



STEEL AUTHORITY OF INDIA LTD.  
(A Govt. of India Enterprise)  
Regd. Office: Ispat Bhawan,  
Lodhi Road, New Delhi – 110 003

BOKARO STEELPLANT  
KIRIBURU IRON ORE MINE  
P.O. KIRIBURU – 833 222  
DIST. SINGHBHUM (W), JHARKHAND

Ref No. : CGM/KIOM/21-22/2321

Date: 16.11.2021

To,  
Regional Office (ECZ)  
Ministry of Environment, Forest & Climate Change  
Bungalow No. A-2, Shyamali Colony  
Ranchi- 834002

Sub: Six Monthly Compliance of the Conditions stipulated in Environmental Clearance of  
Kiriburu- Meghahatuburu Iron Ore Mines for the period April-2021 to September-  
2021

Sir,

We are hereby submitting status of compliance for the period April-2021 to September-2021 to the conditions stipulated in the Environmental Clearance granted by MoEF&CC vide No- J-11015/272/2007-IA.II (M) dated 23.09.2014 for Kiriburu- Meghahatuburu Iron Ore Mines for production capacity of 16 MTPA (ROM) of Iron Ore & vide No- J-11015/272/2007-IA.II (M) dated 30.07.2020 for Tailing Excavation & Selling from Kiriburu- Meghahatuburu Iron Ore Mines- 1 MTPA from each Mine within 16 MTPA capacity.

A Soft copy of compliance report in a form of CD is also enclosed.

Thanking you.

Yours faithfully,  
For Steel Authority of India Limited,

कमलेश राय / KAMLESH RAI  
मुख्य महाप्रबंधक (खान)  
Chief General Manager (Mines) 16.11.2021  
कि.लो.अ.ख., बी.एस.एल, सेल  
KIOM, BSL, SAIL (Kamlesh Rai)  
Chief General Manager (Mines)  
Kiriburu Iron Ore Mines  
Bokaro Steel Plant

Encl : Compliance Report & Annexure

Copy:

- 1) Director, IA, MoEF&CC, GOI, Indira Paryavaran Bhavan, Aliganj, JorBagh Road, New Delhi- 110 003.
- 2) Member Secretary , JSPCB, HEC, Dhurwa, Ranchi- 834 004
- 3) In- Charge, Eastern Zone, CPCB, Southern Conclave , Block 502, 5<sup>th</sup> & 6<sup>th</sup> Floors, 1582, Rajdanga Main Road, Kolkata – 700 107 (W.B.)

**Status of Compliance to Conditions Stipulated in  
Environmental Clearance**

**granted by MoEF& CC**

**Vide order no. J-11015/272/2007-IA. II (M)  
dated 23.09.2014**

**&**

**Vide order no. J-11015/272/2007-IA. II (M)  
dated 30.07.2020**

**of**

**Kiriburu – Meghahatuburu Iron Ore Mine**

**(Period: April'2021 to September'2021)**



**STEEL AUTHORITY OF INDIA LIMITED**

**BOKARO STEEL PLANT**

**KIRIBURU – MEGHAHATUBURU IRON ORE MINES**

**P.O. – KIRIBURU, PIN :833222**

**DIST.: SINGHBHUM (WEST)**

**JHARKHAND STATE**



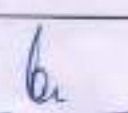
**Status of Compliance to Conditions Stipulated in Environmental Clearance**  
**(Vide order no. J-11015/272/2007-IA. II (M), dt.23.09.2014) & (Vide order no. J-11015/272/2007-IA. II (M) dated 30.07.2020) of**  
**Kiriburu - Meghahatuburu Iron Ore Mines, RMD, SAIL**  
**(Period: April'2021 to September'2021)**

**A. Specific Conditions**

Cond. No.	Condition Stipulated	Compliance Status as on September'2021
(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 kms 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 activities have been 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 their 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 dead line 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: April'2021 to September'2021


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 Kamlesh Rai  
 CGM (Mines), KJOM

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



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<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 IOM have been sponsored for ITI course to ITI, Rourkela (Cost to company/Expenditure-Rs.45000/ per student per year- valuing Rs. 10</p>

  
 Kamlesh Rai  
 CGM (Mines), KIOM

  
 R.P. SELVAM  
 CGM (M) MIOM



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<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 have been provided at 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 conservation plan for the core & buffer	<ul style="list-style-type: none"> <li>As per prevailing practice of the state forest department a scheme for Protection &amp;</li> </ul>

  
 Kamlesh Rai  
 CGM (Mines), KIOM

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

Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	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>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 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 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 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. Draft report has been presented before DFO Saranda on 11/06/2021 which is been</li> </ul>

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Kamlesh Raj  
S.G.M. (Mines), KCM


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R. P. SELVAN  
S.G.M. (M) KCM



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<p>provisionally approved with some modification. Again modified report has been presented before RCCF, Jamshedpur on 07/09/2021, where it is been provisionally approved and the plan is under approval stage before PCCF, Wildlife, Ranchi.</p> <ul style="list-style-type: none"> <li>In the draft Site-Specific Wildlife and Biodiversity Conservation Plan various structures has been proposed such as Rain Water Harvesting, Weed Removal, Avenue Plantation, Gap Filling, Wildlife Rescue Team, Mobile QRT, Artificial Bird Nest, Bird Bath at various locations in Township and mining Area of KIOM-MIOM.</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- WORK ORDER COPY OF CEMC, BHUBNESHWAR 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 780 m above MSL and 760 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 controlled & water sprinkling will also be	<ul style="list-style-type: none"> <li>Ore transportation through closed conveyers within the leasehold area at the Ore Processing Plant and final dispatch to Steel Plants through</li> </ul>

Period: April'2021 to September'2021

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 Kamlesh Rai  
 CGM (Mines), KIOM

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



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	done regularly. Vehicles with PUC 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>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)	Plantation on the OB dump slopes has to be increased and manage properly. House- keeping should be improved in processing area.	<ul style="list-style-type: none"> <li>During the year 2021-22, during APRIL 2021 TO SEPTEMBER 2021, 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>

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Kamlesh Rai  
C.O. (Mines) KIOB

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



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<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>

Period: April'2021 to September'2021

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 Kamlesh Rai  
 Joint Representative (Mines)  
 CGM (Mines), KIOM

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



Cond. No.	Condition Stipulated	Compliance Status as on September'2021																
		<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><tr><th>Local Name of Plant</th><th>Scientific Names</th></tr><tr><td>गुलमोहर</td><td>Delonix regia</td></tr><tr><td>बकवइन</td><td>Melia azedarach</td></tr><tr><td>आकाराम्पी</td><td>Acacia auriculiformis</td></tr><tr><td>कांटा बांस</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></table> <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>	Local Name of Plant	Scientific Names	गुलमोहर	Delonix regia	बकवइन	Melia azedarach	आकाराम्पी	Acacia auriculiformis	कांटा बांस	Bambusa bamboos	Hadge बांस	Bambusa multiplex	कागज फूल	Bougainvillea	Agave	Agave
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Hadge बांस	Bambusa multiplex																	
कागज फूल	Bougainvillea																	
Agave	Agave																	
(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	<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>																

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कमलेश राय  
Kamlesh Rai  
Joint Secretary (Joint)  
CGM (Mines), KIOM


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R. P. SELVAN  
C.O.M. (M) MIOM



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	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.	<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 on the weather conditions.</li> <li>➤ Additional permanent water sprinkling arrangement has also been provided in permanent haul roads of Mines near hopper to reduce fugitive dust.</li> </ul> </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</li> </ul>



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<p>been started. The PM2.5 in the ambient ranges from 16 to 47 ug/m<sup>3</sup>.</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>
(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 effectively implement all the conditions stipulated therein.	<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 24.12.2019 for 16 MTPA capacities vide letter no. JSPCB/HO/RNC/CTO-5913229/2019/2540 with validity up to 31.12.2024</li> <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</li> </ul>

  
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Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		capacities vide letter no. JSPCB/HO/RNC/CTO-9151117/2020/1890 with validity up to 30.09.2023 <b><u>ANNEXURE 14- COPIES OF CONCENT TO OPERATE (CTO) OF KIOM-MIOM, SAIL</u></b>
(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> <b><u>ANNEXURE 15- CORPORATE ENVIRONMENTAL VISION, POLICY AND RESPONSIBILITY OF SAIL</u></b> <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> <b><u>ANNEXURE 16- CERTIFICATE OF REGISTRATION FOR ISO 14001:2015 ENVIRONMENT MANAGEMENT SYSTEM OF KIOM &amp; MIOM, SAIL</u></b>
(xv)	There shall be planning, developing and 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.	<ul style="list-style-type: none"> <li>To augment ground water resources, a huge water pond (Size: 150 m X 100 M) has been made to receive storm water from the township and recharge ground water.</li> <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</li> </ul>



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<p>development has been done through consultant M/s Think Innovative Solution, Ranchi.</p> <ul style="list-style-type: none"> <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 topography and meteorological conditions of the area.</li> <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 ISPCB OF KIOM- MIOM, SAIL</u></b></p>
(xviii)	Water Sprinkling should be increased at places loading and unloading points &	<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</li> </ul>

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Joint Secretary (GM)  
CGM (Mines), KIOM

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



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	transfer point to reduce fugitive emission.	<p>are being operated and maintained. Water spray nozzles have been provided at transfer points / junction houses.</p> <ul style="list-style-type: none"> <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> <li>During April'2021 to September'2021 an amount of <b>Rs. 45.82 lakhs (KIOM- Rs 35.23 lakhs and MIOM- Rs 10.59 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>Expenses on Eklaya Archery Academy: - <b>10.74 lakhs</b></li> <li>Organizing Medical Camps (Eye, RCH, HIV -AIDS, weekly med. Check up camp in villages), Exp. for CSR patients in Indoor &amp; OPD.: -<b>4.37 Lakhs</b></li> </ul>



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<ul style="list-style-type: none"> <li>• Providing Bus services for School children of peripheral villages [ Karampada, Thalkobad]: - <b>1.99 Lakhs</b></li> <li>• Expenditure against to the adopted village's child in KIOM, Saranda hostel: - <b>2.15 Lakhs</b></li> <li>• Payment of Para-teachers engaged in 08 Schools (03 Schools in Jharkhand) &amp; (05 Schools in Odisha): - <b>14.49 Lakhs</b></li> <li>• Procurement of machine for woman empowerment, mushroom cultivation &amp; support services for improvement of production: - <b>0.02 Lakhs</b></li> <li>• Distribution of face mask, hand sanitizer, soap, Ration kit to the needy people in the neighboring village due to COVID: - <b>1.47 Lakhs</b></li> </ul> <p><b>CSR Details for MIOM: -</b></p> <ul style="list-style-type: none"> <li>• Medical check-up camp conducted in peripheral villages: - <b>0.09 Lakh</b></li> <li>• Self-Employment Centre (SOUBHAGYA): - <b>2.41 Lakhs</b></li> <li>• ITI training to local youths- 10 nos (Skill development) : - <b>4.05 Lakh</b></li> <li>• Livelihood Generation- <b>4.04 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 resources shall be obstructed due to any mining operations.	<ul style="list-style-type: none"> <li>• No natural watercourse / water resources obstructed due to any mining operation at Kiriburu -Meghahatuburu Iron ore Mines.</li> </ul>
(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	<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> </ul>

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Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	<p>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 &amp; Forests and its Regional office located at Bhubaneswar on six monthly basis.</p>	<ul style="list-style-type: none"> <li>• Presently entire OB generated at both Kiriburu - Meghahatuburu Mines is being used for backfilling of mined out areas.</li> <li>• During April 2021 to September 2021, about <b>4,66,470 T</b> of OB at KIOM &amp; <b>13,76,042 T</b> of OB at MIOM has been used for back filling the mined-out area.</li> <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 September 2021 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> <li>• Apart from this, 19.06 Ha void in the mining pit is been reclaimed with the backfilling. Out of this reclaimed area 10.4 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</li> </ul>

Period: April'2021 to September'2021

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 मुख्य निगरानी अधिकारी (खान)  
 CGM (Mines), KIOM

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



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<p>through introduction of new genotypes/ varieties/ species and natural resources conservation in different landscapes*.</p> <ul style="list-style-type: none"> <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, so that the plantation activities for next year will be smoothen.</li> <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>

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Cond. No.	Condition Stipulated	Compliance Status as on September'2021																
		<p>Details of Plant species planted are as follows: -</p> <table><tr><th>Local Name of Plant</th><th>Scientific Names</th></tr><tr><td>गुलमोहर</td><td>Delonix regia</td></tr><tr><td>सकाइन</td><td>Melia azedarach</td></tr><tr><td>आकारामनी</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>बागज फूल</td><td>Bougainvillea</td></tr><tr><td>Agave</td><td>Agave</td></tr></table> <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>	Local Name of Plant	Scientific Names	गुलमोहर	Delonix regia	सकाइन	Melia azedarach	आकारामनी	Acacia auriculiformis	कांटा बाँस	Bambusa bamboos	Hadge बाँस	Bambusa multiplex	बागज फूल	Bougainvillea	Agave	Agave
Local Name of Plant	Scientific Names																	
गुलमोहर	Delonix regia																	
सकाइन	Melia azedarach																	
आकारामनी	Acacia auriculiformis																	
कांटा बाँस	Bambusa bamboos																	
Hadge बाँस	Bambusa multiplex																	
बागज फूल	Bougainvillea																	
Agave	Agave																	
(xxii)	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	<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</li></ul>																



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	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>with Specific Measures and Cost Structure for Implementation", has been submitted and being under consideration by the concerned Forest Department.</p> <ul style="list-style-type: none"> <li>Final Catchment Area Treatment Plan in Two Volumes (1/2 &amp; 2/2) is been submitted to PCCF, Nodal Ranchi which is under approval stage.</li> <li>De-silting has been carried out at various locations in lease area. Additional Garland drain construction completed. Sump has been provided allowing settling of silt at corner of garland drains.</li> </ul> <p><b><u>ANNEXURE 20- PHOTOGRAPHS SHOWING VARIOUS SILT CONTROL ARRANGEMENTS CONSTRUCTED BY 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</u></b></p>



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
		<p><u><b>MONITORING SYSTEM (CAAQMS) INSTALLED AT MIOM, SAIL</b></u></p> <p><u><b>ANNEXURE 9- PHOTOGRAPH SHOWING THE DUST SUPPRESSION THROUGH WATER SPRINKLERS AND DRY FOG DUST SUPPRESSION SYSTEM AT KIOM-MIOM, SAIL</b></u></p>
(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><u><b>ANNEXURE 22- KOINA RIVER UPSTREAM &amp; DOWNSTREAM WATER QUALITY DATA REPORT FOR THE PERIOD OF -APRIL 2021 TO SEPTEMBER- 2021 BY KIOM-MIOM, SAIL</b></u></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,	<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, 2021.</li> </ul> <p><u><b>ANNEXURE 23- GROUND WATER QUALITY REPORT IN DUG WELL FOR THE PERIOD OF -APRIL 2021 TO SEPTEMBER- 2021 BY KIOM-MIOM, SAIL</b></u></p>

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 राज्य महानिरीक्षक (खन)  
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Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	Central Ground Water Board.	
(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 should be implemented. Drills shall either be operated with dust extractors or equipped with water injection system.	<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 &amp; DTH are also used to control ground vibration, fly rock.</li> <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 till September 2021, <b>120 Regular Employees &amp; Executives &amp; 295 Contractual Workers</b> have been Periodical Medically Examined (PME).</li> </ul>
(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	<ul style="list-style-type: none"> <li>The Integrated Wild Life Management Plan (IWLMP) prepared by the expert committee has addressed all the issues and recommended precautionary measures to be taken during mining operation for conservation and protection of endangered fauna and necessary allocation of funds for implementation of the conservation plan. 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</li> </ul>

  
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C.G.M. (M) MIOM



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	brought out in the wildlife conservation 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>Management Plan in entire lease hold area, on pro rata basis.</p> <ul style="list-style-type: none"> <li>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 and the plan is under approval stage before PCCF, Wildlife, Ranchi.</li> <li>In the draft Site-Specific Wildlife and Biodiversity Conservation Plan various structures has been proposed such as Rain Water Harvesting, Weed Removal, Avenue Plantation, Gap Filling, Wildlife Rescue Team, Mobile QRT, Artificial Bird Nest, Bird Bath at various locations in Township and mining Area of KIOM-MIOM.</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- WORK ORDER COPY OF CEMC, BHUBNESHWAR FOR SITE- SPECIFIC WILDLIFE AND BIODIVERSITY CONSERVATION PLAN FOR KIRIBURU- MEGHAHATUBURU IRON ORE MINES</u></b></p>
(xxxi)	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>

Period: April'2021 to September'2021

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 Kamlesh Rai  
 गणतंत्र शास्त्रज्ञ (खन)  
 CGM (Mines), KIOM

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



Cond. No.	Condition Stipulated	Compliance Status as on September'2021
	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 corpus fund will be submitted to MoEF&amp;CC, New Delhi 5 years in advance of final mine closure for approval.</li> </ul>
<b>• Additional Specific Conditions (EC Order Dated 30.07.2020)</b>		
(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 September'2021
		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 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 September' 2021
(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 (April'2021 to September'2021) is as follows-               <ul style="list-style-type: none"> <li>❖ <b>For KIOM:-</b> <ul style="list-style-type: none"> <li>For 6 Months (April 2021 to September 2021) : 19,13,220 Te (ROM)</li> </ul> </li> <li>❖ <b>For MIOM:-</b> <ul style="list-style-type: none"> <li>For 6 Months (April 2021 to September 2021) : 17,45,730 Te (ROM)</li> </ul> </li> <li>❖ <b>Total ROM Production for April 2021 to September 2021 (KIOM+MIOM) : 36,58,950 Te (3.658 MT) against EC of 16 MTPA</b></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 nearest habitation, whichever is closer shall be monitored	<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 CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM (CAAQMS) INSTALLED AT MIOM, SAIL</u></b></p>

Period: April'2021 to September'2021

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 Kamlesh Rai  
 मुख्य महानिरीक्षक (खन)  
 CGM (Mines), KIOM

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



Cond. No.	Condition Stipulated	Compliance Status as on September' 2021
	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-20012/1/2006-1A. 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.	<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)	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> & 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.	<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 PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR KIOM-MIOM, SAIL</u></b></p>
(v)	Fugitive dust emission from all the	<ul style="list-style-type: none"> <li>Adequate nos. of fugitive dust emission control</li> </ul>

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R. P. SELVAN  
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Cond. No.	Condition Stipulated	Compliance Status as on September' 2021
	sources 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</li> </ul>

Period: April'2021 to September'2021

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 मुख्य महाप्रबंधक (खान)  
 CGMA (Mines), KIOM

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



Cond. No.	Condition Stipulated	Compliance Status as on September' 2021
		<p>engineers regarding usage of ear plug/ear muffs.</p> <ul style="list-style-type: none"> <li>Regular noise survey is also carried out by trained technician of OHS &amp; by JSPCB on quarterly in the mines as per mines rules and parameters are found within norms.</li> <li>Measured noise levels at the mines during April'2021 to September'2021 are within permissible limit below 75 dB(A)</li> </ul> <p>KIOM Day Time- 73.7 dB(A) to 74.0 dB(A)          KIOM Night Time- 61.3 dB(A) to 62.2 dB(A)          MIOM Day Time- 70.6 dB(A)          MIOM Night Time- 67.5 dB(A)          MIOM DG Set- 72.4 dB(A)          KIOM DG Set- 65.6 dB(A)</p> <p><b><u>ANNEXURE 26- NOISE MONITORING THROUGH NABL LABORATORY REGISTERED WITH ISPCB FOR THE PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR KIOM-MIOM, SAIL</u></b></p>
(vii)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E), dated: 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.	<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 QUALITY ASSESSMENT REPORT THROUGH NABL LABORATORY REGISTERED WITH ISPCB FOR THE</u></b></p>

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 Approved by  
 Kiriburu Plant  
 Head Meghahatuburu (SAIL)  
 CQM (Mines), Kiriburu

11/3  
 R. P. SELVAN  
 C.Q.M. (M) MIOM



Cond. No.	Condition Stipulated	Compliance Status as on September' 2021
		<b><u>PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR KIOM-MIOM, SAIL</u></b>
(viii)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.	<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 being imparted on regular basis. A full-fledged Occupational Health Centre is run by the mines for regular health surveillance.</li> <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, during APRIL 2021 TO SEPTEMBER 2021</b> <b>AT KIOM: -</b> <ul style="list-style-type: none"> <li>Development &amp; maintenance of lake garden &amp; rose garden in Kiriburu Township: <b>Rs.12.98 lakh</b></li> <li>Maint. &amp; Devt. And upkeeping of outside areas and garden of different building of KIOM: <b>Rs.10.7 lakh</b></li> <li>Collection &amp; disposal of domestic garbage by engaging trolley at township area, KIOM: <b>Rs.11.93 lakh</b></li> <li>Collection &amp; disposal of domestic garbage by engaging trolley at hilltop &amp; hutment area of township, KIOM: <b>Rs.11.48 lakh</b></li> </ul> </li> </ul>

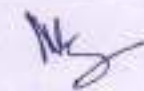


Cond. No.	Condition Stipulated	Compliance Status as on September' 2021
		<ul style="list-style-type: none"> <li>Cleaning of Sankoja Dam, upkeep of different offices etc. inside plant/mines area, KIOM: <b>Rs.7.21 lakh</b></li> <li>Upkeep of different installation, offices including other misc. jobs at hilltop &amp; township KIOM: <b>Rs.12.69 lakh</b></li> <li>R/c for bush cutting in township &amp; hilltop area of KIOM: <b>Rs.1.37 lakh</b></li> <li>R/c for cleaning of various water reservoir at Karo Dalmia, township, Kiriburu: <b>Rs.0.85 lakh</b></li> <li>Support facility for drinking water supply at Dalmia filter plant at Dalmia and filter plant at Murgapara water reservoir at KIOM: <b>Rs.13.8 lakh</b></li> <li>R/c for R&amp;M of sewerage line, drain etc. at KIOM: <b>Rs.1.0 lakh</b></li> <li>R/c for R&amp;M of drinking water supply, sanitary installation work etc. at township &amp; hilltop KIOM: <b>Rs.5.68 lakh</b></li> <li>General upkeep of township &amp; hutment area: <b>Rs.11.44 lakh</b></li> <li>Cleaning of sewerage line at township &amp; hilltop, KIOM: <b>Rs 6.69 lakh</b></li> <li>Mosquito Control operation work at township &amp; inside mining area: <b>Rs.5.7 lakh</b></li> </ul> <p><b>AT MIOM: -</b></p> <ul style="list-style-type: none"> <li>Plantation of trees 1500 nos saplings in mines &amp; township &amp; its maintenance, watch &amp; ward, watering: <b>Rs.8.84 lakh</b></li> <li>Collection &amp; disposal of industrial &amp; domestic garbage- <b>Rs 12.12 lakh</b></li> <li>Aesthetic beautification by upkeep of Megha Nikunj, Sanjivani Vatika Garden &amp; View Point, Hospital- <b>Rs. 6.79 Lakhs</b></li> <li>Laying &amp; Maintenance of sewerage line in MIOM township- <b>Rs. 4.70 lakh</b></li> <li>Implementation of Mosquito Control system (Fogging system)- <b>Rs.3.90 lakh</b></li> <li>Maintenance of Dust Suppression- <b>Rs. 13.3 Lakhs</b></li> </ul>
(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	<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</li> </ul>



Cond. No.	Condition Stipulated	Compliance Status as on September' 2021
	of start of land development work.	after installation of the facilities.
(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.in">www.sail.co.in</a>.</li> </ul>
(xvi)	A copy of clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom suggestion/representation has been received while processing the proposal.	<ul style="list-style-type: none"> <li>A copy of the environmental clearance letter has already been sent to the Panchayat.</li> <li>The clearance letter has been put on the Company website i.e., <a href="http://www.sail.co.in">www.sail.co.in</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	<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>ANNEXURE 28- COPIES OF THE</b></li> </ul>

  
 Kamlesh Raj  
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 R. P. SELVAM  
 C.G.M. (M) KIOB



Cond. No.	Condition Stipulated	Compliance Status as on September' 2021
	<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.	<p><b><u>ADVERTISEMENTS MADE IN THE NEWS PAPERS FOR EC OF KIOM-MIOM, SAIL</u></b></p> <ul style="list-style-type: none"> <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 Bhubaneshwar.</li> </ul>

6  
13-11-2021  
[KAMLESH RAI]  
कमलेश राय  
Kamlesh Rai  
मुख्य महाप्रबंधक (खान)  
CGM (Mines), KIOM

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

13/11/21  
[R. P. SELVAM]  
राजगोपाल पन्नीर सेल्वम  
RAJAGOPAL PANNER SELVAM  
मुख्य महाप्रबंधक (खान) / CGM (Mines)  
Meghahatuburu Iron Ore Mines  
P.O. Meghahatuburu - 833 222  
Dist: Singhbhum (West),  
State: - Jharkhand



**ANNEXURES: 6 MONTHLY EC  
COMPLIANCE APRIL 2021 TO  
SEPTEMBER 2021**

**EC granted by MoEF& CC**


**Vide order no. J-11015/272/2007-IA. II (M)  
dated 23.09.2014**

**&**

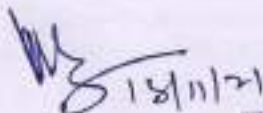
**Vide order no. J-11015/272/2007-IA. II (M)  
dated 30.07.2020**

**of**

**Kiriburu – Meghahatuburu Iron  
Ore Mine, Bokaro Steel Plant, M/s  
SAIL**

  
13.11.2021  
[KAMLESH RAI] **कमलेश राय / KAMLESH RAI**  
मुख्य महाप्रबंधक (खान) / Chief General Manager (Mines)  
कि.सी.अ.ख., बी.एस.एल., सेल / K.I.O.M. BSL, SAIL

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

  
[R.P. SELVAM] **राजागोपाल पन्नैर सेल्वम**  
मुख्य महाप्रबंधक (खान) / Chief General Manager (Mines)  
कि.सी.अ.ख., बी.एस.एल., सेल / K.I.O.M. BSL, SAIL  
Meghahatuburu Iron Ore Mines  
P.O. Meghahatuburu- 833223  
Dist.: Singhbhum (West),  
State:- Jharkhand



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**ANNEXURE 1- PAYMENT RECIEPT OF NPV PAID TOWARDS CAMPA FUND**



संघीय स्टेट ब्यांक  
भारतीय स्टेट बैंक  
STATE BANK OF INDIA

22.10.2019

**TO WHOMSOEVER IT MAY CONCERN**

It is to certify that, as a sum of Rs. 91,74,52,187/- (Rupees Ninety one crore Seventy four lakh thirty two thousand one hundred eighty seven only) has been transferred on 22.10.2019 from Account No. 30672040728 of SAIL RMD Kolkata vide their request letter dated 22.10.2019 to Account No. 150725879000688 of Corporation Bank, Lodi Complex Branch, New Delhi 110003 of Jharkhand Campa through RTGS UTR No. SBINR52019102200122381.

For STATE BANK OF INDIA

Manager (Trade Finance)  
CAG Branch (00008), Kolkata  
ANSHU KUMAR BHAGAT  
S. S. No. - D-8782



bank.sbi

☎ DDM (033) 2288-8090  
☎ AMT-I (033) 2288-8153  
☎ AMT-II (033) 2288-8707  
☎ AMT-III (033) 2288-8117  
☎ AMT-IV (033) 2288-1548  
☎ (033) 2288-7937, 2226-3258

वित्तियिक सहायक समूह शाखा  
सिद्धि धन, १४ फ्लोर  
२४, बंगलुरा रोड, कोलकाता  
कलकत्ता-७०० ०१३  
फोन नंबर : २२८८८८

वित्तियिक सहायक समूह शाखा  
सिद्धि धन, सिटी टॉवर  
२४, बंगलुरा रोड, कोलकाता  
कलकत्ता - ७०० ०१३  
फोन नंबर : २२८८८८

Commercial Clients Group Branch  
Siddhi Dhan  
2nd Floor  
24, Bangalore Road  
Kolkata - 700 021  
Branch Code : 000008

**ANNEXURE-I: A- PAYMENT RECIEPT OF NPV PAID TOWARDS CAMPA FUND**





स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड  
STEEL AUTHORITY OF INDIA LIMITED  
रॉ मटेरियल्स डिवीजन  
RAW MATERIALS DIVISION



State Bank of India  
Corporate Accounts Group Branch  
Kolkata (Code:09998)

Date: 22-10-2019

Please remit the sum of Rs. 91,74,32,187/- (Rupees Ninety One crore seventy four lakh thirty two thousand one hundred eighty seven only) as per details below by debiting our account No. 30672040728 for the said amount including your charges.

Name of the beneficiary: JHARKHAND CAMPA  
Destination Bank's name & branch: Corporation Bank, Lodhi Complex Branch, New Delhi-110003  
IFSC No. CORP0000371  
Account No: 150725879000688

Amount (in words): Rupees Ninety One crore seventy four lakh thirty two thousand one hundred eighty seven only.

Amount (in figures): Rs. 91,74,32,187/-

Charges: \_\_\_\_\_

Name of applicant: SAIL RMD KOLKATA

Total: \_\_\_\_\_

Address: 10, CAMAC STREET, KOLKATA-17

Date of transfer/ cash

Tel No. 22822176

Amount:

Serial No.:

Reference No.:

Signature:   
STEEL AUTHORITY OF INDIA LTD.  
RAW MATERIALS DIVISION  
10, CAMAC ST., KOLKATA-17  
Dr. General Manager (F&A)  
श्री - आर एस शर्मा / SAIL - RMD  
TOD 017

**CONDITIONS FOR TRANSFER:**

1. All payment instructions should be carefully checked by the remitter. As credits to the processing branch is based on the beneficiary's account number, the name of the other bank and its branch being correctly provided, SBI will not be responsible if these particulars are not provided correctly by the remitter.
2. Application/Message received after the business hours will be sent on the immediate next working day.
3. SBI shall not be responsible for any delay in the processing of the payment due to RBI RTGS system NOT being available/failure of internal Communication system at the recipient bank/branch/incorrect information provided by the remitter/Any incorrect credit accorded by the recipient bank/branch due to incorrect information provided by the remitter.
4. (i) Remitting branch shall not be liable for any loss or damage arising or resulting from delay in transmission/delivery or non delivery of electronic message or any mistake, omission or error in transmission or delivery thereof or on encrypting/decrypting the messages for any cause whatsoever or from the misinterpretation when received or for the action of the destination bank or for any act beyond the control of State Bank of India.  
(ii) If the recipient branch is closed for any reason, the account shall be credited on the immediate next working day.  
(iii) Bank is free to recover charges if any in respect of remittances returned on account of faulty/ inadequate information.
5. (i) We have fully read the terms and conditions of the RTGS remittances and shall abide by the same.

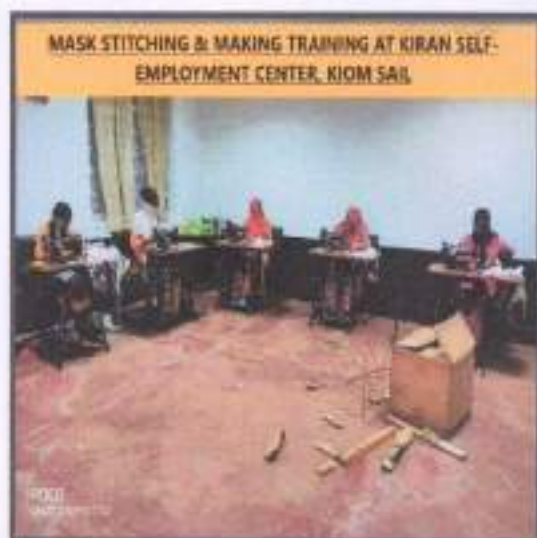
Signature:   
STEEL AUTHORITY OF INDIA LTD.  
RAW MATERIALS DIVISION  
10, CAMAC ST., KOLKATA-17

Signature:   
Dr. General Manager (F&A)  
श्री - आर एस शर्मा / SAIL - RMD  
TOD 017

ANNEXURE-1: B- PAYMENT CHALLAN SUBMITTED AT SBI OF NPV PAID TOWARDS CAMPA FUND



**ANNEXURE 2- PHOTOGRAPHS OF SELF EMPLOYMENT CENTER AT  
KIOM & MIOM, SAIL**



**ANNEXURE-2: A- MASK STITCHING & MAKING  
TRAINING AT KIRAN SELF-EMPLOYMENT CENTER,  
KIOM, SAIL**



**ANNEXURE-2: C- WEAVING TRAINING AT  
SAUBHAGYA SELF-EMPLOYMENT CENTER UNDER  
CSR INITIATIVE OF MIOM, SAIL**



**ANNEXURE-2: B- WEAVING TRAINING AT KIRAN  
SELF-EMPLOYMENT CENTER UNDER CSR INITIATIVE  
OF MIOM, SAIL**



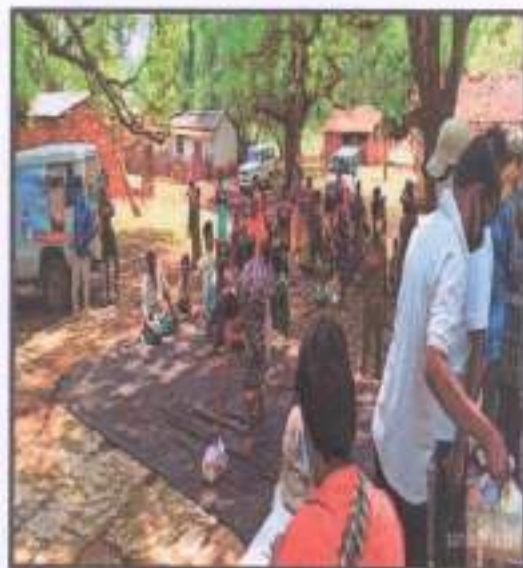
**ANNEXURE-2: D- COMPUTER TRAINING &  
PRINTING TRAINING AT SAUBHAGYA SELF-  
EMPLOYMENT CENTER UNDER CSR INITIATIVE OF  
MIOM, SAIL**



**ANNEXURE 3- FACE MASKS & FOOD PACKETS DISTRIBUTION  
UNDER CSR INITIATIVES DURING COVID-19 PANDEMIC BY KIOM-  
MIOM SAIL**



ANNEXURE-3: A- STITCHING OF MASK DURING  
COVID 19 BY KIOM-MIOM, SAIL-BSI



ANNEXURE-3: C- FOOD PACKETS & MASK  
DISTRIBUTION DURING COVID 19 PANDEMIC,  
VACCINATION DRIVE IN PERIFERAL VILLEGES

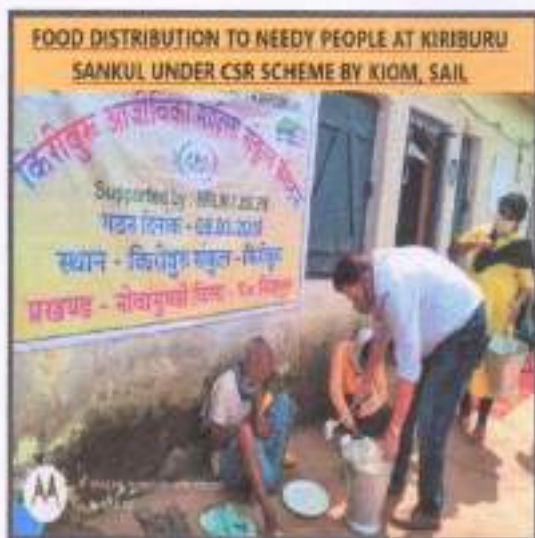


ANNEXURE-3: B- FOOD PACKETS PREPARED BY  
KIOM- MIOM DURING COVID 19 PANDEMIC  
DURING VACCINATION DRIVE IN PERIFERAL  
VILLEGES



ANNEXURE-3: D- FOOD MATERIALS FOR  
DISTRIBUTION DURING COVID 19 PANDEMIC



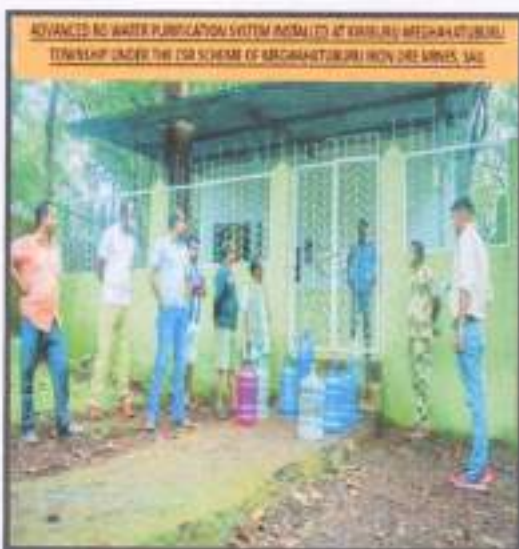


**ANNEXURE-3: E- FOOD DISTRIBUTION TO NEEDY PEOPLE AT KIRIBURU SANKUL UNDER CSR SCHEME BY KIOM**

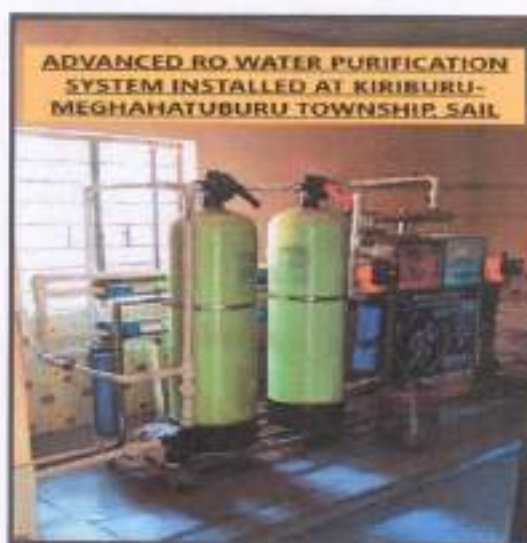


**ANNEXURE-3: F-DISTRIBUTION OF FOOD PACKETS TO NEEDY PEOPLE BY KIOM-MIOM, SAIL**

**ANNEXURE 4- CLEAN RO DRINKING WATER, HAND PUMPS HAVE BEEN PROVIDED AT THE SURROUNDING VILLAGES BY KIOM & MIOM, SAIL**

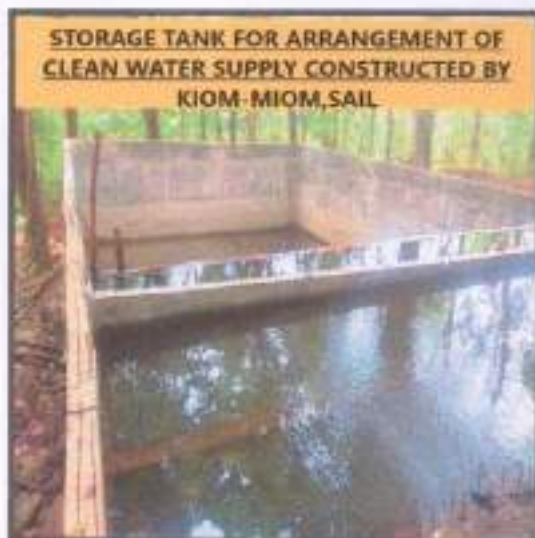


**ANNEXURE-4: A- ADVANCED RO WATER PURIFICATION SYSTEM INSTALLED AT KIRIBURU-MEGHAHATUBURU TOWNSHIP UNDER THE CSR SCHEME OF MEGHAHATUBURU IRON ORE MINES, SAIL**

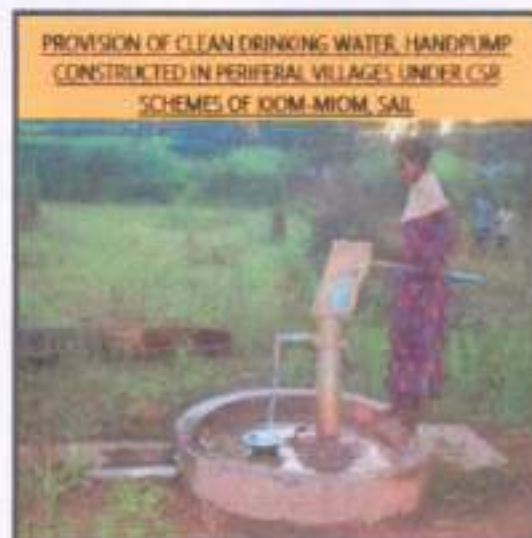


**ANNEXURE-4: B- ADVANCED RO WATER PURIFICATION SYSTEM INSTALLED AT KIRIBURU-MEGHAHATUBURU TOWNSHIP UNDER THE CSR SCHEME OF MEGHAHATUBURU IRON ORE MINES, SAIL**



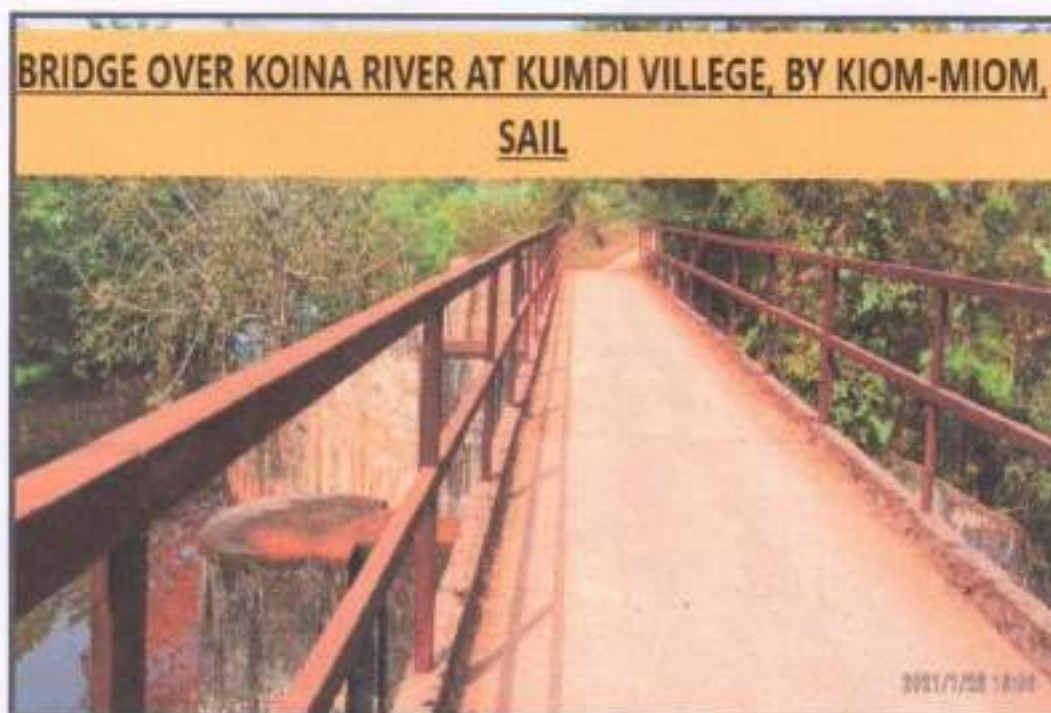


ANNEXURE-4: C- STORAGE TANK FOR  
ARRANGEMENT OF CLEAN WATER SUPPLY  
CONSTRUCTED BY KIOM-MIOM, SAIL



ANNEXURE-4: D- PROVISION OF CLEAN DRINKING  
WATER, HANDPUMP CONSTRUCTED IN PERIPHERAL  
VILLAGES UNDER CSR SCHEMES OF KIOM-MIOM,  
SAIL

**ANNEXURE 5- BRIDGE OVER KOINA RIVER AT KUMDIH VILLAGE HAS  
BEEN CONSTRUCTED BY KIOM-MIOM, SAIL**



ANNEXURE-5: A: BRIDGE OVER KOINA RIVER AT KUMDI VILLETTE CONSTRUCTED BY KIOM-MIOM, SAIL



**ANNEXURE 6- WATER AGREEMENT BETWEEN KIOM-MIOM, SAIL & WATER RESOURCE DEPARTMENT, GOVT. OF JHARKHAND**

**WATER AGREEMENT BETWEEN KIOM-MIOM, SAIL & WATER RESOURCE  
DEPARTMENT, GOVT. OF JHARKHAND- PAGE 1**



**INDIA NON JUDICIAL**  
**Government of Jharkhand**  
**e-Stamp**

Certificate No.	IN-JH0784150C1592576P
Certificate Issued Date	20-09-2017 11:58 AM
Account Reference	WONADO-150-1592576P-CHAIBASA/JH-WS
Unique Doc. Reference	00BIN-JH-ND-2017-0710387829288144P
Purchased by	SAIL, CHAIBASA
Description of Document	Agreement for memorandum of an Agreement
Property Description	AGREEMENT
Consideration Price (Rs.)	0
First Party	0
Second Party	SAIL KIRIBURU TO MEGHAHATUBURU IRON ORE MINES
Stamp Duty Paid By	WATER RESOURCE DEPARTMENT GOVT OF JHARKHAND
Stamp Duty Amount (Rs.)	SAIL KIRIBURU TO MEGHAHATUBURU IRON ORE MINES
	100
	(One Hundred only)





Please write or type below this line.....

**MODEL AGREEMENT**

**AGREEMENT FOR WATER SUPPLY FROM KOINA RIVER WHICH IS A TRIBUTARY OF SOUTH KOEL RIVER (NAME OF RIVER) TO KIRIBURU - MEGHAHATUBURU IRON ORE MINES, RMC, STEEL AUTHORITY OF INDIA LIMITED (SAIL)**

This agreement made on this 30<sup>th</sup> day of October, Two thousand Seventeen (2017) between Governor of Jharkhand through Water Resources Department (WRD), Government of Jharkhand herein after referred to as "The Government" which term shall unless excluded by or repugnant to the context, includes its legal representatives,

30-10-17 UP 0003458912

राज्यपालक अधिकारी

1. The watermark of the State Emblem of India should be visible on this Certificate and as watermark on the reverse side of the Certificate.



**PAGE 2**

**INDIA NON JUDICIAL  
Government of Jharkhand**

**e-Stamp**



सत्यमेव जयते

Certificate No.	: IN-JH07241255495309P
Certificate Issued Date	: 28-09-2017 11:45 AM
Account Reference	: KCHAC001/CH-007/CHAIBASA/JH-WS
Unique Doc. Reference	: STEIN/IN/1007100710387868643962P
Purchased by	: SAIL KIRIBURU
Description of Document	: Article 5 Agreement or memorandum of an Agreement
Property Description	: AGREEMENT
Consideration Price (Rs.)	: 0 (Zero only)
First Party	: SAIL KIRIBURU C.O MEGHAHATUBURU IRON ORE MINES
Second Party	: WATER RESOURCE DEPARTMENT GOVT OF JHARKHAND
Stamp Duty Paid By	: SAIL KIRIBURU C.O MEGHAHATUBURU IRON ORE MINES
Stamp Duty Amount (Rs.)	: 100 (One Hundred only)



Please write or type below this line

successors, executors, administrator & assigners on the one part & Kiriburu Meghahatuburu Iron ore Mines, RMD, Steel Authority of India Limited (SAIL) having its registered & administrative office at Ispat Bhawan, Lodhi Road, New Delhi- 110 003 and works office at Kiriburu Meghahatuburu Iron Ore Mine, Kiriburu, West Singhbhum Jharkhand 833 222 herein after referred to as "The Company" which expression shall unless excluded by or repugnant to the context of the meaning thereof, be deemed to include its successor and assigners and also mean Kiriburu - Meghahatuburu Iron ore Mines, RMD, Steel Authority of India Limited (SAIL) for all transactions & acts.

K. NARAYAN  
Statutory Agent Manager (Mines)

30-10-17  
कार्यालय, जयपुर

UP 0003458913

1. The stamp duty shall be paid by the purchaser of the stamp.  
2. The stamp duty shall be paid by the purchaser of the stamp.  
3. The stamp duty shall be paid by the purchaser of the stamp.



Whereas the company approached the Government on 28.08.2017 for allowing to Pump 3.326 MCM of water on annual basis in the Koila River which is a tributary of South Koel river at Latitude 22°59' 00" (Degree, Minute, Second) North and Longitude 85°15' 50.29" (Degree, Minute, Second) East for existing Kiriburu-Meghahatuburu Iron Ore Mines & Township and expansion of Mines Capacity to 16 MTPA (Type & capacity of the plant) and whereas the Government is in a position to allow withdrawal of 3.326 MCM on annual basis of water as per the concurrence issued by Water Resource Department (WRD), Government of Jharkhand to Kiriburu - Meghahatuburu Iron Ore Mines, RMD, Steel Authority of India Limited (SAIL) vide letter no 2/P/MC/W5-549/2017-448 dated 20/08/2017 and the parties hereto have agreed to have a formal agreement in this regard.

Now it is hereby agreed by and between the parties as follows:

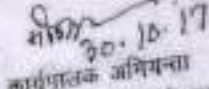
1. That "The Government" agrees to allow 3.326 MCM/Annum withdrawal of required quantity of water as per the details given herein at para 2.1 below :

The water withdrawal schedule for the plant

PERIOD (DD/MM/YYYY)	QUANTITY OF WATER TO BE DRAWN DURING THE YEAR (in MCM)
1.	1.
Nov-17- Oct-18	2.25 MCM
Nov-18- Oct-19	2.50 MCM
Nov-19- Oct-20	2.75 MCM
Nov-20-Oct-21	3.326 MCM
Nov-21-Oct-22	3.326 MCM

- 2.1. The water charges for quantity of water to be drawn by the company will come into effect from the period as indicated in column-1 of the table at para - 2 above.
- 2.2. The quantity of water to be drawn will be restricted to 3.326 MCM on annual basis) and the measurement of water will be done at the intake point. The measurement of this quantity of water will be checked up jointly by the consumer and the representative of Water resources Department, Govt. of Jharkhand (WRD, GOI) at least in every month. The measuring instruments shall be installed by the consumer at his own cost and shall remain exclusively under the control of WRD, GOI.
- A. General condition to be made applicable to any industry under consideration.
  - A.1. The availability of water may be interrupted temporarily for doing repairs or for such other works on the basis of jointly signed protocol & such interruption shall not ordinarily exceed thirty days. No claim by the company shall be preferred against the Government for such fluctuation in the discharge.

  
General Manager (Mines)  
SAIL, RMD  
Kiriburu Iron Ore Mines


  
30.10.17  
कार्यपालक अभियन्ता  
जलसंसाधन विभाग, राँची



## PAGE 4

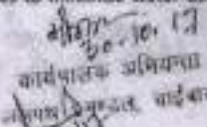
- A.2. The quantity of water indicated in para - 2 is based on the phasing demand of water put up by the company. In future, if it is found by computation as based on scientific methodology or otherwise that the consumption of water is more than as indicated in para -2, charges for such enhanced quantity of water so assessed, shall become payable to Government by the company.
- A.3. The company will install a water meter near the point of intake to measure the quantity of water pumped. If the quantity of water exceeds the quantity mentioned in para -2, the company will have to pay the bill based on actual withdrawal of water as per meter reading, but the minimum water rent for supply of water will be charged for the quantity as indicated at para -2.
- A.4. The company will have to establish online monitoring system of water drawl based on latest technology available at its own cost as and when the same will be implemented by WRD, Govt. of Jharkhand.
- A.5. The Government will not be responsible for any interruption or diminution or stoppage of supply of water due to lockout, strikes, breakdowns of mechanical units or other force majeure or other causes beyond the control of the Government. In view of the production technology & need of water supply to some other usage, the Government shall take such action, as is deemed necessary to restore availability of water with the least possible delay & ensure resumption of interruption or diminution or stoppage of water supply within shortest period.
- A.6. If due to any unforeseen reasons, the Govt. is not able to make available the quantity of water as envisaged in para 2, no legal action can be taken against the Govt.
- A.7. The company will make sure that the effluent (waste water along with Pollutants), if needed to be drained in the river or nala, will conform to the latest prescribed effluent quality parameters as prescribed by State Pollution Control Board and shall be safe for disposal in river or nala and shall not be injurious to human and aquatic life. The Water Resources Department as well as authorities specifically authorised in this regard will also get the test checks conducted at regular interval to testify the same. The installation of equipment or plant needed for this purpose, shall be done by the company. The company will also have to get clearance from the respective State Pollution Control Board and submit the report to WRD at regular interval not exceeding one year for continuance of supply of allocated water. The effluent disposal point should be fixed in the upstream of the respective intake point.
- A.8. The company shall make every endeavour to use the minimum possible water and shall make use of all latest technology to reduce the extant of usage of water.
- A.9. That the required water will be withdrawn or pumped by the company from the Right bank of river Kolna River which is a tributary of South Koel river by constructing a suitable water harvesting structure and intake near plant site located at Lat 22°09'00" North and Long. 85°15'50.29" East and or through the storage constructed for this purpose by the Company at Lat 22°07'20" N and Long 85°16'50" E & Lat 22°05'05" N and Long 85°15'50" E.

  
K. JAISANKAR  
General Manager (Mining)  
SAIL, RMD

  
K. JAISANKAR  
General Manager (Mining)  
SAIL, RMD

- A.10. That the cost of land required for building intake well, pump house, water meter & other allied infrastructure shall be borne by the Company.
- A.11. The Company shall pay water charge at the rate fixed by the WRD, GOJ. from time to time. As and when this rate is revised by the WRD from time to time, the company will be required to make payment at the revised rates of water charge. The rate fixed by the government shall be binding on the company.
- A.12. All the infrastructures including the intake and water harvesting structure commensurate with the requirement of water as per stipulated in para -2 needed for uninterrupted drawl of water shall be constructed by the company at their own cost, as per the design/drawing approved by the WRD, GOJ. The construction of the infrastructure shall be taken up by company only after joint inspection of the water tapping point by the representatives of WRD, GOJ and the company and approval there on by the WRD, GOJ. This infrastructure shall be operated and maintained by the company at their own cost.
- A.13. That the formal approval of the Government on detailed design, drawing & specification of the water harvesting structure, intake well, pump & pump house shall be obtained by the Company within six months from the date of signing of Agreement.
- A.14. The WRD will have the right to inspect the infrastructures from time to time and suggest corrective mechanism for removing the deficiencies, if any. The company will have to undertake the remedial measures, as suggested by WRD, at their own expenses.
- A.15. The company shall have to bear the cost of rehabilitation and resettlement of the families so displaced. The cost of land acquisition, forest land compensation, etc., as per prevailing norms of the Government, shall have to be borne by the company. The company shall also obtain forest, environmental and other mandatory clearances, wherever required from the concerned departments/Ministry of the State Government/Government of India.
- A.16. The company will not be allowed to draw additional water than the committed above without specific permission.
- A.17. The company shall utilize the water for the agreed purpose only and will have no right to sublet this water to any other company.
- A.18. The Govt. will have right to review the quantum of water required by the Company for its bonafide usage, and shall be at liberty to reduce the quantum as allocated in para -2, so as to optimize the usage of water in the interest of the State.
- A.19. The Company has to liaison with the concerned Chief Engineer, WRD to sign an agreement related to the utilisation of allocated water and making payment of the water charge, as per the terms and conditions stipulated under para -A.11 of this agreement. The allocation of water will come into effect from the day of execution of the agreement with the WRD, Jharkhand.
- A.20. The company shall install appropriate devices to minimise water use consumption

  
K. B. S. J. J.  
General Manager (Mines)

  
K. B. S. J. J.  
General Manager (Mines)



## PAGE 6

and also provide for recycling & conservation of industrial water.

A.21. The drawl of water from intake structure, shall under no circumstances be detrimental to the safety and operational procedures of reservoirs/barrages lying in the upstream or downstream or on both sides of the intake structure.

A.22. The company will have to go for the construction of Rain Water harvesting (RWH) Pond and Pit of appropriate capacity as per the design and plan approved by Ground Water Directorate, Water Resources department (WRD), Government of Jharkhand at his own cost for the conservation of rain water to meet the water demand of the plant during emergency/non-monsoon period and also for ground water recharging commensurate with ground water withdrawn for meeting only the domestic water demand during exigency.

A.22.1 A comprehensive plan of Rain Water Harvesting Project for ground water recharging must be submitted by the Company to Ground water Directorate of Water Resources Department, Govt. of Jharkhand within two months from the date of signing of Agreement under the intimation to WRD, GOJ. This plan has to get approved by Ground Water Directorate, WRD, GOJ within one month from the date of submission of the above plan.

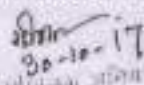
A.22.2 Rain Water Harvesting Project for ground water recharging must be completed within three months from the date of approval of the plan.

A.23. The company will have to construct a reservoir at a suitable location to meet the water requirement of the plant during non-monsoon (November to May) on the basis of the realistic quantum of water availability computed with the help of actual observed hydro-metereological data from where it has been intended to meet the water demand of the plant. Lean season flow of the river will not be intercepted at all. To ensure this, inlet in the intake well will be provided above lowest water level (LWL) which will be fixed by the concerned Chief Engineer, WRD, after approval of WRD, GOJ.

A.24. The flood water will be optimally stored and utilized by the installation of a rubber dam/a series of rubber dams or any other suitable techniques for flexible storage at suitable locations across the river (from where the water is to be drawn) by the company at his own cost. The storage planning will be approved by WRD, GOJ.

The designed height of the flexible storage dam will be restored during flood period only by inflating /raking it to store the flood water within the river section and also to store it into some other suitable storages limited to the quantity of water earmarked to the industrial unit. This height of flexible dam will be gradually decreased and finally deflated/lowered fully in accordance with the balance quantity of flood water needed to be stored. However, the height of the flexible storage dam during normal flow of the river will not exceed the upstream level of the river on which the irrigation/municipal/industrial projects have been planned in the downstream. The water levels at different river flows near to the flexible dam site in the upstream will be marked by the Company at his own cost. These marked water levels of the river will be finally checked and approved by the WRD, GOJ.


  
Sd/- P.110  
Joint Secretary (Water Resources)  
GOJ, Ranchi

  
30-10-17  
Joint Secretary (Water Resources)  
GOJ, Ranchi

The Company at his own cost has to remove the silt from the river bed likely to be deposited in the upstream of the rubber dam just after the monsoon each year to ensure no adverse impact on the river regime.

- A.25. A joint review by the representatives of Govt. of Jharkhand and the company shall be made periodically at least once in every three years on the observed industrial water consumption pattern of the unit to assess the possibility and the technological interventions needed for reducing down the quantum of industrial water already earmarked in order to effect the same from the mutually accepted data.
- A.26. That the accounting year shall be from 1<sup>st</sup> April to 31<sup>st</sup> March of two consecutive calendar years. The bills for payment of water charges shall be prepared by the government every month on the basis of demand stipulated in para - 2, 2.1& 2.2.
- A.27. The company shall ensure to make payment of the bill within 30 days of its presentation, failing which a penalty at the rate of 10% of the water rate in prevalence as on the concerned date shall be charged over and above the normal rate. If however, any discrepancy or error is found in the bill the same will be intimated to the government within 15 days for necessary rectification, but the payment against the original bill will have to be made within stipulated period. The rectification in the bill, however, will be adjusted in the next accounts and accordingly the next bill be charged from the company.
- A.28. In case of non-payment of water charge for more than two consecutive months by the company, the government shall have the right to stop withdrawal of water from the river by the company.
- A.29. That the date of receipt of the bill or the revised bill, as the case may be at company's office, will be treated as the date of receipt from which date the period of 30 days or 15 days referred to above, would be counted.
- A.30. All disputes and differences, except the matter for which provision has been expressly made in the agreement between the parties arising out of or in connection with this agreement, shall be referred to the Arbitrator, who will be an officer of WRD, Jharkhand and not below the rank of Superintending Engineer & will be nominated by the State Government. There shall be no objection to the appointment of the Arbitrator on the ground that the Arbitrator so appointed, is a State Government servant or that he had to deal with the matters to which this agreement relates to & that in the course of his duties as Government servant, he had expressed views on all or any of the matters in disputes or differences. The provision of the Arbitration and Conciliation Act, 1996 & any statutory modification thereof for the time being in force, shall apply.
- A.31. This agreement shall remain valid for a period of five years. For making a fresh agreement, the company will be required to submit an application to the department 6 months prior to expiry of the existing agreement. The fresh agreement will be executed after reviewing the average actual usage by the

  
K. Jaisankar  
General Manager (Mines)  
SAIL LTD

  
K. Jaisankar  
General Manager (Mines)  
SAIL LTD



## PAGE 8

Company. In case, the average utilisation of water during the last four years have been less by more than 10 %, the company will have to submit the justification to WRD for allocating the earlier quantum of water as envisaged in para-2 or else the WRD will revise the allocation of water.

In case the company do not submit the application to WRD within the stipulated time frame or submit the application after the stipulated time frame without substantiating the justification for the allocation of earlier quantum of water, the WRD will have the right to reduce the water allocation to the average use of water made by the company during the last four years or to the quantity to which the WRD deems fit.

A.32. In case the company violates any of the conditions stipulated in this agreement, WRD, Govt will be free to take decision regarding termination of the agreement.

B. Specific technical conditions to the industry on case to case basis.

WRD, GOI will be free to include any specific technical condition/conditions to the industry on case to case basis as and when required and mutually agreed between either parties, in Annexure - A which will be treated as part of this agreement.

In witness whereof, the parties of this agreement have herein put their respective hands & seals, the day and year of agreement first above written.

Signed, seal & delivered on behalf of

(Name of Company) K. VARAJU  
General Manager (Mines),  
SAIL P-13

In presence of Kibburu Iron Ore Mines:

1. Manoj Kumar 30/10/17  
Regional Director SAIL
2. Praveen Kumar 30/10/17  
Mys. (Tech), KIOI
3. 30-10-2017  
R. B. S. S. S.  
MANAGER (Mines) KIOI SAIL

Signed, seal & delivered on behalf of

Governor of Jharkhand through Water  
Resources Department, Government of  
Jharkhand.

In presence of

1. 30/10/17
2. 30/10/17
3. 30/10/17

### Specific Technical Conditions to the Industry

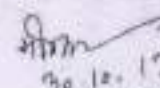
1. The drawal of water will be done by the company from the intake point located at Lat 22°09'00" North and Long 85°15'50.29" East from Koira River which is a tributary of South Koel River and or through the storage constructed for this purpose by the Company at Lat 22°07'20" N and Long 85°38'50" E & Lat 22°08'05" N and Long 85°35'30" E across Koira river & tributaries at Karampada RF, Block Noamundi, Dist West Singhbhum.
2. The drawal of water must start as per the schedule indicated in clause-2 of the agreement.
3. The schedule of drawal of water must start within two years from the date of signing of agreement.
4. In the event of delay in drawal of water as per schedule indicated in clause-2 of the agreement, the delay will be penalized as below:

(i) Up to one year delay from schedule mentioned in clause-2 of the agreement.	(i) 25 % of water charges for the quantity of water drawal indicated for the 1 <sup>st</sup> year under column-2 of the table in clause-2 of the agreement.
(ii) Up to two years delay from schedule mentioned in clause-2 of the agreement.	(ii) 50 % of water charges for the quantity of water drawal indicated for the 2 <sup>nd</sup> year under column-2 of the table in clause-2 of the agreement.
(iii) Beyond two years delay from schedule mentioned in clause-2 of the agreement.	(iii) Full water charges for the quantity of water indicated for the 3 <sup>rd</sup> year and onwards under column-2 of the table in clause-2 of the agreement.

5. The schedule of drawal of water will be fixed in such a manner so that the total quantity of water allocated must be drawn within five years from the starting date of the scheduled water drawal as per clause-2 of the agreement. The quantity of water which cannot be used within five years will be deemed as surrendered and dereserved.

  
20/10/17  
Signed, seal & delivered on behalf of  
(Name of Company)



K. VARAJU  
General Manager (Mines)  
SAIL  
Kibburu Mines

  
30.12.17  
कार्यपालक अभियन्ता  
Signed, seal & delivered on behalf of  
Governor of Jharkhand through Water  
Resources Department, Government of  
Jharkhand.

ANNEXURE-6: I- WATER AGREEMENT BETWEEN KIM-MIOM, SAIL & WATER RESOURCE DEPARTMENT, GOVT. OF JHARKHAND- PAGE- 9

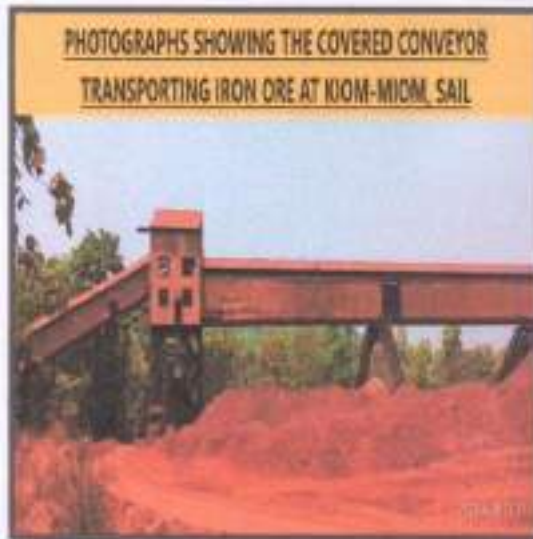


**ANNEXURE 7- WORK ORDER COPY OF CEMC, BHUBNESHWAR FOR  
SITE- SPECIFIC WILDLIFE AND BIODIVERSITY CONSERVATION PLAN  
FOR KIRIBURU- MEGHAHATUBURU IRON ORE MINES**

<p><b>STEEL AUTHORITY OF INDIA LTD.</b> (A Govt. of India Enterprise) Regs. Office : Ispat Bhawan Lodi Road, New Delhi</p>		<p><b>RAW MATERIALS DIVISION</b> KBR-MBR GROUP OF MINES CONTRACT CELL PO : Meghahatuburu-833223 Dist : Singhbhum (West) Jharkhand Email : <a href="mailto:contract@kicm@gmail.com">contract@kicm@gmail.com</a> Tel : [0659-244308] Fax : [0659-244955] [244220] [244287] Dated: 30.01.2021</p>																								
<p>WO No: CG4389/OT/KICM/MW-131/1222</p>																										
<p><b>WORK ORDER</b></p>																										
<p>To, M/s Centre for Envotech &amp; Management Consultancy Pvt. Ltd., 1<sup>st</sup> Floor, N-5305, IRC Village Nayapalli, Bhubaneswar Dist: Khordha, Odisha: 751015 Email: <a href="mailto:cenec122@gmail.com">cenec122@gmail.com</a>, <a href="mailto:cenec_consultancy@yahoo.co.in">cenec_consultancy@yahoo.co.in</a> Mbl No: +91-9851032026</p>	<p><b>Bank &amp; Other Details:</b> A/c No: 381010200004170 IFSC Code: UTIB0000381 Axis Bank, Chandrasekharpur Current Account PAN No: AACCC7431N GST No: 21 AACCC7431N12Q MSME Certificate (Udyog Aadhar Memorandum) No.- OD15E0010199</p>																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Name of the Work:</th> <th colspan="2">Engagement of Consultant for preparation and approval for SITE SPECIFIC WILDLIFE AND BIODIVERSITY CONSERVATION PLAN for Amalgamated Lease area of Kiriburu-Meghahatuburu Iron Ore Mines located in Saranda Forest Division of West Singhbhum District, Jharkhand.</th> </tr> </thead> <tbody> <tr> <td>Ref.</td> <td>1.</td> <td>Our NT No: CG4389/OT/KICM/MW-131/1222 Dated: 01.10.2020</td> </tr> <tr> <td></td> <td>2.</td> <td>Your Offer Dated: 05/11/2020 (Extended Date)</td> </tr> <tr> <td></td> <td>3.</td> <td>Our LOA No: CG4389/OT/KICM/MW-131/1222 Dated: 21.11.2020</td> </tr> <tr> <td></td> <td>4.</td> <td>ISD: ₹28,750/- (Rupees Twenty-Eight Thousand Seven Hundred Fifty Only)</td> </tr> <tr> <td></td> <td>5.</td> <td>EMD: ₹15,000/- (Submitted MSME Document). Hence exempted from submission of EMD.</td> </tr> <tr> <td></td> <td>6.</td> <td>Balance ISD Amount: ₹28,750/- (Rupees Twenty-Eight Thousand Seven Hundred Fifty Only) deposited by you vide Online Transaction from Axis Bank No: NL Dated: 25.11.2020</td> </tr> <tr> <td></td> <td>7.</td> <td>PG Amount: ₹3,70,000/- (Rupees Three Lakh Seventy Thousand Only) deposited by you vide BG No: OGT0856210050245 Dated: 04/01/2021 (valid upto 03.04.2021)</td> </tr> </tbody> </table>			Name of the Work:	Engagement of Consultant for preparation and approval for SITE SPECIFIC WILDLIFE AND BIODIVERSITY CONSERVATION PLAN for Amalgamated Lease area of Kiriburu-Meghahatuburu Iron Ore Mines located in Saranda Forest Division of West Singhbhum District, Jharkhand.		Ref.	1.	Our NT No: CG4389/OT/KICM/MW-131/1222 Dated: 01.10.2020		2.	Your Offer Dated: 05/11/2020 (Extended Date)		3.	Our LOA No: CG4389/OT/KICM/MW-131/1222 Dated: 21.11.2020		4.	ISD: ₹28,750/- (Rupees Twenty-Eight Thousand Seven Hundred Fifty Only)		5.	EMD: ₹15,000/- (Submitted MSME Document). Hence exempted from submission of EMD.		6.	Balance ISD Amount: ₹28,750/- (Rupees Twenty-Eight Thousand Seven Hundred Fifty Only) deposited by you vide Online Transaction from Axis Bank No: NL Dated: 25.11.2020		7.	PG Amount: ₹3,70,000/- (Rupees Three Lakh Seventy Thousand Only) deposited by you vide BG No: OGT0856210050245 Dated: 04/01/2021 (valid upto 03.04.2021)
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<p>Dear Sir,</p> <p>We are pleased to accept your aforesaid tender for the above work and to award the same on the terms and conditions of the tender document and Scope of Work cum Price Schedule annexed herewith as Annexure-I and subject to the following:</p> <ol style="list-style-type: none"> <li>1. Work Order Value : ₹11,50,000.00 (Rupees Eleven Lakh Fifty Thousand only).</li> <li>2. Date of Commencement : 13.02.2021 or actual date of commencement of work, whichever is earlier.</li> <li>3. Period of Contract : 03 (Three) Months from the date of commencement of work.</li> <li>4. Paying Authority : Head of Finance &amp; Accounts Department (KICM)</li> <li>5. Place of Work : Amalgamated lease area of KICM-MCOM (Total Lease area 2897.46Ha) &amp; 5Km buffer zone</li> <li>6. Maintenance Period : NIL</li> <li>7. Inspector/Oper Auth Entry : Shri Manoj Kumar, DGM(E&amp;L), KICM</li> <li>8. Executing Authority : Shri Praveen Kumar, AGM (Mining)/O, E&amp;L, KICM</li> <li>9. You are requested to acknowledge the receipt of the Work order within 07 (Seven) days of issue of the order, duly signed in its duplicate copy as a token of receipt of the same.</li> <li>10. You shall execute an agreement on Non-Judicial Stamp Paper worth ₹50/- within 10 (Ten) days of issue of this letter &amp; copy of same may be submitted to CC. Till a formal agreement is signed, this Work Order together with LOA, NT, Instructions to Tenderers, Form of Tender, Special Conditions of Contract (SCC) and General Conditions of Contract (GCC) shall constitute a binding contract between you and SAIL-RMD-Kiriburu Iron Ore Mines</li> <li>11. You shall have to furnish GST Registration No. if GST is to be claimed &amp; has to clearly show the amount of GST as per rate applicable separately in the Tax Invoices raised by you, otherwise a declaration indicating that the value of the taxable services rendered by you in a year is less than ₹20.00 Lakh shall be given in which case, the GST will not be payable to you.</li> <li>12. The Management reserves the right to withdraw the work order and terminate the contract at any time without giving any reason what-so-ever.</li> </ol> <p>Thanking you,</p> <p align="right">Yours Faithfully,  Dy General Manager (CC) SAIL, RMD, KICM-MCOM Group of Mines K. B. Saha By General Manager (CC) SAIL, RMD Meghahatuburu Iron Ore Mines</p>																										
<p><b>Copy to:</b></p> <table border="0" style="width: 100%;"> <tr> <td>1. DGM (Mining), KICM - for kind information</td> <td>5. AGM (Mining)/O, E&amp;L, KICM</td> </tr> <tr> <td>2. DGM(E&amp;L), KICM</td> <td>6. Safety Officer, Kiriburu</td> </tr> <tr> <td>3. DGM(P&amp;A), KICM</td> <td>7. Range Officer, Kiriburu</td> </tr> <tr> <td>4. DGM(P&amp;A), KICM</td> <td>8. Dy Commandant, CISF</td> </tr> </table>			1. DGM (Mining), KICM - for kind information	5. AGM (Mining)/O, E&L, KICM	2. DGM(E&L), KICM	6. Safety Officer, Kiriburu	3. DGM(P&A), KICM	7. Range Officer, Kiriburu	4. DGM(P&A), KICM	8. Dy Commandant, CISF																
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<p><b>WORK ORDER COPY OF CEMC, BHUBNESHWAR FOR SITE- SPECIFIC WILDLIFE AND BIODIVERSITY CONSERVATION PLAN FOR KIRIBURU- MEGHAHATUBURU IRON ORE MINES</b></p>																										

**ANNEXURE-7- A- WORK ORDER COPY OF CEMC, BHUBNESHWAR FOR SITE- SPECIFIC WILDLIFE AND  
BIODIVERSITY CONSERVATION PLAN FOR KIRIBURU- MEGHAHATUBURU IRON ORE MINES**

**ANNEXURE 8- PHOTOGRAPHS SHOWING THE COVERED CONVEYOR TRANSPORTING IRON ORE AT KIOM-MIOM, SAIL**

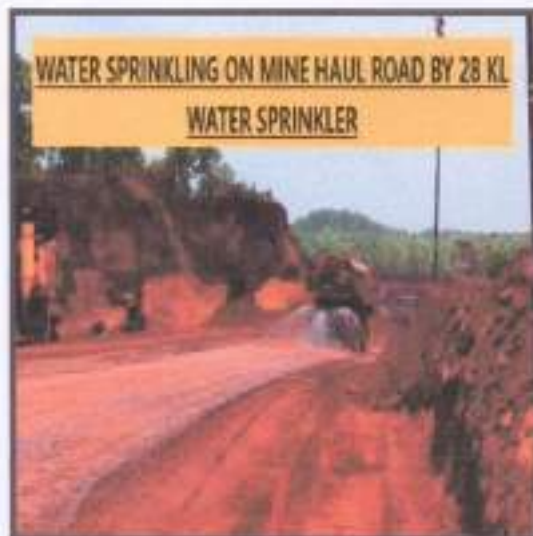


ANNEXURE-8: A- PHOTOGRAPHS SHOWING THE COVERED CONVEYOR TRANSPORTING IRON ORE AT KIOM-MIOM, SAIL

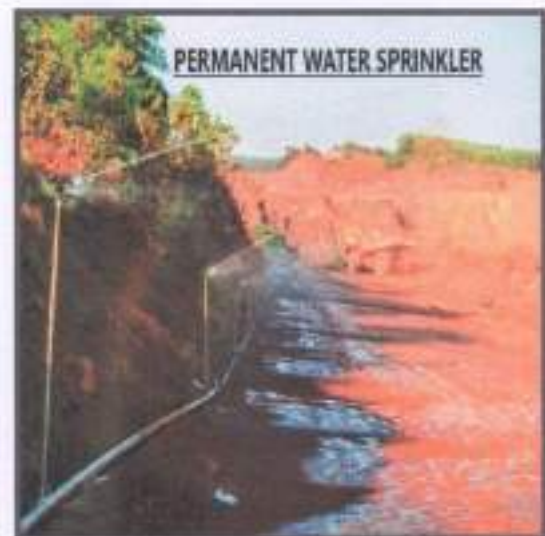


ANNEXURE-8: B- PHOTOGRAPHS SHOWING THE COVERED CONVEYOR TRANSPORTING IRON ORE AT KIOM-MIOM, SAIL

**ANNEXURE 9- PHOTOGRAPH SHOWING THE DUST SUPPRESSION THROUGH WATER SPRINKLERS AND DRY FOG DUST SUPPRESSION SYSTEM AT KIOM-MIOM, SAIL**

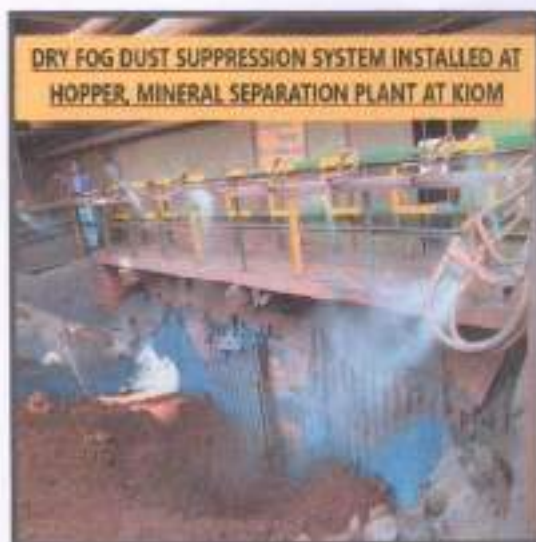


ANNEXURE-9: A- 28 KL WATER SPRINKLER MOUNTED ON DUMPER, SPRINKLING ON HAUL ROAD AT KIOM



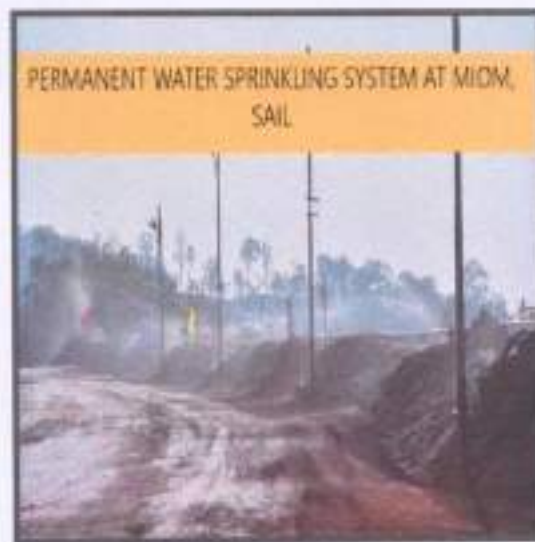
ANNEXURE-9: B- PERMANENT WATER SPRINKLER INSTALLED AT KIOM MINE HAUL ROAD





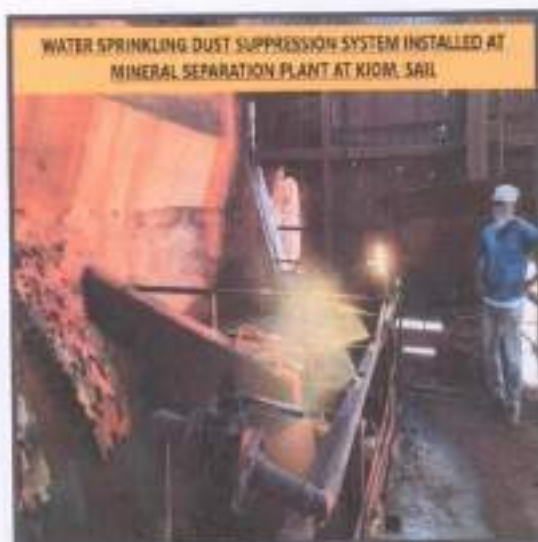
**DRY FOG DUST SUPPRESSION SYSTEM INSTALLED AT HOPPER, MINERAL SEPARATION PLANT AT KIOM**

ANNEXURE-9: C- DRY FOG DUST SUPPRESSION SYSTEM INSTALLED AT HOPPER, MINERAL SEPARATION PLANT AT KIOM, SAIL



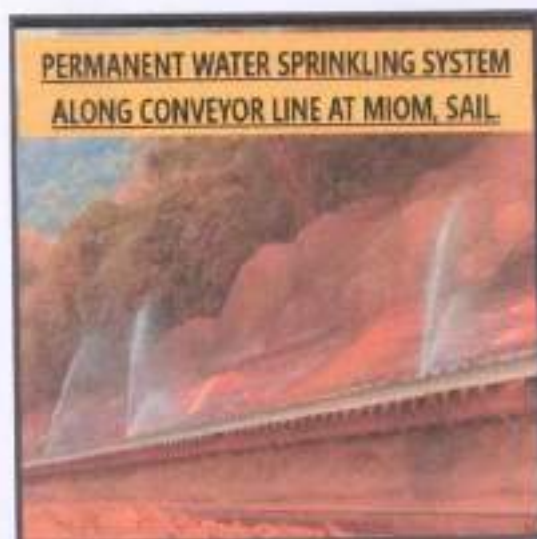
**PERMANENT WATER SPRINKLING SYSTEM AT MIOM, SAIL**

ANNEXURE-9: E- PERMANENT WATER SPRINKLING SYSTEM AT MEGHAHATUBURU IRON ORE MINES, SAIL



**WATER SPRINKLING DUST SUPPRESSION SYSTEM INSTALLED AT MINERAL SEPARATION PLANT AT KIOM, SAIL**

ANNEXURE-9: D- WATER SPINKLING DUST SUPPRESSION SYSTEM INSTALLED AT MINERAL SEPARATION PLANT AT KIOM, SAIL

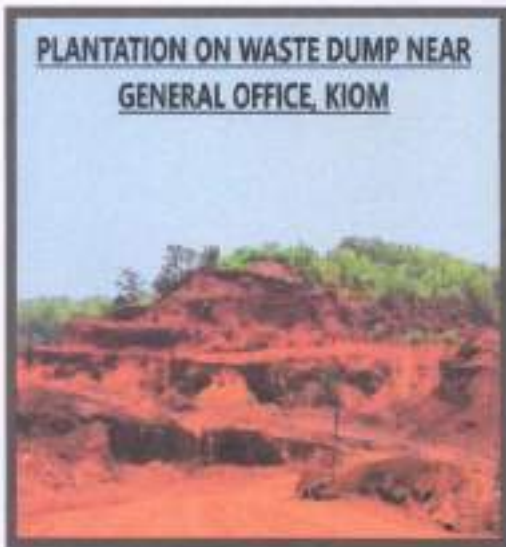


**PERMANENT WATER SPRINKLING SYSTEM ALONG CONVEYOR LINE AT MIOM, SAIL**

ANNEXURE-9: F- PERMANENT WATER SPRINKLING SYSTEM AT MEGHAHATUBURU IRON ORE MINES, SAIL

**ANNEXURE 10- PHOTOGRAPH SHOWING PLANTATION AT VARIOUS LOCATIONS OF MINES, TOWNSHIP & COIR MATTING & COPY OF MOU SIGNED BETWEEN RMD, SAIL KIOM & IFP RANCHI FOR ECO-RESTORATION ON MINED OUT AREA KIOM-MIOM, SAIL**

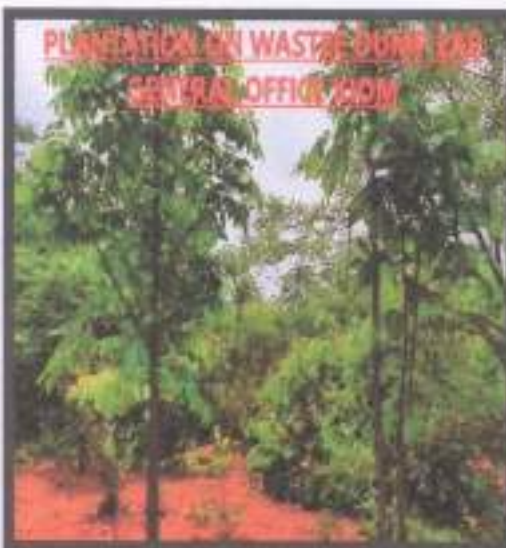
**PLANTATION ON WASTE DUMP NEAR  
GENERAL OFFICE, KIOM**



**ANNEXURE-10: A- PLANTATION ON WASTE DUMP  
NEAR GENERAL OFFICE, KIOM**



**ANNEXURE-10: C- PLANTATION ON BACKFILLED  
AREA NEAR MINERAL SEPARATION PLANT, KIOM**

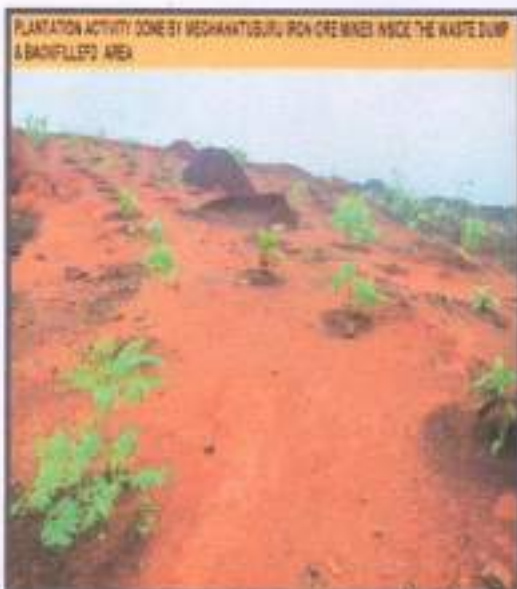


**ANNEXURE-10: B- PLANTATION ON WASTE DUMP  
NEAR GENERAL OFFICE KIOM**

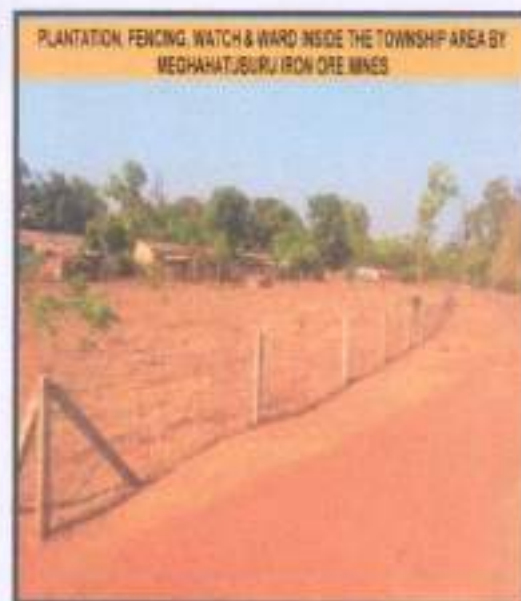


**ANNEXURE-10: D- PLANTATION ON BACKFILLED  
AREA NEAR MINERAL SEPARATION PLANT, KIOM**

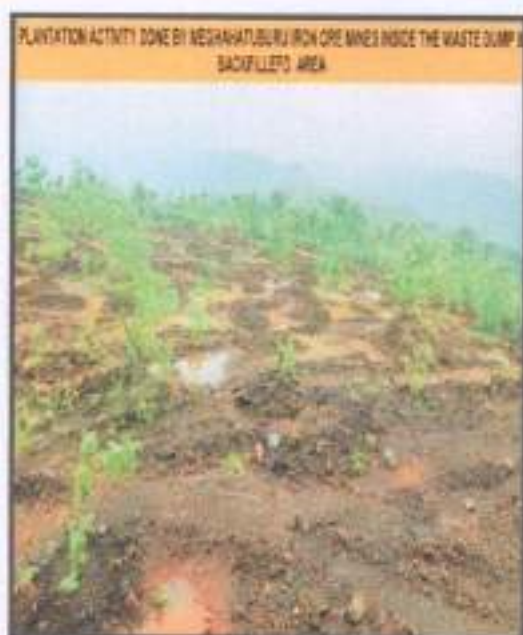




ANNEXURE-10: E- PLANTATION ACTIVITY DONE BY MEGHAHATUBURU IRON ORE MINES INSIDE THE WASTE DUMP & BACKFILLED AREA



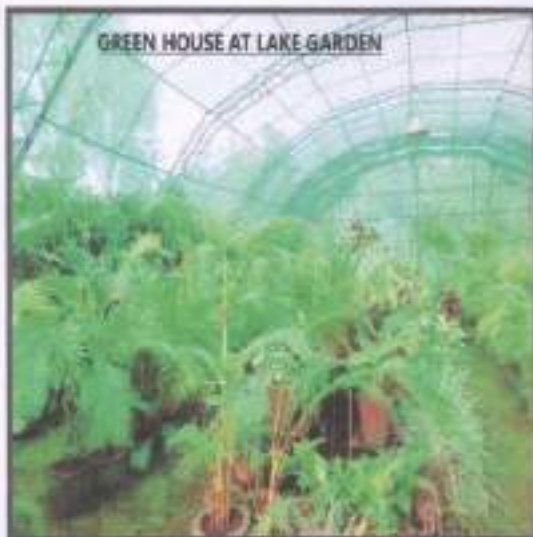
ANNEXURE-10: G- PLANTATION, FENCING, WATCH & WARD INSIDE THE TOWNSHIP AREA BY MEGHAHATUBURU IRON ORE MINES



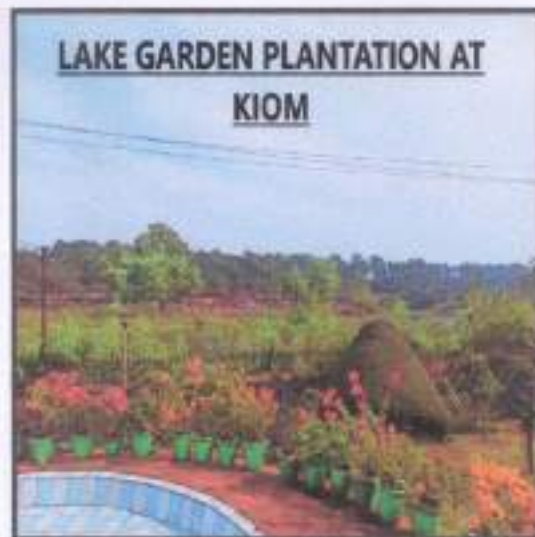
ANNEXURE-10: F- PLANTATION ACTIVITY DONE BY MEGHAHATUBURU IRON ORE MINES INSIDE THE WASTE DUMP & BACKFILLED AREA



ANNEXURE-10: H- PLANTATION DONE BY MEGHAHATUBURU IRON ORE MINES IN TOWNSHIP AREA AT MEGHA NIKUNI GARDEN



ANNEXURE-10: I- GREEN HOUSE AT LAKE GARDEN  
KIOM, SAIL



ANNEXURE-10: K- LAKE GARDEN PLANTATION AT  
KIOM, SAIL



ANNEXURE-10: J- SURVEY & PREPARATORY WORK  
DONE BY OFFICIALS OF IFP RANCHI IN  
CONSULTATION WITH OFFICIALS OF KIOM



ANNEXURE-10: L- PLANTATION ON BACKFILLING  
AREA BY IFP RANCHI AT KIOM





## Government of Jharkhand

### Receipt of Online Payment of Stamp Duty

NON JUDICIAL

Receipt Number : 95ab5dec8e9d93585d38

Receipt Date : 16-Jan-2021 10:53:37 am

Receipt Amount : 100/-

Amount in Words : One Hundred Rupees Only

Document Type : Agreement or Memorandum of an Agreement

District Name : West Singhbhum

Stamp Duty Paid By : KIRIBURU IRON ORE MINES RMD SAIL

Purpose of stamp duty paid : AGREEMENT

First Party Name : INSTITUTE OF FOREST PRODUCTIVITY RANCHI

Second Party Name : KIRIBURU IRON ORE MINES RMD SAIL

GRN Number : 2103844105

- This stamp paper can be verified in the jharkhandhan site through receipt number -

डा. निराला कुलकर्णी  
निदेशक

DILIP KUMAR BARMAN  
Chief Officer (Finance)



वन उत्पादकता संस्थान  
मुख्य  
This Receipt is to be used as proof of payment of stamp duty only for one document. The use of the same receipt as proof of payment of stamp duty in another document through reprint, photo copy or other means is penal offence under section-42 of Indian Stamp Act, 1899

इस रसीद का उपयोग केवल एक ही दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु ही किया जा सकता है। पुनः प्रिन्ट कर अथवा फोटो कॉपी आदि द्वारा इसी रसीद का दूसरे दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु उपयोग भालीप मुद्रांक अधिनियम, 1899 की धारा 62 अन्तर्गत दण्डनीय अपराध है।

ANNEXURE-10: M- COPY OF MOU SIGNED BETWEEN RMD, SAIL KIOM & IFP RANCHI FOR ECO-RESTORATION ON MINED OUT AREA OF 10 HA AT KIOM



## Government of Jharkhand

### Receipt of Online Payment of Stamp Duty

NON JUDICIAL

Receipt Number : 0f2af455e9543651213f

Receipt Date : 16-Jan-2021 10:49:12 am

Receipt Amount : 100/-

Amount In Words : One Hundred Rupees Only

Document Type : Agreement or Memorandum of an Agreement

District Name : West Singhbhum

Stamp Duty Paid By : MEGHAHATUBURU IRON ORE MINES  
RMD SAIL

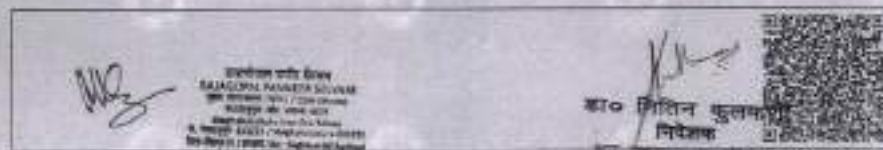
Purpose of stamp duty paid : AGREEMENT

First Party Name : MEGHAHATUBURU IRON ORE MINES  
RMD SAIL

Second Party Name : INSTITUTE OF FOREST PRODUCTIVITY  
RANCHI

GRN Number : 2103844016

- This stamp paper can be verified in the jharkhandhan site through receipt number -



This Receipt is to be used as proof of payment of stamp duty only for one document. The use of the same receipt as proof of payment of stamp duty in another document through reprint, photo copy or other means is penal offence under section-62 of Indian Stamp Act, 1899

इस रसीद का उपयोग केवल एक ही दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु ही किया जा सकता है। पुनः प्रिन्ट कर अथवा फोटो कॉपी आदि द्वारा इसी रसीद का दूसरे दस्तावेज पर मुद्रांक शुल्क का भुगतान के प्रमाण हेतु उपयोग भारतीय मुद्रांक अधिनियम, 1899 की धारा 62 अन्तर्गत दण्डनीय अपराध है।

**ANNEXURE-10: N-COPY OF MOU SIGNED BETWEEN RMD, SAIL, MIOM & IFP RANCHI FOR ECO-RESTORATION ON MINED OUT AREA OF 8.5 HA AT MIOM, SAIL.**



**ANNEXURE 11- WORK ORDER COPY FOR CONSTRUCTION OF 3  
NUMBER OF SEWAGE TREATMENT PLANTS FOR TOWNSHIP  
HOUSEHOLDS AT KIOM-MIOM, SAIL**

# **CONTRACT AGREEMENT**

BETWEEN



STEEL AUTHORITY OF INDIA LIMITED  
(RAW MATERIALS DIVISION)

&

M/s SOPHISTICATED INDUSTRIAL MATERIALS ANALYTIC  
LABS PVT. LTD.

FOR

SETTING UP OF SEWERAGE TREATMENT PLANTS AT  
KIOM & MIOM TOWNSHIPS AT KIRIBURU &  
MEGHAHATUBURU IRON ORE MINES

CONTRACT AGREEMENT NO.

RMD/K/PROJ/MIOM/CA/19-20/105 DATED: 03/10/2019

**ANNEXURE-11: A- CONTRACT AGREEMENT COPY FOR CONSTRUCTION OF 3 NUMBER OF SEWAGE TREATMENT PLANTS FOR TOWNSHIP HOUSEHOLDS AT KIOM-MIOM, SAIL PAGE-1**



पश्चिम बंगाल WEST BENGAL

AC 718260

**CONTRACT AGREEMENT**

THIS CONTRACT NO. RMDK/PROJMIOMCA/19-20/105 made this 03<sup>rd</sup> Day of October Two Thousand Nineteen at RMD, Kolkata.

BETWEEN

STEEL AUTHORITY OF INDIA LIMITED, a Company incorporated under the Companies Act, 1956 and having its registered office at Jagat Bhawan, Lodi Road, New Delhi 110 003, India, having one of its mines, MEGHAHATUBURU IRON ORES MINES under Raw Materials Division (RMD) at MEGHAHATUBURU, DISTRICT-WEST SINGHBHUM, JHARKHAND-833223 (hereinafter referred to as the "Employer") which term or expression unless excluded by or repugnant to the context or the meaning thereof, shall be deemed to include its successors and permitted assigns, OF THE ONE PART,

AND

M/s Sophisticated Industrial Materials Analytic Labs Pvt. Ltd. a partnership firm / Company organized and existing under the laws of India, and having its Office at A-3/P, Mayapuri Industrial Area, Phase-II, New Delhi-64 (hereinafter referred to as "Contractor"), which term or expression unless excluded by or repugnant to the context or meaning thereof, shall be deemed to include its successors and permitted assigns, OF THE OTHER PART

**AND WHEREAS**

- The Employer has decided to setup Setting up of Sewerage Treatment Plants at KIOM & MIOM Townships at Kibbera & Meghahatuburu Iron Ore Mines (hereinafter referred to as the "Facilities"), and
- The Contractor has declared that the Contractor has valuable and specialized knowledge and expertise for providing and executing the above Facilities and
- The Contractor has declared that the Contractor is in a position to disclose, impart, deliver and transfer the requisite engineering data, drawings and documents of those items which are in the scope of the Contractor in this Contract, to the Employer for the engineering of the Facilities and for erection, start-up and commissioning of the Facilities with the aim to manufacture product as specified in the Contract, and

CA No. RMDK/PROJMIOMCA/19-20/105 Dated: 03/10/2019

Page 2 of 314

13/10/19

**ANNEXURE-11: B-CONTRACT AGREEMENT COPY FOR CONSTRUCTION OF 3 NUMBER OF SEWAGE TREATMENT PLANTS FOR TOWNSHIP HOUSEHOLDS AT KIOM-MIOM, SAIL PAGE-2**



02/10/19

450

DATE 02/10/19 (Projector)

NO. 390-000

PS. Shelton Sam Sam

Dist. \_\_\_\_\_

Name of Projector: Barrackpore

Name of Vendor: MANA SUN

Date of Purchase: 25 SEP 2019

Total Amount: 390-000

Signature of Vendor: Rama Sam

02/10/19

- g) The Contractor has obtained derivatives on technical and commercial aspects, inspected the site and surroundings of Facilities and has examined and considered all other matters, conditions and things, possible contingencies and generally all matters incidental thereto and ancillary thereto, affecting the execution and completion of the Facilities; and
- h) The Contractor has agreed to undertake design & engineering, civil engineering work, dismantling of buildings, structures & equipment, fabrication & supply of steel structures, manufacture & supply of plant and equipment, manufacture & supply of refineries, intermediate storage, insurance & handling, erection work, testing, pre-commissioning, start-up & commissioning and demonstration & establishment of performance guarantee parameters of the Facilities.

NOW IT IS HEREBY AGREED as follows:

**Article 1 Contract Documents**

**1.1 Definitions** (Reference GCC Clause 1)

**1.2 Contract Documents** (Reference GCC Clause 2)

The following documents shall constitute the Contract between the Employer and the Contractor, and each shall be read and construed as an integral part of the Contract:

- (a) This Contract Agreement and Appendices hereto;
- (b) Special Conditions of Contract and Addendum hereto;
- (c) Safety code for Contractors;
- (d) General Conditions of Contract and Addendum hereto;
- (e) Contract Technical Specifications;
- (f) LDA issued by the Employer & accepted by the contractor;
- (g) Guidelines of Bidding of business dealings;

**1.3 Order of Precedence** (Reference GCC Clause 3)

In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.2 (Contract Documents) above.

**Article 2 Contract Price and Terms of Payment**

**2.1 Contract Price** (Reference GCC Clause 11 & Appendix 1)

The Employer hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price is ₹ 3,25,27,421.89 (Rupees Nine Crores, Twenty Lakh, twenty seven Thousand, four hundred twenty and sixty paise only) (inclusive of GST @12%) or such other sums as may be determined in accordance with the terms and conditions of the Contract.

**2.2 Terms of Payment** (Reference Appendix-3)

The terms of payment are given in Appendix 3 and GCC clause no- 18.

**2.3 Price Adjustment due to Variation in Price Indices** (Reference Appendix-4)

Price adjustment is applicable as per Appendix 4 and the Base Date shall be 16.04.2019.

OR No. 1024/MUM/CMCA/18-20/10, Dated 03/10/2019



Page 2 of 21

Handwritten signature and date: 03/10/2019



1.1 The Effective Date of Contract shall be 16-09-2016.

**Article 6** Scope of Facilities (Reference: GGC Course 7 & Technical Specifications)

- 4.2 Should the actual percentage weights differ from the indicated ones, neither the Contractor shall be entitled to get any additional price from the Employer nor is the Employer entitled to deduct any amount from the Contract Price due to variation in physical quantities/weights.

## Article 1 Time for Completion (Reference DCC Clause 2 &amp; Appendix D)

- 5.1 The Facilities will be constructed in 24 (Twenty four) months from the Effective Date of the Contract.  
The Performance Bank Guarantee (PBG) shall be submitted by the Contractor within 30 days of signing of Contract.

## Artist: Consultant

- 6.1 Center for Engineering and Technology (CET), Nanaji shall be the Consultant for this project. The CONSULTANT in relation to the Contract, shall have such functions as are delegated to him or as may be referred to him by the Employer from time to time. Employer shall keep the Contractor informed of such delegation.

**Article 7**      Notwithstanding Reference DCC Clause 19

- F.1 This shall be as per IEC Clause 10

## Article 8 Liquidated Damages (Reference DCC Course 27 &amp; 28)

- 81 Unsettled Damages due to Delay in Completion of Facilities (Reference OGC Sub-Cause 29.2)

10. The Contractor shall obtain "Completion of the Facilities" within the Time for Completion of any individual itemized under Clause 42 (Extension of Time for Completion) of GCC due to reasons attributable to the Contractor. The Employer shall receive the amount of Unliquidated Damages, but not by way of penalty, by making deductions from the Contractor's account by encashment of Contractor's Bank Guarantees (or per Sub-Clause 17.4 of GCC) at the rate of 0.05% of the Contract Price plus escalation, if any, paid if applicable to the Contractor, including late payment dates per complete weeks of delay up to a maximum of 5% of the Contract Price plus escalation if any, until it is payable to the Contractor excluding items and duties, as specified in the Clause 20.2 of GCC.

- 4.2. Lightest Damages for Non-Mileage of Performance Guarantees Parameters of Facilities Reference GCI Class 20

It, for reasons attributable to the Contractor, the performance guarantee parameters specified in Appendix-5 are not met either in whole or in part, the Contractor shall at its own expense make such changes, modifications and/or additions to the Facilities or any part thereof as may be necessary to meet performance guarantee parameters. The

CA NE RADIOPROGRAMMALE E DOTTORATO DI RICERCA

© 2004 Blackwell



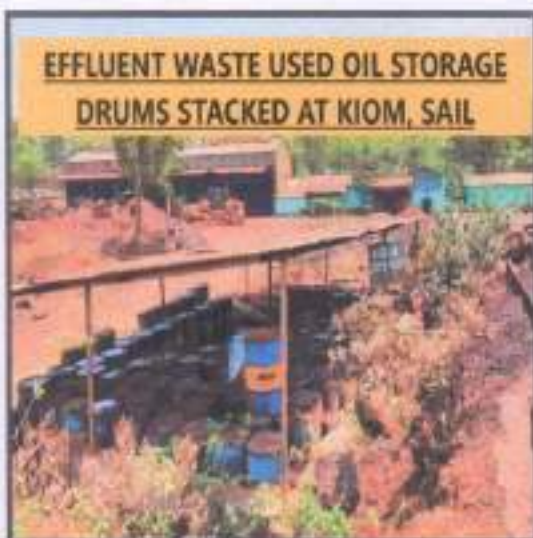
26 Aug 10/2019



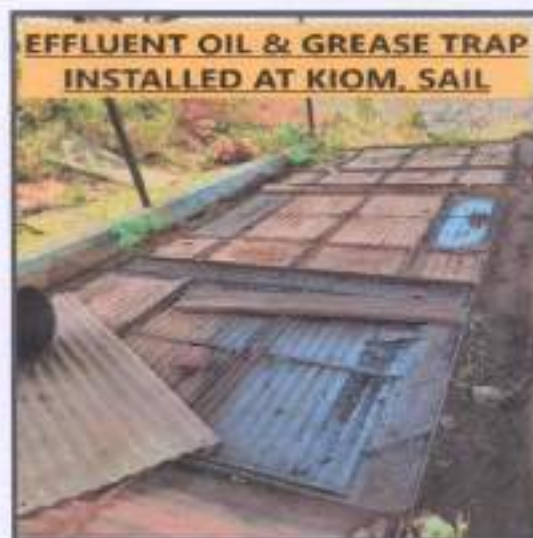




**ANNEXURE 12- EFFLUENT TREATMENT & DISPOSAL FACILITY FOR USED OIL AT KIOM-MIOM, SAIL**

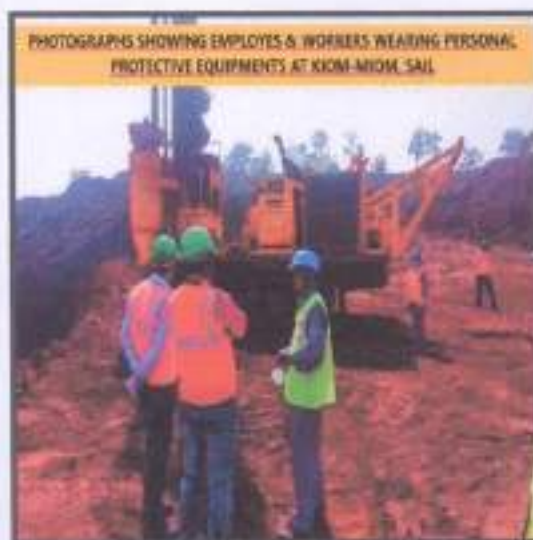


**ANNEXURE-12: A- EFFLUENT WASTE USED OIL STORAGE DRUMS STACKED AT KIOM, SAIL**

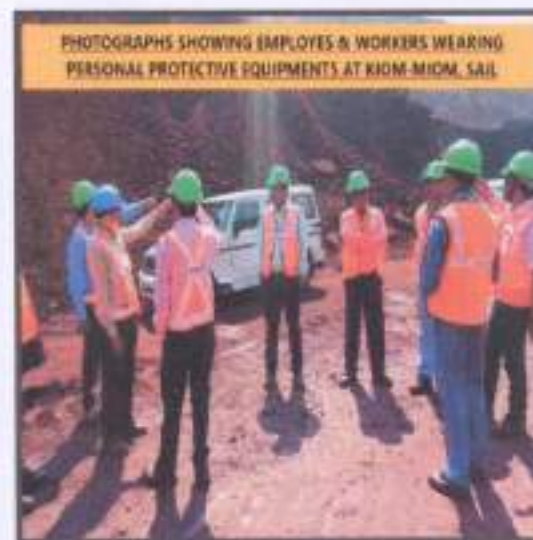


**ANNEXURE-12: B- EFFLUENT TREATMENT UNIT (ETP) - EFFLUENT OIL & GREASE TRAP INSTALLED AT KIOM, SAIL**

**ANNEXURE 13- PHOTOGRAPHS SHOWING EMPLOYEES & WORKERS WEARING PERSONAL PROTECTIVE EQUIPMENTS AT KIOM-MIOM, SAIL**




**ANNEXURE-13: A- PHOTOGRAPHS SHOWING EMPLOYEES & WORKERS WEARING PERSONAL PROTECTIVE EQUIPMENTS AT KIOM-MIOM, SAIL**



**ANNEXURE-13: B- PHOTOGRAPHS SHOWING EMPLOYEES & WORKERS WEARING PERSONAL PROTECTIVE EQUIPMENTS AT KIOM-MIOM, SAIL**



**ANNEXURE 14- COPIES OF CONCENT TO OPERATE (CTO) OF KIOM-MIOM, SAIL**

COPY OF CONCENT TO OPERATE (CTO) VALID TILL 31/12/2024 PAGE-1					
 <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <p><b>JHARKHAND STATE POLLUTION CONTROL BOARD</b></p> <p>TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI - 834004</p> <p>Telephone: 0651-2400850 (Fax): 2400851/2400852/2401847/2400979/2400139</p> </div>					
Ref No. JSPCB/HO/RNC/CTO-5913229/2019/2540			Dated: 2019-12-26		
<p><b>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</b></p>					
<p>1. Application (s) dated 2019-08-26 of KIRIBURU-MEGHAHATUBURU IRON ORE MINES, Occupier Name : C Mukhopadhyay for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention &amp; Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention &amp; Control of Pollution) Act,1981..</p>					
<p>2. Documents Relied Upon:</p>					
<p>(1.) The content of Environmental Clearance (EC), Ref.No. J-1105/05/2006-IA.II (M) Dated 27.12.2006, Ref.No. J-1105/272/2007-IA.II (M) Dated 23.09.2014 issued by MoEF, Govt. of India.</p>					
<p>(2.) The content of Consent-to-Establish (CTE), Ref.No. G-697 Ranchi, Dated 25.03.2015.</p>					
<p>(3.) The content of Consent-to-Operate (CTO), vide Ref.No. JSPCB/HO/RNC/CTO-1024701/2016/1091 Dated : 2016-12-31 for Iron Ore-16.0 Million Ton/annum, Mineral Beneficiation – 16 Million TPA valid up to 31.12.2019;</p>					
<p>(4.) The content of inspection report, Ref. No. 1574 dated 13.09.2019 of Regional Office-cum-Laboratory, Ranchi of the Board.</p>					
<p>3. The consent is granted 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 to operate the project in Mausa -KARAMPADA, P S -KIRIBURU, District -WEST SINGHBHUM, as follows:</p>					
Project	Site-Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot Nos.	Area			Date of issue To
Before Expansion	Block No. 15, - Karampada, P.O. Kiriburu, Dist. West Singhbhum	As per EC	98983 Lacs	Iron Ore-16.0 Million Ton/annum, Mineral Beneficiation – 16 Million TPA	31/12/2024
<p>(A) Specific Conditions:</p>					

PAGE-2

1. That, the occupier shall comply all the conditions imposed in Forest Clearance Letter No. F-No.-8-69/2591-FC (PT) and carry out mining activity over such Forest Area only for which due approval from the competent authority has been obtained.

2. That, the occupier shall obtain approval under the F.C. Act for diversion of entire forest land within the mining lease within a period of 2 years from the date of issue of the guidelines vide F. No. 11-362/2012-FC, MOEF, Govt. of India (FC Division) dated 01.02.2013 failing which the mining lease area will be reduced to the non forest area plus the forest area for which the unit has been able to obtain Environmental Clearance at the end of this time period.

3. That, the occupier shall do sprinkling of water time to time on haul roads and dust prone areas.

4. That, the occupier shall take initiative to mitigate pollution of Koira river and Karo river in consultation with the State Pollution Control Board and shall submit action taken report within two months.

5. That, the occupier shall construct sewage treatment plant for the colony as per time bound action plan submitted by the unit. ETP should also be provided for workshop and mineral separation plant.

6. That, the occupier shall carry out blasting operation during the day time. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.

7. That, the occupier shall keep the vehicular emission under control by regularly monitoring of the vehicles used in mining operations and in transportation of minerals. The engaged vehicles shall be covered with a tarpaulin and shall not be overloaded at any cost.

8. That, the occupier shall re-circulate the decanted water from the beneficiation plant and slime/tailing pond within the mine and there shall be zero discharge from the mine.

9. The mining operations shall be restricted to above ground water table and it should not intersect with ground water table.

10. Plantation on the OB dump slopes has to be increased and managed properly. Housekeeping should be maintained in the specified area.

11. The top soil, if any shall temporarily be stored at earmarked site only and it should not be kept underutilized for long. The top soil shall be used for land reclamation and plantation. The overburden generated during the mining operations shall be stacked at earmarked dump site only and it should not be kept active for a long period of time. The maximum height of the stack should not exceed 8 m and width 20 m and overall slope of the dump shall be maintained at 45 degrees.

12. Catch drains and siltation pond of appropriate size shall be constructed around the mine working, mineral and OB dump to prevent runoff of water and flow of sediments directly into the river and other water bodies.



13. That, the occupier shall adopt clean development mechanism.

14. That, the occupier shall provide adequate no. of high efficiency dust extraction system in mineral handling plant loading and unloading areas including all the transfer points should also have efficient dust control arrangements. The should be properly maintained and operated.

15. That, 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 as well as the State Pollution Control Board.

16. That, the occupier shall comply the conditions of Environmental Clearance and shall submit six monthly compliance report of it to the Board.

17. That, the occupier shall grant of this Consent-to-Operate is issued from the Environmental angle only and does not absolves the project proponent from the other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility, to comply with the conditions laid down in all other laws for the time-being in force, rests with the industry /unit/project proponent.

18. That, the grant of this Consent-to-Operate shall not, in any way, adversely affect or jeopardize the legal proceedings, if any, instituted in the past or that could be instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.

19. That, the occupier shall submit applications for renewal of consent under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days prior to the date of expiry of this consent i.e. 31.12.2024 with requisite fee and documents showing compliance of all of the above conditions.

20. This CTO will supersede the previous CTO issued vide ref.no. JSPCB/HO/RNC/CTO-1024701/2016/1091 Dated : 2016-12-31 valid up to 31-12-2019 for further period.

21. That, the occupier shall install CAAQMS and PM10 analyzer with connectivity to website of the Board, within 03 months, failing which Environmental Compensation shall be levied from date of issued of this Consent to operate(CTO);

(B) General Conditions :

(i) That, the occupier shall maintain the National Ambient Air Quality Standard given below:

**PAGE- 4**

S.N	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Areas	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM <sub>10</sub> , µg/m <sup>3</sup>	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM <sub>2.5</sub> , µg/m <sup>3</sup>	Annual 24 hours	40 60	40 60
5.	Ozone (O <sub>3</sub> ), µg/m <sup>3</sup>	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m <sup>3</sup>	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m <sup>3</sup>	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Annual 24 hours	100 400	100 400
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual	05	05
10.	Benzo(a) Pyrene (BaP) Particulate Phase only ng/m <sup>3</sup>	Annual	01	01
11.	Arsenic (As) µg/m <sup>3</sup>	Annual	06	06
12.	Nickel (Ni) µg/m <sup>3</sup>	Annual	20	20
Note : Serial no. 1 to 4 – Mandatory Serial no. 5 to 12 As applicable for specific type of industry.				



S.N	Parameter	Standard
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- (3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S.N	Parameter	Standard
1	Total Suspended Solids	100 mg/ Nm <sup>3</sup>
2	BOD	30 mg/L
3	COD	250 mg/L
4	Oil & Grease	10 mg/L

- (4) That, the occupier shall dispose of solid wastes as follows:

S.N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	As a substitute of Soil or Mineral
2	Hazardous Non-Carbonaceous Wastes	In co-processing in high temperature furnaces or kilns
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	In TSDF

- (5) That, the occupier shall keep D.G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.
- (6) That, the occupier shall install and maintain Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.
- (7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.
- (8) That, the occupier shall submit environmental statement with supporting stoichiometric calculations analyses reports, every year latest by 30th September of the next financial year.
- (9) That, the occupier shall submit report(s) duly monitored and issued by an NAEL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-para (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.
- (10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Environment/Elimination Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.

- (11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time being in force, rests with the industry/ mill/ occupier.
  - (12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be, instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.
  - (13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.
4. That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.
  5. That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.
  6. The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.
  7. The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.

This is issued with the approval of the Competent authority

(Rajeev Lochan Bakshi)  
Member Secretary

Memo No. : JSPCB/HO/RNC/CTO-  
5913229/2019/2540

Dated: 2019-12-24

Copy to: General Manager (Mines), Kiriburu-Meghalatuburu Iron Ore Mines of M/s. SAIL, Kiriburu-Meghalatuburu, Dist. West Singhbhum / D.F.O., Sarda Forest Division, Chabasa, West Singhbhum / D.M.O., Chabasa, West Singhbhum / Regional Officer, Regional Office, Jamshedpur for information & necessary action. He should ensure that river Koira and Karo may not be polluted due to mining operation.

(Rajeev Lochan Bakshi)  
Member Secretary



# **COPY OF CTO VALID TILL 30/09/2023**



## **JHARKHAND STATE POLLUTION CONTROL BOARD**

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI - 834004  
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-9151117/2020/1890

Dated: 2020-12-07

**Consent to operate (CTO) under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981**

1. Application (s) dated 2020-10-15 of KIRIBURU-MEGHAHATUBURU IRON ORE MINES, Occupier Name: J. P. SELVAM for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act, 1981.

### **2. Documents Relied Upon:**

- (a) The content of Letter from MoEF&CC (Forest Conservation Division) vide F. No. 8-69/1991-FC (P) dated 26.11.2014 regarding renewal of mining lease covering 644.26 Ha of forest land for Kiriburu - Meghahatuburu group of Mines (Total lease area 1936.06 ha) in favour of M/s SAIL.
- (b) The content of Environmental Clearance (EC) vide J-11015/272/2007-LA-II (M) dated 23.09.2014 from MoEF, New Delhi.
- (c) The content of Mining lease issued vide 1255 dated 30.07.2019 for the period up to 27.03.2020 from Mines and Geology, Govt. of Jharkhand and later amended vide 1750 dated 23.10.2019 declaring the area to be read as 82.60 Ha instead of 81.97 Ha and total area to be read as 2897.499 Ha instead of 2897.469 Ha.
- (d) The content of Letter from Impact Assessment Division vide F.No. J-11015/272/2007-LA-II (M) dated 30.07.2020 regarding Proposal for change in excavation & dispatch pattern of Kiriburu Meghahatuburu Iron Ore Mining project (ML Area 2897.499 Ha) of M/s Steel Authority of India Limited (SAIL), located at Villages Kiriburu, Meghahatuburu & Karampada Reserve Forest, Tehsil-Naamundi, District West Singhbhum, Jharkhand - EC under Para 7.
- (e) The content of Consent to establish (CTE) vide Ref No.: JSPCB/HO/RNC/CTE-8648968/2020/378 Dated: 2020-09-30 for Tailing disposal from Meghahatuburu and Kiriburu - 1 MTPA from each.
- (f) The content of obtained authorization vide HWM-1149245/2019/26 dated 03.08.2019 for 05 years.
- (g) The content of inspection report vide 1045 dated 31.10.2020 issued by Regional Officer, Regional Office-Cum-Laboratory, Jamshedpur.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mine: KARAMPADA, P S - KIRIBURU, District - WEST SINGHBHUM, as follows:

Project	Site Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot No.	Area			Date of issue To

**ANNEXURE-14: G-COPY OF CONCENT TO OPERATE (CTO) VALID TILL 30-09-2023 OF KIOM-MIOM, SAIL**

**PAGE-1**

**COPY OF CTO VALID TILL 30/09/2023 PAGE-2**

Before Expansion	Mauza : KARAMPAD A Khata No. : BLOCK NO. 15 Khata No. : KARAMPAD A, TOTAL 14 NOS	2197.46 9 Ha.	155 lakh	Tailing disposal from Meghastam and Kinburn - 1 MTPA from each.	30/09/2023
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**(A) Specific Conditions:**

1. That, the occupier shall do sprinkling of water time to time on haul roads and dust prone areas.
2. That, the occupier shall construct sewage treatment plant for the colony as per time bound action plan submitted by the unit. ETP should also be provided for workshop and mineral separation plant.
3. That, the occupier shall carry out blasting operation during the day time. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
4. That, the occupier shall keep the vehicular emission under control by regularly monitoring of the vehicles used in mining operations and in transportation of minerals. The engaged vehicles shall be covered with a tarpaulin and shall not be overloaded at any cost.
5. That, the occupier shall carry out blasting operation during the day time. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
6. That, the occupier shall keep the vehicular emission under control by regularly monitoring of the vehicles used in mining operations and in transportation of minerals. The engaged vehicles shall be covered with a tarpaulin and shall not be overloaded at any cost.
7. That, the occupier shall re-circulate the decanted water from the beneficiation plant and slime/tailing pond within the mine and there shall be zero discharge from the mine.
8. Plantation on the OB dump slopes has to be increased and managed properly. Housekeeping should be maintained in the specified area.
9. Catch drains and siltation pond of appropriate size shall be constructed around the mine working, mineral and OB dump to prevent runoff of water and flow of sediments directly into the river and other water bodies.



10. That, the occupier shall adopt clean development mechanism.
11. That, the occupier shall provide adequate no. of high efficiency dust extraction system in mineral handling plant loading and unloading areas including all the transfer points should also have efficient dust control arrangements. The should be properly maintained and operated.
12. That, the occupier shall comply the conditions of Environmental Clearance and shall submit six monthly compliance report of it to the Board.
13. That, the occupier shall install CAAQMS and PM10 analyzer with connectivity to website of the Board, within 03 months, failing which Environmental Compensation shall be levied from date of issued of this Consent to operate(CTO);
14. That, the occupier shall submit applications for renewal of consent under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days prior to the date of expiry of this consent i.e. 30.09.2023 with requisite fee and documents showing compliance of all of the above conditions.
15. That, the occupier shall do exorvation and dispatch of Tailings maximum up to @1MTPA each from the Tailing ponds of Kiriburu and Meghatuburu Iron ore mines keeping the total production within the approved EC sanctioned capacity of 16 MTPA i.e. 7.5 MTPA of Kiriburu Iron Ore mine and 8.5 MTPA from Meghatuburu Iron Ore Mines;

**(B) General Conditions :**

- (1) That, the occupier shall maintain the National Ambient Air Quality Standard given below;

S.N	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM <sub>10</sub> , µg/m <sup>3</sup>	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM <sub>2.5</sub> , µg/m <sup>3</sup>	Annual 24 hours	40 60	40 60
5.	Ozone(O <sub>3</sub> ), µg/m <sup>3</sup>	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m <sup>3</sup>	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m <sup>3</sup>	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Annual 24 hours	100 400	100 400
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annual	05	05
10.	Benzo(a) Pyrene(BaP) Particulate Phase only ng/m <sup>3</sup>	Annual	01	01
11.	Arsenic (As) ng/m <sup>3</sup>	Annual	06	06
12.	Nickel (Ni) ng/m <sup>3</sup>	Annual	20	20
Note : Serial no. 1 to 4 - Mandatory Serial no. 5 to 12 As applicable for specific type of industry.				



- (2) That, the occupier shall maintain the emission quality within the standard and the quantity, as follows:

S/N	Parameter	Standard
1	Particulate Matter	100 mg/ Nm <sup>3</sup>

- (3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S/N	Parameter	Standard
1	Total Suspended Solids	100 mg/L
2	BOD	30 mg/L
3	Oil & Grease	10 mg/L
4	COD	250 mg/L

- (4) That, the occupier shall dispose of solid wastes as follows:

S/N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	In co-processing in high temperature furnaces or kilns
2	Hazardous Non-Carbonaceous Wastes	In TSDF
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	As a substitute of Soil or Mineral

- (5) That, the occupier shall keep D/G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.
- (6) That, the occupier shall install and maintain Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.
- (7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.
- (8) That, the occupier shall submit environmental statement with supporting stoichiometric calculations analyses reports, every year latest by 30th September of the next financial year.
- (9) That, the occupier shall submit report(s) daily monitored and issued by an NABL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-parts (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.

**COPY OF CTO VALID TILL 30/09/2023 PAGE-6**

- (10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Environment/Electromagnetic Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.
  - (11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time being in force, rests with the industry/ unit/ occupier.
  - (12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding, if any, instituted in the past or that could be, instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.
  - (13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.
4. That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.
  5. That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.
  6. The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.
  7. The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.

This is issued with the approval of the Competent authority

DINESH  
PRASAD  
SINGH  
(Dinesh Prasad Singh)  
Environmental Engineer

Dated: 2020-12-07

Memo No. : JSPCB/HO/RNC/CTO-  
9151117/2020/1890

Copy to: M/s KIRIBURU-MEGHAHATUBURU IRON ORE MINES, Noonandi, West Singhbhum/  
Chief Inspector of Factories, Ranchi / Director of Industry, Govt of Jharkhand, Ranchi/ Deputy  
Commissioner, West Singhbhum/ Regional Officer, Regional Office-Cum-Laboratory, Jamshedpur  
for information & necessary action.

DINESH  
PRASAD  
SINGH

Digitally signed by  
DINESH PRASAD  
SINGH  
Date: 2020.12.07  
15:23:16 +05'30'

(Dinesh Prasad Singh)  
Environmental Engineer



## **ANNEXURE 15- CORPORATE ENVIRONMENTAL VISION, POLICY AND RESPONSIBILITY OF SAIL**

### **CORPORATE ENVIRONMENTAL VISION, POLICY AND RESPONSIBILITY OF SAIL PAGE-1**

#### **Corporate Environmental Vision, Policy and Responsibility**

##### **Corporate Environmental Vision Statement:**

To lead the way in building an environmentally sustainable future for the Indian iron & steel industry by integrating environmental and stakeholder concerns through resource optimisation and the adoption of cleaner technologies and best practices.

##### **Corporate Environmental Policy**

Steel Authority of India Limited, the largest steel producer of India, in its endeavour to maintain a clean and sustainable environment in and around its plants and mines, is committed to:

- i. Integrate sound environmental practices in all its activities.
- ii. Comply with legal and other requirements pertaining to the environment, forests and wildlife and volunteer to go beyond.
- iii. Contribute towards mitigation of climate change through the adoption of cleaner and energy efficient technologies.
- iv. Promote development of innovative environment-friendly processes and products.
- v. Restore ecosystems in mined out landscapes and abandoned sites through ecological restoration.
- vi. Integrate the principle of "reduce, recover, recycle and reuse" in its operations for conservation of natural resources to ensure a sustainable future.
- vii. Strive for continual improvement of environmental performance by setting and achieving challenging targets.
- viii. Ensure regular monitoring and review of environmental performance through a robust audit mechanism and a transparent reporting system.
- ix. Continuously monitor emissions, discharges and ambient air quality and make data available in the public domain.
- x. Communicate environmental performance to all stakeholders.
- xi. Improve employee commitment and responsibility towards environment protection through capacity building.
- xii. Promote environmentally responsible behaviour amongst contractual workforce and suppliers.

##### **Strategies:**

To ensure sustainable future and realise the vision, the company has planned some strategic action points, which are summarised below, taking into consideration that the old production units shall co-exist with the new units installed/being installed under the ongoing modernisation-cum-expansion schemes for the coming few years:

- Implementation of sound environmental practices in operations and progressively adopting best available cleaner technologies for minimizing emissions and discharges.

## CORPORATE ENVIRONMENTAL VISION, POLICY AND RESPONSIBILITY OF SAIL PAGE-2

- Integration of four 'R's principle of Reduce, Recover, Recycle and Reuse in operation for reducing consumption of natural resources through minimising waste generation, maximising waste utilisation and optimising use of available resources.
- Reduce water consumption through improving water management practices and adopting other measures, like centralised and local recycling.
- Minimising direct and indirect impacts of mining on surrounding forests and wildlife through periodic monitoring using advanced methods, developing and implementing Site Specific Conservation Plans and other measures.
- Bio-diversity conservation through conducting bio-diversity assessment & management studies, periodic monitoring and stakeholder engagement.
- Ecological restoration of mined out areas and abandoned sites through adoption of Progressive and Integrated mine closure plans (PMCP & IMCP).
- Undertaking planned massive plantation through plantation drives at units, social forestry, creating chain of nurseries and Joint Forest Management (JFM) with state forest departments to enhance ecosystem services.
- Minimising impact of operations on environment by developing technologies for maximising use of resources and enhancing utilisation/ management of wastes through well-equipped R&D facility.
- Promoting use of renewable sources of energy and green fuels for reducing dependence on conventional energy sources.
- Monitoring, reviewing and reporting environmental parameters and clearance conditions, for compliance and improvement.
- Strengthening of environmental administration and management reporting structure.
- Enhancing commitment towards environment protection amongst employees, suppliers & contractors through augmenting employee awareness, increasing competency, capacity building and creating knowledge platforms.
- Implementing an Environmental Management Systems (EMS) having focus on continual improvement, on review, on prevention or mitigation of adverse environmental impacts at all plants / units.



**ANNEXURE 16- CERTIFICATE OF REGISTRATION FOR ISO  
14001:2015 ENVIRONMENT MANAGEMENT SYSTEM OF KIOM &  
MIOM, SAIL**

**bsi.**



## Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

Kiriburu Iron Ore Mines  
Raw Materials Division (RMD)  
Steel Authority of India (SAIL)  
Kiriburu  
District - West Singhbhum 833 222  
Jharkhand  
India


Holds Certificate No:

**EMS 700392**

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

The Mining, Processing, Loading and Dispatch of Iron Ore

For and on behalf of BSI:

  
Chris Cheung, Head of Compliance & Risk - Asia-Pacific

Original Registration Date: 2018-11-13

Latest Revision Date: 2018-11-13

Effective Date: 2018-11-13

Expiry Date: 2021-11-12

Page: 1 of 1



...making excellence a habit™

This certificate was issued electronically and retains the property of BSI and is bound by the conditions of contract.

An electronic certificate can be authenticated [here](https://www.bsi-global.com/CheckDirectory).

Printed copies can be validated at [www.bsi-global.com/CheckDirectory](https://www.bsi-global.com/CheckDirectory) or telephone +44 (0) 300 890000.

Further clarifications regarding the scope of this certificate and the applicability of ISO 14001:2015 requirements may be obtained by consulting the registration.

This certificate is valid only if provided original copies are in complete set.

Information and Contact: BSI, Kitemark Court, Davy Avenue, Ipswich, Suffolk IP8 4RN. Tel: +44 (0) 300 890000.  
BSI Assurance UK Limited, registered in England under number 2900211 at 389 Chiswick High Road, London W6 4AL, UK.  
A Member of the BSI Group of Companies.

**ANNEXURE-16: A- CERTIFICATE OF REGISTRATION FOR ISO 14001:2015 ENVIRONMENT MANAGEMENT SYSTEM  
OF KIOM, SAIL**

bsi.



By Royal Charter

## Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

Meghahatuburu Iron Ore Mines  
Steel Authority of India Ltd.  
Raw Materials Division (RMD)  
Post: Meghahatuburu  
District: Paschim Singhbhum 833 223  
Jharkhand  
India

Holds Certificate No:

EMS 698550

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

Mining of Iron Ore, Processing, Loading and Dispatch

For and on behalf of BSI:

Chris Cheung, Head of Compliance & Risk - Asia Pacific

Original Registration Date: 2018-09-21

Latest Revision Date: 2018-09-21

Effective Date: 2018-09-21

Expiry Date: 2021-09-20

Page: 1 of 1



...making excellence a habit<sup>®</sup>

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.  
An electronic certificate can be authenticated using the BSI website [www.bsi.com](http://www.bsi.com).  
Printed copies can be validated at [www.bsi.com](http://www.bsi.com) or by telephone +44 (0) 20 8996 9001.  
Further clarifications regarding the scope of this certificate and the applicability of ISO 14001:2015 requirements may be obtained by consulting the organization.  
The certificate is valid only if provided original copies are in compliance with the conditions of contract.

Information and Contact: BSI, Standards Centre, 389 Chiswick Avenue, Uxbridge, Middlesex UB8 3PH, UK. Tel: +44 (0) 20 8996 9001.  
BSI is a registered company in England under number 2863212 at 389 Chiswick Avenue, Uxbridge, Middlesex UB8 3PH, UK.  
A member of the BSI Group of Companies.



**ANNEXURE 17- PHOTOGRAPH COVERING ROOF TOP & CATCHMENT  
POND FOR RAIN WATER HARVESTING SYSTEM OF KIOM- MIOM, SAIL**



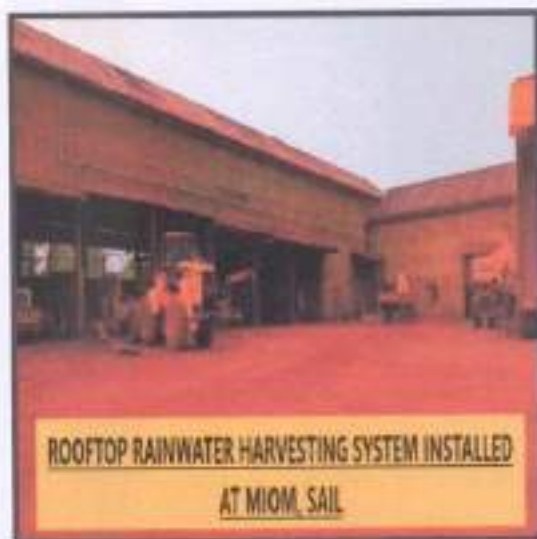
ANNEXURE-17: A- ROOFTOP RAINWATER  
HARVESTING SCHEME INSTALLED AT KIOM  
GENERAL OFFICE SHOWING COLLECTION, KIOM,  
SAIL



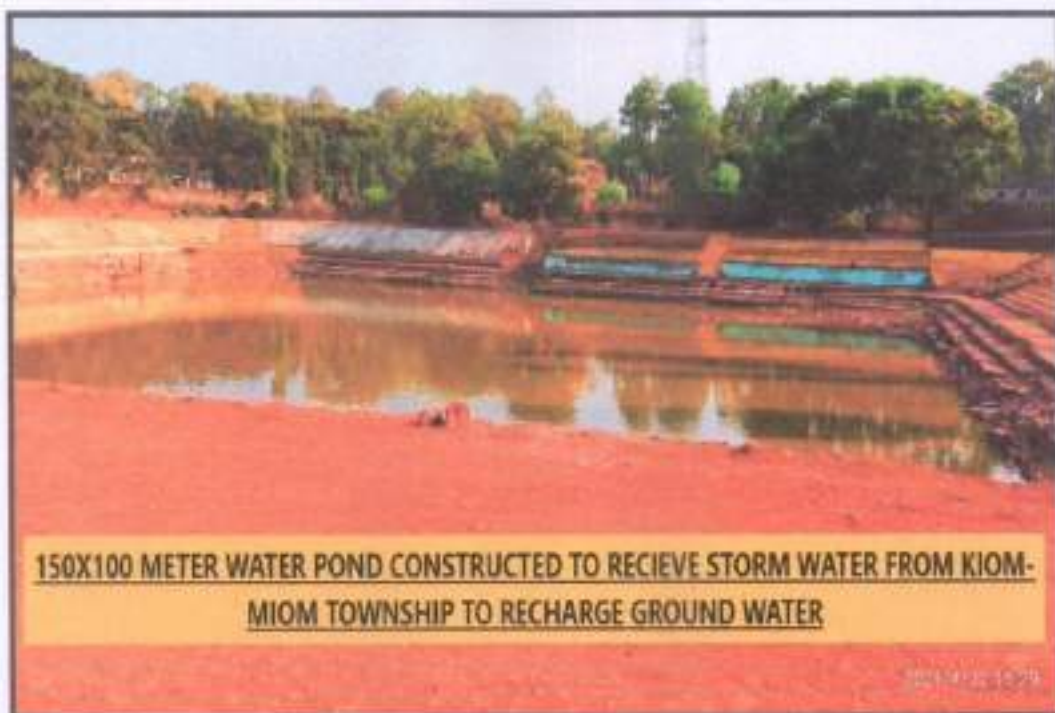
ANNEXURE-17: C- ROOFTOP RAINWATER  
HARVESTING SYSTEM SHOWING WATER  
COLLECTION PIPE INSTALLED AT MEGHAHATUBURU  
IRON ORE MINES, SAIL



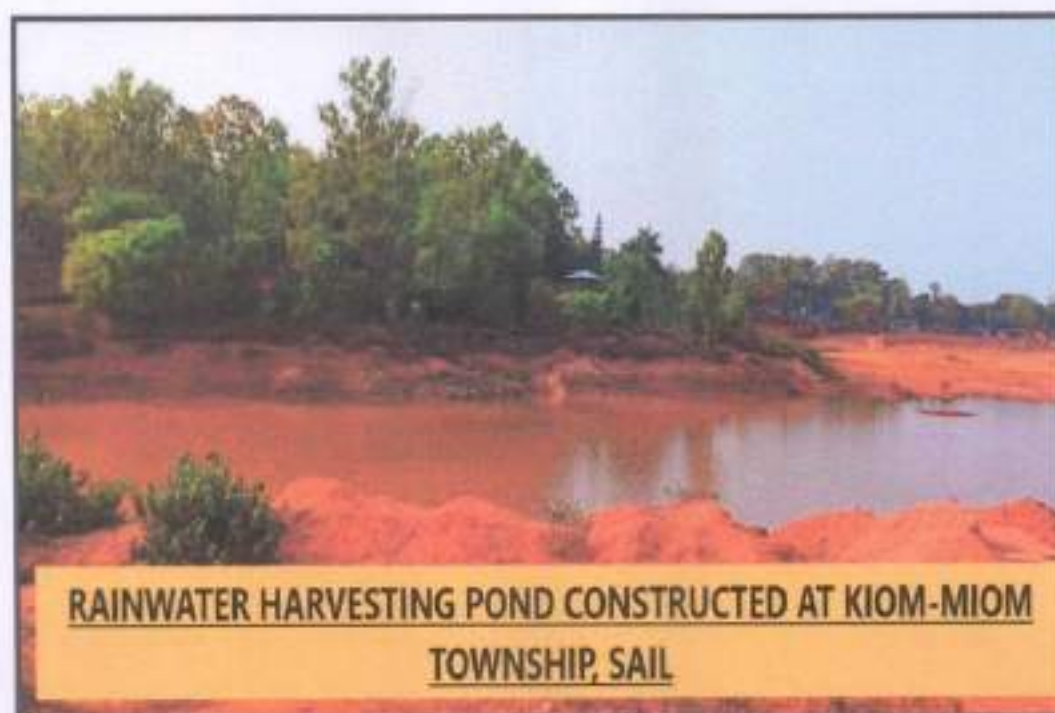
ANNEXURE-17: B- ROOFTOP RAINWATER  
HARVESTING SCHEME INSTALLED AT KIOM  
GENERAL OFFICE SHOWING COLLECTION  
RECHARGE PIT, KIOM, SAIL



ANNEXURE-17: D- ROOFTOP RAINWATER  
HARVESTING INSTALLED SHOWING WATER  
COLLECTION PIPE AT MEGHAHATUBURU IRON ORE  
MINES, SAIL




ANNEXURE-17: E- 150X100 METER WATER POND CONSTRUCTED TO RECIEVE STORM WATER FROM KIOM-MIOM TOWNSHIP TO RECHARGE GROUND WATER



ANNEXURE-17: F- RAINWATER HARVESTING POND CONSTRUCTED AT KIOM-MIOM TOWNSHIP, SAIL




# ANNEXURE 18- AMBIENT AIR QUARTERLY MONITORING REPORT THROUGH JSPCB OF KIOM-MIOM, SAIL



**YUGANTAR BHARATI**  
**ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY**

Accredited by: National Accreditation Board for Testing Laboratory (NABL) & Jharkhand State Pollution Control Board (JSPCB)  
Certified by: An ISO 9001:2015 & ISO 14001:2015

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY



Certificate No. JC 3012

---

**Atmospheric Pollution Test Report**

Report Release Date	28 <sup>th</sup> June, 2021	URL/Unique Lab Report No.	TC78132120000451F
Sample Description	Ambient Air Quality	Report ID	YBAEEL-210615-170503-JM1
Type of Industry	Iron Ore Mines	Job code/Ref. no.	YBAEEL/MALJA/Jen.-21/31
Issue to	M/s Kiriburu-Meghahatuburu Iron Ore Mines Kiriburu-Meghahatuburu Iron Ore Mines Dist. - West Singhbhum, Jharkhand.	Work Order No./Date	JSPCB Application No. - 10463322
Sampling Period	22/06/2021 - 23/06/2021	Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS:5182 and CPCB Air Manual Volume-1 (NAAQS/2012-13)		
Sampling Locations	A. Near Hopper (22°32'09.8"N, 85°35'37.4"E) A. Near Mining Shelter (22°05'41.3"N, 85°17'05.5"E) A. Near Guest House (22°06'28.1"N, 85°17'16.9"E)		
Meteorological Cond.	W.C. - Cloudy	RH % - 78%	Temp. - 24°C
Sample receipt Date	24/06/2021	Analysis Started on	24/06/2021
		Analysis completed on	25/06/2021

Parameters	Test Method	Units	Sampling Location			NAAQS (2009)
			Site A	Site B	Site C	
Particulate matter (PM <sub>10</sub> )	IS:5182 (P-23) 2006	µg/m <sup>3</sup>	55.1	91.8	74.0	100
Particulate matter (PM <sub>2.5</sub> )	USEPA-48 CFR (PART 59) (50.7)	µg/m <sup>3</sup>	38.0	40.1	35.1	60
Sulphur Dioxide (SO <sub>2</sub> )	IS:5182 (P-2) 2001 RA 2012	µg/m <sup>3</sup>	26.1	28.1	22.0	80
Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-6) 2006 RA 2012	µg/m <sup>3</sup>	40.3	42.2	37.3	80

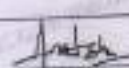


\*\*End of Report\*\*

Remarks	Sampled Carefully with the prescribed specification as per NAAQS 2009
Abbreviation	MA - Maximum detection limit, SDL - Soiled detection limit
Note	The parameters marked with * are not accredited by NABL
Specific contractual notes	<p>All results are reported in µg/m<sup>3</sup></p> <p>The results listed refer only to the tested sample and applicable parameter.</p> <p>The report, in full or in part, shall not be used for advertising or as evidence in any court of law.</p> <p>The report cannot be reproduced, except when in full, without the written permission of the Lab. and sign.</p> <p>The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise.</p> <p>The liability of the laboratory is limited to the provided services.</p> <p>All disputes are subject to the Home Jurisdiction.</p>


  

**Sub-CONCERN** in  
Jharkhand State Pollution Control Board  
Application No. 10463322  
Analysis Date 22-06-2021  
Submission Date 23-06-2021


 Issued by Authorized Signatory Air Quality Section Lab Analyst	 Verified by Section In-Charge Air Quality Section Lab Analyst	 Issued by Technical Manager Yugantar Bharati Analytical & Environmental Engineering Laboratory
--	---	--



Branch Office - Jamshedpur    Dhanbad    Hazaribag    Patna

Main Office: Netam Post Office, Sidra, Ranchi - 834010, Jharkhand  
Ph: 066351-97960, 066357-86677, Email - ybaeel@gmail.com, Web - http://ybaeel.in



Established  
20 Nov 2015  
ISO 9001:2015

ANNEXURE-18: A- AMBIENT AIR QUALITY MONITORING REPORT THROUGH JSPCB OF MEGHAHATUBURU IRON ORE MINE, SAIL



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: National Accreditation Board for Testing Laboratory (NABL) & Jharkhand State Pollution Control Board (JSPCB)  
 Certified by: AN ISO 9001:2015 & OHSAS 45001:2018



Certificate No. - 02/2013

### AMBIENT AIR QUALITY MONITORING REPORT

Atmospheric Pollution Test Report		URL (Unique Lab Report No.)	TC7B13212000471F
Report Release Date	29 <sup>th</sup> June, 2021	Report ID	YBAEEL-210513-124035-A01
Sample Description	Ambient Air Quality	Job code/Ref. no.	YBAEEL/WAL/Jun.-21/34
Type of Industry	Iron Ore Mines	Work Order No./Date	JSPCB Application No. - 10618224
Issue to	M/s Kiriburu-Meghaatuburu Iron Ore Mines Kiriburu-Meghaatuburu Iron Ore Mines Dist. - West Singhbhum, Jharkhand.		
Sampling Period	23/06/2021 - 24/06/2021	Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS-5182 and CPCB Air Manual Volume-1 (NAAQM/2012-13)		
Sampling Locations	A. Hill Top Guest House (22°04'20.38"N, 85°16'38.52"E)	A. Near Mining Office (22°04'02.89"N, 85°16'38.39"E)	A. Near Hoopar (22°04'03.11"N, 85°16'03.72"E)
Meteorological Cond.	W.C. - Cloudy	RH % - 73%	Temp. - 24°C
Sample receipt Date	25/06/2021	Analysis Started on	25/06/2021
		Analysis completed on	28/06/2021

### \*\*Test Results\*\*

Parameters	Test Method	Units	Sampling Location			NAAQS (2009)
			Site A	Site B	Site C	
Particulate matter (PM <sub>10</sub> )	IS-5182 (P-23) 2006	µg/m <sup>3</sup>	78.1	92.4	87.0	100
Particulate matter (PM <sub>2.5</sub> )	USEPA-40 CFR (PART 50) (58.7)	µg/m <sup>3</sup>	38.2	44.9	41.2	60
Sulphur Dioxide (SO <sub>2</sub> )	IS-5182 (P-2) 2011 RA 2012	µg/m <sup>3</sup>	24.0	27.1	29.2	80
Nitrogen Dioxide (NO <sub>2</sub> )	IS-5182 (P-6) 2006 RA 2012	µg/m <sup>3</sup>	41.2	43.2	46.1	80

### \*\*End of Report\*\*

Remarks	Samples comply with the prescribed specification as per NAAQS 2009.
Abbreviation	NAQ - Minimum detection limit, QCL - Lower detection limit.
Note	The parameter "relative humidity" is not included in NAAQS.
Specific contractual notes	All values are expressed in µg/m <sup>3</sup> . The results refer only to the tested sample and applicable parameter. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the Lab in-charge. The samples collected shall be destroyed after 15 days from the date of issue of this certificate unless specified otherwise. The liability of the laboratory is limited to the provided amount. All disputes are referred to the Parent Jurisdiction.

**CONCERN**  
 Jharkhand State Pollution Control Board  
 Application No. 10618224  
 Allotted Date 18-02-2021  
 Submission Date 02-06-2021

Tested by Anil Kumar Sinha Lab Analyst	Verified by Bilal Swatan Syam Section In-Charge	Issued by Authorized Signatory Atmospheric Pollution Technical Manager Yugantar Bharati Analytical & Environmental Engineering Laboratory
--	---	---



Branch Office - Jamshedpur | Ranchi | Hazarbag | Pakur

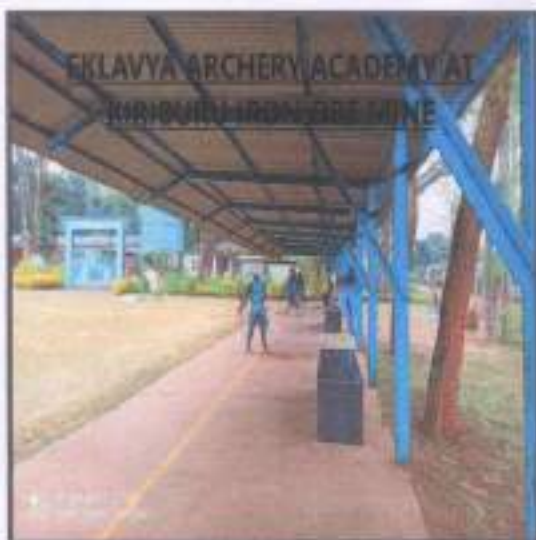
Main Office : Namkum Post Office, Sidraul, Ranchi - 834010, Jharkhand  
 Ph: 098351-97960, 098357-88677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ANNEXURE-18: B - AMBIENT AIR QUALITY MONITORING REPORT THROUGH JSPCB OF KIRIBURU IRON ORE MINE, SAIL.



**ANNEXURE 19- PHOTOGRAPHS OF VARIOUS CSR ACTIVITIES  
CONDUCTED BY KIOM-MIOM, SAIL**



ANNEXURE-19: A- EKLAVYA ARCHERY ACADEMY  
UNDER CSR SCHEME OF KIOM, SAIL



ANNEXURE-19: C- TREATMENT OF PATIENTS  
UNDER CSR SCHEME OF MEGHAHATUBURU IRON  
ORE MINES UNDER THE CSR SCHEME OF KIRIBURU  
- MEGHAHATUBURU GENERAL HOSPITAL



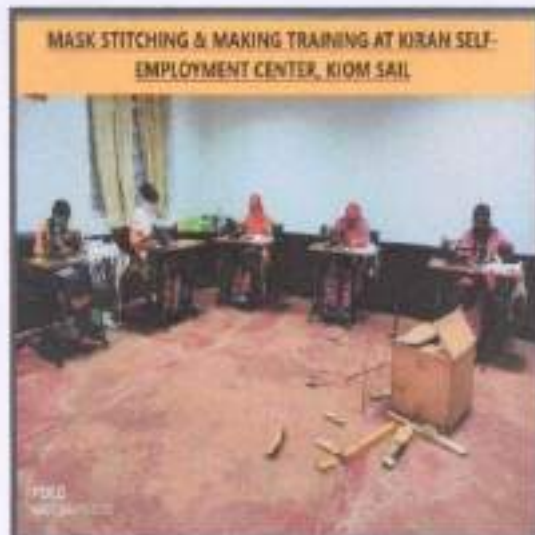
ANNEXURE-19: B- STUDENTS AT SARANDA SUVAN  
CHATRAVAS, UNDER CSR SCHEME OF KIOM, SAIL



ANNEXURE-19: D- HON'BLE CHAIRMAN &  
DIRECTOR TECHNICAL VISIT AT SARANDA SUVAN  
CHATRAVAS



ANNEXURE-19: E- FABRIC WEAVING UNDER THE CSR SCHEME OF MEGHAHATUBIURU IRON ORE MINES AT SAURHAGYA SELF EMPLOYMENT CENTER



ANNEXURE-19: G- MASK STITCHING & MAKING TRAINING UNDER CSR (KIRAN SELF-EMPLOYMENT CENTER) KIOM, SAIL DURING COVID 19 PANDEMIC



ANNEXURE-19: F- STUDENTS STUDY AT SARANDA SUVAN CHATRAVAS KIOM- MIOM, SAIL



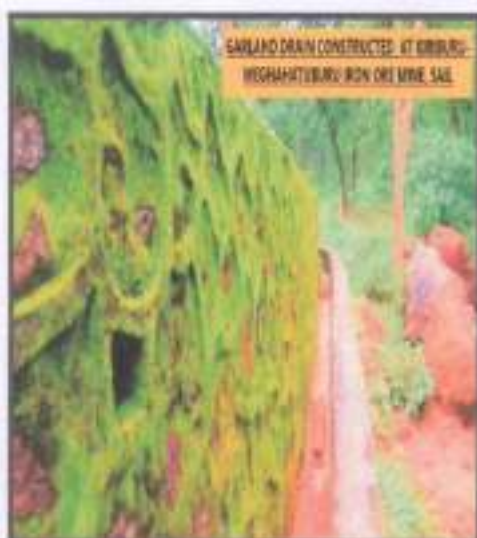
ANNEXURE-19: H- FOOD PACKETS DISTRIBUTION IN PERIPHERAL VILLAGES DURING THE VACCINATION DRIVE IN DECOND WAVE OF COVID 19



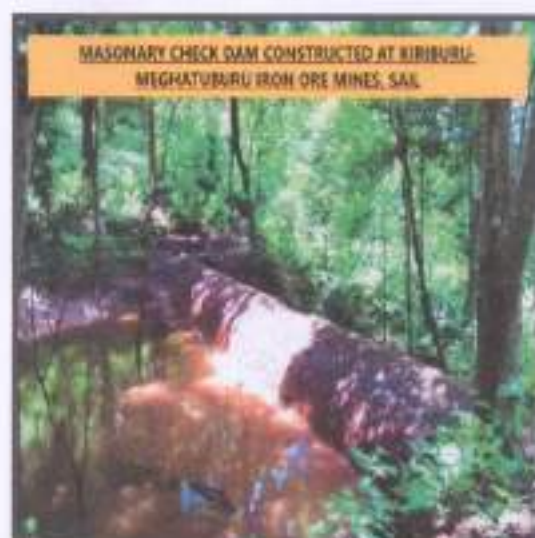


ANNEXURE-19: I- VARIOUS SOFT SKILL DEVELOPMENT PROGRAMMES ORGANISED BY RTC KIOM

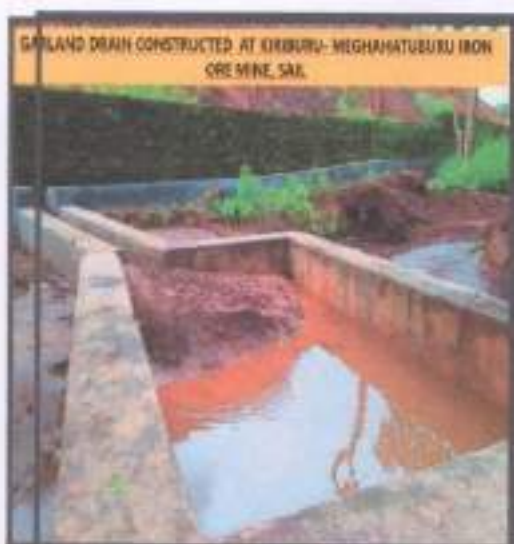
**ANNEXURE 20- PHOTOGRAPHS SHOWING VARIOUS SILT CONTROL ARRANGEMENTS CONSTRUCTED BY KIOM-MIOM, SAIL**



ANNEXURE-20: A- GARLAND DRAIN CONSTRUCTED AT KIOM- MIOM BY MEGHAHATUBURU IRON ORE MINES, SAIL



ANNEXURE-20: C- MASONARY CHECK DAM CONSTRUCTED AT KIRIBURU-MEGHATUBURU IRON ORE MINES, SAIL



ANNEXURE-20: B- GARLAND DRAIN CONSTRUCTED AT KIOM- MIOM BY MEGHAHATUBURU IRON ORE MINES, SAIL



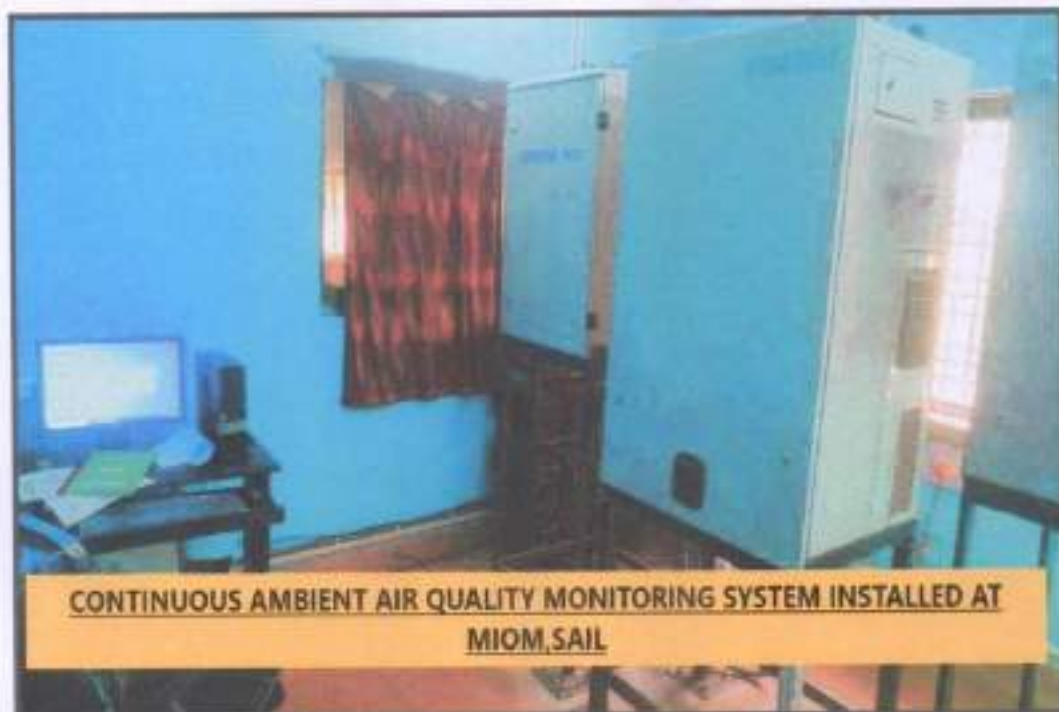
ANNEXURE-20: D- MASONARY CHECK DAM CONSTRUCTED AT KIRIBURU-MEGHATUBURU IRON ORE MINES, SAIL



**ANNEXURE 21- PHOTOGRAPHS SHOWING CONTINUOUS AMBIENT  
AIR QUALITY MONITORING SYSTEM (CAAQMS) INSTALLED AT  
MIOM, SAIL**



*ANNEXURE-21: A- CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM INSTALLED AT  
MEGHAHATUBURU IRON ORE MINES, SAIL*



*ANNEXURE-21: B- CONTINUOUS AMBIENT AIR QUALITY MONITORING SYSTEM INSTALLED AT  
MEGHAHATUBURU IRON ORE MINES, SAIL*

**ANNEXURE 22- KOINA RIVER UPSTREAM & DOWNSTREAM WATER  
QUALITY DATA REPORT FOR THE PERIOD OF -APRIL 2021 TO  
SEPTEMBER 2021 BY KIOM-MIOM, SAIL**



STEEL AUTHORITY OF INDIA LIMITED  
BOKARO STEEL PLANT  
KIRIBURU-MEGHAHATUBURU IRON ORE MINES

**RIVER WATER QUALITY**

**(A) Koina River – Upstream of Mines**

Period	pH	Turbidity	TDS	SS	Iron	Manganese
Unit	-	NTU	mg/l	mg/l	mg/l (as Fe)	mg/l (as Mn)
Desirable Limit *	6.5-8.5	5	500	-	0.3	0.1
Permissible Limit **	6.5-8.5	10	2000	-	1.0	0.3
April 21	6.9	2.1	112	-	0.10	0.03
May 21	6.7	2.3	106	-	0.14	0.05
June 21	6.4	2.4	110	-	0.09	0.04
July 21	6.7	2.2	102	-	0.08	0.03
August 21	6.7	2.1	101	-	0.13	0.04
September 21	6.8	2.5	99	-	0.10	0.02

\* Requirement (Desirable limits) as per Drinking Water Specification IS : 10500

\*\* Permissible limit in absence of alternate source as IS : 10500

**(B) Koina River – Downstream of Mines**

Period	pH	Turbidity	TDS	SS	Iron	Manganese
Unit	-	NTU	mg/l	mg/l	mg/l (as Fe)	mg/l (as Mn)
Desirable Limit *	6.5-8.5	5	500	-	0.3	0.1
Permissible Limit **	6.5-8.5	10	2000	-	1.0	0.3
April 21	6.8	2.4	115	-	0.14	0.02
May 21	6.6	2.2	110	-	0.16	0.06
June 21	6.8	2.6	109	-	0.11	0.05
July 21	6.7	2.3	106	-	0.12	0.04
August 21	6.7	2.1	100	-	0.13	0.04
September 21	6.7	2.5	101	-	0.11	0.03

\* Requirement (Desirable limits) as per Drinking Water Specification IS : 10500


\*\* Permissible limit in absence of alternate source as IS : 10500

EC Compliance – KIOM – MIOM

ANNEXURE-22: A- KOINA RIVER UPSTREAM & DOWNSTREAM WATER QUALITY DATA REPORT FOR THE PERIOD  
OF – APRIL 2021 TO SEPTEMBER 2021 BY KIOM-MIOM, SAIL



**ANNEXURE 23- GROUND WATER QUALITY REPORT IN DUG WELL  
FOR THE PERIOD OF -APRIL 2021 TO SEPTEMBER 2021 BY KIOM-  
MIOM, SAIL**



 <p>STEEL AUTHORITY OF INDIA LIMITED BOKARO STEEL PLANT MEGHAHATUBURU IRON ORE MINES</p>					
<b>GROUND WATER QUALITY</b>					
<b>LOCATION : DUG WELL IN KUMDIH VILLAGE</b>					
Parameter	Unit	Acceptable Limit*	Permissible Limit*	Quarter - 3 (June '21)	Quarter - 4 (Sept '21)
pH	-	6.5 - 8.5	6.5 - 8.5	6.7	6.8
Turbidity	NTU	5	10	3.2	2.7
Dissolved Solids	mg/l	500	2000	219	218
Iron (as Fe)	mg/l	0.3	0.3	0.15	0.13
Manganese (as Mn)	mg/l	0.1	0.3	0.03	0.04
* as per Drinking Water Specification IS - 10500, 2012					
EC Compliance - KIOM - MIOM					

**ANNEXURE-23: A-- GROUND WATER QUALITY REPORT IN DUG WELL FOR THE PERIOD OF - APRIL 2021 TO SEPTEMBER 2021 BY MEGHAHATUBURU IRON ORE MINES, SAIL**

<p>STEEL AUTHORITY OF INDIA LIMITED RAW MATERIALS DIVISION KIRIBURU-MEGHAHATUBURU IRON ORE MINES</p>									
Annexure-7									
<b>MONITORING OF MINE EFFLUENT STANDARDS</b>									
Mineral:	IRON ORE								
Period:	April '21 to Sept '21								
Name of the Mine:	Kiriburu Iron Ore Mines								
Agent:	Sri D.K.Bhattacharya, GM(Mines)								
Agency:	Environment Laboratory, KIOM-MIOM								
Instrument:	Photometer SQ-110								
Unit:	Concentration in Mg/L, except pH & Turbidity								
Location:	Dug well in Karampada Village								
Parameter	Unit	Permissible Limit*	Desired Limit*	April'21	May'21	June'21	July'21	Aug'21	Sept'21
Depth of water table below ground level									
pH		6.5-8.5	6.5-8.5	6.8	6.8	6.8	6.9	6.9	6.8
Turbidity	NTU	10	5.0	3.2	3.1	3.1	3.2	3.1	3.0
Dissolved Solids	mg/l	2000	500.0	217	215	225	219	221	225
Iron as (Fe)	mg/l	1	0.3	0.18	0.18	0.18	0.18	0.17	0.15
Manganese as (Mn)	mg/l	0.3	0.1	0.03	0.03	0.03	0.03	0.03	0.03
* As per Drinking water specification IS:10500									

**ANNEXURE-23: B- GROUND WATER QUALITY REPORT IN DUG WELL FOR THE PERIOD OF - APRIL 2021 TO SEPTEMBER 2021 BY KIRIBURU IRON ORE MINES, SAIL**

**ANNEXURE 24- BLASTING VIBRATION REPORT FOR KIOM-MIOM,  
SAIL**

<b>बी.डी.जी. (एक्सप्लोसिव्स) BDG (Explosives)</b>	<b>इंडियन ऑयल कॉर्पोरेशन लिमिटेड</b> बी.डी.जी. (ई) : एम एन एम एक्सप्लोसिव्स कंपनी, बोयनी पोस्ट : बोयनी, जिला : केजलदा (ओडिसा) - 758037 Indian Oil Corporation Limited BDG(E) : SMS Explosives Support Plant, Bowni P.O. : Bowni, Dist. : Keonjhar (Odisha) - 758037 Website : www.ioc.com	 <b>IndianOil</b> A Maharatna Company
IOCL/BOLANI/BGW/19-20/01 07.02.2020		
To, Dy. General Manager (Mines) Meghahatuburu Iron Ores Mines, SAIL RMD Meghahatuburu		
<u>Subject : Submission of Report of Blast Induced Ground Vibration Test.</u>		
In response to your request for conducting Blast induced ground vibration study at your mines site for statutory purpose, we call a technical person from our other location.		
In line with your requirement we had arranged to conduct the study at your mines site on 05.02.2020. Study was carried out by our technical representative Shri Guduru Sunil, Asst. Manager (Marketing).		
We are attaching the Report of the study of Blast Induced Ground vibration test.		
Hope this will serve your purpose.		
Thanking you,		
Yours sincerely		
For, Indian Oil Corporation Limited		
 Adarsh Kesharwani Asst. Manager(Ops.)		
बोयनी कार्यालय : बी-4, नवी नगर पोस्ट ऑफिस, राधा (ई) कुंदा - 758037 (ओडिसा) Regd. Office : G-4, N4 Yaver Jung Marg, Bowni, (East), Mumbai - 400001 CIN : L23201MH1989GG01011358		

ANNEXURE-24: A-BLASTING VIBRATION REPORT FOR KIOM-MIOM SAIL PAGE-1



IOC/BOI/BIGV/19-20/01  
06.02.2020



**Report of study conducted on Blast Induced Ground  
Vibration at Meghahatuburu Ores Mines, RMD, SAIL.**

**Objective of the study:**

To assess the impact of blast induced ground vibrations on the structures nearest to the blast sites.

**Particulars of the study:**

**Location of study:** Meghahatuburu Iron Ores Mines (North Area Bench 9),  
RMD, SAIL


**Date of the study:** 05.02.2020


**Study conducted For:** Meghahatuburu Iron Ores Mines, RMD, SAIL

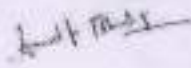
**Study conducted by:** Indian Oil Corporation Limited (BDG: Explosives)

**IOCL Representatives:** 1. Shri Adarsh Kesharwani, Asst. Manager(Operations)  
2. Shri Gadhara Sunil, Technical person, IOCL

**MIOM, SAIL Representative:** Sh Sandeep Kr. Bharadwaj, Sr. Manager (Mining)

  
Gadhara Sunil  
Asst. Manager (MKG)  
IOCL (BDG-Exp)  
Talcher, Angul Odisha

  
Adarsh Kesharwani  
Asst. Manager (OPS)  
Indian Oil Corporation Limited  
Talcher Plant, Angul-751001  
Odisha

  
Sandeep Kr. Bharadwaj  
Sr. Manager (Mining)  
SAIL - RMD - MIOM

### Findings of the study:

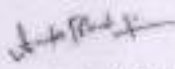
Following were the findings of the study conducted

Date of blast	Location of blast	Location of impact assessment	Max PPV(mm/s) in any orthogonal direction	Max corresponding PPV(mm/s) permissible as per DGMS	Remarks
05.02.2020	North Area	Central Area	0.347	15	Well within range

The results are well within the ceilings of maximum permissible PPV laid down by DGMS as per the circular ref: DGMS (Tech)/(S&T) Circular No.7 of 1997 dated 29.08.1997.

  
**Guduru Sunil**  
AM (Marketing)  
(Conducted by)  
Guduru Sunil  
Asst. Manager (Mktg.)  
IOCL (SOG-Rep)  
Talcher, Angul Odisha

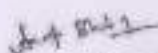
  
**Adarsh Kesharwani**  
AM (Ops.), Bolani Plant  
Adarsh Kesharwani  
Assistant Manager (OPS.)  
Indian Oil Corporation Limited  
Bulk Support Plant, Bolani-750037  
Bhubaneswar, Odisha

  
**Sandeep K. Shrivastava**  
S. Manager (Mktg.)  
IOCL - B&B - MCO



VIBRATION-CUM-BLAST REPORT				
SN	PARTICULARS	REMARKS		
1	Date of Blast	05.02.2020		
2	Location /Bench	North Area(Bench 9), MDOM		
3	Hole Dia (mm)	150		
4	No. of Holes	20		
5	Bench height (m)	10		
Drilling Parameters				
6	Avg Depth of the hole (m)	9.35		
7	Spacing (m)	4		
8	Burden (m)	4		
9	Block Volume (m3)	2992		
10	Type of Explosives	INDOGEL 600 SERIES		
11	Type of Initiators	NONEL		
12	Average Explosive Charge per hole (Kg)	108.500 Kg		
13	Maximum Explosives Charge per Delay (Kg)	110.250 Kg		
14	Total Primer Used(Kg)	10.000 Kg		
15	Total Bulk Explosives (Kg)	21600		
16	Total Explosive Used	2170.000 Kg		
VIBRATION MEASUREMENT:				
17	Distance of Vibration M/c from Blast Site	Approx. 150 m from Blast face		
18	Maxi. PPV at Orthogonal Directions (mm/sec.)	T	V	L
		0.347	0.189	0.181
19	Corresponding Frequency (Hz)	5.1	7.2	3.5
20	Peak Vector Sum	0.347 mm/sec		
POST BLAST OBSERVATION				
21	Fragmentation	V. Good		
22	Fly Rock	Nil		
23	Muck Profile	As required		

   
**For Indian Oil Corporation Limited**  
 INDIAN OIL CORPORATION LIMITED  
 BGS - EXPLOSIONS  
 (NGO) of India (Department)  
 Bulk Storage Plant  
 ANPO, BOLPUR, JHARKH  
 Dist - Khatwa (Jharkh)

  
**Sr. Manager (Mining)**  
 MIOM, RMD, SAIL

Girdhar D. Sharma  
 Sr. Manager (Mining)  
 SAIL - RMD - MIOM

Alt/Time: Tran at 13:20:08 February 5, 2020  
 Trigger Source: Geo: 0.300 mm/s  
 Range: Geo: 254.0 mm/s  
 Record Time: 1.045 sec (Auto 10sec) at 2048 sps  
 Operator/Setup: Operator: SAIL, MIOM MM2

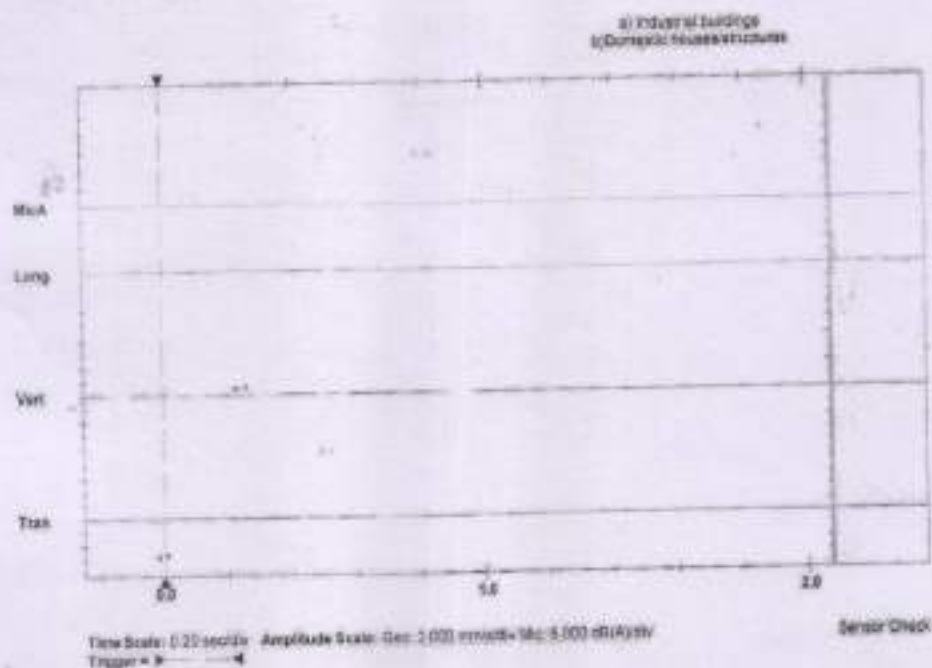
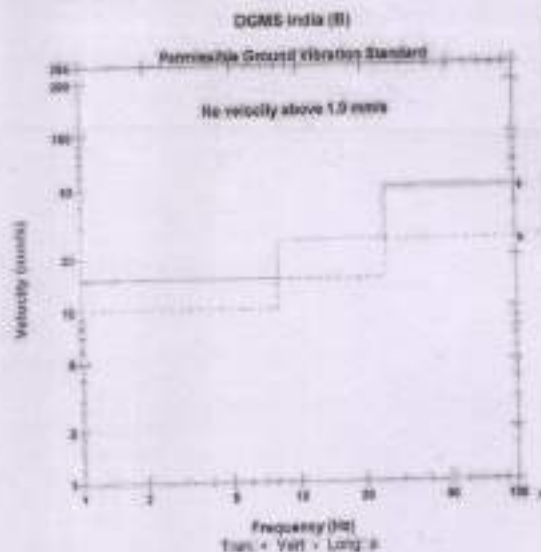
Serial Number: UM10057 V 10-01 Micromass ISEE  
 Battery Level: 5.7 Volts  
 User Calibration: October 1, 2018 by InstanTEL  
 Mix Calibration: 0.1% 0.1%  
 File Name: \_TEMP.EVT

Notes:  
 Location: SAIL, MIOM  
 Owner: SAIL  
 User Name: KGL ROLPH  
 General:

Microphone: A. Wright - Fast  
 LMax: <50 dB(A) at 0.250 sec  
 Sound (dB): LMin <30.110 <30.130 <30.140 <30  
 Channel Test: Check (Amp = 0 mV)

	Tran	Vert	Long	
PKV	0.347	0.169	0.101	mm/s
20 Freq	5.1	7.2	3.5	Hz
Time (Rel. to Trig)	0.028	-0.245	0.107	sec
Peak Acceleration	0.012	0.008	0.008	g
Peak Displacement	0.010	0.006	0.008	mm
Sensor Check	Passed	Passed	Passed	
Frequency	7.3	7.5	7.2	Hz
Overwing Ratio	3.3	3.7	3.9	

Peak Vector Sum: 0.347 mm/s at 0.028 sec



Printed: February 5, 2020 17:16:74

Printed: 0-100-2018 InstanTEL Corporation

ANNEXURE-24: E-BLASTING VIBRATION REPORT FOR KIOM-MIOM SAIL PAGE-5



**ANNEXURE 25- AMBIENT AIR QUALITY REPORT FOR THE PERIOD,  
APRIL 2021 TO SEPTEMBER 2021 FOR KIOM-MIOM, SAIL**



STEEL AUTHORITY OF INDIA LIMITED  
RAW MATERIAL DIVISION  
**KIRIBURU-MEGHAHATUBURU IRON ORE MINES**

ANNEXURE – 13 (a)

**AMBIENT AIR QUALITY REPORT**

Period : APRIL'21 - SEPTEMBER'21  
Instrument : Respirable Dust Sampler, Photometer SQ - 118  
Locations : **KIRIBURU IRON ORE MINE**  
Location - 1 : Mining Field Office  
Location - 2 : Hopper  
Location - 3 : Hospital  
Location - 4 : Township

Month	Sampling location	RPM ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )
<b>Permissible Level</b>		100	80	80
APRIL'21	Location - 1	67	23	12
	Location - 2	94	26	21
	Location - 3	--	BDL	BDL
	Location - 4	--	BDL	BDL
MAY'21	Location - 1	62	22	12
	Location - 2	89	23	19
	Location - 3	--	BDL	BDL
	Location - 4	--	BDL	BDL
JUNE'21	Location - 1	70	19	11
	Location - 2	76	21	16
	Location - 3	--	BDL	BDL
	Location - 4	--	BDL	BDL
JULY'21	Location - 1	--	--	--
	Location - 2	--	--	--
	Location - 3	--	--	--
	Location - 4	--	--	--
AUGUST'21	Location - 1	--	--	--
	Location - 2	--	--	--
	Location - 3	--	--	--
	Location - 4	--	--	--
SEPTEMBER'21	Location - 1	--	--	--
	Location - 2	--	--	--
	Location - 3	--	--	--
	Location - 4	--	--	--

Note : SO<sub>2</sub> : BDL (Below Detectable Limit) : 4  $\mu\text{g}/\text{m}^3$   
NO<sub>x</sub> : BDL (Below Detectable Limit) : 10  $\mu\text{g}/\text{m}^3$

EC Compliance - KIOM - MIOM



STEEL AUTHORITY OF INDIA LIMITED  
JHARKHAND GROUP OF MINES, BSL  
KIRIBURU-MEGHAHATUBURU IRON ORE MINES

AMBIENT AIR QUALITY REPORT

Period : April'21 to Sept'21  
Instrument : Respirable Dust Sampler, Photometer SQ- 118  
Location : MEGHAHATUBURU IRON ORE MINE  
Location - 1 : Dumper Shop  
Location - 2 : Mining Field Office  
Location - 3 : Hopper  
Location - 4 : Township

Month	Sampling location	SPM ( $\mu\text{g}/\text{m}^3$ )	RPM ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )
Permissible Level		500	100	80	80
April'21	Location - 1	99.52	35.23	BDL	BDL
	Location - 2	96.11	39.99	BDL	BDL
	Location - 3	97.62	36.51	BDL	BDL
	Location - 4	80.22	34.46	BDL	BDL
May'21	Location - 1	97.18	38.12	BDL	BDL
	Location - 2	96.59	39.31	BDL	BDL
	Location - 3	98.17	36.45	BDL	BDL
	Location - 4	81.85	35.37	BDL	BDL
June'21	Location - 1	86.05	24.33	BDL	BDL
	Location - 2	81.38	21.51	BDL	BDL
	Location - 3	90.05	26.38	BDL	BDL
	Location - 4	69.89	19.27	BDL	BDL
July'21	Location - 1	94.12	23.58	BDL	BDL
	Location - 2	87.59	24.70	BDL	BDL
	Location - 3	93.65	27.61	BDL	BDL
	Location - 4	73.20	21.03	BDL	BDL
Aug'21	Location - 1	87.82	25.29	BDL	BDL
	Location - 2	86.67	22.80	BDL	BDL
	Location - 3	95.30	28.81	BDL	BDL
	Location - 4	74.84	21.70	BDL	BDL
Sept'21	Location - 1	82.72	33.58	BDL	BDL
	Location - 2	79.20	32.92	BDL	BDL
	Location - 3	83.03	30.07	BDL	BDL
	Location - 4	66.13	36.04	BDL	BDL

Note : SO<sub>2</sub> : BDL (Below Detectable Limit) : 4  $\mu\text{g}/\text{m}^3$   
NO<sub>x</sub> : BDL (Below Detectable Limit) : 10  $\mu\text{g}/\text{m}^3$

EC Compliance - KIOM - MIOM

ANNEXURE-25: B-AMBIENT AIR QUALITY REPORT FOR THE PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR MIOM, SAIL



**ANNEXURE 26- NOISE MONITORING THROUGH NABL LABORATORY  
REGISTERED WITH JSPCB FOR THE PERIOD, APRIL 2021 TO  
SEPTEMBER 2021 FOR KIOM-MIOM, SAIL**

		<b>YUGANTAR BHARATI</b> <b>ANALYTICAL &amp; ENVIRONMENTAL ENGINEERING LABORATORY</b>			
Accredited by: National Accreditation Board for Testing Laboratory (NABL) & Jharkhand State Pollution Control Board (JSPCB) Certified by: ISO 9001:2015 & ISO 14001:2015		Certificate No.: TC 1812		ANALYTICAL TEST REPORT	

<b>Atmospheric Pollution Test Report</b>		URL (Website) Lab Report No.		TC1812120000473F	
Report Release Date		29 <sup>th</sup> June, 2021		Report ID	
Sample Description		Ambient Noise		YBAEEL-210512-124035-NE2	
Type of Industry		Iron Ore Mines		Job code/Ref. no.	
Issue to		Mrs Kiriburu-Meghahatuburu Iron Ore Mines Kiriburu-Meghahatuburu Iron Ore Mines Dist. - West Singhbhum, Jharkhand		Work Order No./ Date	
Sampling Period		23/06/2021 - 24/06/2021		Mode of sample collection	
Sampling Protocol		IS 9875:1981 (RA 2007) & CPCB Method S.O.50 (E) dated 11/9/2011		By YBAEEL Team	
Meteorological Cond.		Temp. - 34°C		RH % - 63%	
Sample receipt Date		25/06/2021		W.C.-Cloudy	
Analysis Started on		25/06/2021		Analysis completed on	
				28/06/2021	

**Test Results**						
Sl.NO.	Locations	Parameters	Units	Day Time	Night Time	Limits
2.	Near Hopper	Leq	dB (A)	70.1	62.2	Day - 75 Night - 70

\*\*End of Report\*\*

- Day time shall mean from 6.00 a.m. to 6.00 p.m.
- Night time shall mean from 10.00 p.m. to 6.00 a.m.
- Noise level in any area comprising less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
- Mean value of any noise level declared as one of the four noise level values by the competent authority.
- dBA (A) denotes the time weighted average of the level of sound in decibels (re 20 µPa) which is suitable to human hearing.

<b>Remarks</b>	Sample Complies with the prescribed specification as per the noise pollution (Regulation & Control) Rules, 2000
<b>Abbreviation</b>	MSL - Maximum Sound Level, RMS - Root Mean Square
<b>Note</b>	The parameters marked with * are not accredited by NABL
<b>Specific contractual notes</b>	All values are expressed in dB (A). The results listed refer only to the tested sample and applicable parameters. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the Lab. In (Page) The samples submitted shall be destroyed after 12 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the parameters tested. All disputes are subject to the Jurisdiction of the Court.

Use CONFORM for Jharkhand State Pollution Control Board  
 Application No. 12613-24  
 Allotted Date 16-06-2021  
 Subsidised Fee 49,000/- (49K)

 Tested by Anil Kumar Singh Lab Analyst		 Verified by Brij Ranjan Kumar Sooten 9-07/20		 Issued by Umesh Das Authorized Signatory Atmospheric Pollution Yugantar Bharati Analytical & Environmental Engineering Laboratory	
--	--	--	--	--	--

Branch Office :- Jamshedpur		Dhanbad		Hazaribag		Paku	
-----------------------------	--	---------	--	-----------	--	------	--

Main Office : Namkum Post Office, Sidrout, Ranchi - 834010, Jharkhand  
 Ph : 098351-97860, 098357-85677, Email - ybaeel@gmail.com, Web - https://ybaeel.in

**ANNEXURE-26: A- NOISE MONITORING THROUGH NABL LABORATORY REGISTERED WITH JSPCB FOR THE  
PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR KIOM, SAIL**



# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: National Accreditation Board for Testing Laboratory (NABL) & Jharkhand State Pollution Control Board (JSPCB)  
Certified by: NABL ISO 9001:2015 & ISO 14001:2015



ANALYST: YUGANTAR BHARATI

Atmospheric Pollution Test Report		URL/Single Lab Report No.	TC78132120090462F
Report Release Date	29th June, 2021	Report ID	YBAEEL-210616-170908-401
Sample Description	Ambient Noise	Job code/ Ref. no.	YBAEEL/WALIA/Jun.-2101
Type of Industry	Iron Ore Mines	Work Order No./ Date	JSPCB Application No., 10483322
Issue to	M/s Kiriburu-Meghahatuburu Iron Ore Mines Kiriburu-Meghahatuburu Iron Ore Mines Dist. - West Singhbhum, Jharkhand.		
Sampling Period	23/06/2021 - 23/06/2021	Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS 9876:1981 (RA 2007) & CPCB Method S.O.50 (E) dated 11/01/2018		
Metereological Cond.	Temp. - 24°C	RH % - 70%	W.C. - Cloudy
Sample receipt Date	24/06/2021	Analysis Started on	24/06/2021
		Analysis completed on	28/06/2021

## "Test Results"

Sl. No.	Locations	Parameters	Units	Day Time	Night Time	Units
2.	Near Hopper	Leq	dB (A)	70.5	67.5	Day - 75 Night - 70

## "Level of Report"

- Day time shall mean from 6:00 a.m. to 10:00 p.m.
- Night time shall mean from 10:00 p.m. to 6:00 a.m.
- Sampling area is an area comprising not less than 90° meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.
- Actual day time noise may be declared as one of the four above mentioned categories by the competent authority.
- dB(A) Day denotes the time weighted average of the level of sound in decibels as dB(A) which is suitable for human hearing.

Remarks	Sample Complies with the prescribed specifications as per the noise pollution (Regulation & Control) Rules, 2002
Accreditation	ISO 9001:2015 (Minimum detection limit: 50L - Noise detection limit)
Note	The parameters marked with * are not accredited by NABL.
Specific contractual notes	All values are expressed in its unit. The results are valid only for the tested samples and applicable parameters. This report is valid only for the use of the samples and is not to be used for any other purpose. This report cannot be reproduced, except when it is used without the written permission of the Lab to change. The samples collected shall be destroyed after 10 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the intended amount. All disputes are subject to the Jurisdiction of the Court.

Only CONCERN to  
Jharkhand State Pollution Control Board  
Registration No. 10483322  
Issued Date: 14.06.2021  
Expiry Date: 14.06.2022

Tested by Anil Kumar Singh Lab Analyst	Verified by Bijendra Kumar Section In-Charge	Authorized Signatory Atmendra Kumar Potluri Yugantar Bharati Analytical & Environmental Engineering Laboratory	Issued by Jharkhand State Pollution Control Board
--	--	--	--



Branch Office :- Jamshedpur | Dhanbad | Hazratnagar | Pakur  
Main Office :- Namkum Post Office, Sidrauli, Ranchi - 834010, Jharkhand  
Ph : 098351-07900, 098357-88677, Email - ybaseel@gmail.com, Web - https://ybaseel.in



ANNEXURE-26: B- NOISE MONITORING THROUGH NABL LABORATORY REGISTERED WITH JSPCB FOR THE PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR MIOM, SAIL



[illegible]



**YUGANTAR BHARATI**  
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Approved by  
Ministry of Environment & Forests, Government of India  
No. 1001/2003-2004 dated 10/01/2004



Ministry of Environment & Forests, Government of India  
No. 1001/2003-2004 dated 10/01/2004

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**Atmospheric Pollution Test Report**

**Report Reference No.** 09/Jan, 2009

**Sample Description** 05 Series

**Type of Industry** Iron Ore Mines

**Address** M/s KIRBHU-Meghahatnuri Iron Ore Mines  
Dist. - West Singhbhum, Jharkhand

**Sampling Period** 24/02/2007

**Sampling Protocol** IS 9078, 1997 (RA 2007) & GPCB Manual

**Methodological Code** Temp. - 35.5 °C

**Sample receipt Date** 29/02/2007

**URL/Source Location No.** 70781321-200000472P

**Report ID** VBAEEL-210012-124875-001

**Job order Ref. no.** VBAEELWAL/J.O. No. - 31794

**Work Order No. / Date** JSPM Application No. - 10079224

**Mode of sample collection** By VBAEEL Team

**IS 9078, 1997 (RA 2007) & GPCB Manual** IS 9078 (P) dated 13/07/2004

**W.C. Class** 3rd M. 4th S.

**Analysis completed on** 08/03/2007

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SL.NO.	Location	Parameters	Units	Results	Limit*
1.	Near DC (60 m from Acoustic Enclosure Area)	Log	dB(A)	73.0	75

\*Limit (Leq)

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**Remarks**

1. The test was conducted from 10:00 AM to 10:30 AM.

2. The test was conducted from 10:00 AM to 10:30 AM.

3. The test was conducted from 10:00 AM to 10:30 AM.

4. The test was conducted from 10:00 AM to 10:30 AM.

5. The test was conducted from 10:00 AM to 10:30 AM.

6. The test was conducted from 10:00 AM to 10:30 AM.

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8. The test was conducted from 10:00 AM to 10:30 AM.

9. The test was conducted from 10:00 AM to 10:30 AM.

10. The test was conducted from 10:00 AM to 10:30 AM.

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**ANNEXURE 27- TAILING DAM WATER QUALITY ASSESSMENT REPORT  
THROUGH NABL LABORATORY REGISTERED WITH JSPCB FOR THE  
PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR KIOM-MIOM, SAIL**

 <b>YUGANTAR BHARATI</b> <b>ANALYTICAL &amp; ENVIRONMENTAL ENGINEERING LABORATORY</b>																																																																				
Accredited by: National Accreditation Board for Testing Laboratory (NABL) & Jharkhand State Pollution Control Board (JSPCB) Certified by: An ISO 9001:2015 & ISO 14001:2015		Certificate No.: TS/7021																																																																		
<b>Water Test Report</b>																																																																				
Date of Issue:	29 <sup>th</sup> June, 2021	URL/Issue Lab Report No.																																																																		
Sample Description:	Surface Water	Report ID																																																																		
Type of Industries:	Iron Ore Mines	Job code / Ref. No.																																																																		
Issued to :-	M/s Kiriburu-Meghahatuburu Iron Ore Mines Kiriburu-Meghahatuburu Iron Ore Mines Dist. - West Singhbhum, Jharkhand.	Work Order No./ Date																																																																		
Sampling date	23/06/2021	Mode of sample Collection																																																																		
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code																																																																		
Sampling Location	Rangring Dam	Sampling Source																																																																		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity																																																																		
Meteorological cond.	W.C. - Cloudy	RH - 70 %																																																																		
Work slotted date	24/06/2021	Test started on																																																																		
		Test completed on																																																																		
<table border="1"> <thead> <tr> <th>Sl</th> <th>Parameter</th> <th>Test Method</th> <th>Units</th> <th>Results</th> <th>Limits</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>pH value</td> <td>IS 3025 (P-11):2002</td> <td>pH</td> <td>7.09</td> <td>6.0 - 9.0</td> </tr> <tr> <td>2.</td> <td>Temperature</td> <td>IS 3025 (P-40)</td> <td>°C</td> <td>26.2</td> <td>-</td> </tr> <tr> <td>3.</td> <td>Nitrate (as NO<sub>3</sub>-)</td> <td>APHA 4500 NO<sub>3</sub>- (B) 23<sup>rd</sup> edition 2017</td> <td>mg/l</td> <td>1.44</td> <td>50</td> </tr> <tr> <td>4.</td> <td>Total solids</td> <td>IS 3025 (P-15):2009</td> <td>mg/l</td> <td>112</td> <td>-</td> </tr> <tr> <td>5.</td> <td>Total suspended solids</td> <td>IS 3025 (P-17):2012</td> <td>mg/l</td> <td>40</td> <td>-</td> </tr> <tr> <td>6.</td> <td>Total dissolved solids</td> <td>IS 3025 (P-18):2009</td> <td>mg/l</td> <td>72</td> <td>1500</td> </tr> <tr> <td>7.</td> <td>Chloride (as Cl<sup>-</sup>)</td> <td>IS 3025 (P-37):2003</td> <td>mg/l</td> <td>4.73</td> <td>950</td> </tr> <tr> <td>8.</td> <td>BOD</td> <td>IS 3025 (P-44):2009</td> <td>mg/l</td> <td>0.0</td> <td>3.0</td> </tr> <tr> <td>9.</td> <td>COD</td> <td>IS 3025 (P-58):2006</td> <td>mg/l</td> <td>12.6</td> <td>-</td> </tr> <tr> <td>10.</td> <td>Oil and grease</td> <td>IS 3025 (P-35):2003</td> <td>mg/l</td> <td>2.8</td> <td>-</td> </tr> </tbody> </table>			Sl	Parameter	Test Method	Units	Results	Limits	1.	pH value	IS 3025 (P-11):2002	pH	7.09	6.0 - 9.0	2.	Temperature	IS 3025 (P-40)	°C	26.2	-	3.	Nitrate (as NO <sub>3</sub> -)	APHA 4500 NO <sub>3</sub> - (B) 23 <sup>rd</sup> edition 2017	mg/l	1.44	50	4.	Total solids	IS 3025 (P-15):2009	mg/l	112	-	5.	Total suspended solids	IS 3025 (P-17):2012	mg/l	40	-	6.	Total dissolved solids	IS 3025 (P-18):2009	mg/l	72	1500	7.	Chloride (as Cl <sup>-</sup> )	IS 3025 (P-37):2003	mg/l	4.73	950	8.	BOD	IS 3025 (P-44):2009	mg/l	0.0	3.0	9.	COD	IS 3025 (P-58):2006	mg/l	12.6	-	10.	Oil and grease	IS 3025 (P-35):2003	mg/l	2.8	-
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Remarks :- Samples Comply with the prescribed Specifications as per IS 2296:1992. Note :- The parameters marked with * are not accredited by NABL. Specific contractual notes :- * The results listed refer only to the tested sample and applicable parameter. * This report, in full or in part, shall not be used for advertising or as evidence in any court of law. * This report cannot be reproduced, except when in full, without the written permission of the Lab in-charge. * The samples received shall be destroyed after two months from the date of issue of the certificate unless specified otherwise and sample for biological testing will be destroyed after one hour of testing. * The liability of the laboratory is limited to the involved amount. * All disputes are subjected to the Ranchi Jurisdiction. * ND - not detected, DL - detectable limit.																																																																				
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**ANNEXURE 27: A- TAILING DAM WATER QUALITY ASSESSMENT REPORT THROUGH NABL LABORATORY  
REGISTERED WITH JSPCB FOR THE PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR MIOM, SAIL**





# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: National Accreditation Board for Testing Laboratory (NABL) & Jharkhand State Pollution Control Board (JSPCB)  
Certified by: An ISO 9001:2015 & ISO 14001:2015



Certificate No.: YB/13

## ANALYTICAL TEST REPORT

Water Test Report		URL/Unique Lab Report No.	TC0532110099166P
Date of Issue	29 <sup>th</sup> June, 2021	Report ID	YBAEEL-210512-124835 - SW01
Sample Description	Surface Water	Job code / Ref. no.	YBAEEL/WALAC/Jus-21067
Type of Industries	Iron Ore Mines	Work Order No./ Date	JSPCB Application No.: 10619224
Issued to :-	M/s Kiriburu-Meghahatuburu Iron Ore Mines Kiriburu-Meghahatuburu Iron Ore Mines Dist. - West Singhbhum, Jharkhand		
Sampling date	24/06/2021	Mode of sample Collection	By YBAEEL Team
Sampling Protocol	IS: 3025 (Part-1) 1987, R-2003	Sample Code	210625 - SW - E01
Sampling Location	Pump House	Sampling Source	Surface Water
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	3000 ml
Meteorological cond.	W.C. - Cloudy	RH - 73 %	Temp - 24°C
Work allotted date	25/06/2021	Test started on	25/06/2021
		Test completed on	29/06/2021

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2003	pH	8.82	6.5 - 9.0
2.	Temperature	IS 3025 (P-09)	°C	26.5	--
3.	Nitrate (as NO <sub>3</sub> -)	APHA 4500 NO <sub>3</sub> - (B) 23 <sup>rd</sup> edition 2017	mg/l	1.5	50
4.	Total solids	IS 3025 (P-15):2008	mg/l	222	--
5.	Total suspended solids	IS 3025 (P-17):2012	mg/l	42	--
6.	Total dissolved solids	IS 3025 (P-18):2008	mg/l	180	1500
7.	Chloride (as Cl <sup>-</sup> )	IS 3025 (P-32):2003	mg/l	5.74	600
8.	BOD	IS 3025 (P-44):2008	mg/l	1.5	3.0
9.	COD	IS 3025 (P-58):2008	mg/l	20.0	--
10.	Oil and grease	IS 3025 (P-39):2003	mg/l	3.2	--

\*\*\*\*\*End of Test\*\*\*\*\*

**Remarks** - Samples Comply with the prescribed Specification as per IS 2296:1992.  
**Note** - The parameters marked with \* are not accredited by NABL.

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- The liability of the laboratory is limited to the invoiced amount.
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- ND - not detected, DL - detectable limit



Tested by Pankaj Kumar Lab Analyst	Checked by Mihir Kumar In-Charge Water Testing	Issued by Umesh Das Authorized Signatory Chemical Section Technical Manager



Branch Office :- Jamshedpur, Dhanbad, Hazratnagar, Pakur  
Main Office :- Namkum Post Office, Sirsa, Ranchi - 834010, Jharkhand  
Ph : 098351-97980, 098357-89677, Email - ybaeel@gmail.com, Web - https://ybaeel.in

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**ANNEXURE-27: B-TAILING DAM WATER QUALITY ASSESSMENT REPORT THROUGH NABL LABORATORY  
REGISTERED WITH JSPCB FOR THE PERIOD, APRIL 2021 TO SEPTEMBER 2021 FOR KIOM, SAIL**

ENR/NOVEMBER 11, 1998  
\$4.00 U.S./\$5.00 CAN. & MEX.

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## METRO

Power  
cuts hit  
studies,  
business

# CM prod for 'new capital'

BY MICHAEL BAKER

Construction companies are being asked to do more than build infrastructure, says a new report from the U.S. General Accounting Office. The report, "Infrastructure: A New Role for the Private Sector," says that the federal government should consider using private companies to build and operate infrastructure projects. The report also says that the federal government should consider using private companies to build and operate infrastructure projects.

The report, which was released last week, says that the federal government should consider using private companies to build and operate infrastructure projects. The report also says that the federal government should consider using private companies to build and operate infrastructure projects.

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**WORLD BANK GROUP**  
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