



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The Owner
SUNDARAM STEELS PRIVATE LIMITED
B-7, Phase-III, Bokaro Industrial Area, Balidih, district Bokaro,
Jharkhand,,Bokaro,Jharkhand-827014

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/JH/IND1/414770/2023 dated 01 Feb 2023. The particulars of the environmental clearance granted to the project are as below.

- | | |
|--|---|
| 1. EC Identification No. | EC23A008JH110090 |
| 2. File No. | IA-J-11011/128/2010-IA-II(IND-I) |
| 3. Project Type | Expansion |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 3(a) Metallurgical industries (ferrous & non ferrous) |
| 6. Name of Project | Expansion of existing Sponge Iron plant from 54,000 TPA to 174,000 TPA, Installation of 3 x 20 Ton Induction Furnaces with Billet Caster for production of 174,000 TPA Rolled Products along with 24 MW Captive Power Plant by M/s Sundaram Steels Private Limited at B-7, Phase-III, Bokaro Industrial Area, Balidih, Bokaro, Jharkhand. |
| 7. Name of Company/Organization | SUNDARAM STEELS PRIVATE LIMITED |
| 8. Location of Project | Jharkhand |
| 9. TOR Date | N/A |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 04/07/2023

(e-signed)
Dr. R B Lal
Scientist F
IA - (Industrial Projects - 1 sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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PARIVESH

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and Virtuous Environment Single-Window Hub)



F. No. IA-J-11011/128/2010-IA-II(IND-I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan
Vayu Wing, 3rd Floor, Aligunj
Jor Bagh Road, New Delhi -110003

Dated: 4th July, 2023

To,

M/s Sundaram Steels Private Limited
B-7, Phase-III, Bokaro Industrial Area,
Balidih, district Bokaro, Jharkhand
Email: sundaramsteels2019@gmail.com

Project: Expansion of existing Sponge Iron plant from 54,000 TPA to 174,000 TPA, Installation of 3 x 20 Ton Induction Furnaces with Billet Caster for production of 174,000 TPA Rolled Products along with 24 MW Captive Power Plant by M/s Sundaram Steels Private Limited, located at B-7, Phase-III, Bokaro Industrial Area, Balidih, Bokaro, Jharkhand – Grant of Environmental Clearance under provisions of SOP dated 07.07.2021 regarding.

Sir,

This refers to your proposal No. IA/JH/IND1/414770/2023 dated 18.01.2023 received through PARIVESH Portal for grant of Environmental Clearance (EC) for the project mentioned above, as per the provisions of Ministry's OM dated 07.07.2021. Further, the PP, vide letter dated 14.06.2023 has uploaded the CPCB letter dated 14.06.2023 w.r.t. receipt of the details of Bank Guarantee by the CPCB, and Jharkhand State Pollution Control Board letter dated 09.06.2023 w.r.t. receipt of penalty by JSPCB in response of the compliance of Ministry's SOP dated 07.07.2021.

2. As per the provisions of the Environment Impact Assessment (EIA) Notification, 2006, the above-mentioned project/activity is covered under category 'A' of item 3(a) Metallurgical Industries (ferrous & non-ferrous) and 1(d) Thermal Power Plants, and appraised at Central level.
3. The above-mentioned proposal has been considered in 23rd meeting of Expert Appraisal Committee (Industry-1 Sector) held during 14th -15th February, 2023. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at <https://parivesh.nic.in>.
4. The Ministry's SOP vide an OM dated 07.07.2021 provides for appraisal of projects for grant of terms of reference/environmental clearance, which have started the work on site, expanded the production beyond the limit of environmental clearance, or changed the product mix without obtaining prior environmental clearance under the EIA Notification, 2006.
5. The details of the proposal are as per the EIA report submitted by the proponent. The salient features of the proposal as presented during the above-mentioned meetings of EAC (Industry 1) are as under: -

S. No.	Particulars	Details submitted by the PP
a.	Terms of Reference for undertaking EIA study	01.07.2019 & 05.12.2022 (Amended-under violation)
b.	Period of baseline data collection	1 st October 2022 to 31 st December 2022
c.	Date of Public Consultation	25.02.2020



S. No.	Particulars	Details submitted by the PP		
d.	Action plan to address the PH issues	An amounts of Rs 280.56 Lakhs have been earmarked to address the issues raised during public hearing. Detail of activities proposed attached as Annexure 1 .		
e.	Location of the project	B-7, Phase-III, Bokaro Industrial Area, Balidih, Bokaro, Jharkhand		
f.	Latitude and Longitude of the project site	Point	Latitude	Longitude
		A	23° 40' 47.229" N	86° 4' 23.284" E
		B	23° 40' 42.552" N	86° 4' 23.741" E
		C	23° 40' 41.955" N	86° 4' 21.915" E
		D	23° 40' 36.675" N	86° 4' 23.665" E
		E	23° 40' 34.041" N	86° 4' 22.805" E
		F	23° 40' 33.780" N	86° 4' 16.784" E
		G	23° 40' 39.407" N	86° 4' 11.831" E
		H	23° 40' 41.592" N	86° 4' 9.923" E
		I	23° 40' 45.500" N	86° 4' 14.343" E
g.	Total land	25Acers (10.117Ha). [Private: 10.117Ha]		
h.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	The total land area of 25Acers (10.117Ha) is allotted to M/s Sundaram Steels Pvt Ltd by Bokaro Industrial Area Development Authority, Bokaro on 18.08.2009 for a period of 30 years.		
i.	Existence of habitation & involvement of R&R, if any	R&R is not applicable		
		Existence of Habitation		
		Project Site – Nil		
		Study Area (Nearest)		
		Habitation	Distance	Direction
		Village Koradih	0.25 km	East
j.	Elevation of the project site	232 meter above mean sea level.		
k.	Involvement of Forest land if any.	No forest land involved.		
l.	Water body exists within the project site as well as study area	Project Site: 1 no. RWH Pond		
		Study area		
		Water Body	Distance	Direction
		Khanjo River	6.20	W
		River Damodar	6.75	NE
Garga River	6.32	SSW		
Reservoir of Garga Dam	3.28	SSW		
m.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	None within 10 km radius study area		
n.	Project cost	The capital cost of the existing unit (non-violation units) and the units installed and are under violation are Rs. 34.38Cr. and Rs. 33.21Cr. Respectively. Cost of the proposed expansion is estimated to be Rs. 154.11Cr. Hence, total estimated cost to the plant after the proposed expansion will be Rs. 221.71Cr.		
o.	EMP cost	The Environmental Protection Measures is proposed as Rs.1576.59 Lakhs (including the cost to address the Public Hearing and Total amount of Remediation Plan, natural and		



S. No.	Particulars	Details submitted by the PP
		Community Resource Augmentation Plan) and the recurring cost of Rs. 62.53 Lakhs.
p.	Employment opportunity	The employment generation from the proposed expansion is 200.
q.	Water and Power requirement	Existing water requirement is 199 m ³ /day (non-violating + violating units), water requirement is obtained from Jharkhand Industrial Area Development Authority (JIADA) and permission for the same has been obtained from JIADA vide letter no. 681 dated 24.09.2021. The water requirement after the proposed expansion is estimated as 906m ³ /day, out of which 833m ³ /day of fresh water requirement will be obtained from the Jharkhand Industrial Area Development Authority (JIADA) and remaining will be recycled water. Drinking water and Sanitation Department, Bokaro has recommended supply of 1500 KLD of surface water from Garga Dam in favor of M/s Sundaram Steels Private Limited vide Ir. dated 06.01.2023 to JIADA. Existing power requirement of 16.0MW (non-violating + violating) is obtained from DVC. The power requirement after the proposed expansion is estimated as 23MW, which will be met from proposed Captive Power Plant of capacity 24.0MW.

Unit configuration and capacity:

S No.	Plant Equipment/ Facility	Existing Facility as per EC dated 14.01.2011 and subsequent amendment 21.12.2011								Proposed Unit		Final	Remark
		Total		Implemented		Unimplemented		As per CTO		Configuration	Capacity		
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity				
1.	Sponge Iron Plant	2x90 TPD	5400 TPA	2x90 TPD	5400 TPA	--	--	2x90 TPD	5400 TPA	2x200 TPD	120,000 TPA	174,000 TPA	--
2.	Induction Furnace	--	--	--	--	--	--	--	--	3x20T	--	3x20T	Installed and operated Under Violation
3.	Billet Caster	--	--	--	--	--	--	--	--	3 strands 9/11m	180,000 TPA	180,000 TPA	
4.	Rolling Mill	--	--	--	--	--	--	--	--	580 TPD	174,000 TPA	174,000 MS Long Rolled Products	Hot Rolling of Billets
5.	Captive Power Plant	--	8MW	--	--	--	8 MW	--	--	AFBC 12 MW	24 MW	24 MW	--



											WHR B 12 MW			
--	--	--	--	--	--	--	--	--	--	--	-------------------	--	--	--

6. The **EAC, in its meeting held during 14-15 February, 2023**, inter-alia, deliberated the following:

- i. The instant proposal is for enhancement of sponge iron production from 0.054 to 0.174 million tonnes per annum (MTPA), production of 0.18 MTPA Billets (installed under violation) and setting-up of facility for production 0.174 MTPA Rolled Products along with 24MW Captive Power Plant.
- ii. The EAC, constituted under the provision of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.
- iii. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.
- iv. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.
- v. The existing project was accorded environmental clearance vide Ir no. J-11011/128/2010-IA-II(I) dated 14th January, 2011 for installation of 2x90 TPD Sponge Iron Plant along with 8 MW Captive Power Plant and amendment on 21st December, 2011 from MoEFCC, New Delhi. Consent To Operate has been issued by Jharkhand State Pollution Control Board vide Ref no. JSPCB/HO/RNC/CTO-10568235/2021/1258 dated 10.10.2021. The validity of CTO is up to 30.06.2024.
- vi. The EAC further noted that during August, 2019 to October, 2019 company installed 3x20T Induction Furnace along with 3 strands, 9/11m radius CCM to produce 180,000TPA MS Billets within the existing plant area of 25Acres (10.117Ha). As these units for production of Billets were installed without prior environmental clearance, the project falls under violation and is appraised under the provision of S.O. 804 (E) issued by MoEF&CC dt. 14.03.2017 and OM, dt. 07.07.2021 regarding SOP for identification and handling for projects under violation. Also, the environmental clearance accorded to the company is for 2x90TPD sponge iron production of 54000TPA but in the year 2018-2019, 2019-2020 and 2021-20222 the company has exceeded the production limits. The violation units were under operation till 30.11.2022. As per the MoEF&CC OM dated 07.07.2021, M/s Sundaram Steels Pvt. Ltd. 1% of the Project Cost (i.e Rs. 33.21 Crores) and 0.25% of the total turnover during the violation period (i.e. Rs. 3,47,61,790.45) as penalty for the violation activity in addition to Damage Assessment cost. The company has also prepared a Natural and Community Resource Augmentation plan for 3 years.



- vii. There is a case (Case no. 242/2023) filed on 11.01.2023 in the Court of Chief Judicial Magistrate, Bokaro, Jharkhand to initiate credible action against M/s Sundaram Steels Pvt Ltd and others for the offence committed u/s 19 of Environment (Protection) Act, 1986. This is filed as per provisions of the SOP dated 07.07.2021.
- viii. Total project land is 10.117 ha which is allotted to M/s Sundaram Steels Pvt Ltd by Bokaro Industrial Area Development Authority, Bokaro on 18.08.2009 for a period of 30 years.
- ix. The EAC also deliberated the advantages of installation of 1x400 TPD DRI Kiln in place of 2x200 TPD Kilns and accepted the request of PP.
- x. The nearest human settlement from the project site is Village Koradih which is at a distance of 0.25 km in the East direction.
- xi. Panjudih Primary School is in close proximity to the project site. M/s Sundaram Steels Pvt Ltd. has committed to plant 250 trees in monsoon season of the year 2023 along the boundary wall of Panjudih Primary School.
- xii. Khanjo River (6.20 km, W), River Damodar (6.75 km, NE), Garga River (6.32 km, SSW) and Reservoir of Garga Dam (3.28 km, SSW) exists within the study area of 10 km from the project site. The EAC is of the opinion that water bodies shall not be disturbed. Mitigation measures w.r.t. safeguarding the water bodies shall be implemented.
- xiii. The water requirement after the proposed expansion is estimated as 906 m³/day, out of which 833 m³/day of fresh water requirement will be obtained from the Jharkhand Industrial Area Development Authority (JIADA) and remaining will be recycled water.
- xiv. The existing greenbelt has been developed in 3.407 Ha which is about 33% of the total plant area of 10.117 ha with total sampling of 5110 trees. Proposed greenbelt will be developed with a tree density of 2500 trees per hectare. A total of 4088 numbers of trees will be planted for gap filling. The EAC deliberated on the greenbelt action plan and found it satisfactory.
- xv. The Committee has found that the baseline data and incremental GLC due to the proposed project within NAAQ standards.
- xvi. The committee deliberated details of carbon foot prints and carbon sequestration study w.r.t. proposed project and found them to be satisfactory.
- xvii. The Committee also deliberated on the public hearing issues along with revised action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory.
- xviii. The EAC deliberated on the written submission of project proponent and found it satisfactory.
- xix. The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for grant of environmental clearance.
- xx. The environmental clearance recommended to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.



7. Considering the information & clarifications provided by the project proponent and after detailed deliberations, EAC has recommended the proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 and SOP dated 07.07.2021 subject to the stipulation of following specific conditions and general conditions as detailed in the point below.

8. Based on recommendations of the EAC and finalization/approval of the bank guarantee for an amount of Rs. 56.44 Lakhs by the competent authority, towards Remediation Plan and Natural and Community Resource Augmentation Plan, the project proponent has submitted the desired bank guarantee with the Central Pollution Control Board (CPCB). The CPCB vide letter No. B-33014/7/2023/IPC-II, dated 14.06.2023 has informed the Ministry regarding receipt of the bank guarantee of Rs. 56.44 Lakhs vide BG No. 594GT02231370002 (HDFC Bank) by CPCB.

9. Based on recommendations of the EAC and finalization/approval of the penalty provisions for an amount of Rs. **3,80,82,790.45/-** by the competent authority, towards penalty provisions i.e., 1% of project cost attributable to the expansion, as per SOP dated 07.07.2021, the project proponent has submitted the desired penalty with the State Pollution Control Board (SPCB). The SPCB vide letter No. B-1575, dated 09.06.2023 has informed the Ministry regarding receipt of the penalty of Rs. 3,80,82,790.45/.

10. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto along with SOP dated 07.07.2021 and after accepting the recommendations of the Expert Appraisal Committee (Industry-1) hereby decided to grant **Environment Clearance for the instant proposal of M/s Sundaram Steels Private Limited** under the provisions of EIA Notification, 2006 and SOP dated 07.07.2021 subject to the following specific conditions and general conditions:

A. Specific Condition:

- i. The PP needs to comply all the points of TOR for Violation Project and follow SOP dated 07.07.2021 issued by the Ministry of Environment, Forest & Climate Change, for identification & handling of Violation cases under EIA notification 2006.
- ii. The project proponent shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.
- iii. The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.
- iv. **The total amount of Rs. 56.44 Lakhs shall be spent on Remediation plan and Natural Resource Augmentation Plan and Community Resource Augmentation Plan which shall be implemented in three years as per the action plan details given in EIA Report and summarized below.**

A. Damage Remediation Plan

S. No.	Environmental Component	Activity Description	Total Budgetary Provision in Rs.			
			1 st Year	2 nd Year	3 rd Year	Total



S. No.	Environmental Component	Activity Description	Total Budgetary Provision in Rs.			
			1 st Year	2 nd Year	3 rd Year	Total
1.	Land Environment	<ul style="list-style-type: none"> Assistance to Farmers by providing seedlings, manure, Bio-Fertilizer to Villagers of Khurti = Rs. 1,94,000/- Providing one tractor (Make Mahindra) with Bund maker, Ridger, Plough for agriculture purpose to be provided to Nagae Panchayat Gorabali Dakshini = Rs. 19,00,000/- 	Rs 19,00,000 (Providing Tractor with Bund maker, Ridger, Plough in Nagar panchayat of Gorabali Dakshini)	Rs 1,94,000 (providing seedlings, manure and Bio-fertilizers to villagers of Khutri)	--	Rs. 20.94 Lakhs
2.	Air Environment	<ul style="list-style-type: none"> Installation of solar lights in 25 numbers of houses in Village Koradih (@ Rs. 20,000 each) Providing one E-Rickshaw (4 seater, Make: Mac Auto) with Charger for public transport in Koradih Village = Rs. 6,00,000/- 	Rs 5,00,000 Installation of solar lights in 25 number of houses in Village Koradih	Rs 6,00,000 (Providing E-Ricksaw each in Koradih village)	--	Rs. 11.0 Lakhs
3.	Water Environment	<ul style="list-style-type: none"> Rain water harvesting pit (@Rs 3 Lakhs/ location) at Panchayat office of villages Narkara Punarvas, Gorabali Dakshini and Maraphari Punarvas = Rs. 9,00,000 Renovation of Village Ponds in Gorabali Dakshini and Maraphari Punarvas (@ Rs. 3,00,000 per villages) = Rs. 6,00,000/- 	Rs 6,00,000 (Rainwater Harvesting Pit and Renovation of Pond in Village Gorabali Dakshini)	Rs 6,00,000 (Rainwater Harvesting Pit and Renovation of Pond in Village Maraphari Punarvas)	Rs 3,00,000 (Rainwater Harvesting pit in Panchayat Office in Narkara Punarvas)	Rs. 15.0 Lakhs
4.	Noise Environment	<ul style="list-style-type: none"> Distribution of Hearing aids to the needed Sr. Citizen of the Village Barudih @ 1000x200 person = Rs. 2,00,000 	Rs 200,000 (Distribution of Hearing aids to the needed Sr. Citizens of Village Koradih)	--	--	Rs. 2.0 Lakhs
Total			Rs. 32.0 Lakhs	Rs. 13.94 Lakhs	Rs. 3.0 Lakhs	Rs. 48.94 Lakhs

B. Natural Resource Augmentation Plan Along with Budget

Sl. No.	Proposed Activities	Budget (Rs.)			
		1 st Year	2 nd Year	3 rd Year	Total
1.	Installation of Bio- degradable waste converter (Make: Reddonatura, Capacity: 75 kg/day) in	--	3,50,000	--	3,50,000



Gorabali Dakshini Panchayat				
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C. Community Resource Augmentation Plan along with Budget

Sl No.	Proposed Activities	Budget (Rs.)			
		1 st Year	2 nd Year	3 rd Year	Total
1.	Renovation of Drainage system in Gorabali Dakshini Panchayat	4,00,000	--	--	4,00,000

Table: Damage Remediation, Natural Resource Augmentation plan and Community Resource Augmentation Plan

Sl. No.	Aspects	Budget (Rs.)
1.	Air Environment	11,00,000
2.	Water Environment	15,00,000
3.	Noise Environment	2,00,000
4.	Land Environment	20,94,000
A	Cost of Damage Remediation Plan	48,94,000
B	Natural Resource Augmentation Plan for 3 Years	3,50,000
C	Community Resource Augmentation Plan for 3 Years	4,00,000
	Total	56,44,000

- v. The project proponent has submitted a bank guarantee of an amount of Rs. 56.44 lakhs towards Remediation plan and Natural and Community Resource Augmentation plan with the CPCB prior to the grant of environmental clearance (EC) as per SOP 07.07.2021.
- vi. Project proponent shall ensure that the plan shall be completed in three years whereas the bank guarantee shall be for five years. The bank guarantee shall be released by the CPCB after successful implementation of Remediation plan, Natural Resource Augmentation Plan and Community Resource Augmentation plan.
- vii. Project proponent has submitted Rs. 3,80,82,790.45 towards penalty provisions as per SOP dated 07.07.2021 to the SPCB prior to the grant of EC as penalty for the violation activity in addition to Damage Assessment cost. The cost of Penalty as per MoEF&CC's OM dated 07.07.2021 is detailed as below:

Particulars	Value (Rs.)	Damage Cost (Rs.)
Turn Over	13,90,47,16,183.81	3,47,61,790.45
Total Project Cost	33,21,00,000	33,21,000
Cost of Penalty		3,80,82,790.45

- viii. The total water requirement is 906 m³/day, out of which 833 m³/day of fresh water requirement shall be obtained from the Jharkhand Industrial Area Development Authority (JIADA) and remaining shall be from recycled water. PP shall obtain necessary permission from the Competent Authority.
- ix. Following additional arrangements to control fugitive dust shall be provided:
- a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.



- b. Proper covered vehicle shall be used while transport of materials.
- c. Wheel Washing mechanism shall be provided in entry and exit gates with complete recirculation system.
- x. All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project.
- xi. All stockyards shall be having impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains to trap the run off material.
- xii. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
- xiii. Particulate matter emission from stacks shall be less than 30 mg/Nm^3 . Action plan submitted to limit the dust emission shall be strictly implemented.
- xiv. CEMS shall be provided on all process stacks and the signal shall be received in plant control room for central control of APCDs installed in the plant
- xv. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil as a fuel.
- xvi. Ultralow NO_x burner with three stage combustion, flue gas recirculation and auto combustion control system shall be used.
- xvii. Solid waste utilization
 - a. PP shall install a slag crusher to convert steel slag into aggregate for use in construction industry, fine sand for use as flux in steel plant, sand in brick making and as lime in cement making.
 - b. PP shall recycle/reuse 100 % solid waste generated in the plant.
 - c. Used refractories shall be recycled as far as possible.
- xviii. Khanjo River (6.20 km, W), River Damodar (6.75 km, NE), Garga River (6.32 km, SSW) and Reservoir of Garga Dam (3.28 km, SSW) exists within the study area of 10 km from the project site. A robust and full proof Drainage Conservation scheme to protect the natural drainage and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be implemented.
- xix. The proposed project shall be designed as "Zero Liquid Discharge" Plant. ETP shall be installed and there shall be no discharge of effluent from the plant. Domestic effluent shall be treated in Sewage Treatment Plant. MSW waste shall be treated in digester and recovered gas shall be used in the canteen.
- xx. The company shall also undertake rain water harvesting measures as per the plan submitted in the EIA/EMP report and reduce water dependence from the outside source.
- xxi. The nearest human settlement from the project site is Village Koradih which is at a distance of 0.25 km in the East direction. Project Proponent shall take appropriate environmental safeguard measures to minimise the impact on the habitation of the locals. The company shall also include this locations in its environmental monitoring programme.
- xxii. As committed, PP shall plant 250 trees in monsoon season of the year 2023 along the boundary wall of Panjudih Primary School.
- xxiii. PP shall undertake Village adoption programme and shall prepare and implement a robust plan for socio-economic development of nearby villages to develop them into model villages.
- xxiv. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.



- xxv. Three tier Green Belt shall be developed in at least 33% of the project area in a period of 1 year with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. Gap filling shall be undertaken and survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. PP shall develop greenbelt in the form of shelter belt comprising of total of 6 rows of 2x2 m plantation with tall trees & broad leaves with thick canopy to act as green barrier for air pollution & noise levels towards Village Koradih inside the plant premises. The green belt shall be completed by monsoon season of 2023. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.
- xxvi. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
- xxvii. Air Cooled condensers shall be used in the captive power plant.
- xxviii. During operational phase at Captive Power Plant, PP shall measure coal dust exposures and to maintain coal dust exposures within stipulated standards at coal handling areas. PP shall identify extreme hot areas through heat stress survey as well as noise monitoring within process plants to ensure that workers not exposed above 90 dBA levels as per Factories Act, 1948.
- xxix. All the commitments made to the public during the Public Hearing/Public Consultation shall be satisfactorily implemented. The action plan based on the social impact assessment study of the project as per the EMP in accordance to the Ministry's OM dated 30.09.2020 shall be strictly implemented and progress shall be submitted to the Regional Office of MoEF&CC.
- xxx. Action Plan for fire fighting system including provision for flame detectors, temperature actuated heat detectors with alarms, automatic sprinkler system, fixing the location of fire water tanks, separate power system for fire fighting, involvement of qualified and trained fire personnel, nearest fire station & time required to reach the proposed site shall be prepared and implemented.
- xxxi. The Plastic Waste Management Rules 2016, inter-alia, mandated banning of identified Single Use Plastic (SUP) items with effect from 01/07/2022. In this regard, CPCB has issued a direction to all the State Pollution Control Boards (SPCBs)/Pollution Control Committees (PCCs) on 30/06/2022 to ensure the compliance of Notification published by Ministry on 12/08/2021. The technical guidelines issued by the CPCB in this regard is available at <https://cpcb.nic.in/technical-guidelines-3/>. All the project proponents are hereby requested to sensitize and create awareness among people working within the Project area as well as its surrounding area on the ban of SUP in order to ensure the compliance of Notification published by this Ministry on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report being submitted by the project proponents.
- xxxii. The PP shall conduct personal and area air sampling for in PM2.5 dust where exposure to Coal/coke dust to be quantified at work areas at different process plants-coal/coke handling areas, power plants-ball mills, coal handling areas and to be compared with permissible exposure limit of coal/coke dust.
- xxxiii. Adequate number of Mobile Fog / Mist Sprinklers shall be commissioned at conveyors, on bulk raw material storage area/ transfer points like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. This Fog/Mist sprinkling should also be facilitated to the surrounding villages on a periodic basis.
- xxxiv. The project proponent shall adopt the Clean Air practices like mechanical collectors, wet scrubbers, fabric filters (bag houses), electrostatic precipitators, combustion systems (thermal oxidizers), condensers, absorbers, adsorbers, and biological degradation. Controlling emissions



related to transportation shall include emission controls on vehicles as well as use of cleaner fuels. Sufficient numbers of additional truck mounted Fog/Mist water cannons shall be procured and operated regularly inside the project premises and also in the surrounding villages to arrest suspended dust in the atmosphere.

D. General conditions:

I. Statutory compliance:

- i. The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislations, etc., as may be applicable to the project.

II. Air quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as two Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.
- iii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
- iv. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- v. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/agglomeration.
- vi. The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.
- vii. Plant internal roads shall be concreted and a vacuum cleaner shall be used to regularly clean the roads.
- viii. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.
- ix. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

- i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th



December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre- and post-monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- iv. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.

IV. Noise monitoring and prevention

- i. Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

V. Energy Conservation measures

- i. Energy conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.

VI. Waste management

- i. Used refractories shall be recycled as far as possible.
- ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused in melting Furnaces.
- iii. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

- i. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
- ii. Project proponent shall submit a study report on Decarbonisation program, which would essentially consist of company's carbon emissions, carbon budgeting/ balancing, carbon sequestration activities and carbon offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames", when PP comes for EC proposal. This study shall be formulated keeping in view of India's Net-zero commitment at the COP-26 Climate Summit.

VIII. Public hearing and Human health issues

- i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE).



- iii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained.

IX. Environment Management

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30/09/2020.
- ii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

X. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.
- v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. The PP shall put all the environment related expenditure, expenditure related to Action Plan on the PH issues, and other commitments made in the EIA/EMP Report etc. in the company web



site for the information to public/public domain. The PP shall also put the information on the left over funds allocated to EMP and PH as committed in the earlier ECs and shall be carried out and spent in next three years, in the company web site for the information to public/public domain.

- x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
 - xi. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
11. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.
12. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.
13. 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.
14. The above conditions shall be enforced, *inter-alia* under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
15. This issues with approval of the competent authority.



(Dr. R. B. Lal)
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Encl. as above at Annexure –I

Copy to: -

1. The Additional Chief Secretary, Environment & Forests Department, Government of Jharkhand, Secretariat, Nepal House, Doranda, Ranchi-834001.
2. Principal Chief Conservator of Forests and HoFF, Van Bhawan Jharkhand Sate at-Doranda P.O. Doranda, Ranchi-834002 Jharkhand.
3. The Director General of Forest, Ministry of Environment, Forest and Climate Change, New Delhi.
4. The Regional Officer, Ministry of Env., Forest and Climate Change, Integrated Regional Office, Bunglow No. A-2, Shyamali Colony, Ranchi-834002.



5. The Member Secretary, Central Pollution Control Board Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 32
6. The Member Secretary, Jharkhand Pollution Control Board, Town Administrative Building, HEC, Dhurwa, Ranchi- 824004.
7. Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
8. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi.
9. District Collector, Giridih, Jharkhand.
10. Guard File/Monitoring File/ Parivesh Portal /Record File.



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Table: Action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020

Sl. No.	Action Plan Proposed to Address the issues raised during the Public Hearing	Target of Implementation of Action Plan (Timeline) with year wise expenditure			Total Expenditure Rs.
		1 st Year	2 nd Year	3 rd Year	
1.	2 No of Ambulance with life supporting facilities i.e. Oxygen supply unit with necessary accessories and Nebulizer along with stretchers for the patient will be provided for villagers of Tandh and Balidih.	Rs. 12.0 Lakhs (Provision of 1 No. of Ambulance equipped with necessary accessories)	--	Rs. 12.0 Lakhs (Provision of 1 No. of Ambulance equipped with necessary accessories)	Rs. 24.0 Lakhs
2.	Installation of 50 numbers of solar powered street lights at internal roads of the village Barudih.	Rs. 5.0 Lakhs (25 Nos. of Solar Street Lamps)	Rs. 5.0 Lakhs (25 Nos. of Solar Street Lamps)	--	Rs. 10.0 Lakhs
3.	Installation of 2 numbers of borewell along with water purification unit at Vivekanand School, village Koradih and Bajrangbali Mandir, village Panjudih	Rs. 6.0 Lakhs	--	--	Rs. 6.0 Lakhs
4.	Adoption of Village Barudih under village panchayat Gorabali Dakshini				
	a) Installation of Water Coolers with Water Purification Unit at Govt. School	Rs. 1.5 Lakhs	--	--	
	b) Paving of Road	--	--	Rs. 13.5 Lakhs	
	c) Drainage System Development	--	Rs. 6.0 Lakhs	--	
	d) Renovation of Schools	Rs. 6.0 Lakhs	--	--	
	e) Installation of Solar Street Lights	--	--	Rs. 3.0 Lakhs	
	f) Pond Renovation	--	Rs. 3.0 Lakhs	--	
	g) Development of Park and Construction of Cultural program podium	--	Rs. 10 Lakhs	--	
	h) Providing books, Computer set and relevant accessories to school	Rs. 7.0 Lakhs	--	--	
6.	Additional Plantation of Trees on both sides of BIADA Bhavan road (1km) in village. Total number of 2000 trees will be planted.	Rs. 10 Lakhs (Plantation of 2000 Number of Trees)	--	--	Rs. 10.0 Lakhs
7.	Additional Plantation of 250 trees along the boundary wall of Panjudih Primary School.	Rs. 1.25 Lakhs (Plantation of 250 Number of Trees)	--	--	Rs. 1.25 Lakhs
8.	Company is paying for fees, school dress and books for a total of 26 numbers of children	Rs. 0.863 Lakhs	Rs. 0.863 Lakhs	Rs. 0.863 Lakhs	Rs. 2.59 Lakhs
9.	Construction of 15 Bed Hospital in Balidih Industrial Area, Bokaro	Rs. 40 Lakhs (Building)	Rs. 50	Rs. 75.0	Rs. 165 Lakhs



Sl. No.	Action Plan Proposed to Address the issues raised during the Public Hearing	Target of Implementation of Action Plan (Timeline) with year wise expenditure			Total Expenditure Rs.
		1 st Year	2 nd Year	3 rd Year	
		construction of 2 Floors)	Lakhs (Purchase of Medical Equipment)	Lakhs (Purchase of Furniture)	
Total amount to be spent to address the issues of public hearing		Rs. 89.613 Lakhs	Rs. 74.863 Lakhs	Rs. 104.363 Lakhs	Rs. 268.84 Lakhs
<i>As the public hearing was conducted on 25.02.2020, company has already carried out some developmental activities in the villages to address the issues raised in public hearing</i>					
A.	Renovation work at the pond located in village Panjudih.	The Renovation work has already been done			Rs. 10.0 Lakhs
B.	Company is paying for fees, school dress and books for a total of 26 numbers of children	The school fees, School dress and books for total of 26 numbers of children has been paid for the year 2020-21 & 2021-22			Rs. 1.72 Lakhs
Total Cost to address the issues raised during public hearing					Rs. 280.56 Lakhs

