have expanded its coverage and marketing tie-ups with other units of SAIL and Jharcraft to make the market sustainability of products manufactured.</li> </ul> <p><b><u>ANNEXURE 2- PHOTOGRAPHS OF SELF EMPLOYMENT CENTER AT KIOM &amp; MIOM, SAIL</u></b></p> <ul style="list-style-type: none"> <li>• During Global Pandemic COVID 19, a huge quantity of Cotton Face Mask has been weaved by the women at KIRAN and SOUBHAGYA self-employment centers and have been distributed among local people free of cost under CSR activity.</li> <li>• Food packets has been distributed among the local people of peripheral village inside the forest area (Karampada, Thalkobad) during the vaccination drive for the motivational purposes to increase maximum number of participation.</li> </ul> <p><b><u>ANNEXURE 3- FACE MASKS &amp; FOOD PACKETS DISTRIBUTION UNDER CSR INITIATIVES DURING COVID-19 PANDEMIC BY KIOM-MIOM SAIL</u></b></p> <p><b><u>For MIOM -</u></b></p> <p>10 nos. of students for 2020-22 (2 years) &amp; 10 nos. of students for 2021-23(2 years) from MIOM have been sponsored for ITI course to ITI, Rourkela (Cost to company/Expenditure-Rs.45000/ per student per year- valuing Rs. 10</p>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>Lakhs/year; Costing Rs 5 Lakhs in six months for MIOM including transportation arrangements).</p> <p><b><u>For KIOM-</u></b></p> <ul style="list-style-type: none"> <li>• 10 nos. of students for 2020-22 (2 years) &amp; 10 nos. of students for 2021-23 (2 years) from KIOM have been sponsored for ITI course to ITI, Rourkela (Cost to company/Expenditure-Rs.45000/ per student per year- valuing Rs.9 Lakh/year; Costing Rs 4.5 Lakh in six months for KIOM).</li> <li>• For clean drinking water, tube wells with hand pumps &amp; water treatment plant at Kiriburu Hilltop have been provided in the surrounding villages-</li> </ul> <p><b><u>ANNEXURE 4- CLEAN RO DRINKING WATER, HAND PUMPS HAVE BEEN PROVIDED AT THE SURROUNDING VILLAGES BY KIOM &amp; MIOM, SAIL</u></b></p> <ul style="list-style-type: none"> <li>• Bridge over Koina river at Kumdih Village has already been constructed by KIOM-MIOM.</li> </ul> <p><b><u>ANNEXURE 5- BRIDGE OVER KOINA RIVER AT KUMDIH VILLAGE HAS BEEN CONSTRUCTED BY KIOM-MIOM, SAIL</u></b></p>
(v)	The Project proponent shall obtain necessary prior permission of the competent authority for drawl of requisite quantity of surface water and ground water for the project.	<ul style="list-style-type: none"> <li>• Kiriburu-Meghahatuburu Iron Ore Mines are using only surface water for domestic &amp; industrial purposes. \</li> <li>• Permission exists for water drawl from Karo River.</li> <li>• Water drawl permission from River Koina has been obtained from Water Resource Deptt. Government of Jharkhand dated 20.09.2017 Letter No.- 2/PMC/WS-549/2017-448. Water drawl` agreement signed between SAIL and Govt. of Jharkhand.</li> </ul> <p><b><u>ANNEXURE 6- WATER AGREEMENT BETWEEN KIOM-MIOM, SAIL &amp; WATER RESOURCE DEPARTMENT, GOVT. OF JHARKHAND</u></b></p>
(vi)	Implementation of the site-specific	<ul style="list-style-type: none"> <li>• As per prevailing practice of the state forest</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	<p>conservation plan for the core &amp; buffer zone and Integrated Wild Life conservation plan which is being prepared by the Dept. of Forest, Govt of Jharkhand. Abiding the guidelines of this Integrated Wild Life Conservation Plan and accordingly contribute proportionately in the preparation and implementation of the Plan.</p>	<p>department a scheme for Protection &amp; Conservation of Forest and Wild life habitat including Anti-Depredation measures and Eco-development activities for villagers for a period of ten years in the district of Singhbhum (West) and applicable for Kiriburu-Meghahatuburu group of Mines was prepared by Chief Wildlife Warden, Govt. of Jharkhand.</p> <ul style="list-style-type: none"> <li>• For the implementation of the above scheme for Kiriburu-Meghahatuburu mines, SAIL has deposited an amount of Rs.6, 21, 44,836.00 for implementation of the scheme as per demand raised by Divisional Forest Officer, Saranda Forest Division.</li> <li>• Integrated Wildlife Management Plan for West Singhbhum District was prepared by an Expert Committee constituted by the Govt. of Jharkhand vide notification dated 27.08.2011. As per the notification constituting the committee, SAIL was assigned responsibility for institutionalizing and funding the study. The said Plan is completed in respect and is ready for implementation by the Jharkhand State Forest Dept. In this regard, SAIL has already submitted an undertaking to abide by the guidelines and contribute funds for the implementation of Integrated Wildlife Management Plan in entire lease hold area, on pro rata basis.</li> <li>• In addition to the above, a consultant has been engaged for preparation of Site-Specific Wildlife and Biodiversity Conservation plan for Amalgamated Lease of Kiriburu-Meghahatuburu Iron Ore Mines.</li> <li>• The aforementioned consultant has prepared the draft report for site-specific wildlife &amp; biodiversity conservation plan associated with the amalgamated mining lease area of Kiriburu- Meghahatuburu iron ore mines. The draft report has been presented before DFO</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>XIII. CONTINGENCIES</p> <ul style="list-style-type: none"> <li>All of these suggested measures were proposed in the Two Chapters 4 &amp; 5 , In Chapter 4, The works shall be done by Project Authority (SAIL) , &amp; In Chapetr-5, The Works shall be done by the Forest Department, for which the proposed financial involvement under Chapter 5 has already been paid through the <b>DD NO 443780 dated. 31.03.2022 of an Amount of Rs. 1453.482 Lakhs in favor of Divisional Forest Officer, Saranda Forest Division payable at Chaibasa.</b></li> <li>SAIL Authority is under process for the start of works proposed under Chapter-4</li> <li>All the measures suggested will be implemented at the project cost. It is undertaken that a copy of the action plan will be submitted to the MOEF&amp;CC and its Regional office.</li> </ul> <p><b><u>ANNEXURE 7- APPROVAL LETTER, PAYMENT DETAILS FOR CHAPTER-5 FOR SITE- SPECIFIC WILDLIFE AND BIODIVERSITY CONSERVATION PLAN FOR KIRIBURU- MEGHAHATUBURU IRON ORE MINES</u></b></p>
(vii)	The Mining operation shall be restricted to above ground water table and it should not intersect ground water table. In case of working below ground water table, prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.	<ul style="list-style-type: none"> <li>Water table level at Kiriburu – Meghahatuburu mining lease area is in the range of 537 m AMSL and present working depths at Kiriburu and Meghahatuburu Mines are 750 m above MSL and 753 m above MSL respectively. Hence there is no interference of Mine workings with the ground water table.</li> <li>Due to any reason if it is required to work below the groundwater table, we will obtain prior approval of the Ministry of Environment, Forest &amp; Climate Change and the Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study will be carried out.</li> </ul>
(viii)	The pollution due to transportation load on the environment will be effectively	<ul style="list-style-type: none"> <li>Ore transportation through closed conveyers within the leasehold area at the Ore Processing</li> </ul>

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		<p>Saranda on 11/06/2021 which is been provisionally approved with some modifications. Again modified report has been presented before RCCF, Jamshedpur on 07/09/2021, where it is been provisionally approved.</p> <ul style="list-style-type: none"> <li>• <b><i>This plan has been approved by PCCF (Wildlife cum Chief Wildlife Warden), GOJ dated 25/01/2022 vide Office Order No- 17 for total financial involvement of 5996.244 Lakhs (Chapter-4 - 4542.402 Lakhs, Chapter-5- 1453.842 Lakhs) &amp; Copy for the approval order has been sent to M/s SAIL on the same date vide Memo No- 88.</i></b></li> <li>• In the Site-Specific Wildlife and Biodiversity Conservation Plan various measures have been proposed such as- <ul style="list-style-type: none"> <li>I. WILDLIFE HABITAT PROTECTION AND DEVELOPMENT</li> <li>II. FOREST LANDSCAPE RESTORATION (FLR)</li> <li>III. ELEPHANT CORRIDOR MANAGEMENT</li> <li>IV. IMPROVEMENT OF WATER REGIME AND ITS MAINTAINANCE</li> <li>V. MITIGATION STRUCTURES FOR TREE DWELLING AND HERPETOFAUNA SPECIES</li> <li>VI. MEASURES FOR ANTI-DEPREDATION AND WILDLIFE PROTECTION</li> <li>VII. FIRE PREVENTION AND PROTECTION OF HABITAT</li> <li>VIII. CAPACITY BUILDING AND LIVELIHOOD IMPROVEMENT TO LOCAL PEOPLE</li> <li>IX. CAPACITY BUILDING TO FOREST DEPARTMENT FOR MONITORING AND SUPERVISION OF SITE SPECIFIC PLAN</li> <li>X. BIODIVERSITY ASSESSMENT &amp; ANIMAL CENSUS ACTIVITIES</li> <li>XI. AWARENESS PROMOTION</li> <li>XII. CORPUS FUND</li> </ul> </li> </ul>

Period: October, 2021 to March, 2022

7 | Page

  
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	<p>controlled &amp; water sprinkling will also be done regularly. Vehicles with PUCC only will be allowed to ply. The mineral transportation shall be carried out through trucks only and the vehicles carrying the mineral shall not be overloaded. Project should obtain 'PUC' certificate from all the vehicles from authorized pollution testing center.</p>	<p>Plant and final dispatch to Steel Plants through rakes has been adopted to minimize the pollution from the transportation of ore. Photographs showing the covered.</p> <p><b><u>ANNEXURE 8- PHOTOGRAPHS SHOWING THE COVERED CONVEYOR TRANSPORTING IRON ORE AT KIOM-MIOM, SAIL</u></b></p> <ul style="list-style-type: none"> <li>• Transportation of ore from mine face to ore processing plant is being done by high capacity (9.5 Cu.M) Shovel- (100 T) Dumper combination to reduce nos. of vehicle plying and thus reduce generation of dust through Mine haul roads.</li> <li>• 28 KL High Pressure Water Sprinklers are being used for effectively controlling haul road dust emission at the both the mines.</li> <li>• All these vehicles are being maintained in good condition to control vehicular emissions. PUC certificate has been obtained from authorized Pollution testing center for different categories of Vehicle running within the lease.</li> <li>• Moreover, permanent Water sprinkling arrangement in permanent haul road installed is being operated.</li> <li>• Dry Fog Dust Suppression System has been installed at Hopper and Crushing Unit in Mineral Separation Plant.</li> </ul> <p><b><u>ANNEXURE 9- PHOTOGRAPH SHOWING THE DUST SUPPRESSION THROUGH WATER SPRINKLERS AND DRY FOG DUST SUPPRESSION SYSTEM AT KIOM-MIOM, SAIL</u></b></p>
(ix)	<p>Plantation on the OB dump slopes has to be increased and manage properly. House- keeping should be improved in processing area.</p>	<ul style="list-style-type: none"> <li>• During the year 2021-22, , 1200 nos. of saplings were planted and maintained on OB dump, Backfilled area and lease area &amp; watered regularly. To prevent soil erosion and effective plantation over the dump slopes.</li> <li>• Housekeeping at the ore processing plants have been improved at both the mines through adoption of regular cleaning of spillages at various points, timely repair &amp; maintenance of</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>rollers / conveyer belts, awareness training on housekeeping practices, etc.</p> <ul style="list-style-type: none"> <li>• 2 No. of MoUs have been signed between SAIL, RMD Kiriburu Iron Ore Mine and Meghahatuburu Iron Ore Mine for the Eco-Restoration of backfilled mine pits on both the mines.</li> <li>• Total project cost will be 99.34 Lakhs for Meghahatuburu Iron Ore Mine for 8.5 Ha of backfilled area.</li> <li>• For Kiriburu Iron Ore Mine: Area of Eco-Restoration will be 10 Ha, The IFP will provide technology and services along with the expenditure of restoration as per the All India Coordinated Research Project (AICRP) "Combating Desertification by Enhancing Vegetation Cover &amp; People Livelihood in Degraded Dry Lands &amp; Deserts of India" under objective "Restoration of Mine, degraded hills, hill slopes, sand dunes, ravines and saline areas through introduction of new genotypes/ varieties/ species and natural resources conservation in different landscapes".</li> <li>• A team of 6 Officials of Forest Ecology &amp; Climate Change Division, Institute of Forest Productivity, Ranchi visited the Kiriburu Iron Ore Mines during 23/06/2021- 25/06/2021 regarding the preparatory work for Rehabilitation of slopes in the coming months of 10 Ha of mined out backfilled area. A team of officers of E&amp;L, Mining &amp; Survey Department from Kiriburu Iron Ore Mine was also deployed for necessary co-ordination with the officials of IFP, Ranchi.</li> <li>• For aforementioned purpose, team of officials visited &amp; surveyed the backfilled area situated at Hill-1 of Kiriburu mine pit. They have selected and measured the slope of backfilled area near already planted area for the plantation purposes. Various activities have been planned like ploughing of Trenches &amp; Digging of Pits for plantation and soil erosion control purposes and plantation on slopes during July 2021. Planning for irrigation water was also done in co-ordination with Officials of IFP, Ranchi &amp; KIOM, Sail. Officials of IFP, Ranchi also requested for leveling of top surface portion of backfilled area,</li> </ul>

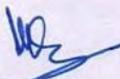
Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<b><u>SIGNED BETWEEN RMD, SAIL KIOM &amp; IFP RANCHI FOR ECO-RESTORATION ON MINED OUT AREA KIOM-MIOM, SAIL</u></b>
(x)	There are about 850 households in the township for both MIOM and KIOM mines. A full-fledged sewage treatment plant should be set up by the project in the colony. The oil & grease trap at the workshop at both the mines should have a covered shed. A separate pit should be constructed to retain the treated water which should be reused for washing purpose instead of discharging into natural course.	<ul style="list-style-type: none"> <li>• Presently Oxidation ponds for treatment of the sewerage from the township of MIOM and KIOM colonies have been provided.</li> <li>• Further Installation of full-fledged Sewage Treatment Plants covering both MIOM and KIOM is under progress.</li> </ul> <p><b><u>ANNEXURE 11- WORK ORDER COPY FOR CONSTRUCTION OF 3 NUMBER OF SEWAGE TREATMENT PLANTS FOR TOWNSHIP HOUSEHOLDS AT KIOM-MIOM, SAIL.</u></b></p> <ul style="list-style-type: none"> <li>• ETPs consisting oil &amp; grease traps have been provided to arrest oil from the workshop effluents. These ETP areas have been covered with sheds. The treated effluent from these ETPs is being collected and used for plantation / dust suppression at haul roads.</li> </ul> <p><b><u>ANNEXURE 12- EFFLUENT TREATMENT &amp; DISPOSAL FACILITY FOR USED OIL AT KIOM-MIOM, SAIL</u></b></p>
(xi)	Project shall identify the causes for the higher particulate matter and take appropriate mitigative measures. Project shall start monitoring PM2.5.	<ul style="list-style-type: none"> <li>• All the dust generating sources have been identified at both Kiriburu and Meghahatuburu Mines. The existing dust control measures at these dust prone areas have been augmented for controlling the fugitive dust emissions. The following measures have been augmented for controlling fugitive dust emissions: <ul style="list-style-type: none"> <li>➤ Dry fog dust suppression systems at ore unloading hoppers have been revamped through replacing nozzles.</li> <li>➤ Additional dry-fog dust suppression systems have been provided at transfer points and screening areas.</li> <li>➤ Wet drilling facilities with the Drill Machines have been revamped.</li> <li>➤ Increased frequency of Haul Road Sprinkling based</li> </ul> </li> </ul>

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		<p>so that the plantation activities for next year will be smoothen.</p> <ul style="list-style-type: none"> <li>A team of 3 Officials of Forest Ecology &amp; Climate Change Division, Institute of Forest Productivity, Ranchi along with 2 Technical Field Staffs visited the Kiriburu Iron Ore Mines during 26/07/2021-27/07/2021 regarding the Plantation of Plant Saplings for Rehabilitation of slopes for 10 Ha of mined out backfilled area. A team of officers of E&amp;L, Mining &amp; Survey Department from Kiriburu Iron Ore Mine was also deployed for necessary co-ordination with the officials of IFP, Ranchi.</li> <li>394 No of plant sapling have been planted on the sloped of 10ha of mined out backfilled area. Apart from this, 39 existing plants have been replaced by the officials of IFP, Ranchi which was having mortality.</li> </ul> <p>Details of Plant species planted are as follows: -</p> <table border="1" data-bbox="847 958 1469 1346"> <thead> <tr> <th>Local Name of Plant</th> <th>Scientific Names</th> </tr> </thead> <tbody> <tr> <td>गुलमोहर</td> <td>Delonix regia</td> </tr> <tr> <td>बकाइन</td> <td>Melia azedarach</td> </tr> <tr> <td>आकाशमनी</td> <td>Acacia auriculiformis</td> </tr> <tr> <td>कांटा बाँस</td> <td>Bambusa bamboos</td> </tr> <tr> <td>Hadge बांस</td> <td>Bambusa multiplex</td> </tr> <tr> <td>कागज फूल</td> <td>Bougainvillea</td> </tr> <tr> <td>Agave</td> <td>Agave</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>In MIOM- Nursery area has been finalized as well as design has been finalized. Layout of design in the site has been done and preparation of platforms, agroshadenet and irrigation channels are under process and will be completed within this financial year.</li> <li>Grass seedlings of vetiver species and lemon grass have been prepared. Seed sowing of screened species will be carried out in April,2022 in the nursery at Meghahatuburu.</li> </ul> <p><b><u>ANNEXURE 10- PHOTOGRAPH SHOWING PLANTATION AT VARIOUS LOCATIONS OF MINES, TOWNSHIP &amp; COIR MATTING &amp; COPY OF MOU</u></b></p>	Local Name of Plant	Scientific Names	गुलमोहर	Delonix regia	बकाइन	Melia azedarach	आकाशमनी	Acacia auriculiformis	कांटा बाँस	Bambusa bamboos	Hadge बांस	Bambusa multiplex	कागज फूल	Bougainvillea	Agave	Agave
Local Name of Plant	Scientific Names																	
गुलमोहर	Delonix regia																	
बकाइन	Melia azedarach																	
आकाशमनी	Acacia auriculiformis																	
कांटा बाँस	Bambusa bamboos																	
Hadge बांस	Bambusa multiplex																	
कागज फूल	Bougainvillea																	
Agave	Agave																	

Period: October, 2021 to March, 2022

11 | Page

  
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 C.G.M. (M) MIOM

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>on the weather conditions.</p> <ul style="list-style-type: none"> <li>➤ Additional permanent water sprinkling arrangement has also been provided in permanent haul roads of Mines near hopper to reduce fugitive dust.</li> <li>• In addition to the above, new dust suppression systems at Tertiary Crushers, Screens, ore handling areas, etc., are under progress at both Kiriburu and Meghahatuburu mines.</li> <li>• Monitoring PM2.5 in ambient air has already been started.</li> <li>• <b>The PM2.5 in the Ambient Air Ranges from-</b></li> <li>• <b>KIOM- 41.2 to 57.9 ug/m<sup>3</sup>.</b></li> <li>• <b>KIOM- 38.0 to 58.4 ug/m<sup>3</sup>.</b></li> </ul> <p><b><u>ANNEXURE 9- PHOTOGRAPH SHOWING THE DUST SUPPRESSION THROUGH WATER SPRINKLERS AND DRY FOG DUST SUPPRESSION SYSTEM AT KIOM-MIOM, SAIL.</u></b></p>
(xii)	Project should ensure that all the workers wear safety devices.	<ul style="list-style-type: none"> <li>• Safety device like Safety Shoe, certified helmet &amp; ear muff etc. are provided to all workers making the workplace safe includes providing instructions, procedures, training and supervision to encourage people to work safely and responsibly.</li> <li>• Wearing safety devices including personal protective equipments (PPEs) for all the workmen is being ensured. Necessary instructions have also been displayed at prominent areas in the mines.</li> <li>• All the Heads of the Departments (HODs) have been instructed to ensure wearing of safety devices by workmen in their respective departments. The same is being reviewed in the review meetings held on monthly basis.</li> </ul> <p><b><u>ANNEXURE 13- PHOTOGRAPHS SHOWING EMPLOYEES &amp; WORKERS WEARING PERSONAL PROTECTIVE EQUIPMENTS AT KIOM-MIOM, SAIL.</u></b></p>
(xiii)	The project proponent shall obtain consent to operate from the state pollution control board, Jharkhand and	<ul style="list-style-type: none"> <li>• Consent to operate (CTO) under section 25 /26 of the Water (Prevention &amp; Control of Pollution) Act, 1974 and under section 21 of the Air</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	effectively implement all the conditions stipulated therein.	<p>(Prevention &amp; Control of Pollution) Act, 1981 has been obtained on 24.12.2019 for 16 MTPA capacities vide letter no. JSPCB/HO/RNC/CTO-5913229/2019/2540 with validity up to 31.12.2024</p> <ul style="list-style-type: none"> <li>• Consent to operate (CTO) under section 25 /26 of the Water (Prevention &amp; Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention &amp; Control of Pollution) Act, 1981 has been obtained on 07.12.2020 for Tailing Disposal from Meghahatuburu and Kiriburu Iron Ore Mines- 1 MTPA from each within 16 MTPA capacities vide letter no. JSPCB/HO/RNC/CTO-9151117/2020/1890 with validity up to 30.09.2023</li> </ul> <p><b><u>ANNEXURE 14- COPIES OF CONCENT TO OPERATE (CTO) OF KIOM-MIOM, SAIL</u></b></p>
(xiv)	Implementation of Environment Management Policy of the company w.r.t. judicious use of Mineral resources for growth & development synchronizing mining and environment with prosperity.	<ul style="list-style-type: none"> <li>• SAIL has always been an environmentally conscious and responsible company. In 1996, it was a pioneer in adopting a Corporate Environmental Policy.</li> <li>• In view of the rapid technological advancements in the past two decades and growing stringency of regulatory requirements, SAIL has revised its Environmental Policy and made "Corporate Environmental Vision, Policy and Responsibility", which is under implementation.</li> </ul> <p><b><u>ANNEXURE 15- CORPORATE ENVIRONMENTAL VISION, POLICY AND RESPONSIBILITY OF SAIL</u></b></p> <ul style="list-style-type: none"> <li>• For effective implementation of corporate environmental policy, EMS linked with ISO 14001:2015 has been implemented and maintained at both Kiriburu and Meghahatuburu Iron Ore Mines. This has resulted in continual improvement in environmental aspects and helped in conservation of resources.</li> </ul> <p><b><u>ANNEXURE 16- CERTIFICATE OF REGISTRATION FOR ISO 14001:2015 ENVIRONMENT MANAGEMENT SYSTEM OF KIOM &amp; MIOM, SAIL</u></b></p>
(xv)	There shall be planning, developing and	<ul style="list-style-type: none"> <li>• To augment ground water resources, a huge</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	implementing facility of rainwater harvesting measures on long term basis in consultation with Regional Director, Central Ground Water Board resources in the area in consultation with Central Ground Water Board.	<p>water pond (Size: 150 m X 100 M) has been made to receive storm water from the township and recharge ground water.</p> <ul style="list-style-type: none"> <li>The pond is being regularly de-silted before monsoon to maintain capacity. As the mine pits are located at the hill top, all the surface runoff from the mining areas have been diverted to mine pits and stored at bottom most pits, from where it seeps in to the ground.</li> <li>Technical feasibility study of rainwater harvesting cum ground water recharge system development has been done through consultant M/s Think Innovative Solution, Ranchi.</li> <li>The Technical Feasibility Report has been submitted to Central Ground Water Board, Mid-Eastern Region, Patna vide letter No. KIOM/GM/15-16, dated 22.07.2015. The report was reviewed by CGWB and recommended for implementations vide letter No. CGWB/MER/CGWA/2015-840, dated 13.08.2015.</li> <li>Various rainwater harvesting schemes suggested under the Technical Feasibility report are under consideration for implementation.</li> </ul> <p><b><u>ANNEXURE 17- PHOTOGRAPH COVERING ROOF TOP &amp; CATCHMENT POND FOR RAIN WATER HARVESTING SYSTEM OF KIOM- MIOM, SAIL</u></b></p>
(xvi)	Regular monitoring of ground water table to be carried out at the upstream and depth of water available in the dug well is to be measured. Monitoring to be done by establishing a network of existing wells and constructing new piezometers.	<ul style="list-style-type: none"> <li>2 nos. of existing Dug Wells located around the mines has been selected for ground water level monitoring. Ground water table levels at the selected wells are being monitored at regular intervals i.e., 4 times in a year.</li> <li>Action is being taken for installing piezometers by establishing network with the existing dug wells.</li> </ul>
(xvii)	Monitoring of Ambient Air Quality to be carried out based on the Notification, as amended from time to time by the Central Pollution Control Board.	<ul style="list-style-type: none"> <li>Four (4) ambient air quality monitoring stations at Kiriburu Mines and four (4) more ambient air quality monitoring stations at Meghahatuburu Mines have been established based on the</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>topography and meteorological conditions of the area.</p> <ul style="list-style-type: none"> <li>Regular ambient air quality monitoring of key parameters to mining industries as per the guidelines of MoEF&amp;CC and CPCB is being done.</li> </ul> <p><b><u>ANNEXURE 18- AMBIENT AIR QUARTERLY MONITORING REPORT THROUGH JSPCB OF KIOM-MIOM, SAIL</u></b></p>
(xviii)	Water Sprinkling should be increased at places loading and unloading points & transfer point to reduce fugitive emission.	<ul style="list-style-type: none"> <li>Dry fog dust suppression systems have been provided at the mineral handling plants of both Kiriburu Meghahatuburu Mines. These systems are being operated and maintained. Water spray nozzles have been provided at transfer points / junction houses.</li> <li>Frequency of haul road water sprinkling through 28 KL high pressure water sprinklers has been increased at both the mines for control of dust emission from haul roads inside leasehold area.</li> <li>Permanent water sprinkling arrangement has also been provided in permanent haul roads of Mines near hopper to reduce fugitive dust.</li> </ul> <p><b><u>ANNEXURE 9- PHOTOGRAPH SHOWING THE DUST SUPPRESSION THROUGH WATER SPRINKLERS AND DRY FOG DUST SUPPRESSION SYSTEM AT KIOM-MIOM, SAIL</u></b></p>
(xix)	The up-liftment of scheduled caste/schedule tribe population, specific programmes have been taken in to consideration specially with respect to education, health care, livelihood generation, infrastructure development & promotion of sports & culture for SC/ST population and that these will be intensified in future.	<ul style="list-style-type: none"> <li>The Kiriburu - Meghahatuburu mines are located in economically backward tribal regions. Being fully aware of SAIL's social responsibilities, KIOM - MIOM Mines under Bokaro Steel Plant has taken a giant leap in corporate social responsibility (CSR) by providing Health and Hygiene Improvement, Education, Income generation through self-reliant economic activities, Sports &amp; Entertainment, etc., to improve the quality of life of the scheduled caste / tribe populace living in the villages surrounding the mines. These CSR activities are intensified for further increasing quality of life of tribal population.</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<ol style="list-style-type: none"> <li>1. Residential Bridge Course Center is continuing at Saranda Suvan Chhatrawaas jointly BY SAIL, KIOM and M/s Tata Steel Rural Development Center for 42 Nos never enroll children and dropout children for improvement of education level and admission in school.</li> <li>2. Financial assistance is being provided to 7 schools of peripheral villages for engaging 24 temporary teachers.</li> <li>3. Sponsored 10 local youths for 2 years ITI training from periphery villages</li> <li>4. 9 new cadets ( 4 Girls &amp; 5 Boys ) were inducted for the Eklavya Archery Academy, Kiriburu.</li> <li>5. 19 Apprentice students of KIOM were provided with Basic Computer Training at HRDC Kiriburu under Soft Skill Development Programme of CSR KIOM.</li> <li>6. Renovation of Primary Health Center at Kiriburu Township.</li> <li>7. 6 students of class 10 th and 2 of class 12 th of Saranda Suwan Hostel cleared their board exam with 1st division.</li> <li>8. 2 Buses are being operated successfully to bring students of peripheral villages to Kiriburu township schools.</li> <li>9. International women's day was organized for local women.</li> <li>10. Workshop with all temporary teachers organized for improvement of quality of education</li> </ol> <ul style="list-style-type: none"> <li>• During the year 2021-22- An amount of <b>Rs. 45.82 lakhs (KIOM- Rs 102.78 lakhs and MIOM- Rs 28.62 lakhs)</b> has been spent under CSR activities by the Kiriburu – Meghahatuburu Iron Ore Mines.</li> </ul> <p><b><u>CSR Details For KIOM: -</u></b></p> <ul style="list-style-type: none"> <li>• Adoption of students for free Education at SSC from peripheral villages. Strength 20 nos.- <b>Rs.</b></li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p><b>5.492 lakhs</b></p> <ul style="list-style-type: none"> <li>• Para-teachers [Total 23 Nos.] providing schools in Jharkhand &amp; Odisha-<b>Rs. 28.85 lakhs</b></li> <li>• Providing Bus Services for school children from Kiriburu to Karampada- <b>Rs. 5.18 lakhs</b></li> <li>• Providing Bus Services for school children from Kiriburu to Thalkobad via Karampada- <b>Rs. 6.27 lakhs</b></li> <li>• Organizing Medical Camps (Eye,RCH, HIV-ADS, weekly med) and indoor treatment of CSR patients- <b>Rs. 10.35 lakhs</b></li> <li>• CSR HEALTH CARE MEDICAL DURING COVID-19- <b>Rs. 6.03 lakhs</b></li> <li>• Sponsoring the ITI course to the students - <b>Rs. 7.03 lakhs</b></li> <li>• Sponsoring of local youths for short duration skill development training 10 nos. -<b>Rs. 0.50 lakhs</b></li> <li>• Procurement of machines for women empowerment scheme like KSEC, Mushroom Cultivation etc- <b>Rs. 0.621 lakhs</b></li> <li>• Development of Cricket feeder academy- <b>Rs. 1.00 lakhs</b></li> <li>• Operation of Eklavya Archery Academy - <b>Rs. 29.04 lakhs</b></li> <li>• Provision of basic infrastructure as per the plan of Noamundi initiatives requested by District Authority- <b>Rs. 2.40 lakhs</b></li> <li>• Meeting with the public representative, Baseline survey of villages etc.- <b>Rs. 0.0177 lakhs</b></li> </ul> <p><b>CSR Details for MIOM: -</b></p> <ul style="list-style-type: none"> <li>• CSR Women Empowerment- <b>11.06 Lakhs</b></li> <li>• CSR Livelihood Generation- <b>11 Lakhs</b></li> <li>• CSR Sports, Art &amp; Culture- <b>2.0 Lakhs</b></li> <li>• CSR Health Care- <b>0.66 Lakhs</b></li> <li>• Sanitation &amp; Drinking- <b>3.90 Lakhs</b></li> </ul> <p><b><u>ANNEXURE 19- PHOTOGRAPHS OF VARIOUS CSR ACTIVITIES CONDUCTED BY KIOM-MIOM, SAIL</u></b></p>
(xx)	The project proponent shall ensure that no natural watercourse and/or water	<ul style="list-style-type: none"> <li>• No natural watercourse / water resources obstructed due to any mining operation at</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	resources shall be obstructed due to any mining operations.	Kiriburu -Meghahatuburu Iron ore Mines.
(xxi)	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. 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. The maximum height of the dumps shall not exceed 8m and width 20m and overall slope of the dumps shall be maintained to 45°. The OB dumps should be scientifically vegetated with situated native species to prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The entire excavated area shall be backfilled and afforested. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneswar on six monthly basis.	<ul style="list-style-type: none"> <li>No top soil is generated from existing operations, as the mines have been in operation since 1960 within the already broken area. However, top soil generated during opening of South and Central blocks shall be stacked separately and will be used for reclamation works.</li> <li>Top soil generated in future during the expansion of the mine pits to virgin areas, if any, will be stored temporarily at earmarked site and will be used for plantation /dump reclamation.</li> <li>Presently entire OB generated at both Kiriburu - Meghahatuburu Mines is being used for backfilling of mined out areas.</li> <li>Total Overburden/ Waste Generated &amp; Backfilled in KIOM- MIOM: -</li> </ul> <p><b>For KIOM: -</b></p> <ul style="list-style-type: none"> <li>For 6 Months (October 2021 to March 2022) : <b>3,74,850 Te</b></li> <li>Annual (April 2021 to March 2022) : <b>8,41,320 Te</b></li> </ul> <p><b>For MIOM :-</b></p> <ul style="list-style-type: none"> <li>For 6 Months (October 2021 to March 2022) : <b>17,22,997 Te</b></li> <li>Annual (April 2021 to March 2022) : <b>30,99,039 Te</b></li> </ul> <p><b>Total OB/ Waste Generated &amp; Backfilled for April 2021 to March 2022 (KIOM+MIOM) : 39,40,359 Te (3.94 MT)</b></p> <ul style="list-style-type: none"> <li>The existing inactive dumps at both Kiriburu Meghahatuburu Mines have already been stabilized through plantation covering an area of 41 ha. For further stabilization, additional 1200 nos. had been planted in April 2021 to March 2022 for which regular maintenance &amp; watering job is carried out during the period. Geo-textiles have also been used to cover some portion of OB dump slopes for effective stabilization.</li> </ul>

Period: October, 2021 to March, 2022

19 | Page

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<ul style="list-style-type: none"> <li>• Apart from this, 19.06 Ha void in the mining pit is been reclaimed with the backfilling. Out of this reclaimed area 10.6 ha area is been fully rehabilitated with plantation on surface &amp; slopes</li> <li>• Six monthly Compliance Status is being submitted to the Ministry of Environment, Forest &amp; Climate Change and its Regional Office located at Ranchi.</li> <li>• 2 No. of MoUs have been signed between SAIL, RMD Kiriburu Iron Ore Mine and Meghahatuburu Iron Ore Mine for the Eco-Restoration of backfilled mine pits on both the mines.</li> <li>• Total project cost will be 99.34 Lakhs for Meghahatuburu Iron Ore Mine for 8.5 Ha of backfilled area.</li> <li>• For Kiriburu Iron Ore Mine: Area of Eco-Restoration will be 10 Ha, The IFP will provide technology and services along with the expenditure of restoration as per the All India Coordinated Research Project (AICRP) "Combating Desertification by Enhancing Vegetation Cover &amp; People Livelihood in Degraded Dry Lands &amp; Deserts of India" under objective "Restoration of Mine, degraded hills, hill slopes, sand dunes, ravines and saline areas through introduction of new genotypes/ varieties/ species and natural resources conservation in different landscapes".</li> <li>• A team of 6 Officials of Forest Ecology &amp; Climate Change Division, Institute of Forest Productivity, Ranchi visited the Kiriburu Iron Ore Mines during 23/06/2021- 25/06/2021 regarding the preparatory work for Rehabilitation of slopes in the coming months of 10 Ha of mined out backfilled area. A team of officers of E&amp;L, Mining &amp; Survey Department from Kiriburu Iron Ore Mine was also deployed for necessary co-ordination with the officials of IFP, Ranchi.</li> <li>• For aforementioned purpose, team of officials visited &amp; surveyed the backfilled area situated at Hill-1 of Kiriburu mine pit. They have selected and measured the slope of backfilled area near already planted area for the plantation purposes. Various activities have been planned like</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>grass have been prepared. Seed sowing of screened species will be carried out in April,2022 in the nursery at Meghahatuburu.</p> <p><b><u>ANNEXURE 10- PHOTOGRAPH SHOWING PLANTATION AT VARIOUS LOCATIONS OF MINES, TOWNSHIP &amp; COIR MATTING &amp; COPY OF MOU SIGNED BETWEEN RMD, SAIL KIOM &amp; IFP RANCHI FOR ECO-RESTORATION ON MINED OUT AREA KIOM-MIOM, SAIL</u></b></p>
(xxii)	<p>Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the river and other water bodies. The water so collected should be utilized for watering the mine area, road, green belt development etc. the drains shall be regularly de-silted particularly after monsoon and maintained properly. The drains settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dumps to prevent run off of water and flow of sediments directly into the river and other water bodies 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 shall be constructed at the corners of these garland drains and de-silted at regular intervals.</p>	<ul style="list-style-type: none"> <li>• Catch drains and siltation ponds have been constructed at strategic locations. The drains/sediment ponds/ check dams are cleaned periodically.</li> <li>• All OB dumps of the mines are either already stabilized and vegetated or being stabilized by vegetation. Toe walls, garland drains and sedimentation pits were constructed around the OB dumps to control surface runoff.</li> <li>• IIT Kharagpur has assessed the need of construction of the additional check dams and sedimentation traps to arrest silt from surface runoffs from mine working and OB dumps. Based on the recommendations of the IIT, 15 nos (7 nos at MIOM &amp; 8nos at KIOM) of boulders check dams have been constructed in consultation with DFO Saranda.</li> <li>• Final estimation and report for" Comprehensive Catchment Area Treatment Plan for The Saranda Forest Area Fed by Karo and Koina River System with Specific Measures and Cost Structure for Implementation", has been submitted and being under consideration by the concerned Forest Department.</li> <li>• The final Catchment Area Treatment is two volumes <b><u>VOL 1/2 -COMPREHENSIVE CATCHMENT AREA TREATMENT PLAN FOR THE SARANDA FOREST AREA FED BY KARO AND KOINA RIVER SYSTEM WITH SPECIFIC MEASURES AND COST STRUCTURE FOR IMPLEMENTATION</u></b> Revised in July, 2021</li> </ul>

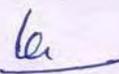
Cond. No.	Condition Stipulated	Compliance Status as on March 2022																
		<p>ploughing of Trenches &amp; Digging of Pits for plantation and soil erosion control purposes and plantation on slopes during July 2021. Planning for irrigation water was also done in co-ordination with Officials of IFP, Ranchi &amp; KIOM, Sail. Officials of IFP, Ranchi also requested for leveling of top surface portion of backfilled area, so that the plantation activities for next year will be smoothen.</p> <ul style="list-style-type: none"> <li>A team of 3 Officials of Forest Ecology &amp; Climate Change Division, Institute of Forest Productivity, Ranchi along with 2 Technical Field Staffs visited the Kiriburu Iron Ore Mines during 26/07/2021-27/07/2021 regarding the Plantation of Plant Saplings for Rehabilitation of slopes for 10 Ha of mined out backfilled area. A team of officers of E&amp;L, Mining &amp; Survey Department from Kiriburu Iron Ore Mine was also deployed for necessary co-ordination with the officials of IFP, Ranchi.</li> <li>394 No of plant sapling have been planted on the sloped of 10ha of mined out backfilled area. Apart from this, 39 existing plants have been replaced by the officials of IFP, Ranchi which was having mortality.</li> </ul> <p>Details of Plant species planted are as follows: -</p> <table border="1" data-bbox="783 1205 1465 1592"> <thead> <tr> <th>Local Name of Plant</th> <th>Scientific Names</th> </tr> </thead> <tbody> <tr> <td>गुलमोहर</td> <td>Delonix regia</td> </tr> <tr> <td>बकाइन</td> <td>Melia azedarach</td> </tr> <tr> <td>आकाशमनी</td> <td>Acacia auriculiformis</td> </tr> <tr> <td>कांटा बाँस</td> <td>Bambusa bamboos</td> </tr> <tr> <td>Hadge बाँस</td> <td>Bambusa multiplex</td> </tr> <tr> <td>कागज़ फूल</td> <td>Bougainvillea</td> </tr> <tr> <td>Agave</td> <td>Agave</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>In MIOM- Nursery area has been finalized as well as design has been finalized. Layout of design in the site has been done and preparation of platforms, agroshadenet and irrigation channels are under process and will be completed within this financial year.</li> <li>Grass seedlings of vetiver species and lemon</li> </ul>	Local Name of Plant	Scientific Names	गुलमोहर	Delonix regia	बकाइन	Melia azedarach	आकाशमनी	Acacia auriculiformis	कांटा बाँस	Bambusa bamboos	Hadge बाँस	Bambusa multiplex	कागज़ फूल	Bougainvillea	Agave	Agave
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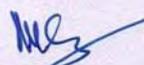
Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>construction completed. Sump has been provided allowing settling of silt at corner of garland drains.</p> <p><b><u>ANNEXURE 20- PHOTOGRAPHS SHOWING VARIOUS SILT EROSION CONTROL ARRANGEMENTS CONSTRUCTED BY KIOM-MIOM, SAIL &amp; COPY OF APPROVAL LETTER OF CATCHMENT AREA TREATMENT PLAN FOR SARANDA FOREST DIVISION PREPARED BY IIT KGP FOR KIOM- MIOM, SAIL</u></b></p>
(xxiii)	Dimension of the retaining wall at the toe of over burden dumps and OB benches within the mine to check run-off and siltation shall be based on the rain fall date.	<ul style="list-style-type: none"> <li>• Toe walls, garland drains and siltation pond at the OB Dumps have been constructed to control the surface runoff from the OB dumps.</li> <li>• Based on the rainfall of the region, 0.50 m width and 2.0 m height toe walls and 0.50 m width and 0.50 m depth garland drains provided at both the mines.</li> </ul>
(xxiv)	Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of PM10 and PM2.5 such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in the regard.	<ul style="list-style-type: none"> <li>• Dry fog dust suppression systems have been provided at the mineral handling plants of both Kiriburu Meghahatuburu mines.</li> <li>• Water spray nozzles have been provided at transfer points / junction houses.</li> <li>• 28 KL High Pressure Water Sprinklers are regularly deployed for control of dust emission from haul roads inside leasehold area.</li> <li>• Permanent water sprinkling arrangements have been provided in permanent haul road of Mines near hopper.</li> <li>• All these fugitive dust control measures are being operated and maintained effectively to maintain air quality parameters below the prescribed standards.</li> </ul> <p><b><u>ANNEXURE 21- PHOTOGRAPHS SHOWING CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM (CAAQMS) INSTALLED AT MIOM, SAIL</u></b></p> <p><b><u>ANNEXURE 9- PHOTOGRAPH SHOWING THE DUST SUPPRESSION THROUGH WATER SPRINKLERS AND DRY FOG DUST SUPPRESSION SYSTEM AT KIOM- MIOM, SAIL</u></b></p>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>incorporating LFA, Addendum (Revised Cost Estimate for CAT Structures), Bio-Restoration Measures (Geogreen Erosion Control Blanket) for CAT Plan Implementation &amp; <u>VOL 2/2 - ADDENDUM TO FINAL REPORT ON CATCHMENT AREA TREATMENT PLAN FOR SARANDA FOREST AREA FED BY KARO AND KOINA RIVER SYSTEM WITH SPECIFIC MEASURES AND COST STRUCTURE FOR IMPLEMENTATION</u> Revised in July, 2021 incorporating, Addendum (Revised Cost Estimate for CAT Structures), Bio-Restoration Measures (Geogreen Erosion Control Blanket) for CAT Plan Implementation plan has been submitted to DFO, Saranda on 29/07/2021 vide ref. no- CGM (M)/ MIOM/2021-22/3920.</p> <ul style="list-style-type: none"> <li>The Catchment Area Treatment (CAT) Plan prepared by Indian Institute of Technology (Kharagpur) in Two Volumes as mentioned in above for Saranda Forest Division has been approved by PCCF, Jharkhand vide Office Order No- 06 Dated 01/02/2022.</li> <li>There are many measures such as Soil Erosion Control Structures (CAT Structures), Bio-Restoration Measures, Bio- Conservation Measures, Eco-Restoration Measures, Infrastructures, have been proposed. Apart from this, for monitoring &amp; implementation of Catchment area treatment plan, there is a provision of dedicated Project Implementation &amp; Monitoring Unit (PIMU). Total financial implication of this project for all Priority-I &amp; Priority-II Mines will be 12286.307 Lakhs.</li> <li>There are four (4) SAIL Mines in Saranda Forest Division (Kiriburu Iron Ore Mines, Meghahatuburu Iron Ore Mines, Gua Ore Mines, Manoharpur Ore Mines). Total financial implication for all 4 SAIL mines in Cat plan will be 4605.093 Lakhs</li> <li>De-silting has been carried out at various locations in lease area. Additional Garland drain</li> </ul>

Period: October, 2021 to March, 2022

23 | Page

  
 कमलेश राय  
 Kamlesh Rai  
 मुख्य महाप्रबंधक (खान)  
 CGM (Mines), KIOM

  
 R. P. SELVAM  
 C.G.M. (M) MIOM

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
(xxv)	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.	<ul style="list-style-type: none"> <li>Water flow monitoring at Ghagirathi nallah and Pardih nallah are being carried out on monthly basis and records are being maintained.</li> </ul>
(xxvi)	Regular monitoring of water quality upstream and downstream of water bodies viz. Karo River and Koina River shall be carried out and record of monitoring data should be maintained and submitted to the Ministry of Environment and Forests, its Regional office, Bhubaneswar, Central Ground Water Authority, Regional Director, Central Ground Water Board, State pollution Control Board and Central Pollution Control Board.	<ul style="list-style-type: none"> <li>All the natural nallahs originated from leasehold area as well as surface runoff / effluents from the mines are draining to the river Koina, which controls drainage pattern of the area and is located on western side of the leasehold. No discharge from Kiriburu / Meghahatuburu mines is drained to Karo River.</li> <li>Hence, quality of water of Koina River at upstream and downstream of mines is being regularly monitored and reports are being submitted.</li> </ul> <p><b><u>ANNEXURE 22- KOINA RIVER UPSTREAM &amp; DOWNSTREAM WATER QUALITY DATA REPORT FOR THE YEAR ENDING - MARCH 2022 BY KIOM-MIOM, SAIL.</u></b></p>
(xxvii)	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 construction new piezometers during the mining operation. The monitoring shall be carried out four times in a year- pre-monsoon (April-May), monsoon (August), post- monsoon (November) and winter (January) and the data thus collected may be sent regularly to Ministry of Environment and Forests and its Regional office, Bhubaneswar, Central Ground water Authority and Regional Director, Central Ground Water Board.	<ul style="list-style-type: none"> <li>2 nos. of existing Dug Wells located around the mines have been selected for ground water level monitoring. Ground water table levels at the selected wells are being monitored at regular intervals i.e., 4 times in a year.</li> <li>Proposals for installation of piezometers for automatic measurement of ground water levels has been initiated and expected to be installed by December, 2022.</li> </ul> <p><b><u>ANNEXURE 23- GROUND WATER QUALITY REPORT IN DUG WELL FOR THE YEAR ENDING - MARCH 2022 BY KIOM-MIOM, SAIL</u></b></p>
(xxviii)	Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures to control of ground vibrations and to arrest fly rocks and boulders	<ul style="list-style-type: none"> <li>Blasting is carried out in a notified fixed day time only (1.00 PM - 2.00 PM). Controlled blasting with slurry explosives and NONEL detonators is being done to minimize ground vibrations and to arrest fly rocks. Further, TLD</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	should be implemented. Drills shall either be operated with dust extractors or equipped with water injection system.	<p>&amp; DTH are also used to control ground vibration, fly rock.</p> <ul style="list-style-type: none"> <li>All the drills at both Kiriburu &amp; Meghahatuburu Mines have been equipped with wet drilling facility to prevent dust generation during drilling.</li> </ul> <p><b><u>ANNEXURE 24- BLASTING VIBRATION REPORT FOR KIOM-MIOM, SAIL</u></b></p>
(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.	<ul style="list-style-type: none"> <li>Periodical Medical Examination (PME) of all workmen working in the mines is being done at our Occupational Health Centre once in every five years/three/one year depending on category.</li> <li>Additional PME is also conducted as per the recommendation of X<sup>th</sup> &amp; XI<sup>th</sup> Conference of Safety, DGMS, Dhanbad.</li> <li>In the year 2021-22,</li> </ul> <p><b>In KIOM-</b>  <b>158 Regular Employees &amp; Executives &amp; 88 Contractual Workers</b> have been Periodical Medically Examined (PME).</p> <p><b>In MIOM-</b>  <b>58 Regular Employees &amp; Executives &amp; 76 Contractual Workers</b> have been Periodical Medically Examined (PME).</p>
(xxx)	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely leopard, elephant etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the state forest and wildlife department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. All the safeguard measures brought out in the wildlife conservation	<ul style="list-style-type: none"> <li>Integrated Wildlife Management Plan for West Singhbhum District was prepared by an Expert Committee constituted by the Govt. of Jharkhand vide notification dated 27.08.2011. As per the notification constituting the committee, SAIL was assigned responsibility for institutionalizing and funding the study. The said Plan is completed in respects and is ready for implementation by the Jharkhand State Forest Dept. In this regard, SAIL has already submitted an undertaking to abide by the guidelines and contribute fund for implementation of Integrated Wildlife Management Plan in entire lease hold area, on</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>VII. FIRE PREVENTION AND PROTECTION OF HABITAT</p> <p>VIII. CAPACITY BUILDING AND LIVELIHOOD IMPROVEMENT TO LOCAL PEOPLE</p> <p>IX. CAPACITY BUILDING TO FOREST DEPARTMENT FOR MONITORING AND SUPERVISION OF SITE SPECIFIC PLAN</p> <p>X. BIODIVERSITY ASSESSMENT &amp; ANIMAL CENSUS ACTIVITIES</p> <p>XI. AWARENESS PROMOTION</p> <p>XII. CORPUS FUND</p> <p>XIII. CONTINGENCIES</p> <ul style="list-style-type: none"> <li>All of these suggested measures were proposed in the Two Chapters 4 &amp; 5 , In Chapter 4, The works shall be done by Project Authority (SAIL) , &amp; In Chapter-5, The Works shall be done by the Forest Department, for which the proposed financial involvement under Chapter 5 has already been paid through the DD NO 443780 dated. 31.03.2022 of an Amount of Rs. 1453.482 Lakhs in favor of Divisional Forest Officer, Saranda Forest Division payable at Chaibasa.</li> <li>SAIL Authority is under process for start of works proposed under Chapter-4</li> <li>All the measures suggested will be implemented at the project cost. It is undertaken that a copy of action plan will be submitted to the MOEF&amp;CC and its Regional office.</li> </ul> <p><b><u>ANNEXURE 7- APPROVAL LETTER, PAYMENT DETAILS FOR CHAPTER-5 FOR SITE- SPECIFIC WILDLIFE AND BIODIVERSITY CONSERVATION PLAN FOR KIRIBURU- MEGHAHATUBURU IRON ORE MINES</u></b></p>
(xxxii)	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	<ul style="list-style-type: none"> <li>Most of the construction Labour are hired from the local villagers and only few are being hired from outside, for which housing facilities along with necessary infrastructure are being provided at the existing colony of the mines.</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	<p>plan so prepared specific to the project site shall be effectively implemented. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional office, Bhubaneswar.</p>	<p>pro rata basis.</p> <ul style="list-style-type: none"> <li>• In addition to the above, a consultant has been engaged for preparation of Site-Specific Wildlife and Biodiversity Conservation plan for Amalgamated Lease of Kiriburu-Meghahatuburu Iron Ore Mines.</li> <li>• The aforementioned consultant has prepared the draft report for site-specific wildlife &amp; biodiversity conservation plan associated with the amalgamated mining lease area of Kiriburu-Meghahatuburu iron ore mines. Draft report has been presented before DFO Saranda on 11/06/2021 which is been provisionally approved with some modification. Again modified report has been presented before RCCF, Jamshedpur on 07/09/2021, where it is been provisionally approved.</li> <li>• This plan has been approved by PCCF (Wildlife cum Chief Wildlife Warden), GOJ dated 25/01/2022 vide Office Order No- 17 for total financial involvement of 5996.244 Lakhs (Chapter-4 - 4542.402 Lakhs, Chapter-5- 1453.842 Lakhs) &amp; Copy for the approval order has been sent to M/s SAIL on the same date vide Memo No- 88.</li> <li>• In the Site-Specific Wildlife and Biodiversity Conservation Plan various measures have been proposed such as- <ul style="list-style-type: none"> <li>I. WILDLIFE HABITAT PROTECTION AND DEVELOPMENT</li> <li>II. FOREST LANDSCAPE RESTORATION (FLR)</li> <li>III. ELEPHANT CORRIDOR MANAGEMENT</li> <li>IV. IMPROVEMENT OF WATER REGIME AND ITS MAINTAINANCE</li> <li>V. MITIGATION STRUCTURES FOR TREE DWELLING AND HERPETOFAUNA SPECIES</li> <li>VI. MEASURES FOR ANTI-DEPREDAION AND WILDLIFE PROTECTION</li> </ul> </li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	health care, crèche etc. the housing may be in the form of temporary structures to be removed after the completion of the project.	
(xxxii)	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.	<ul style="list-style-type: none"> <li>A Final Mine Closure Plan along with details of the corpus fund will be submitted to MoEF&amp;CC, New Delhi 5 years in advance of final mine closure for approval.</li> </ul>
<ul style="list-style-type: none"> <li><b><u>Additional Specific Conditions (EC Order Dated 30.07.2020)</u></b></li> </ul>		
(xxxiii)	PP shall implement all the conditions specified in the EC letter no. J-11015 /272/2007-IA. II (M) dated 23rd 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.	<ul style="list-style-type: none"> <li>All the conditions specified in the EC (General as well as specific) have been implemented and compliance of all the conditions is being incorporated in this EC Compliance.</li> </ul>
(xxxiv)	Fines from the tailing dam shall not be excavated during the monsoon period.	<ul style="list-style-type: none"> <li>Excavation &amp; dispatch of fines from tailing dam has not been started yet due to non-issuance of transit permits by Govt. of Jharkhand. However, it is assured that fines from the tailing dam shall not be excavated during the monsoon period in any circumstances.</li> </ul>
(xxxv)	Mitigative measures proposed for excavation and transportation of mineral shall be complied with including moist and covered.	<ul style="list-style-type: none"> <li>Excavation &amp; dispatch of fines from tailing dam has not been started yet due to non-issuance of transit permits by Govt. of Jharkhand. However, it is assured that mitigative measures proposed for excavation and transportation of mineral shall be complied with including moist and covered.</li> </ul>
(xxxvi)	The PP shall monitor the fugitive emissions by installing at least two AAQ monitoring stations along the transportation route.	<ul style="list-style-type: none"> <li>Excavation &amp; dispatch of fines from tailing dam has not been started yet due to non-issuance of transit permits by Govt. of Jharkhand. However, it is assured that before excavation &amp; dispatch of tailings, at least two AAQ monitoring stations</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		along the transportation route shall be installed.
(xxxvii)	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.	<ul style="list-style-type: none"> <li>Excavation &amp; dispatch of fines from the tailing dam has not been started yet due to non-issuance of transit permits by Govt. of Jharkhand. However, it is assured that the stripping ratio and total excavation for each year shall remain same as approved in the previous EC.</li> </ul>

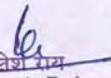
**B. General Conditions**

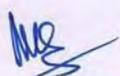
Cond. No.	Condition Stipulated	Compliance Status as on March 2022
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	<ul style="list-style-type: none"> <li>Mining is being done as per the approved Mining Plan/ Scheme of Mining approved by Indian Bureau of Mines. There is no change in mining technology and scope of work.</li> </ul>
(ii)	No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.	<ul style="list-style-type: none"> <li>❖ ROM production at both the Kiriburu &amp; Meghahatuburu Mines are kept within permitted capacity in the EC / approved Mining Plan. The quantity of ROM Production during the year 2021-22 is as follows- <ul style="list-style-type: none"> <li>❖ <b>For KIOM: -</b></li> <li>❖ For 6 Months (October 2021 to March 2022) : <b>21,34,350 Te (ROM)</b></li> <li>❖ Annual (April 2021 to March 2022) : <b>40,47,570 Te (ROM)</b></li> <li>❖ <b>For MIOM: -</b></li> <li>❖ For 6 Months (October 2021 to March 2022) : <b>15,27,070 Te (ROM)</b></li> <li>❖ Annual (April 2021 to March 2022) : <b>35,12,070 Te (ROM)</b></li> <li>❖ <b>Total ROM Production</b> for April 2021 to March 2022 (<b>KIOM+MIOM</b>) : <b>75,59,640 Te (7.559 MT)</b> against EC of 16 MTPA</li> </ul> </li> </ul>
(iii)	The critical parameters such as PM10 (size less than 10 micro meter), PM 2.5 (size less than 2.5 micro meter), NOx in the ambient air within the impact zone, peak particle velocity at 300 m distance or within the	<ul style="list-style-type: none"> <li>Critical parameters i.e., PM10, PM2.5, NOx and SO<sub>2</sub> in ambient air and relevant parameters in the effluents are being monitored regularly.</li> </ul> <p><b><u>ANNEXURE 21- PHOTOGRAPHS SHOWING</u></b></p>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	<p>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 board at the project site at a suitable location near the main gate of 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 <a href="http://www.envfor.nic.in">www.envfor.nic.in</a> shall also be referred in this regard for its compliance.</p>	<p><b><u>CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM (CAAQMS) INSTALLED AT MIOM, SAIL</u></b></p> <ul style="list-style-type: none"> <li>The monitored data is being displayed in General Offices of both Kiriburu &amp; Meghahatuburu Mines. Copy of EC compliance along with environmental quality data is being uploaded to the company website <a href="http://www.sail.co.in">www.sail.co.in</a>.</li> </ul>
(iv)	<p>Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for PM 10, PM 2.5, SO<sub>2</sub> &amp; NO<sub>x</sub> monitoring. Location of the stations should be decided based on the meteorological, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board. Data on ambient air quality 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.</p>	<ul style="list-style-type: none"> <li>Four (4) ambient air quality monitoring stations at Kiriburu Mines and four (4) more ambient air quality monitoring stations at Meghahatuburu Mines have been established based on the topography and meteorological conditions of the area.</li> </ul> <p><b><u>ANNEXURE 21- PHOTOGRAPHS SHOWING CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM (CAAQMS) INSTALLED AT MIOM, SAIL</u></b></p> <ul style="list-style-type: none"> <li>Regular ambient air quality monitoring of key parameters (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>) to mining industries as per the guidelines of MoEF&amp;CC and CPCB is being done</li> <li>Ambient air quality monitoring data is being submitted to MoEF&amp;CC, New Delhi and Regional Office, Ranchi along with the compliance reports.</li> <li>Air quality data is also being submitted to Jharkhand State Pollution Control Board and Central Pollution Control Board.</li> </ul> <p><b><u>ANNEXURE 25- AMBIENT AIR QUALITY REPORT FOR THE YEAR ENDING - MARCH 2022 FOR KIOM-MIOM, SAIL</u></b></p>
(v)	Fugitive dust emission from all the sources	<ul style="list-style-type: none"> <li>Adequate nos. of fugitive dust emission control</li> </ul>

Period: October, 2021 to March, 2022

31 | Page

  
 कमलेश राय  
 Kamlesh Rai  
 मुख्य महाप्रबंधक (खान)  
 CGM (Mines), KIOM

  
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 C.G.M. (M) MIOM

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	<p>measures have been provided at the mines. Dry fog dust suppression systems at the mineral handling plants and water sprinklers at haul roads / transfer points have also been provided.</p> <ul style="list-style-type: none"> <li>• These systems are being operated and maintained. Details of major fugitive dust control measures at various main unit operations are as follows: <ul style="list-style-type: none"> <li>➤ Drilling - Wet drilling is being practiced.</li> <li>➤ Blasting - Controlled blasting by using slurry explosives &amp; NONEL technology is being followed to control the dust generation during blasting.</li> <li>➤ Haulage - Haul roads are regularly sprinkled with water by four (Two at each mine) mobile pressurized water sprinklers of 28KL capacity each. Permanent water sprinkling arrangement has also been provided in permanent haul roads of Meghahatuburu Mines near hopper to reduce fugitive dust.</li> <li>➤ Crushing/Screening- Dry-fog dust suppression systems for unloading, crushing &amp; screening, transfer points have been provided at both the mines.</li> </ul> </li> </ul> <p><b><u>ANNEXURE 9- PHOTOGRAPH SHOWING THE DUST SUPPRESSION THROUGH WATER SPRINKLERS AND DRY FOG DUST SUPPRESSION SYSTEM AT KIOM-MIOM, SAIL</u></b></p>
(vi)	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged operations of HEMM, etc. should be provided with ear plugs/muffs.	<ul style="list-style-type: none"> <li>• Regular maintenances and periodic checks of the HEMM are being carried out to control noise below 85 dB (A) in the work environment. The operators engaged in blasting/ drilling operations and operator of HEMM are provided with protective earplug/ ear muffs with helmet.</li> <li>• Use of these protective measures is ensured by educating the workers on ill effect of the prolonged excessive exposure to high Noise levels and daily checks by shift mining engineers regarding usage of ear plug/ear muffs.</li> <li>• Regular noise survey is also carried out by trained technician of OHS &amp; by JSPCB on</li> </ul>

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
		<p>quarterly in the mines as per mines rules and parameters are found within norms.</p> <ul style="list-style-type: none"> <li>Measured noise levels at the mines during <b><u>FOR THE YEAR ENDING - MARCH 2022</u></b> are within permissible limit below 75 dB(A)</li> </ul> <p>KIOM Day Time- 53.5 dB(A) to 73.2 dB(A)  KIOM Night Time- 61.8 dB(A) to 68.3 dB(A)  KIOM DG Set- 73.4 dB(A)  MIOM Day Time- 66.5 dB(A) to 74.0 dB(A)  MIOM Night Time- 61.3 dB(A) to 69.2 dB(A)  MIOM DG Set- 72.4 dB(A)</p> <p><b><u>ANNEXURE 26- NOISE MONITORING THROUGH NABL LABORATORY REGISTERED WITH JSPCB FOR THE YEAR ENDING - MARCH 2022 FOR KIOM-MIOM, SAIL</u></b></p>
(vii)	<p>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: 19<sup>th</sup> May,1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.</p>	<ul style="list-style-type: none"> <li>ETPs consisting oil &amp; grease traps have been provided at the mines for treating the effluents from garages. The treated water from these ETPs are being used for plantation / dust suppression.</li> <li>Effluents generated from the beneficiation plants are being treated in Thickeners followed by Tailing Ponds. The clear water to the tune of 60% is being recycled and the underflow from thickener is discharged into Tailing Dam. Presently the recirculation facility at the rate of 160 cubic meter/ hr. is carried out as per the requirement of ore processing System for recovery &amp; recycling of clear water from the Tailing Pond is under stabilization at Kiriburu Mines.</li> </ul> <p><b><u>ANNEXURE 27- TAILING DAM WATER QULITY ASSESSMENT REPORT THROUGH NABL LABORATORY REGISTERED WITH JSPCB FOR THE YEAR ENDING - MARCH 2022 FOR KIOM-MIOM, SAIL</u></b></p>
(viii)	<p>Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on</p>	<ul style="list-style-type: none"> <li>Dust masks have been provided to personnel working in dusty areas i.e., drilling, excavation, unloading &amp; loading areas, crushing &amp; screening areas. Training on safety and health aspects is</li> </ul>

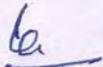
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	safety and health aspects.	<p>being imparted on regular basis. A full-fledged Occupational Health Centre is run by the mines for regular health surveillance.</p> <ul style="list-style-type: none"> <li>Use of dust masks is ensured by daily checks by shift in-charges of the respective departments.</li> </ul>																					
(ix)	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.	<ul style="list-style-type: none"> <li>Periodical Medical Examination (PME) of all workmen working in the mines is being done at our Occupational Health Centre once in every five years/three/one year depending on category.</li> <li>Additional PME is also conducted as per the recommendation of 10<sup>th</sup>&amp;11<sup>th</sup> conference of Safety, DGMS, Dhanbad.</li> </ul>																					
(x)	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.	<ul style="list-style-type: none"> <li>Separate Environmental Management Deptt. have been established at both Kiriburu and Meghahatuburu mines and headed by Sr. Officers, who reports directly to the Head of Mines.</li> </ul>																					
(xi)	The funds earmarked for environmental protection measures should be kept in separate account and should not be divided for the purpose. Year wise expenditure should be reported to the Ministry and its Regional office located at Bhubaneswar.	<ul style="list-style-type: none"> <li><b>During the year 2021-22-</b></li> <li><b>AT KIOM: -</b></li> </ul> <table border="1"> <thead> <tr> <th>S.NO</th> <th>Details of Work</th> <th>Expend. in Lakhs</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Development &amp; maintenance of lake garden &amp; rose garden in Kiriburu Township</td> <td>19.34</td> </tr> <tr> <td>2</td> <td>Maint. &amp; Devt. And up keeping of outside areas and garden of different building of KIOM</td> <td>17.68</td> </tr> <tr> <td>3</td> <td>Collection &amp; disposal of domestic garbage by engaging trolley at township area, KIOM</td> <td>19.46</td> </tr> <tr> <td>4</td> <td>Collection &amp; disposal of domestic garbage by engaging trolley at hilltop &amp; hutment area of township, KIOM</td> <td>26.7</td> </tr> <tr> <td>5</td> <td>Cleaning of Sankoja Dam</td> <td>11.59</td> </tr> <tr> <td>6</td> <td>Up keeping of different installation, offices including other misc. jobs at hilltop &amp; township KIOM</td> <td>16.17</td> </tr> </tbody> </table>	S.NO	Details of Work	Expend. in Lakhs	1	Development & maintenance of lake garden & rose garden in Kiriburu Township	19.34	2	Maint. & Devt. And up keeping of outside areas and garden of different building of KIOM	17.68	3	Collection & disposal of domestic garbage by engaging trolley at township area, KIOM	19.46	4	Collection & disposal of domestic garbage by engaging trolley at hilltop & hutment area of township, KIOM	26.7	5	Cleaning of Sankoja Dam	11.59	6	Up keeping of different installation, offices including other misc. jobs at hilltop & township KIOM	16.17
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1	Development & maintenance of lake garden & rose garden in Kiriburu Township	19.34																					
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			& domestic garbage
		6	Cleaning of Pardih/Kumdih pump house area for water 2.75
		7	Laying & Maintenance of sewerage line in MIOM township 14.71
		8	Implementation of Mosquito Control system(Fogging system)- 8.64
		9	Repair & Maint. of water supply line & minimize water consumption 14.54
		10	RO plants of 1000 ltrs/hr,its maintenance 10.03
		11	Provision of retaining wall with sump for stabilization of waste dump 6.41
		<b>TOTAL EXPENDITURE IN LAKHS</b> 91.53	
(xii)	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.	<ul style="list-style-type: none"> <li>The Kiriburu and Meghahatuburu Iron Ore Mines are working mines operating since 1960 and 1985 respectively. Installation of various facilities under the 16 MTPA expansion are under progress. Will be informed in due time after installation of the facilities.</li> </ul>	
(xiii)	The Regional office of the 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.	<ul style="list-style-type: none"> <li>Full co-operation is extended to the officers of the Regional Office, MoEF&amp;CC, Bhubaneswar / Ranchi, by furnishing the requisite data/information / monitoring reports.</li> </ul>	
(xiv)&(xv)	The project proponent shall submit six monthly reports on the status of the implementation of the stipulate environmental safeguards to the Ministry of Environment and Forest, its Regional Office, Bhubaneswar, Central Pollution Control Board and State pollution Control Board.	<ul style="list-style-type: none"> <li>Six monthly compliance reports on the status of implementation of environmental safeguards are being submitted to MoEF&amp;CC, New Delhi, Regional Office - MoEF&amp;CC, Ranchi, Central Pollution Control Board and State Pollution Control Board.</li> <li>Copy of the compliance report including environmental quality data is being uploaded to the SAIL web site i.e., <a href="http://www.sail.co.on">www.sail.co.on</a>.</li> </ul>	
(xvi)	A copy of clearance letter will be marked to concerned Panchayat/local NGO, if any,	<ul style="list-style-type: none"> <li>A copy of the environmental clearance letter has already been sent to the Panchayat.</li> </ul>	

Cond. No.	Condition Stipulated	Compliance Status as on March 2022		
		7	R/c for bush cutting in township & hilltop area of KIOM	2.92
		8	R/C For cleaning of Ghagirathi Pump	12.93
		9	R/c for cleaning of various water reservoir at Karo Dalmia, township, Kiriburu	1.96
		10	Support facility for drinking water supply at Dalmia filter plant at Dalmia and filter plant at Murgapara water reservoir at KIOM	33.27
		11	R/c for R&M of sewerage line, drain etc. at KIOM	4.36
		12	R/c for R&M of drinking water supply, sanitary installation work etc. at township & hilltop KIOM	7.87
		13	General up keeping of township & hutment area	8.75
		14	Cleaning of sewerage line at township & hilltop, KIOM	20.59
		15	Mosquito Control operation work at township & inside mining area	16.89
		16	Cleaning of Sewerage Line Township & Hilltop Area	6.59
		<b>TOTAL EXPENDITURE IN LAKHS</b>		<b>227.07</b>
<b>AT MIOM: -</b>				
S.NO	Details of Work	Expend. in Lakhs		
1	Plantation of trees 500 nos saplings in township & its maintenance, watch & ward, watering	14.048		
2	Plantation -Watch & Ward in Mines & Township (1500 Saplings)			
3	Maintenance & Upkeep of Nursery/Garden to improve greenery			
4	Aesthetic beautification by up keeping of MBR township, garden view point, hospital			
5	Collection & disposal of industrial	20.41		

Period: October, 2021 to March, 2022

35 | Page

  
 कमलेश राय  
 Kamlesh Rai  
 मुख्य महाप्रबंधक (खान)  
 CGM (Mines), KIOM

  
 R. P. SELVAM  
 C.G.M. (M) MIOM

Cond. No.	Condition Stipulated	Compliance Status as on March 2022
	from whom suggestion/representation has been received while processing the proposal.	<ul style="list-style-type: none"> <li>The clearance letter has been put on the Company website i.e., <a href="http://www.sail.co.on">www.sail.co.on</a>.</li> </ul>
(xvii)	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and Collectors office/Tehsildar's office for 30 days.	-
(xviii)	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> and a copy of the same should be forwarded to the Regional office of the Ministry located Bhubaneswar.	<ul style="list-style-type: none"> <li>Advertisement was published in two local newspapers widely circulated, one of which was in the vernacular language (Hindi in Dainik Jagran on 27.09.2014) and other in English (in Telegraph on 27.09.2014) i.e., within stipulated time by informing that the project has been accorded environmental clearance. Further, EC amendment advertisement done in two newspapers on 04.08.2020 (English in Times of India &amp; Hindi in Prabhat Khabar</li> <li><b><u>ANNEXURE 28- COPIES OF THE ADVERTISEMENTS MADE IN THE NEWS PAPERS FOR EC OF KIOM-MIOM, SAIL</u></b></li> <li>SAIL A copy of the clearance letter was also made available to the State Pollution Control Board and Regional Office of MoEF&amp;CC at Bhubaneswar.</li> </ul>

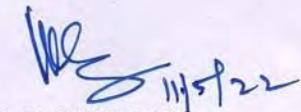
  
11.05.2022

[KAMLESH RAI]

Chief General Manager (Mines)  
Kiriburu Iron Ore Mines  
P.O. Meghahatuburu - 833 222  
Dist.: Singhbhum (West),  
State: - Jharkhand

कमलेश राय / KAMLESH RAI  
मुख्य महाप्रबंधक (खान)  
Chief General Manager (Mines)  
कि.लौ.अ.ख., बी.एस.एल, सेल  
KIOM, BSL, SAIL

Period: October, 2021 to March, 2022

  
[R. P. SELVAM]

Chief General Manager (Mines)  
Meghahatuburu Iron Ore Mines  
P.O. Meghahatuburu - 833 223  
Dist.: Singhbhum (West),  
State: - Jharkhand

राजगोपाल पन्नैर सेल्वम  
RAJAGOPAL PANNEER SELVAM  
मुख्य महाप्रबंधक (खान) / CGM (Mines)  
मेघाहातुबुरु लौह अयस्क खदान  
Meghahatuburu Iron Ore Mines  
पो. मेघाहातुबुरु 833223 / Meghahatuburu 833223  
जिला-सिंहभूम (प.) अरावक / Dist.: Singhbhum (W) Jharkhand