



स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
बोकारो इस्पात संयंत्र
BOKARO STEEL PLANT
गुआ अयस्क खान
GUA ORE MINES

Ref. No. : GUA/E&L/Topailore-EC Compl._H1/2022-23/ 316

Date: 29.11.2022

To,

The Addl. PCCF (C)
Ministry of Environment, Forest and Climate Change
Regional Office (ECZ)
Bungalow No. A - 2, Shyamali Colony
Doranda, Ranchi - 834 002

Sub: Compliance Report of Environmental Clearance accorded by MoEF&CC to the Topailore Iron Ore Mining Project of Gua Ore Mines of SAIL, located in Ghatkuri Reserve Forest, Tehsil Gua, West Singhbhum Dist., Jharkhand

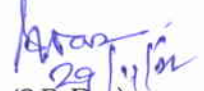
Ref.: 1. Ministry's Environment Clearance Letter No. EC/SEIAA/2015-16/694/2015/1291, dated 17.08.2015
2. EC amendment vide Letter No. J-11015/272/2011-IA.II(M) dated 19.05.2020

Sir,

As per the provisions of the condition no. (17) of above stated Environmental Clearance order granted to the Topailore Iron Ore Mining Project of Gua Ore Mines, the six monthly compliance report on the conditions stipulated in the Environmental Clearance for the period from *April, 2022 to September, 2022* is enclosed herewith for kind perusal please.

Thanking you.

For & on behalf of
SAIL-BSL, Gua Ore Mines


(S.P. Das)

General Manager (Mines) and E&L

Encl: As stated above

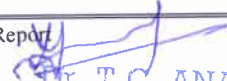
Copy to:


1. Director, IA, MoEF&CC, GOI, Indira Paryavaran Bhavan, Aliganj, Jor Bagh Road, New Delhi - 110 003.
2. Member Secretary, JSPCB, HEC, Dhurwa, Ranchi - 834 004.
3. In-charge, Eastern Zone, CPCB, Southern Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700 107 (W. B.)
4. The Regional Office, JSPCB, Jamshedpur

Compliances for conditions of Environmental Clearance (Vide Order no.EC/ SEIAA/2015-16 /694/2015/1291, dated 17.08.2015&EC Amendment Order No. J-11015/272/2011-IA.II (M) dated 19.05.2020) of Topailore Iron Ore Mining Project of Gua Ore Mines of M/s. STEEL AUTHORITY OF INDIA LTD (SAIL)-(Period: April, 2022 – September, 2022)

SL.	CONDITION	COMPLIANCES
A. Specific Conditions:		
1.	This Environment Clearance is valid subject to the following condition below – That this project has- a. Obtained all legal rights to operate at concerned place. b. Complied with all existing concerned laws of the land and c. Complied with the decisions of SEIAA on the issue of Environment Clearance till date.	Agreed to. Topailore Iron Ore Mining Project has valid mining lease, approved Forest Clearance from MoEF&CC and approved CTE & CTO from JSPCB.
2.	The Environment Clearance is subject to renewal of mining lease as per Rule 24 A of mineral concession Rule 1960 and all other Statutory Conditions as imposed by various agencies / District Authorities are complied with.	Agreed to. The lease has been extended & executed upto 08.03.2040 as per MCR, 2021/MMGC Rule, 2015.
3.	At the time of obtaining Consent to establish/ Consent to Operate, PP should submit sitemap duly signed by PP and DMO to JSPCB & SEIAA.	Consent to Establish (CTE) and Consent to Operate (CTO) were granted by JSPCB 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 vide Ref No.: JSPCB/HO/RNC/CTE-8139793/2020/245 dated 19.06.2020 and vide reference no. JSPCB/HO/RNC/CTO-8312053/2020/1190 dated 28.07.2020 respectively. Sitemap was submitted to JSPCB along with application for Consent to establish (CTE). The copy of CTE & CTO is enclosed as Annexure-1
4.	At the time of obtaining consent to operate, PP will erect boundary pillars to demarcate boundary of lease. GPS reading, backward – forward bearing & pillar to pillar distance is to written on each pillar. Pillar wise	The demarcation of boundary of diverted forest land which itself is the total mining lease area (14.15 ha) and safety zone (7.5-meter strip within the boundary of the mining lease area), and its

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	list will be submitted to SEIAA and JSPCB before issue of Consent to Establish/Consent to Operate.	protection by erecting adequate number of 4 feet high RCC boundary pillars inscribed with DGPS coordinates along-with fencing has been undertaken. Copy of the survey map including DGPS co-ordinates has been submitted to concerned statutory bodies before issue of Consent to Establish/Consent to Operate.
5.	All the conditions stipulated by the State Pollution Control Board in their NOC shall be effectively implemented.	Agreed. All the conditions stipulated by the State Pollution Control Board in the NOC will be effectively implemented.
6.	Environment Clearance is subject to obtaining clearance under Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project. The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna.	The condition is not applicable as there is no designated wildlife protected area/wildlife sanctuary within 10 Km radius to the project site.
7.	Necessary permission from the Forest Department for transportation of minerals through the forest road shall be revalidated before restarting the mining operations.	Topailore Lease is presently non-operational. This condition is noted and shall be complied before restarting the mining operations.
8.	The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table. In case of working below the ground water table, prior approval of the Ground Water Directorate, Government of Jharkhand / Central Ground Water Board shall be obtained. Benches height and slope shall be maintained as per approved mining plan.	<p>Topailore Mine Lease does not have any geological reserves of iron ore. The iron ore deposited in Topailore lease are those which have been washed down from the fines dump of Duarguiburu Lease and dumped on flat ground. The mine will be worked by means of opencast mechanized method of mining using pay-loader, dozer and dumper. No drilling and blasting will be required.</p> <p>The Ground Water Table in the Lease area occurs at 400 m AMSL whereas ultimate pit limit will be the original ground level i.e. 470 m AMSL whereas the current depth of the pit is 515 m AMSL. So there will be no intersecting of ground water table during mining</p>


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		operations at the mine.
9.	The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of first order and second order streams, if any emanating / passing through the mine lease area during the course of mining operation.	There is no natural watercourse in the mining lease area, however, adequate measures will be taken for conservation and protection of first order and second order streams present in nearby area of mine lease during the course of mining operation
10.	The top soil shall temporarily be stored at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.	Topailore Mine Lease does not have any geological deposit of iron ore. The iron ore deposited in Topailore lease are those which have been washed down from the processed fines dump of Duarguiburu Lease (adjacent main mining lease of Gua Ore Mines) and dumped on flat ground. The mine will be worked by means of opencast mechanized method of mining using pay-loader, dozer and dumper. No drilling and blasting will be required. Therefore, there will be no instance of encountering top soil.
11.	The entire waste generated shall be backfilled and there shall be no external overburden dump left at the end of mine life. The entire backfilled area shall be reclaimed by plantation. The back filling should be carried out in such a manner that it is restored to the normal ground level. Monitoring and management of rehabilitated areas should continue until the vegetation become self- sustaining. Compliance status should be submitted to Jharkhand state Pollution Control Board, Ranchi and its nearest Regional Office on six monthly basis.	<p>Noted for compliance.</p> <p>The iron ore deposited in Topailore lease are those which have been washed down from the processed fines dump of Duarguiburu Lease (adjacent main mining lease of Gua Ore Mines) and dumped on flat ground. Therefore no waste will be generated in Topailore lease.</p> <p>Since Topailore ML is located entirely within Forest Land, after the deposited iron ore fines are excavated to the maximum possible extent, eco-restoration of the forest land will be possible.</p>

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12.	Catch drains and siltation ponds of appropriate size should be constructed for the working pit, temporary OB dumps, If any and mineral dump to arrest flow of silt and sediment. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The Drains should be regularly desilted, particularly after monsoon, and maintained properly.	As practiced in the adjacent lease (i.e. Duarguiburu which is main mining lease under Gua Ore Mine) of the said project, all mining pits, the storm water in the rainy season is being drained & collected in mining pits, which has almost totally eliminated the discharge of storm water from mining pit. A detailed study has been conducted by IIT Kharagpur for identifying places vulnerable to erosion, surface runoff control and suggesting mitigative measures. Based on the recommendations of IIT KGP, as practice is being followed in adjacent lease, the protective measures viz. settling tanks and check dams of appropriate size will be constructed during the period of operation in addition to existing control measures as per requirement. Actions are being taken for utilizing stored water for watering the mine area, roads, greenbelt development etc. Existing drains and sedimentation pits are regularly desilted, after monsoon, and maintained properly.
13.	Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and temporary dumps and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.	Garland drain of appropriate size, gradient and length are constructed for mine pit and temporary sump capacity has been designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years' data) and maximum discharge in the area adjoining the mine site. As done in past within the adjacent lease of Gua, sedimentation pits will be constructed at the corners of the garland drains and the same will be desilted at regular intervals. These measures will be taken as when required depending upon the topography and field condition of the site.
14.	Dimension of the retaining wall at the toe of the temporary dumps and OB benches within the mine to check run-off and siltation should be based on the rain fall data	No overburden dump will be created in the mining period because this project is only for excavation of existing silted fines within the lease hold area.



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14 (1).	Plantation shall be raised in the 7.5 m wide green belt in the safety zone around the mining lease by planting native species around ML area, backfilled and reclaimed area, around water body, roads etc. in consultation with local DFO/ Agriculture Department. Greenbelt shall be developed all along the mine lease area and haul roads. The project proponent shall do tree plantation in at least 33% of the space preferably along the periphery and in vacant species. Fast growing and local species will be planted. In case land is not available within the lease area or it is not possible to plant tree due to nature of land then PP will do necessary afforestation at other place/land.	Agreed. Since early eighties, the Gua Ore Mine has taken up plantation in and around the mines with an objective to improve green cover in the lease hold area as well as improve environmental quality. About 12.3 lakh saplings have been planted covering an area of 755 ha since 1984-85. This has not only improved green cover but also resulted in reducing dust levels and attenuating noise.
15.	Regular water sprinkling shall be carried out in critical areas prone to air pollution & having high levels of SPM and RSPM such as haul road, loading and unloading point and transfer points. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control board in this regard.	In adjacent Duarguiburu Lease, High pressure Water Sprinklers (28 KL.) have been deployed for regular water sprinkling on Haul Roads and other dust prone areas. In addition to this, installed permanent sprinklers of Gua ore mines along the main approach haul roads and other critical areas. Spray nozzles have also been provided at the hopper as well as screening & transfer points at Ore Processing Plant. All these dust control measures installed at Duarguiburu mines have significantly controlled fugitive dust generation and helped in maintaining the air quality in and around the mines. The same arrangement will be made for Topailore mining lease of Gua Ore Mines whenever it will be operational.
16.	The project authority should implement suitable conservation measures to augment the ground water resource in the area in consultation with Ground Water Directorate, Government of Jharkhand / Central Ground Water Board / Authority.	Suitable conservation measures to augment the ground water resource in the area in consultation with Ground Water Directorate, Government of Jharkhand are under implementation. Water conservation through construction of sedimentation cum rain water harvesting pits and Gully plugging etc. has already been implemented. Additionally, rooftop rainwater harvesting system is

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		also implemented in Gua township. The construction of rooftop rainwater harvesting system for ground water recharge through recharge pit cum shaft at Director Bungalow and Guest House buildings of Gua Township has been completed.
17.	The Project authority should obtain prior approval of the competent authority for drawl of water required for the project.	Permission for drawl of required water has already been taken from Water Resource Department, Govt. of Jharkhand.
18.	Suitable rainwater harvesting measures shall be planned and implemented in consultation with Ground Water Directorate, Government of Jharkhand/ Central Ground Water Board / Authority.	Suitable conservation measures to augment the ground water resource in the area in consultation with Ground Water Directorate, Government of Jharkhand are under implementation. Water conservation through construction of sedimentation cum rain water harvesting pits and Gully plugging etc. has already been implemented. Additionally, rooftop rainwater harvesting system is also implemented in Gua township. The construction of rooftop rainwater harvesting system for ground water recharge through recharge pit cum shaft at Director Bungalow and Guest House buildings of Gua Township is completed. The photographs of rooftop rainwater harvesting are enclosed as Annexure-2
19.	Vehicular emission shall be kept under control & regularly monitored. Measures shall be taken for maintenance of vehicle used in mining operation & in transportation of Minerals. The vehicle shall be covered with a tarpaulin & shall not be overloaded.	Topailore Lease is presently non-operational. This condition shall be complied when the lease is operational.
20.	Blasting operation should be carried out during the daytime. Control Blasting should be practiced. The mitigative measures for control of ground vibration & to arrest fly rocks and boulders should be implemented	The mine will be worked by means of opencast mechanized method of mining using pay-loader, dozer and dumper. No drilling and blasting will be required.

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21.	Drills shall either be operated with dust extractors or equipped with water injection system.	The mine will be worked by means of opencast mechanized method of mining using pay-loader, dozer and dumper. No drilling and blasting will be required.
22.	Effective safeguard measures should be taken to control the fugitive emissions so as to ensure that RSPM (PM10 and PM 2.5) levels are within prescribed limits.	Effective safeguard measures will be taken to control the fugitive emission upon start of mining operation of Topailore lease.
23.	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained.	Pre-placement medical examination and periodical medical examination of the workers engaged in the project are carried out and records maintained for Duarguiburu Mining Lease of Gua Ore Mines. The same practice will be followed for Topailore Mining lease of Gua Ore Mines.
24.	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, septic tanks, safe drinking water, medical health care etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	In Gua Ore Mines most of the construction labour are hired from the local villages 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.
25.	Proper Safety measures as per statutory requirement are to be implemented around the mined out pit prior to closure of site.	Proper Safety measures as per statutory requirement will be implemented around the mined out pit prior to closure of site.
26.	A final mine closure plan along with corpus fund duly approved by Competent Authority shall be submitted to the Jharkhand state Pollution Control Board, Ranchi and the concerned DMO in advance to the final closure for approval.	<p>Indian Bureau of Mines (IBM), Ranchi has approved Review of Mining Plan & Progressive Mine Closure Plan (PMCP) for period from 2022-23 to 2026-2027 vide letter No. RAN/WSB/Fe/MP-17/2021-22 dated 22.12.2021.</p> <p>After complete exhaustion of mineral from the lease, Final Mine Closure Plan (FMCP) will be prepared and get it approved from</p>

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		the Competent Authority i.e. Indian Bureau Of Mines. Further the measures approved in the FMCP will be implemented at the cost of SAIL.
27.	Consent to Operate should be obtained from JSPCB before starting production from the Mine.	Consent to Establish (CTE) and Consent to Operate was granted by JSPCB 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 vide Ref No.: JSPCB/HO/RNC/CTE-8139793/2020/245 dated 19.06.2020 and vide reference no. JSPCB/HO/RNC/CTO-8312053/2020/1190 dated 28.07.2020 respectively. The copy of CTE & CTO are enclosed as Annexure-1
<u>B. General Conditions:</u>		
1.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	Agreed. There will be no change in mining technology and scope of working without prior approval of the Ministry of Environment & Forest. The Amendment made in Environmental Clearance (EC) Order No. J-11015/272/2011-IA.II (M) dated 19.05.2020 of Topailore Iron Ore Mining Project of Gua Ore Mines which will be strictly followed by Gua Ore Mines.
2.	No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.	No change in the calendar plan including excavation, quantum of mineral iron ore and waste will be made. ROM production will be kept within permitted capacity in the EC/ approved Review of Mining Plan & PMCP.
3.	The project proponent shall maintain register for production and dispatch and submit return to the Board.	Register for production and dispatch will be maintained once the production starts from the mines also periodic return will be submitted to the Board.



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4.	The project proponent shall not cut trees/ carry out tree felling in leased out area without the permission of competent authority.	Permission from competent authority will be taken for tree cutting / tree felling as and when required.
5.	Four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (Particulate matter with size less than 10 microns i.e. PM10 and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Since Topailore mining lease is one of the four mining lease of Gua Ore Mines, ambient locations will be same as for the Duarguiburu Mining lease. Ambient Air quality monitoring at four locations is being carried out regularly and reports are being submitted to Jharkhand State Pollution Control Board. The latest air quality monitoring reports are enclosed as Annexure-3
6.	Regular monitoring of ground water level & quality should be carried out in & around the mine lease by establishing a network of existing wells and constructing new piezometers during the operation. The monitoring should be carried out four times in a year i.e. January, April-May, August, November and the data thus collected may be sent regularly to Jharkhand State Pollution Control Board, Ranchi and its nearest Regional Office / Ground Water Directorate, Government of Jharkhand / Central Ground Water Board / Authority.	Four open wells have been selected all around the Gua Ore Mines viz, (i) Guasai – Forest Bungalow, (ii) Ghatkuri Village, (iii) ChotaNagra-Baihatu Village & (iv) Baraiburu village Near Pool, for regular monitoring of ground water levels & quality. The regular monitoring of the same is being carried out on quarterly basis and data are being submitted to JSPCB.
7.	The project proponent shall make all internal roads pucca and shall maintain a good housekeeping by regular cleaning and wetting of the haul roads and the premises. Fugitive dust emission from all sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	Most of the internal roads are made pucca. Good housekeeping is being maintained by regular cleaning and wetting of the haul roads and the premises. Effective measures have been taken to control fugitive dust within the prescribed standards. Water spraying arrangement on haul roads and other strategic points will be provided and the same will be properly maintained.
8.	Measures should be taken for control of noise levels below 85 dB (A) in the work environment. Workers engaged in operations of HEMM, etc.	Measures for control of noise levels are being taken regularly to maintain the noise levels below 85 dB(A). Workers engaged in operations of HEMM, Ore Crushing & Screening areas, are being

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	should be provided with ear plugs / muffs	provided with ear plugs / muffs and are motivated time to time to use the safety equipments for the whole period of their engagement in work.
9.	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of effluent from workshop.	Necessary provisions for treatment & recycling of effluents from the proposed beneficiation plant will be taken during the commissioning of Beneficiation Plant. Installation of oil and grease trap along with vehicle washing ramp, maintenance bay and covered storage yard for proper handling of hazardous waste for the workshop effluents will be practiced as done in Duarguiburu lease.
10.	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Personal Protective Equipment (PPE) i.e. dust masks are being provided to all the workers engaged in the dust prone areas i.e. excavation & loading areas, ore handling plants, stacking & loading areas etc. Suitable training on safety and health aspects is being given on regular basis. Occupational health surveillance program are being conducted regularly.
11.	Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed. Dispensary facilities for First Aid shall be provided at site.	Personal Protective Equipment (PPE) i.e. dust masks are being provided to all the workers engaged in the dust prone areas i.e. excavation & loading areas, ore handling plants, stacking & loading areas etc. Suitable training on safety and health aspects is being given on regular basis. Occupational health surveillance program are being conducted periodically to observe any contractions due to exposure to dust so that corrective measures will be taken, if needed. Dispensary facilities for First Aid will be provided at site. Further, PME in every 3 years for person attaining age of 45 years & every 5 years for persons below 45 years are

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		being done.
12.	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	Environmental Management Cell (including laboratory) having qualified personnel has already been established at the Gua Ore Mine. This cell is headed by a General Manager who reports directly to head of Gua Ore Mines i.e. Chief General Manager (Mines).
13.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Jharkhand state Pollution Control Board, Ranchi. PP shall carry out CSR activities as per Government Guidelines. (% of profit/turnover).	Agreed to. Funds earmarked for environmental protection measures at the mine are booked separately and not being diverted for other purpose.
14.	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment and Forests and its Regional Office located at Bhubaneswar	Funds earmarked for environmental protection measures at the mine are booked separately and not being diverted for other purpose. Year wise expenditure is being reported to the Ministry of Environment and Forests and its Regional Office located at Ranchi.
15.	The Jharkhand State Pollution Control Board, Ranchi directly or through its Regional Office, shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) by furnishing the requisite data / information/ monitoring reports.	Agreed. Full cooperation will be provided to the JSPCB officer(s) by furnishing the requisite data / information/ monitoring reports.
16.	The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by	Agreed. Six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by email) are being

SL.	CONDITION	COMPLIANCES
	email) to the Jharkhand state Pollution Control Board, Ranchi and to its concerned Regional Office.	submitted to the Jharkhand State Pollution Control Board, Ranchi and to its concerned Regional Office.
17.	The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Jharkhand state Pollution Control Board, Ranchi and to its concerned Regional Office. The criteria pollutant levels namely; SPM, RSPM, SO ₂ , NO _x (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the company in the public domain.	<p>Six monthly compliance reports on the status of implementation of environmental safeguards are being submitted timely to MoEF&CC, New Delhi, Regional Office – MoEF&CC, Ranchi, Central Pollution Control Board and State Pollution Control Board.</p> <p>Copy of the compliance report including environmental quality data will be uploaded to the SAIL web site i.e. www.sail.co.in.</p>
18.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent. JSPCB should display a copy of the clearance letter at the Regional Office, District Industry Centre and DC's, Circle Officer's Office for 30 days. 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 Jharkhand State Pollution Control Board.	<p>Copies of the Environmental Clearance have been sent to local Member of Panchayat & Zila Parisad. The clearance letter has been put on the Company website i.e. www.sail.co.in. Advertisement were published in two (2) daily newspapers (Dainik Jagran Daily, Jamshedpur Edition on 30.07.2015 and The Telegraph Daily, Ranchi & Jamshedpur Edition on 01.09.2015). Also intimated to Local Zilla Parishad Members, Gram Panchayat Members, Mainky & Mundas etc.</p> <p>In addition to that, EC Amendment Order No. J-11015/272/2011-IA.II (M) dated 19.05.2020 of MoEFCC, New Delhi has been published for advertisement on Times of India Newspaper, Jharkhand edition and Prabhat Khabar (Hindi) in Jamshedpur and Ranchi edition on 13.06.2020. The clearance letter has been put on the Company website i.e. www.sail.co.in</p>
19.	The environmental statement for each financial year ending 31st March in Form V as is mandated to be submitted by the project proponent to the Jharkhand State Pollution Control Board as prescribed under the	Agreed. Once, the mining operation starts, the environmental statement for each financial year ending 31st March in Form V are being submitted to the Jharkhand State Pollution Control Board.

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	Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along the status of compliance of EC conditions and shall also to the concerned Regional Office of JSPCB by e- mail.	The same will be put on the website of the company along the status of compliance of EC conditions and we will also send the copy to concerned Regional Office of JSPCB by e- mail.
20.	All statutory clearance shall be obtained before start of mining operations.	Agreed. All statutory clearance will be obtained before start of mining operations.
<u>C. Other Points</u>		
1.	The Authority reserve the right to add any new condition or modify the above conditions or to revoke the clearance if conditions stipulated above are not implemented to the satisfaction of Authority of for that matter for any other Administrative reason.	Agreed.
2.	Failure to comply any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Agreed.
3.	The Environmental Clearance accorded shall be valid for the period of renewal of lease (generally 20 years) for life of mine or for 30 years whichever is less. The PP shall not increase production rate and alter lease area during the validity of Environmental Clearance.	Agreed. Production rate will be maintained as per the approved Environmental Clearance / EC amendment order.
4.	In case of any deviation or alteration in the project proposed from those submitted to SEIAA, Jharkhand for clearance, a fresh reference should be made to SEIAA to assess the adequacy of the conditions imposed and to	Agreed.



SL.	CONDITION	COMPLIANCES
	incorporate any new conditions if required.	
5.	The above stipulations would be enforced among others under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Jharkhand and any other Court of Law relating to the subject matter.	Agreed.
6.	Any Appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Agreed.

Note: - The Amendment made in Environmental Clearance (EC) of Topailore Iron Ore Mining Project of Gua Ore Mines vide Order No. J-11015/272/2011-IA.II (M) dated 19.05.2020 will be strictly followed by Gua Ore Mines.

(S P Das)

General Manager (Mines) and E&L
GUA ORE MINES
BOKARO STEEL PLANT
STEEL AUTHORITY OF INDIA LIMITED (SAIL)

(Sankar Prasad Das)

General Manager (Mines) & E&L
SAIL-BSL, Gua Ore Mines



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/CTE-8139793/2020/245

Dated : 2020-06-19

Consent to Establish (CTE) 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. Reference: Application (s) No.- 8139793 / dated : 30/05/2020 of TOPAILORE IRON ORE MINE OF GUA ORE MINES, M/s SAIL, Bipin Kumar GIRI for 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

2. Documents Relied Upon:

- (a) The content of letter written to The Additional Chief Secretary, MoEF&CC, Govt. of Jharkhand, vide Ref. No. 3497 dated 04.10.2019 by Central Government regarding diversion of 14.15 ha (already broken up) of forest land for renewal of Topailore Iron Ore Mining lease of Gua Ore Mines of Steel Authority of India Ltd. (SAIL) in Saranda Forest Division of Jharkhand and its approval with conditions.
- (b) The content of Environmental Clearance issued vide EC/SEIAA/2015-16/694/2015/1291 dated 17.08.2015 for the project "Topailore Iron Ore mining project of Gua Ore Mines of SAIL at vill-Topailore, Tehsil - Noamundi, Dist - West Singhbhum, Jharkhand";
- (c) The content of letter from MoEF regarding amendment in EC issued vide EC/SEIAA/2015-16/694/2015/1291 dated 17.08.2015 for selling of mineral in open market and change in mode of mineral dispatch;
- (d) The content- GRANT OF LEASE: Govt. of Jharkhand vide letter no. Kha.Bhu.(Chai.)-04/05/1748/M, Ranchi dated 23.10.2019 extended the lease period of Topailore lease covering 14.15 ha upto 08.03.2040 under the provisions of MMGC Rules, 2015 with respect to Iron Ore (o'Minerals").
- (e) The content of checklist dated 02.06.2020 issued vide Ref. No. 598 dated 02.06.2020 of RO, 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 establish the project in Mauza- Ghatkuri Reserve Forest, P S -GUA, District-WEST SINGHBHUM as follows:

Project	Site-Area		Investment (Rs)/ Year	Product & Capacity	Period of CTE
	Plot Nos.	Area			


 (Sankar Prasad Das)
 General Manager (Mines) & E&L
 SAIL-BSL, Gua Ore Mines

Before Expansion	Mauza: Ghatkuri Reserve Forest Khata No.: Ghatkuri Reserve Forest Khesra No.: Ghatkuri Reserve Forest	14.15 ha	468.3 lakh	Iron Ore Mining - 0.6 MTPA	One year from date of issue.
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(A) Specific Conditions:

1. That, the occupier shall reclaim mined out area with OB and construct toe wall and garland drain.
2. That, the occupier shall make all roads pucca and shall maintain a good house keeping by regular cleaning and wetting of the premises and dust prone areas.
3. That, the shall preserve the top soil, fill over OB after mine reclamation and do tree plantation
4. That, the occupier shall comply the conditions of Environmental Clearance issued by SEIAA, Jharkhand.
5. That, the occupier shall install fixed type water sprinklers to control fugitive emission and shall maintain a good house keeping;
6. That, the occupier shall submit application under Air(Prevention and control of pollution) Act'1981 and Water(Prevention and control of pollution) Act'1974 and shall operate after obtaining consent-tooperate
7. That, the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any area which may have been disturbed due to their mining activities and restore the land to a conditions which is fit for growth of fodder, flora , fauna, etc.

(B) General Conditions :

- (1) That, the occupier shall construct pucca (i) minimum ten feet high boundary wall and (ii) approach road and internal roads and shall keep the premises neat and clean and tidy.
- (2) That, the occupier shall install comprehensive enclosure (s) to cover the places of unloading of raw materials, the equipments of their processing & transferring, the places of loading of products, by products and wastes for prevention of fugitive emission and shall install such automatic inbuilt system(s) that in house dust/ gases collect(s) and undergo (es) cleaning and clean air goes out.
- (3) That, the occupier shall install such automatic inbuilt system(s) that process flue gas(es) / process gas(es) and undergo(es) cleaning and clean air go(es) out through the chimney(s), having height(s) as per Central Pollution Control Board norm.

(4) That, the occupier shall have D G Set(s) of the standard as laid in the Environment (protection) Rules, 1986 and shall install it (them) within acoustic enclosure (s) and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm .

(5) That, the occupier shall impart treatment as per Central Pollution Control Board text to wastewater and shall keep process effluent in close-circuit and effluent from other sources in conformity with the standard (s).

(6) That, the occupier shall install Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge.

(7) That, the occupier shall create new water body (ies) / remove deposit(s) of existing water body(ies) and nearby stream(s) and pond(s) and shall maintain the wholesomeness of water.

(8) That, the occupier shall grow greenery in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.

(9) That, this CTE is valid subjected to the validity of mining Lease / Mining Plan / Ecofriendly / Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.

(10) That, this CTE 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.

(11) That, this CTE 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.

(12) 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 there under.

4. **That, this CTE 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 CTE is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTE will be revoked if any of the information/ documents/ certificates/ undertaking given by the occupier is found false/fictitious/forged in future.**
6. **This order shall be valid subject to compliance of all other legal requirements applicable to the unit.**
7. **The State Board reserves the right to revoke, withdraw or make any reasonable variation / change / alteration in condition of this consent.**

This is issued with the approval of the competent authority

**DINESH
PRASAD
SINGH** Digitally signed
by DINESH
PRASAD SINGH
Date: 2020.06.19
14:31:16 +05'30'

(Dinesh Prasad Singh)
Environmental Engineer

Memo No. : JSPCB/HO/RNC/CTE-
8139793/2020/245

Dated : 2020-06-19

Copy to : M/s TOPAILORE IRON ORE MINE OF GUA ORE MINES, M/s SAIL, Gua Ore Mines, SAIL Raw Materials Division, Post- Gua, Distt: West Singhbhum (Jharkhand)/ the Director of Industry, Government of Jharkhand, Ranchi/ the Deputy Commissioner, West Singhbhum / the Chief Inspector of Factories, Ranchi/ the D.F.O.- West SINGHBUM/ the D.M.O. - West SINGHBUM/ the Regional Officer, Regional Office-Cum-Laboratory, Jamshedpur for information & necessary action.

**DINESH
PRASAD
SINGH**

Digitally signed
by DINESH
PRASAD SINGH
Date: 2020.06.19
14:31:48 +05'30'

(Dinesh Prasad Singh)
Environmental Engineer



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-8312053/2020/1190

Dated : 2020-07-28

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 2020-06-22 of TOPAILORE IRON ORE MINE OF GUA ORE MINES, M/s SAIL, Occupier Name :Bipin Kumar GIRI 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 written to The Additional Chief Secretary, MoEF&CC, Govt. of Jharkhand, vide Ref. No. 3497 dated 04.10.2019 by Central Government regarding diversion of 14.15 ha (already broken up) of forest land for renewal of Topailore Iron Ore Mining lease of Gua Ore Mines of Steel Authority of India Ltd. (SAIL) in Saranda Forest Division of Jharkhand and its approval with conditions.

(b) The content of Environmental Clearance issued vide EC/SEIAA/2015-16/694/2015/1291 dated 17.08.2015 for the project "Topailore Iron Ore mining project of Gua Ore Mines of SAIL at vill- Topailore, Tehsil - Noamundi, Dist - West Singhbhum, Jharkhand";

(c) The content of letter from MoEF regarding amendment in EC issued vide J-11015/272/2011-IA.II(M) Dated 19.05.2020 for selling of mineral in open market and change in mode of mineral dispatch;

(d) The content- GRANT OF LEASE: Govt. of Jharkhand vide letter no. Kha.Bhu.(Chai.)-04/05/1748/M, Ranchi dated 23.10.2019 extended the lease period of Topailore lease covering 14.15 ha upto 08.03.2040 under the provisions of MMGC Rules, 2015 with respect to Iron Ore (o'Minerals").

(e) The content of Consent to establish (CTE) vide Ref No.: JSPCB/HO/RNC/CTE-8139793/2020/245 Dated : 2020-06-19 for Iron Ore Mining - 0.6 MTPA with compliance report;

(f) The content of Authorization under Hwom vide JSPCB/HO/RNC/HWM-6383857/2020/5 dated 28/01/2020 for 05 years;

(g) The content of checklist dated 02.06.2020 issued vide Ref. No. 598 dated 02.06.2020 of RO, JSPCB, 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 Mauza -Ghatkuri Reserve Forest , P S -GUA , District -WEST SINGHBHUM , as follows:

Project	Site-Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot Nos.	Area			Date of issue To

Before Expansion	Mauza: Ghatkuri Reserve Forest Khata No.: Ghatkuri Reserve Forest Khesra No.: Ghatkuri Reserve Forest	14.15 ha	468.3 lakh	Excavation of fines from fine dump - 0.6 MTPA	30/06/2025
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(A) Specific Conditions:

1. That, the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any area which may have been disturbed due to their mining activities and restore the land to a conditions which is fit for growth of fodder, flora , fauna, etc.
2. That, the occupier shall install and ,operate fixed type water sprinklers to control fugitive emission and shall maintain a good house keeping;
3. That, the shall preserve the top soil, fill over OB after mine reclamation and do tree plantation
4. That, the occupier shall make all roads pucca and shall maintain a good house keeping by regular cleaning and wetting of the premises and dust prone areas.
5. That, the occupier shall reclaim mined out area with OB and construct toe wall and garland drain.
6. That, no mining operation shall be carried out in the forestland for which forest clearance under FC Act has not been taken.
7. That, the occupier shall keep the waste water in closed circuit and maintain the quality of storm water in conformity with the standard prescribed by the Board
8. That, the occupier shall carry out all processing and operations within enclosure/comprehensive enclosure with provision of arresting all fugitive emissions.
9. That, the occupier shall submit the report of Ambient Air and Ambient Noise monitored by NABL accredited laboratory and registered from JSPC Board, annually.
10. That, the occupier shall do tree plantation and shall continue enhancing plant density and biodiversity.
11. That, the occupier shall cover iron containing fines/dust materials with the tarpaulin sheet when not in use.
12. That, the occupier shall construct garland drain followed by settling tanks to control water pollution during rainy season.

13. That, the occupier shall heavy-duty vehicles operating in the minerals stock yard shall conform to the standard prescribed under Motor Vehicles Rule, 1989.
14. That, the occupier shall maintain and operate pollution control devices regularly in order to maintain the prescribed norm.
15. That, the occupier shall maintain and operate dry fogging system installed at feeding hopper, conveyor belt, transfer point, crushing & screening section regularly.
16. That, the occupier shall maintain the permanent boundary wall.
17. That the occupier shall submit application for renewal of consent under section 25 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 to the date of expiry of this consent with requisite fee and documents showing compliance of all the above conditions.
18. That the occupier shall install CAAQMS and PM10 analyzer with online connectivity within 03 months with online connectivity for transference data to the server at JSPC Board and CPC Board with intimation to this office; and is mandatory OR else environmental compensation would be levied from the date issue of this CTO;

(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 ₂), µg/m ³	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO ₂), µg/m ³	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM ₁₀ , µg/m ³	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM _{2.5} , µg/m ³	Annual 24 hours	40 60	40 60
5.	Ozone(O ₃), µg/m ³	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m ³	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m ³	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH ₃) µg/m ³	Annual 24 hours	100 400	100 400
9.	Benzene (C ₆ H ₆) µg/m ³	Annual	05	05
10.	Benzo(a) Pyrene(BaP) Particulate Phase only ng/m ³	Annual	01	01
11.	Arsenic (As) ng/m ³	Annual	06	06
12.	Nickel (Ni) ng/m ³	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 ³

- (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	COD	250 mg/L
3	Oil & Grease	10 mg/L
4	BOD	30 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) duly monitored and issued by an NABL 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/Ecofriendly/Environmental 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

Digitally signed by
DINESH PRASAD
SINGH
Date: 2020.07.28
22:12:21 +05'30'

Dated : 2020-07-28

Memo No. : JSPCB/HO/RNC/CTO-
8312053/2020/1190

Copy to: M/s TOPAILORE IRON ORE MINE OF GUA ORE MINES, M/s SAIL, Gua Ore Mines, SAIL Raw Materials Division, Post- Gua, Distt: West Singhbhum (Jharkhand)/ the Director of Industry, Government of Jharkhand, Ranchi/ the Deputy Commissioner, West Singhbhum / the Chief Inspector of Factories, Ranchi/ the D.F.O.- West SINGHBUM/ the D.M.O. - West SINGHBUM/ the Regional Officer, Regional Office-Cum-Laboratory, Jamshedpur for information & necessary action.


DINESH
PRASAD
SINGH


Digitally signed by
DINESH PRASAD
SINGH
Date: 2020.07.28
22:12:40 +05'30'

(Dinesh Prasad Singh)
Environmental Engineer



Photos: Construction of rooftop rain water harvesting for two main buildings i.e. Director Bungalow & DB Annex cum Guest House


Dr. T.C. ANANDA
 DGM (Geo), E&L and CSR
 Gua Ore Mines
 BSL-SAIL

 (Sankar Prasad Das)
 General Manager (Mines) & E&L
 SAIL-BSL, Gua Ore Mines



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

ISO 9001:2015 (QMS), ISO 45001:2018 (OHSAS); JSPCB Accreditation
A-13, Saket Vihar, Harmu Housing Colony, Near Sohrai Bhawan, Ranchi, Jharkhand – 834002.
Email ID – iem2012@rediffmail.com, Mob. No. – 8407804253.

Formate No.- IEM-EEL-F-049

TEST REPORT

Discipline: Chemical		Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 12-10-2022		Test Report No.: RN-220920001A1	
Sample ID: 220927-AP-0001		Sample Description: Ambient Air	
Challan No./P.O. No.: 14270425		Challan No./ P.No. Date: 20-09-2022	
Issued to: Duargulburu Iron Ore Mining Lease, M/S. Sail Gua Ore Mines, Sail, Post- Gua District: West Singhbhum (Jharkhand)			
Type of Industry: Iron Ore Mine		Customer Representative: Bipin Kumar Giri	
Sample Drawn by: IEM Team		Sampling Date: 26-09-2022 to 27-09-2022	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series			
Sampling Location: Near Gua Club		Co-Ordinates: 22°12'43.01"N 85°22'52.33"E	
Field Meteorological Information		A. Tem.(°C): 29	R.H.(%): 72
Sample Receiving date: 28-09-2022		W.C.: Partly Cloudy	W.D.: NNW to SSE
Testing Started: 28-09-2022		Testing Ended: 05-10-2022	

----Test Results----					
Sl. No.	Parameters	Test Method	Unit	Result	Limits
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006 RA 2017	µg/m ³	81.94	100
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	17.54	80
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	34.57	80

----End of Report----

Env.Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Prakash Kumar & Team

REDUCE • REUSE
RECYCLE • RESPECT

Checked By
(B. N. Kumar)
(Technical Manager)



Specific Contractual Note: 1. The results refer only to the tested sample of applicable parameters. 2. The sample will be preserved for 7 days on date of issue of the certificate. 3. The certificate shall not be reproduced in part or full and can't be used as evidence or in court of law without prior permission of MD in writing. All disputes are subjected to the Ranchi jurisdiction.

T.C. ANANDA
DGM (Geo), E&L and CSR
Gua Ore Mines
BSL-SAIL

Sankar Prasad Das
General Manager (Mines) & E&L
SAIL-BSL, Gua Ore Mines



REDUCE • REUSE
RECYCLE • RESPECT

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

ISO 9001:2015 (QMS), ISO 45001:2018 (OHSAS); JSPCB Accreditation

A-13, Saket Vihar, Harmu Housing Colony, Near Sohrai Bhawan, Ranchi, Jharkhand – 834002.

Email ID – iem2012@Rediffmail.com, Mob. No. – 8407804253.

Formate No.- IEM-EEL-F-049

TEST REPORT

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 12-10-2022	Test Report No.: RN-220920001A2	
Sample ID: 220927-AP-0002	Sample Description: Ambient Air	
Challan No./P.O. No.: 14270425	Challan No./ P.No. Date: 20-09-2022	
Issued to: Duarguiburu Iron Ore Mining Lease, M/S. Sail Gua Ore Mines, Sail, Post- Gua District: West Singhbhum (Jharkhand)		
Type of Industry: Iron Ore Mine	Customer Representative: Bipin Kumar Giri	
Sample Drawn by: IEM Team	Sampling Date: 26-09-2022 to 27-09-2022	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Environmental Lab		
Co-Ordinates: 22°12'49.46"N 85°22'39.02"E		
Field Meterological Information	A. Tem.(°C): 29	R.H.(%): 72
	W.C.: Partly Cloudy	W.D.: NNW to SSE
Sample Receiving date: 28-09-2022	Testing Started: 28-09-2022	Testing Ended: 05-10-2022

---Test Results---

Sl. No.	Parameters	Test Method	Unit	Result	Limits
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006 RA 2017	µg/m ³	84.44	100
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	17.73	80
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	35.46	80

---End of Report---

Env.Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit
Limit is Specified	As per the Environmental (Protection) Rule - 1986
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Prakash Kumar & Team

Dr. T.C. ANANDA
DGM (Geo), E&L and CSR
Gua Ore Mines
BSL-SAIL

Checked By *(Signature)*
(B. N. Kumar)
(Technical Manager)

(Signature)
(Sankar Prasad Das)
General Manager (Mines) & E&L
SAIL-BSL, Gua Ore Mines



Specific Contractual Note: 1. The results refer only to the tested sample of applicable parameters. 2. The sample will be preserved for 7 days on date of issue of the certificate. 3. The certificate shall not be reproduced in part or full and can't be used as evidence or in court of law without prior permission of MD in writing. 4. All disputes are subjected to the Ranchi jurisdiction.



INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

ISO 9001:2015 (QMS), ISO 45001:2018 (OHSAS); JSPCB Accreditation

A-13, Saket Vihar, Harmu Housing Colony, Near Sohrai Bhawan, Ranchi, Jharkhand – 834002.

Email ID – iem2012@rediffmail.com, Mob. No. – 8407804253.

Formate No.- IEM-EEL-F-049

TEST REPORT

Discipline: Chemical	Group: Atmospheric Pollution	Sub-Group: Ambient Air
Report Issue Date: 12-10-2022	Test Report No.: RN-220920001A3	
Sample ID: 220927-AP-0003	Sample Description: Ambient Air	
Challan No./P.O. No.: 14270425	Challan No./ P.No. Date: 20-09-2022	
Issued to: Duarguiburu Iron Ore Mining Lease, M/S. Sail Gua Ore Mines, Sail, Post- Gua District: West Singhbhum (Jharkhand)		
Type of Industry: Iron Ore Mine	Customer Representative: Bipin Kumar Giri	
Sample Drawn by: IEM Team	Sampling Date: 26-09-2022 to 27-09-2022	
Protocol: CPCB Guideline(NAAQMS/36/2012-13) & IS Method 5182 Series		
Sampling Location: Near Main Canteen	Co-Ordinates: 22°12'54.15"N 85°21'29.64"E	
Field Meteorological Information	A. Tem.(°C): 29	R.H.(%): 72
	W.C.: Partly Cloudy	W.D.: NNW to SSE
Sample Receiving date: 28-09-2022	Testing Started: 28-09-2022	Testing Ended: 05-10-2022

----Test Results----

Sl. No.	Parameters	Test Method	Unit	Result	Limits
1.	Particulate Matter (PM ₁₀)	IS 5182 Part 23:2006 RA 2017	µg/m ³	83.16	100
2.	Sulphure Dioxide (SO ₂)	IS 5182 Part-02: 2001 RA 2017	µg/m ³	16.98	80
3.	Nitrogen Dioxide (NO ₂)	IS 5182 Part-06: 2006 RA 2017	µg/m ³	35.85	80

----End of Report----

Env.Condition of Lab.	Laboratory is maintaining Temperature 27± 2°C and Relative Humidity 65±5 % in all testing area as per IS 196:1966(C).
Abbreviation	MDL: Minimum Detection Limit
Limit is Specified	As per the Environmental (Protection) Rule – 1986
Remark	Sample Comply with prescribed specification.

Tested By: Akanksha Sourabh

Sample Drawn By: Prakash Kumar & Team

REDUCE • REUSE
RECYCLE • RESPECT

Checked By
(B. N. Kumar)
(Technical Manager)



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Dr. T.C. ANANDA
DGM (Geo), E&L and CSR
Gua Ore Mines
BSL-SAIL

(Sankar Prasad Das)
General Manager (Mines) & E&L
SAIL-BSL, Gua Ore Mines



स्टील अथॉरिटी ऑफ इण्डिया लिमिटेड
STEEL AUTHORITY OF INDIA LIMITED
बोकारो इस्पात संयंत्र
BOKARO STEEL PLANT
गुआ अयस्क खान
GUA ORE MINES

Ref No.: Gua/E&L/IBM/QtrEnv.Report/2022-23/267 (A)

Date: 31.10.2022

To,

The Regional Controller of Mines
Indian Bureau of Mines,
318(B), Ashok Nagar, Road No.-3
Ranchi- 834002

Sub: Quarterly Report of Ambient Air Quality and Mines Effluent Standards for Gua Ore
Mines, SAIL.


Sir,

With reference to above mentioned subject, we are submitting herewith quarterly environment
monitoring report of Gua Ore Mine, BSL, SAIL for the Second quarter ending September-2022 as
Annexure-1.

This is for your kind information please.

Thanking You.


Yours Faithfully,


(Dr. T. C. Ananda)
DGM (Geo.) and E&L

Encl.: As stated above

Copy to:

1. Member Secretary, JSPCB, HEC, Dhurwa, Ranchi – 834 004
2. The Regional Officer, Jharkhand State Pollution Control Board (JSPCB), Regional Office Cum Laboratory, M/B 15, New Housing Colony, Adityapur, Jamshedpur-831013


(Sankar Prasad Das)
General Manager (Mines) & E&L
SAIL-BSL, Gua Ore Mines

सिंहभूम (पश्चिम), झारखण्ड-833213, दूरभाष: (फोन): 06596-263713, फैक्स : 06596-263714,
Singbhum (West), Jharkhand-833213, Phone : (O) 06596 - 263713, Fax : 06596-263714.
E-mail/ई-मेल: gmguamines@gmail.com, Website : www.sail.co.in

Environmental Quality Report
GOM, SAIL

Quarter-2
(July, 2022 to September, 2022)

Gua Ore Mines, BSL, SAIL
(Environment & Lease Department)

Ambient Air Quality Monitoring Report

PM ₁₀ (µg/m ³)						
Location	Jul, 22	Aug, 22	Sep, 22	Min	Max	Average
Near Hospital	31.4	28.6	40.8	28.6	40.8	33.6
Near Environment & QC Lab	49.4	45.5	50.1	45.5	50.1	48.33
Near Gua Club	41.6	37.1	42.4	37.1	42.4	40.37
Near Time Office	44.8	41.3	53.4	41.3	53.4	46.5
PM _{2.5} (µg/m ³)						
Location	Jul, 22	Aug, 22	Sep, 22	Min	Max	Average
Near Hospital	14.7	13.3	17.4	13.3	17.4	15.13
Near Environment & QC Lab	17.5	16.7	18.1	16.7	18.1	17.43
Near Gua Club	14.1	13.8	17.3	13.8	17.3	15.07
Near Time Office	24.2	22.6	25.2	22.6	25.2	24
SO ₂ (µg/m ³)						
Location	Jul, 22	Aug, 22	Sep, 22	Min	Max	Average
Near Hospital	3.1	2.8	3.5	2.8	3.5	3.13
Near Environment & QC Lab	4.9	4.4	6.4	4.4	6.4	5.23
Near Gua Club	5.1	4.7	7.1	4.7	7.1	5.63
Near Time Office	9.2	8.9	11.5	8.9	11.5	9.87
NOx (µg/m ³)						
Location	Jul, 22	Aug, 22	Sep, 22	Min	Max	Average
Near Hospital	5.4	4.9	6.1	4.9	6.1	5.47
Near Environment & QC Lab	8.5	7.9	9.3	7.9	9.3	8.57
Near Gua Club	9.8	8.8	11.1	8.8	11.1	9.9
Near Time Office	14.9	14.2	15.8	14.2	15.8	14.97

(Dharmendra Sethia)

Asst. Manager (Env.)

Dharmendra Sethia

असिस्टन्ट मैनेजर (पर्यावरण) / Asst. Manager (Env.)

सैन-बी.एस.एल-स.स. / SAIL-BSL-JGOM

गुआ अयस्क खान / GUA ORE MINES

फै.सं. गुआ-833213 / P.O. : Guā-833213

भारतियु (ए.) बालासोरा/Dist.Singbhum (W) Jharkhand

(Alok Kumar Yadav)

Manager (F&E)

आलोक कुमार यादव

Alok Kumar Yadav

मैनेजर (फॉरेस्ट एंड एनवायरनमेंट) / Manager (Forest & Env.)

सैन-बी.एस.एल-स.स. / SAIL-BSL-JGOM

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