

**SREE
METALIKS
LIMITED**

Ref. No.: SML-KIOM/SPCB/2019-2020/194

Date: 25.11.2019

**The Member Secretary,
State Environment Impact Assessment Authority, Odisha**
(Ministry of Environment, Forests & Climate Change)
Government of India,
Qr. No-5RF-2/1, Unit-IX
Bhubaneswar -751 022.

**Sub: Half yearly Environmental Clearance Compliance Report of
Khandbandh Iron Ore Mining Project of M/s. Sree Metaliks Ltd. for the
period April to September, 2019- Reg.**

Ref: 1. SEIAA Clearance letter no. SEIAA/362, dated. 06.09.2010
2. MoEF&CC notification no. 4624 (Gazette of India notification) dt.
26.11.2018

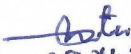
Dear Sir,

With reference to the above mentioned subject, we are herewith submitting the six monthly EC compliance reports (in soft copies along with e-mail) of Khandbandh Iron Ore Mining Project of M/s. Sree Metaliks Ltd is for the period of **April to September, 2019** on the cited subject.

This for your kind information, please.

Yours sincerely,

**For M/s. Sree Metaliks Ltd.
Khandbandh Iron Ore Mines**


25.11.2019.

**Mines Manager Mines Manager
Khandabandh Iron Ore Mines
M/s. Sree Metaliks Limited**

Encl. As above

Six Monthly EC Compliance Report

Period

April to September, 2019



Khandbandh Iron Ore Mines

M/s. Sree Metaliks Ltd.

Khanbandh, Joda, Keonjhar, Odisha

www.sreemetaliks.com

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**

Copy to:

1. The Director (S), Regional Office (EZ), Ministry of Environment, Forest & Climate Change, A-31, Chandrasekharpur, Bhubaneswar.
2. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum Office Complex, Delhi – 110032
3. The Chairman, State Pollution Control Board, Orissa, A/118, Nilakantha Nagar, Unit – VIII, Bhubaneswar – 751012
4. The Regional Director, Central Ground Water Board, Government of India, South Eastern Region, Bhubaneswar – 751030.

Reporting Period: April to September, 2019

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**

**EC Compliance Reports
Of
Khandabandh Iron Ore Mining
Project of
M/s. Shree Metaliks Ltd.**

April to September, 2019

Reporting Period: April to September, 2019

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**

SL. NO	SPECIFIC CONDITIONS	STATUS AS ON DATE / ACTION TAKEN
I	<p>The applicant (Project Proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, water pollution, noise pollution and land pollution including solid waste management as mentioned by him in form-I, final EIA reports and Environment management Plan (EMP) in compliance with prescribed statutory norms and standards.</p>	<p>The project is taking care of necessary environmental protection measures for prevention, control and mitigation of Air Pollution, water pollution, noise pollution and land pollution including solid waste management in compliance with prescribed statutory norms and standards. The details of the same is mentioned in the table no. # 1.</p> <p>The photographs witnessing the same i.e. dust suppression by water tanker, plantation, settling pits, retaining wall etc. Enclosed as Photo # 1 & 2.</p>
II	<p>The applicant will take necessary steps for socio economic development of the people of the area on need based assessment for providing employment, education, health care, drinking water and sanitation, road and communication facilities. After a detailed primary Socio-Economic survey.</p>	<p>The project has already undertaken the socio-economic development study of the people by carrying out a need based assessment with provision of employment, education, health care, drinking water and sanitation, road and communication facilities. The report of the same is enclosed as Annexure # 1.</p>
III	<p>The applicant will comply with the points, concerns and issues raised by the people during public hearing on 18th February, 2009 in accordance with the commitments made by him thereon.</p>	<p>The project has complied all the points, concerns & issues raised by the people during public hearing during operation of the ML area.</p> <p>The detailed point wise compliance of same is mentioned in the Table no. # 2.</p>
IV	<p>The applicant will take statutory clearance/approval/permissions from the concerned authorities in respect of his project as and when required.</p>	<p>The project has obtained necessary statutory clearances / approval / permissions from the concerned authorities i.e. Lease Deed from Govt. of Odisha, Mining Plan from IBM, Forest Clearance from MOEFCC, Consent to establish & Operate from SPCB etc. However, we will also follow the same as and when required.</p>

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V	<p>For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Orissa on 1st June and 1st December of each calendar year.</p>	<p>The project is ensuring the submission of half yearly compliance report to SEIAA, Orissa as well as Regional Office of MOEF&CC, Bhubaneswar on 1st June and 1st December of each calendar year of the mines lease. The details are mentioned in the Table no. # 3.</p>															
VI	<p>The core zone should be monitored intensively with number. Of stations as prescribed by CPCB, Delhi and unit of pollutant level should be expressed as NAAQ standards of CPCB, Delhi. The detail methodology adopted for analysis of samples shall be cleared indicated and should be in accordance of NAAQs.</p>	<p>The project has already established 4 no. of AAQ monitoring station in the core and 4 no. AAQ monitoring station in buffer zone for monitoring the AAQ as per NAAQs notifications made by the CPCB and the project is also adopting the analysis of sample as cleared indicated in the NAAQ.</p> <table border="1" data-bbox="799 1070 1393 1328"> <thead> <tr> <th>Sl. No</th> <th>Pollutant</th> <th>Method of Measurement</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>SO₂</td> <td>Ultraviolet Fluorescence</td> </tr> <tr> <td>2</td> <td>NO₂</td> <td>Chemiluminescence</td> </tr> <tr> <td>3</td> <td>SPM(PM₁₀)</td> <td>Gravimetric</td> </tr> <tr> <td>4</td> <td>SPM(PM_{2.5})</td> <td>Gravimetric</td> </tr> </tbody> </table>	Sl. No	Pollutant	Method of Measurement	1	SO ₂	Ultraviolet Fluorescence	2	NO ₂	Chemiluminescence	3	SPM(PM ₁₀)	Gravimetric	4	SPM(PM _{2.5})	Gravimetric
Sl. No	Pollutant	Method of Measurement															
1	SO ₂	Ultraviolet Fluorescence															
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4	SPM(PM _{2.5})	Gravimetric															
VII	<p>The proponent shall submit ground tothing baseline data on flora & fauna and CSR activities already carried out within three months to the SEIAA.</p>	<p>The proponent has already carried the ground tothing baseline data on flora & fauna and CSR activities by engaging AISD, Ranchi. The report is attached as Annexure # 1.</p>															
VIII	<p>Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.</p>	<p>Adequate buffer zone between two consecutive minerals bearing deposits will be carried as per the approved mining plan/scheme. However, there is only one pit mining operation is carried.</p>															

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IX	Zero waste mining concept shall be implemented either by putting up palletization plant or disposing off low grade ores/fines to the prospective buyers	The project will ensure to adopt the Zero waste Mining Concept as per the approved mining plan.
X	The following shall be implemented viz. (a) dump run off should be diverted into setting ponds until it is clear (b) adequate rain water harvesting and ground water recharging facilities should be adapted in the core zone, (c) attempt should be made to achieve zero water balance	The project has adopted the followings; <ul style="list-style-type: none"> • Dump run off generated during rainy season is being diverted to the Settling Pits and also to the mines pit for percolation. Photo enclosed as Photo # 3. • Adequate rain water harvesting structures are provided for ground water recharge purposes with implementation of Garland drains, Settling pits, Trenches etc. Photo enclosed as Photo # 3.
XI	Maintenance of roads through which transportation of ores are undertaken shall be carried by the project proponent regularly at his own cost.	The project is ensuring and maintaining the transportation roads on regular basis by engaging grader. Photo enclosed as Photo # 4 .
XII	Fugitive dust generation shall be controlled and regularly monitored at locations of nearest human habitation (including schools and other public amenities located nearest to sources of dust generation as applicable) and records shall be submitted to the SEIAA. Orissa annually.	The project is carrying the fugitive dust monitoring on regular basis and monitoring reports are being submitted on regular basis to SEIAA. The results reveals that, all the parameters are very well within the prescribed norms. The test report of the same is enclosed as Annexure # 2 .
XIII	Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore /dust takes place.	The project is ensuring that the trucks are not being overloaded during transportation and we also ensure that all the trucks used for the mineral transport are covered with tarpaulin to avoid the spillage of ore. Photo enclosed as Photo # 5 .

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XIV	<p>Monitoring of ground and surface water quality shall be regularly conducted and records should be maintained and data shall be submitted regularly to SEIAA, Orissa.</p>	<p>The project is carrying out the monitoring of ground water in 6 locations and surface water in 4 locations on regular basis of the said parameters. Test reports of the same is enclosed as Annexure # 3 & 4.</p>
XV	<p>The proponent shall ensure that no silt originating due to mining activity is transported in the surface water course. Measures for prevention and control of soil erosion and management of silt shall be undertaken. Protection of dumps against erosion shall be carried out with geo-textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump slopes. Dumps shall be protected by retaining walls.</p>	<p>The project is ensuring and implementing the necessary precautionary measures by application of grass seeds and plantations over the dump slopes towards control of soil erosion along with construction of guard wall of gabion boxes, check dams, check weirs, settling pits etc. at toe of the dumps for prevention and control of soil erosion and management of silt. Photo enclosed as Photo # 6.</p>
XVI	<p>Trenches / garland drains shall be constructed at foot of dumps to arrest silt from being carried to water bodies. Adequate number of check dams shall be constructed across seasonal/ perennial Nallah (if any) flowing through the ML area and silts be arrested. De-silting at regular intervals shall be carried out.</p>	<p>There is no presence of any seasonal/perennial nallah flowing through the ML area. However, the project constructed guard wall of gabion boxes, trenches, garland drains, check weirs, settling pits etc. at toe of the dumps & strategic locations for prevention and control of soil erosion and management of silt. Photo enclosed as Photo # 6.</p>
XVII	<p>Provisions shall be made for the housing of the labors within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. the housing may be in the form of temporary structures to</p>	<p>Not Applicable, as the workers engaged in mines activity are from the locals, however, the project has made the provision of mobile toilets, safe drinking water, health care facilities inside the mines premises.</p>

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	be removed after the completion of the project	
XVIII	<p>Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The proponent shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness program for workers on impact of mining on their health and precautionary measures like use of personal equipment's etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required. Occupational Health center shall be established near the mine site itself.</p>	<p>Initial Medical Examination & Periodical Medical Examination of the workers engaged in the project is being undertaken periodically for employees, who are engaged in the process of mining & are likely exposed to dust to observe any contractions due to exposure to dust. This is being carried as per in compliance to Mines Act 1952 & rules 1956 and amendments there to.</p> <p>The last such examination of IME/PME held during the reporting period (April to Sept 19) for 3 No. of employee of the Project. The various tests include PFT, X-Ray, and lung spirometry etc. On the basis of the above tests there is none of the above mentioned employees was found by Silicosis/ Pneumoconiosis or occupational health related diseases.</p>

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XIX	<p>Shelter belt i.e. wind break of 15 m width and consisting of at least 5 tiers around lease facing the human habitation, school/agricultural fields etc. (if any in the vicinity) in the safety zone/backfilled and reclaimed areas, around voids and roads shall be raised. Green belt development and selection of plant species shall be as per CPCB guidelines. Density of the trees has to be around 2500 plants per hectare, herbs and shrubs shall also form a part of afforestation program besides tree plantation. Help and guidance of local DFO may be sought in the matter. Details of year wise afforestation program including rehabilitation of mined out area shall be submitted to the SEIAA, Orissa within six months.</p>	<p>The mine is located inside the Forest area and it is also surrounded by other mines leases. There is no such presence of human habitations in and around the ML area.</p> <p>However, the project has planted 1070 no. of sapling during 2019-20 (Apr to September, 2019) with native species across the safety zone, road side, dump sites, etc. in consultation with local Forest Dept. Photos of the same given in as Photos # 1A.</p>
XX	<p>This environmental clearance is subjected to forest clearance under the Forest (Conservation) Act, 1980.</p>	<p>The project has obtained the Forest Clearance from the MOEFCC, GOI over an area of 30.980 Ha of Forest land under the FC Act, 1980. Copy enclosed as Annexure # 5.</p>
XXI	<p>The mining operation shall be restricted to above ground water table and it should not intersect the groundwater table. The depth of mine should be restricted to the depth mentioned in Form 1-A at the most.</p>	<p>As per the approved mining plan by Indian Bureau of Mines, GoI and hydrogeology study, the ground water table exists at 510 m RL and present mines operation is restricted at 547 M RL. So, there is no occurrence of ground water intersection during the reporting period.</p>
XXII	<p>The top soil shall temporarily be stored at earmarked site (s) only and it should not be kept unutilized for long (not more than 3 years). The topsoil shall be used for land reclamation and plantation.</p>	<p>The project has kept the top soil in an ear marked area with proper stabilization measures and will also ensures that, the same will be utilized for land reclamation and plantation purposes. Photos of the same given in as Photos # 7.</p>

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XXIII	<p>The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. Proper terracing of OB dump shall be carried out so that the overall slope shall not exceed Back filling shall be done as per approved mining plan, mine closure plan. Back filling to start from 3rd year onwards of the mining operation and the entire quantity of waste generated shall be back-filled and used within five years. There shall be no external OB dumps after the 6th year of the mining operations. The backfilled area shall be afforested. Back-filling has to be done in a manner that it is restored to the normal ground level. Monitoring and management of rehabilitatee areas should continue till the vegetation is established and becomes self-generating compliance status to be reported to the appropriate authorities.</p>	<p>The over burden (OB) generated during the mining operation are being stacked at earmarked dump site(s) only and it's active one. Proper terracing of OB dump is being carried out so that the overall slope shall not exceed as per approved mining plan. Back filling will be carried as per approved mining plan/mine closure plan. The dump is provided with retaining wall at toe followed by garland drain and settling pits. Photos of the same given in as Photos # 1B.</p> <p>Presently the mines operation is in 2nd years during the reporting period and dumps after the 6th year of the mining operations will go for back filling as per approved mining plan.</p>
XXIV	<p>The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this funds shall be diverted for other purposes like regular maintenance of vehicles/ machineries/ purchase or salary of staff. Year wise expenditure for this fund should be reported to the SEIAA, Orissa.</p>	<p>The project has ear marked the funds for implementation of environment protection measures and the same is being used for same. The details of the same is mentioned in table no. # 4.</p>

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XXV	<p>The critical parameters such as SPM, RSPM, NO_x in the ambient air within the impact zone, peak particle velocity at 300 m distance or within the nearest habitation, whichever is closure shall be monitored periodically. Further, quality of discharged water shall also be monitored [TDS, DO, pH and total suspended solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the company in public domain. The circular no. J 20012/1/2006-1A.II (M) dated 27.05.2009 issued by Ministry of Environment and forest, which is available on the website of the Ministry www.envfor.nic.in shall also be refereed in this regard for its compliance.</p>	<p>The said critical parameters are being monitored & uploaded in the company's website bearing address https://www.sreemetaliks.com/. The said monitored parameters i.e. for AAQ: PM10, PM2.5, SO2, NOx & discharge for surface run off discharge from the mine (treated) etc. is being displayed at the main gate of the mines of the company for public domain. The details of the same enclosed as Annexure # 6.</p>
XXVI	<p>A final mine closer plan along with details of Corpus Fund shall be submitted to the SEIAA 5 years in advance of final mine closure for approval.</p>	<p>A Final mine closer plan along with detailed corpus fund will be submitted to the ministry of Environment & Forest 5 years in advance of final mine closure for approval.</p>
XXVII	<p>The project proponent shall obtained necessary prior permission of the competent authorities for drawl of requisite quantity of water (Surface water and ground water) required for the project</p>	<p>The project has already obtained the necessary clearances from the competent authority for drawl of requisite quantity of Surface water.</p>

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XXVIII	<p>The project proponent shall prepare wild life conservation plan in consultation with DFO and adequate safety and mitigation measures should be incorporated to protect the wildlife, flora, fauna to mitigate the adverse impacts of mining on them</p>	<p>The project has prepared the Wild Life Conservation Plan in consultation with DFO and the same got approved by PCCF (Wildlife) & Chief Wild Life Warden, Bhubaneswar with estimated cost of INR 14 Lakhs towards activities to be implemented within the ML area and INR 68 Lakhs towards activities to be implemented by the DFO in the project impact area. Copy of the same is enclosed as Annexure # 7.</p>
XXIX	<p>The project proponent shall prepare wild life conservation plan in consultation with DFO and adequate safety and mitigation measures should be incorporated to protect the wildlife, flora, fauna to mitigate the adverse impacts of mining on them</p>	<p>The project has prepared the Wild Life Conservation Plan in consultation with DFO and the same got approved by PCCF (Wildlife) & Chief Wild Life Warden, Bhubaneswar with estimated cost of INR 14 Lakhs towards activities to be implemented within the ML area and INR 68 Lakhs towards activities to be implemented by the DFO in the project impact area.</p>

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TABLE # 01

Details of the EMP measures implemented

Table No. 1.1 – Environmental Protection measures

SI. No	Particulars	Location	Dimensions
1	Retaining Wall (L x W x H) in M	From Pillar F1 to F	462x1x1
2	Garland drain (L x W x H) in M	All along the haulage road to to divert for rain water to settling pond	200x1x1
3	Check dam	Near Pillar No F	8x1x1.5 6x1x1.5
4	Check Weir	Near Pillar No E	27.24x1x1
5	Settling Pit (in CUM)	Near Pillar No E Near Pillar No D	40x20x3.5 30x20x3.0 20x10x3.0

Table No. 1.2

SI. No.	Particulars	Location	Quantity
1	Plantation (in Nos.)	New sapling and gap filling in S/Z	1070
2	Coir Matting (in Sq. M)	SG Dump	5000 Sq. M.

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**TABLE # 02
Public Hearing Compliance**

Issued raised at the public hearing meeting on da. 18.02.2009 were;

1. Supply of Drinking water, Education, electrification, Employment and road development.

In this Content I would like to mention that Khandbandh Iron Ore Mines of Sree Metaliks Limited has started operation on March 2018. Most of the issue as raised during public hearing meeting like road development, Employment, Supply of drinking water etc. are taken into consideration and being full filled.

2. Apart from that some other issue are taken under CSR activities:-
 - (I) 05 Nos. of Sewing Machines are provided to the SHG of this locality to develop their skillless and earnings.
 - (II) Ceiling fans are being provided at class rooms of Kundurpani, Jalahari and Khandbandh U.P. Schools.

**TABLE # 03
Submission of EC Compliance details**

EC Compliance submission Details		
Sl. No.	Period	Date of Submission
1.	October, 2017 to March, 2018	28.05.2018
2.	April to September, 2018	30.11.2018
3.	October, 2018 to March, 2019	26.05.2019

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TABLE # 04
Details of the Environmental Expenses

Environmental Expenses				
Sl. No	Description	Budget: Capital Cost (As per EIA/EMP)	Expense in 2018-19 (in Lakhs)	Expense in 2019-20 (up to September, 19) (in Lakhs)
1	Air Quality Management			
	Dust Suppression	24.00	24.00	10.00
	Dry fog	12.00	12.00	3.00
2	Water Quality Management			
	Retaining Wall & Garland drain	26.285	0	25.00
	Check Dam, Settling Ponds etc.			
3	Dump Management			
	Plantation	0.85	2.001	0.65
	Coir Matting & grass seed application			
4	Occupational Health & Hygiene	0.50	0.15	0.26
	IME/PME			
	Safety Items			
5	Environmental Monitoring			
	Monitoring Charges	10.00	3.00	2.50
	Calibration of Instruments	4.00	0.00	0
6	Water Conservation Measures			
	Rain harvesting and its maintenance	10.00	8.00	6.00
	Others	--	0	0
	TOTAL	87.635	49.15	47.41

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ANNEXURE – 1

**Socio Economic Study, Need based
assessment and preparation of CSR/ ESC
Plan of Project Affected Villages around
Khandbandh Iron Ore Mines of M/s. Sree
Metaliks Ltd., at Barbil in Keonjhar district of
Odisha**



Sree Metaliks Limited

SML House, Main Road, P.O Barbil, District.,
Keonjhar, Odisha, 758035, India

Study conducted by



**ASIAN INSTITUTE FOR SUSTAINABLE DEVELOPMENT
Sreenibas, Shiv Bhavan Lane, Morabadi, Ranchi, Jharkhand –
834008**

Email: info@aisdindia.org

Phone & Fax: +91 651 2551034

Oct. 2018

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ANNEXURE – 2: Fugitive Dust Monitoring Report



Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025 (NABL) Accredited Laboratory, ISO/IEC 17025 (NABL) Accredited Laboratory and ISO 9001 : 2015 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9937590329, E-mail: ersibbsr@gmail.com

GSTIN : 21AAACE6224D1ZE



UCR-TC2000180-00000362F

Test Report Format No.: ERSIPL/FM/37

TEST REPORT (AMBIENT AIR) - Fugitive Emission

Pg No: 1 of 1

Date: 18 May 2019
Test Report No: ERSIPL/TR/AA/18D
Name and Address of the Customer : Khandbandh Iron Ore Mines of M/s Sree Metaliks Ltd
 Khandbandh, Joda, Keonjhar-758034.
Sample Collected by : Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of : Representative of Client.
Date of Sampling/Monitoring : 01-30.04.2019
Sample Received on : 18.04.2019 & 05.05.2019
Analysis Started on : 24.04.2019 & 14.05.2019
Analysis Completed on : 27.04.2019 & 18.05.2019
Method of Sampling : As per guidelines for sampling & measurement of notified
 AAQ parameters (NAAQS 2009)-CPCB
Quantity of Sample : 01 sample for each parameter
Environment Condition : Mostly Sunny with occasional afternoon thunderstorm
 (Max:42°C to Min:19°C)

Test Findings*

Sl No	Monitoring Stations	Sample Id	Date of Monitoring	Analysis Result in $\mu\text{g}/\text{m}^3$
				PM (Particulate Matter) IS: 5182 (Part 6)- 1999, Reaffirmed 2014, Gravimetric Method
1	Near Mines Bench	1492	08.04.19	227.47
		1494	22.04.19	248.57
2	Near Haul Roads (inside lease)	1493	08.04.19	198.94
		1495	22.04.19	229.54
3	Near Waste Dump	1434	08.04.19	262.88
		1496	22.04.19	137.94
4	Near Screening Plant	1435	08.04.19	299.02
		1497	22.04.19	213.15
5	Near Ore storage and loading	1436	08.04.19	224.49
		1498	23.04.19	179.82
6	Near Crushing Point	1437	09.04.19	208.74
		1499	23.04.19	126.64
Permissible Limits				1200.0

Note: *Monitoring carried out with control measures.

.....END OF TEST REPORT.....


 (Authorized Signatory)
 S.P. Pattanayak
 Test Manager

Reporting Period: April to September, 2019

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**

ANNEXURE – 3:Ground Water Quality Report



Environmental Research and Services (India) Pvt. Ltd.

(An ISO 9001:2005 (NABL) Accredited Laboratory, OSPCEmpowered Laboratory and ISO 14001:2015 Certified Company)



Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9937690329, E-mail: ersibso@gmail.com

GSTIN : 21AAACE6224D1ZE

ULR-7C7440180-00000363P

Test Report Format No.: ERSIPL/IM/40

TEST REPORT (Water/ Waste-Water)-Ground Water

Pg.No: 1 of 2

Date: 18 May 2019	Test Report No: ERSIPL/TR/WA/228
Name and Address of the Customer	: Khandbandh Iron Ore Mines of M/s Sree Metaliks Ltd Khandbandh, Joda, Keonjhar-758034
Date of Sampling	: 03.04.2019 & 16.04.2019
Sample Collected by	: Representative of ERS (I) Pvt. Ltd.
Sample Collected in presence of	: Representative of Client.
Sample Received on	: 04.04.2019 & 17.04.2019
Analysis Started on	: 04.04.2019 & 17.04.2019
Analysis Completed on	: 18.04.2019 & 25.04.2019
Method of Sampling	: IS 3025: Part 1: 1987, Reaffirmed 2014
Quantity of Sample	: 2ltrs
Type of Container	: Glass Bottle & HDPE Bottle
Environment Condition	: All Tests carried out in Room Temperature

Sample ID. No.

1. ERSIPL/WA/1034
2. ERSIPL/WA/1036
3. ERSIPL/WA/1072 (16.04.2019)
4. ERSIPL/WA/1037

Locations

1. Open well in Village Jejanga
2. Bore well in Village Khandbandh near DMC Colony
3. Bore well in Mines Office
4. Bore well in Village Jalahuri

Sl	Parameters Analysed	Test Method	Unit	Permissible Limit as per IS 10400:2017	Result				
					ERSIPL/WA/1034	ERSIPL/WA/1036	ERSIPL/WA/1072	ERSIPL/WA/1037	
01	Colour	IS 3025:Part 1A: 1987 Reaffirmed 2017	Hazen	5.0	<5.0	<5.0	<5.0	<5.0	
02	Odour	IS 3025:Part 1B: 1987 Reaffirmed 2017	—	Agreeable (A)	A	A	A	A	
03	Taste	IS 3025:Part 1C: 1987 Reaffirmed 2017	—	Agreeable (A)	A	A	A	A	
04	pH	IS 3025:Part 11: 1987 Reaffirmed 2017	No.	6.5 to 8.5	6.52	6.59	6.54	6.36	
05	Turbidity	IS 3025:Part 10: 1987 Reaffirmed 2017	NTU	1.0	0.4	0.3	0.4	0.3	
06	Total Hardness as CaCO ₃	IS 3025:Part 21: 2002 Reaffirmed 2014	mg/L	200.0	116.0	44.0	32.0	56.0	
07	Total Iron	IS 3025:Part 5A: 2002 Reaffirmed 2014	mg/L	0.3	0.07	0.33	<0.07	1.98	
08	Chloride	IS 3025:Part 22: 1987 Reaffirmed 2014	mg/l	250.0	35.91	11.65	9.62	15.54	
09	Total Dissolved Solids	IS 3025:Part 16: 1987 Reaffirmed 2014	mg/L	500.0	249.0	59.3	40.3	82.0	
10	Calcium as Ca	IS 3025:Part 04: 1987 Reaffirmed 2014	mg/L	75.0	30.46	11.22	9.62	9.62	
11	Sulphate as SO ₄ ⁻²	IS 3025:Part 24: 1987 Reaffirmed 2014	mg/l	200.0	11.1	1.8	1.5	1.7	
12	Fluoride	IS 3025:Part 06: 2005 Reaffirmed 2017	mg/l	1.0	0.11	0.23	<0.1	0.34	
13	Total Alkalinity as CaCO ₃	IS 3025:Part 23: 1987 Reaffirmed 2014	mg/L	200.0	132.0	36.0	24.0	20.0	

Reporting Period: April to September, 2019

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**



Environmental Research and Services (India) Pvt. Ltd.

(an ISO/IEC 17025 (IABL) Accredited Laboratory, ISO/IEC 14001 (IABQ) Certified Company)



GSTIN : 21AAACE6224D1ZE



Plot No: 5-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel : +91-9537690329 , E-mail: envlabnsr@gmail.com

Page 2/2

14	Nitrate as NDS	IS 3025 Part 34: 1993 Revised: 2014	mg/l	45.0	<5.0	<5.0	<5.0	<5.0
15	Residual Free Chlorine	IS 3025 Part 29: 1986 Revised: 2014	mg/l	0.2 (min)	Nil	Nil	Nil	Nil
16	Copper	IS 3025 Part 42: 1992 Revised: 2014	mg/l	0.05	<0.02	<0.02	<0.02	<0.02
17	Manganese	IS 3025 Part 58: 2002 Revised: 2014	mg/l	0.1	<0.01	<0.01	<0.01	<0.01
18	Phenolic Compound	IS 3025 Part 40: 1991 Revised: 2014	mg/l	0.001	ND	ND	ND	ND
19	Mercury	IS 3025 Part 48: 1994 Revised: 2014	mg/l	0.001	ND	ND	ND	ND
20	Cadmium	IS 3025 Part 41: 1993 Revised: 2014	mg/l	0.005	ND	ND	ND	ND
21	Selenium	IS 3025 Part 50: 2003 Revised: 2014	mg/l	0.01	ND	ND	ND	ND
22	Total Arsenic	IS 3025 Part 37: 1988 Revised: 2014	mg/l	0.01	ND	ND	ND	ND
23	Cyanide	IS 3025 Part 27: 1986 Revised: 2014	mg/l	0.05	ND	ND	ND	ND
24	Lead	IS 3025 Part 47: 1991 Revised: 2014	mg/l	0.01	ND	ND	ND	ND
25	Zinc	IS 3025 Part 49: 1994 Revised: 2014	mg/l	3.0	<0.1	<0.1	<0.1	<0.1
26	Anionic detergents	IS 3042: 2015 Revised: 2014	mg/l	0.2	ND	ND	ND	ND
27	Total Chromium	IS 3025 Part 52: 2003 Revised: 2014	mg/l	0.05	ND	ND	ND	ND
28	Petroleum, aromatic hydrocarbons	IS 3025 Part 53: 2003 Revised: 2014	mg/l	0.0001	ND	ND	ND	ND
29	Mineral Oil	IS 3025 Part 59: 2003 Revised: 2014	mg/l	0.5	ND	ND	ND	ND
30	Pesticides	IS 3025 Part 54: 2003 Revised: 2014	mg/l	ND	ND	ND	ND	ND
31	Aluminum	IS 3025 Part 55: 2003 Revised: 2014	mg/l	0.01	ND	ND	ND	ND
32	Boron	IS 3025 Part 57: 2003 Revised: 2014	mg/l	0.5	ND	ND	ND	ND
33	Nickel	IS 3025 Part 51: 2003 Revised: 2014	mg/l	0.02	ND	ND	ND	ND

ND: Not Detected.

... END OF TEST REPORT ...


 (Authorized Signatory)
 S.P. Pattanayak
 Tech. Manager

Reporting Period: April to September, 2019

STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd., At /PO –Khandbandh, Joda, Dist.: Keonjhar

ANNEXURE – 4:Surface water quality report



Environmental Research and Services (India) Pvt. Ltd.

(An ISO/IEC 17025:2005 (ENGL) Accredited Laboratory, ISO/IEC 14001:2004 Certified Company)

Plot No: B-22, Sector-B, Industrial Estate Chandaka, Infocity Road, Bhubaneswar-751024, Odisha
Tel: +91-9937890329, E-mail: erslbbn@gmail.com



GSTIN : 21AAACE6224D1ZE

HR/TC/200/18/01-00000362P

Test Report Format No.: ERSIPL/FM/40

TEST REPORT (WATER/WASTE-WATER) Surface Water

Pg No: 1 of 1

Date: 18 May 2019

Test Report No: ERSIPL/TR/WA/227

Name and Address of the Customer : Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.
Khandbandh, Joda, Keonjhar-758034

Date of Sampling : 03.04.2019
Sample Collected by : Representative of ERS (I) Pvt. Ltd.

Sample Collected in presence of : Representative of Client.

Sample Received on : 04.04.2019

Analysis Started on : 04.04.2019

Analysis Completed on : 10.04.2019

Method of Sampling : IS 3025: Part 1: 1987, Reaffirmed 2014

Quantity of sample : 2litrs

Type of Container : Glass Bottle & HDPE Bottle

Environment Condition : All Tests carried out in Room Temperature

Sample ID. No.

1. ERSPL/WA/1031
2. ERSPL/WA/1033
3. ERSPL/WA/1032
4. ERSPL/WA/1034

Location

1. Water from river Saharuni, near village, Jalandh
2. Water from Dalco Nala Near TATA Pump House No.07
3. Water From Saha Nala (up stream of Mines Lease Area)
4. Water From Saha Nala (down stream of Mines Lease Area)

S. No.	Test Parameters	Test Method	Unit	Result				In-Place water quality (IS 3025: Part 1: 1987, Reaffirmed 2014)
				ERSIPL/WA/1001	ERSIPL/WA/1003	ERSIPL/WA/1002	ERSIPL/WA/1004	
1	pH	IS 3025: Part 1: 1987, Reaffirmed 2014	No.	7.47	5.85	7.26	7.00	6.5 - 8.5
2	Dissolved Oxygen	IS 3025: Part 301: 1991, Reaffirmed 2014	mg/l	7.1	3.0	3.0	3.0	5.0 (min)
3	BOD (5 days at 20°C)	IS 3025: Part 46: 1994 (Reaffirmed 2014, 20°C 5 days)	mg/l	0.2	0.8	0.2	0.8	3.0
4	Fluoride (as F)	IS 3025: Part 60: 2008, Reaffirmed 2014	mg/l	0.22	0.20	<0.1	<0.1	1.5
5	Free available Chlorine (as Cl ₂)	IS 3025: Part 52: 2001, Reaffirmed 2014	mg/l	ND	ND	ND	ND	0.05
6	Free Chlorine Residual	IS 3025: Part 40: 2002, Reaffirmed 2014	mg/l	ND	ND	ND	ND	0.05
7	Colour	IS 3025: Part 24: 2008, Reaffirmed 2014	Platinum	15-20	15-20	5-10	5-10	300
8	Total Coliform	IS 3025: 1983, Reaffirmed 2014	NP/100 ml	141.0	1000.0	<5.0	<5.0	500.0
9	Ammonia (as N)	IS 3025: Part 37: 2001, Reaffirmed 2014	mg/l	ND	ND	ND	ND	0.2

HR/TC/200/18/01-00000362P

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.....END OF TEST REPORT.....

(Authorized Signatory)

S.P. Pattanayak
Tech. Manager

Reporting Period: April to September, 2019

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**

ANNEXURE – 5:FC Copy



Government of India
Ministry of Environment, Forest & Climate Change
Eastern Regional Office
A/3, Chandrasekharapuri, Bhubaneswar
Bhubaneswar - 751 023, Odisha



Telephone: 0674-2332281, 23312415, 23324422, 23312424. Fax: 0674-2332430. Email: mca@moef.gov.in

No.5-ORCI/97/2010-BHU

16th December, 2016



Principal Secretary,
Forest & Environment Department,
Govt. of Orissa,
Bhubaneswar.

Annexure - 2

Stage - II - Final clearance order

Sub:- Diversion of 30.980 ha of forest land in Baitarani Reserve Forests in Keonjhar district, Orissa for iron ore mining by M/s Sree Metaliks Ltd.

I am directed to refer to State Govt. letter No. 10F(Cons)88/2009-4788/F&E dated 08.03.2010, wherein prior approval of the Ministry of Environment & Forests for diversion of 30.980 ha of forest land in Baitarani Reserve Forests in Keonjhar district, Orissa for iron ore mining by M/s Sree Metaliks Ltd., was sought in accordance with Section-2 of the Forest (Conservation) Act, 1980. After due consideration of the proposal by the Ministry of Environment & Forests and on the basis of recommendation of State Advisory Group held on 19.10.2010, the in-principle approval for diversion of the said forest land was accorded by Ministry vide this office letter of even number dated 11.03.2011, subject to fulfillment of certain conditions. The State Government has furnished compliance report in respect of the conditions stipulated in the in-principle approval and has requested to grant final approval of the proposal.

2. In this connection, I am directed to say that on the basis of the compliance report furnished by the State Government of Odisha vide their letter No.10F(Cons)477/2011-14946/F&E dated 11.08.2016, approval of the Ministry of Environment, Forest & Climate Change is hereby granted under Section 2 of the Forest (Conservation) Act, 1980 for diversion of 30.980 ha of forest land in Baitarani Reserve Forests in Keonjhar district, Orissa for iron ore mining by M/s Sree Metaliks Ltd., subject to the fulfillment of the following conditions:-

- i) Legal status of the diverted forest land shall remain unchanged.
- ii) Additional amount of NPV of the diverted forest land, if any, becoming due after finalization of the same by the Hon'ble Supreme Court of India, shall be charged by State Govt. from the user agency. An undertaking from the user agency shall be obtained in this regard.
- iii) Compensatory Afforestation shall be raised and maintained over 31.00 ha of non-forest land identified in village Champajhar in Plot No.166/179(P) and 165/180(P) of Khata No.24 of Parbat-II KISSAM in Telkoi Tehsil of Keonjhar district from the funds provided by the user agency.

Contd....2

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**

ANNEXURE – 6:Update of EC Compliance in website



Reporting Period: April to September, 2019

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**

ANNEXURE – 7: Site Specific Wild Life Conservation Plan

**OFFICE OF THE
PRINCIPAL CHIEF CONSERVATOR OF FORESTS (WILDLIFE)
AND CHIEF WILDLIFE WARDEN: ORISSA: BHUBANESWAR-
751012.**

Memo No. 4400 /1WL(C)SSP-311 /2011.

Dated, Bhubaneswar the 27 th June, 2011.

To 27.11
The Chief Conservator of Forests (Nodal),
O/O the Principal Chief Conservator of Forests, Orissa,
Bhubaneswar.

Sub: Approval of site specific wildlife conservation plan of Khandabandh Iron Ore Mines of M/S Sree Metaliks Ltd. in the district of Keonjhar.

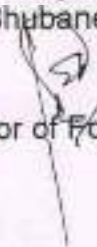
I am directed to inform you that the Site Specific Wildlife Conservation Plan for Khandabandh Iron Ore Mines of M/S Sree Metaliks Ltd. in the district of Keonjhar has been approved by the Principal Chief Conservator of Forests (WL) & Chief Wildlife Warden, Orissa with financial forecast of Rs.82.00 lakhs for the following activities.

- | | |
|---|------------------------------|
| 1. For activities to be implemented by M/S Sree Metaliks Ltd. in ML area | Rs.14.00 Lakhs |
| 2. For activities to be implemented by the DFO, Keonjhar Division in the Project impact area- | <u>Rs.68.00 Lakhs</u> |
| | Total: Rs.82.00 Lakhs |

Various activities in the lease hold area will be executed by the User Agency under the guidance of D.F.O., Keonjhar Division. Rs.68.00 Lakhs may be deposited with the Divisional Forest Officer, Keonjhar Division under CAMPA for implementation of various activities within the project impact area.

Encl: Two Nos. of approved
S.S. WL Conservation Plan.

Approved by Principal C.C.F. (WL),
Orissa, Bhubaneswar.


Conservator of Forests (WL).

Contd..2

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**

Photographs of Environmental Safeguard Measures



Photo # 1A 7 Showing Safety Zone plantation



Photo # 1B showing Retaining Wall all along the Nala Safety Zone & strategic locations



Photo # 2A Showing Drilling Machine with Water Injecting System



Photo #2B & 4 Showing 20 Kl Water Tanker For Dust Suppression On The Haul Road



Photo # 3 showing Settling Tank at strategic locations

Reporting Period: April to September, 2019

**STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS – For
Khandbandh Iron Ore Mines of M/s. Sree Metaliks Ltd.,
At /PO –Khandbandh, Joda, Dist.: Keonjhar**



Photo # 5 Showing Trucks and Dumpers Covered With Tarpaulin On Top



Photo # 6 showing Check Dam



Photo # 7 showing Top Soil Stack inside the ML area with waste dump cover matting provisions & retaining wall at toe of the dump

