



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

To,

The SENIOR MANAGER
ORISSA ALLOY STEEL PVT. LTD.
ROOM NO 3B, 1 GARSTIN PLACE, KOLKATA, Kolkata, West Bengal-
700001

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/WB/IND/261449/2021 dated 12 May 2022. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No.	EC22A008WB114687
2. File No.	J-11011/169/2017-IA.li(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 Integrated Steel Plant (1.2 Million TPA to 2.0 Million TPA Finished Steel) with 270 MW Captive Power Plant
7. Name of Company/Organization	ORISSA ALLOY STEEL PVT. LTD.
8. Location of Project	West Bengal
9. TOR Date	08 Apr 2021

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

Date: 10/08/2022

(e-signed)
Dr. R. B. Lal
Scientist E
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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By Speed Post/Online

F. No. J-11011/169/2017-IA.II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(I.A. Division – Industry I sector)

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi – 110003

Dated: 10th August, 2022

To,

M/s. Orissa Alloy Steel Pvt. Ltd.
Room No 3 B, 1, Garstin Place, Kolkata,
West Bengal-700 001
Email: orissaalloysteelprivateltd@gmail.com

Subject: Expansion of Integrated Steel Plant (1.2 To 2.0 Million TPA Finished Steel) with 270 MW Captive Power Plant by M/s. Orissa Alloy Steel Pvt. Ltd. located at Mouza – Nandarchalk, Bargai, Shyamraipur & Kanjarichak, Village-Gokulpur, P.O.-Shyamraipur, P.S.-Kharagpur (L), Dist. Paschim Medinipur, West Bengal–Grant of Environment Clearance regarding.

Sir,

This refers to your proposal no. **IA/WB/IND/261449/2021**, dated **12.05.2022** received through PARIVESH Portal for grant of **Environmental Clearance (EC)** and further ADS reply submitted by PP on 16.07.2022 for the project mentioned above.

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), 2(b) Mineral Beneficiation, 4(b) Coke oven plants and 1(d) Thermal Power Plants**, and appraised at **Central level**.

3. The above-mentioned proposal has been considered in **6th meeting of Expert Appraisal Committee (Industry-1 Sector) held on 30th –31st May, 2022**. 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 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
a.	Terms of Reference for undertaking EIA study	08.04.2021
b.	Period of baseline data collection	1 st December 2020 to 28 th February 2021
c.	Date of Public Consultation	13 th August, 2021
d.	Action plan to address the PH issues	Attached as Annexure 1
e.	Location of the project	Mouza – Nandarchalk, Bargai, Shyamraipur & Kanjarichak, Village – Gokulpur, P.O. – Shyamraipur, P.S. – Kharagpur (L), Dist. Paschim Medinipur, West Bengal.



S No	Particulars	Details			
f.	Latitude and Longitude of the project site	Point	Latitude	Longitude	
		Existing			
		A	22°21'39.93"N	87°17'57.63"E	
		B	22°22'05.60"N	87°17'48.71"E	
		C	22°22'14.07"N	87°18'11.67"E	
		D	22°22'08.35"N	87°18'29.62"E	
		E	22°21'40.33"N	87°18'29.19"E	
		F	22°21'38.26"N	87°18'12.82"E	
		Proposed			
		1	22°21'43.26"N	87°18'40.85"E	
		2	22°21'50.56"N	87°18'41.34"E	
		3	22°21'55.08"N	87°18'35.88"E	
		4	22°21'37.63"N	87°18'25.76"E	
		5	22°21'34.78"N	87°18'29.77"E	
		6	22°21'27.01"N	87°18'26.71"E	
		7	22°21'30.28"N	87°18'22.30"E	
g.	Total land	145.69 ha (360 acres) [Private: 20.23 ha; Other Land: 125.46 ha]			
		S. No.	Particulars	Area (Ha)	%
		1	Main Plant	52.63	36.12
		2	Water Reservoir	6.48	4.45
		3	Built up Area	7.77	5.33
		4	Internal roads	6.48	4.45
		5	Green Belt	48.07	33.00
		6	Tailing Area	2.02	1.39
		7	Truck Parking area	6.05	4.15
		8	Raw Material Storage	16.19	11.11
		TOTAL PROJECT AREA		145.69	100.0
h.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Out of the 145.69 hectare of land, 131.53 hectare of land is already in possession of M/s Orissa Alloy Steel Private Limited (Formerly M/s Rashmi Alloy Steel Private Limited) & for rest of land (14.16 hectare) consent from private rayat obtained.			
i.	Existence of habitation & involvement of R&R, if any	Project Site: No habitation in the proposed site. Study Area:			
		Habitation	Distance	Direction	
		Kharagpur	3.0 km	S	
j.	Elevation of the project site	Elevation of the project site varies from 32 m to 35 m AMSL.			
k.	Involvement of Forest land if any.	No forest land involved.			



S No	Particulars	Details																		
l.	Water body exists within the project site as well as study area	Project site: 01 Nos. artificial ponds (rain water harvesting pond). Study area: <table border="1"> <thead> <tr> <th>Water body</th> <th>Distance</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td>Kangsabati River</td> <td>3.0 Km</td> <td>NE</td> </tr> <tr> <td>Saha Chouk pond</td> <td>1.9 km</td> <td>W</td> </tr> <tr> <td>Khalkona pond</td> <td>6.9 km</td> <td>NW</td> </tr> <tr> <td>Gokulpur pond</td> <td>2.4 km</td> <td>NW</td> </tr> <tr> <td>Upharjhuli pond</td> <td>4.7 km</td> <td>S</td> </tr> </tbody> </table>	Water body	Distance	Direction	Kangsabati River	3.0 Km	NE	Saha Chouk pond	1.9 km	W	Khalkona pond	6.9 km	NW	Gokulpur pond	2.4 km	NW	Upharjhuli pond	4.7 km	S
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m.	Existence of ESZ / ESA / national park / wildlife Sanctuary / biosphere Reserve / tiger reserve / elephant reserve etc. if any within the study area	Study area No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Reserve Forest lies within 10 km radius. Three protected forest is present within 10 km area of the project. ~5.52 km in N direction ~6.32 km in S direction ~5.80 km in SE direction																		
n.	Project cost	INR 2900 Crores (Existing capital cost of project was Rs. 1,700 Crores. The capital cost of the proposed project is Rs. 1,200 Crores)																		
o.	EMP cost	114.70 Crores Cr (Capital); 10.65 Cr (Annual Recurring)																		
p.	Employment opportunity	2,000 (Direct additional employment - Regular & Contractual). The total manpower shall be 5000 persons.																		
q.	Water and Power requirement	Water – 10,128 m ³ /day, Power – 215.9 MW																		

Unit configuration and capacity:

Sl. No.	Plant Equipment/ Facility	Existing facilities as per EC dated 19.03.2021 & 12.05.2021								Expansion Proposal considering 350 annual working days		Final (Existing + Proposed)		Remarks
		Total (A+B)		Implemented (A)		Unimplemented (B)		As per CTO		Configur ation	Capaci ty	Configur ation	Capaci ty	
		Configur ation	Capaci ty	Configur ation	Capaci ty	Configur ation	Capaci ty	Configur ation	Capaci ty					
1	Blast Furnace with matching PCM	1 x 550 m ³	0.6 Million TPA	--	--	1 x 550 m ³	0.6 Million TPA	--	--	No change In Blast furnace size	(+) 0.17 Million TPA	1 x 550 m ³	0.77 Million TPA	Hot Liquid Metal / Pig Iron/ High Quality Billet & steel product
	Matching LD,CCM & Rolling Mill	***	***	***	***	***	***	***	***	2 x 45 T	0.77 Million TPA	2 X 45 T		
2	Sinter	1 x 70 m ²	0.60 Million TPA	--	--	1 x 70 m ²	0.60 Million TPA	--	--	No change	(+) 0.24 Million TPA	1 x 70 m ²	0.84 Million TPA	Sinter
3	Enhancement of DRI plant capacity	4 x 600 TPD	0.744 Million TPA	4 x 600 TPD	0.744 MTPA	--	--	4 x 600 TPD	0.744 MTPA	No change same kiln	(+) 0.156 Million TPA	4 x 600 TPD (Same kilns) + 2 x 1200 TPD	1.80 Million TPA	Sponge Iron
	New DRI plant			***	***	***	***	***	***	***	Addition (2 x 1200 TPD)			
4	SMS with	10 x 20 T	1.0	--	--	10 x 20 T	1.0	--	--	Addition	(+)	20 T I F X	1.80	M.S Billet



Sl. No.	Plant Equipment/ Facility	Existing facilities as per EC dated 19.03.2021 & 12.05.2021								Expansion Proposal considering 350 annual working days		Final (Existing + Proposed)		Remarks
		Total (A+B)		Implemented (A)		Unimplemented (B)		As per CTO		Configuration	Capacity	Configuration	Capacity	
		Configuration	Capacity	Configuration	Capacity	Configuration	Capacity	Configuration	Capacity					
	LRF/AOD, C CM and oxygen optimized furnace	EIF + 2 x 50 T EAF	Million TPA			EIF + 2 x 50 T EAF (Under Construction)	MTPA			& change in technology (25 T I.F x 12 + 30 T I.F. x 5)	0.80 Million TPA	10 + 25 T I.F x 12 + 30 T I.F. X 5	Million TPA	
5	SMS Slag Crusher	***	***	***	***	***	***	***	***	4 x 25 TPD	(+) 100 TPD	4 x 25 TPD	100 TPD	Metal Recovery
6	Ferro Alloy Plant	4 x 9 MVA	0.048 Million TPA	3 x 9 MVA	0.036 Million TPA	1 x 9 MVA (Under Construction)	0.012 Million TPA	3 x 9 MVA	0.036 Million TPA	No change in configuration		4 x 9 MVA	0.078 Million TPA	Ferro Alloys (FeMn, FeSi, SiMn & FeCr)
7	Jigging Plant	***	***	***	***	***	***	***	***	2 x 15 TPD	(+) 30 TPD	2 x 15 TPD	30 TPD	Metal Recovery
8	Chrome Briquette manufacturing plant	1 x 40 TPH	40 TPH	--	--	1 x 40 TPH	40 TPH	--	--	No change		1 x 40 TPH	40 TPH	Chrome Briquette
9	Non-recovery type Coke Oven Plant (modified wet quenching type)	2 x 0.25 MTPA	0.5 Million TPA	--	--	2 x 0.25 MTPA (Under Construction)	0.5 Million TPA	--	--	(+0.05)		2 x 0.25 MTPA	0.55 Million TPA	Metallurgical Coke
10	Lime Dolomite Plant	1 x 200 TPD	200 TPD	--	--	1 x 200 TPD	200 TPD	--	--	No change		1 x 200 TPD	200 TPD	Lime & Dolomite
11	Oxygen Plant	1 x 200 TPD	200 TPD	--	--	1 x 200 TPD (Under Construction)	200 TPD	--	--	Addition (2 x 200 TPD)	400 TPD	3 x 200 TPD	600 TPD	Oxygen
12	Rolling Mill	****	0.6 Million TPA	--	--	**** (Under Construction)	0.6 Million TPA	--	--	Expansion	(+) 1.2 Million TPA	**	1.8 Million TPA	TMT Bar, Wire, Wire Rod
13	Rolling Mill with Pickling Line & Continuous Galvanizing	***	0.35 Million TPA	--	--	***	0.35 Million TPA	--	--	(-) 0.35 MTPA		SURRENDERING THE UNIT		
14	Ductile Iron Pipe Unit, Fitting & Accessories	***	0.20 Million TPA	DIP Finishing line	0.20 Million TPA	Rest under construction	0.20 Million TPA	***	0.20 Million TPA	No change		**	0.20 Million TPA	DI Pipe, Fitting & Accessories
15	Captive Power Plant	WHRB Based 104 MW (68 MW from DRI Plant) + 34 MW from Coke Oven Plant + 2 MW from	194 MW	***	68 MW from DRI Plant	***	34 MW from Coke Oven Plant + 2 MW from EAF + CFBC (Coal & Dolochar Mix			Expansion of WHRB Based CPP	(+) 68 MW from WHRB DRI Plant + 8 MW from Coke Oven Plant + 2 MW	180 MW WHRB Based (136 MW from DRI Plant) + 42 MW from Coke Oven Plant + 2 MW from B.F. TRT	270 MW	Power



Sl. No.	Plant Equipment/ Facility	Existing facilities as per EC dated 19.03.2021 & 12.05.2021								Expansion Proposal considering 350 annual working days		Final (Existing + Proposed)		Remarks
		Total (A+B)		Implemented (A)		Unimplemented (B)		As per CTO		Configur ation	Capaci ty	Configur ation	Capaci ty	
		Configur ation	Capaci ty	Configur ation	Capaci ty	Configur ation	Capaci ty	Configur ation	Capaci ty					
		EAF+ CFBC (Coal & Dolochar Mix based) 2 x 45 MW]					based) 2 x 45 MW (Under Constru ction)				B.F. TRT + (- 2) MW from EAF	90 MW CFBC (Coal & Dolochar Mix based) 2 x 45 MW		
16	Pellet Plant with matching Beneficiation Plant	1 x 2.4 MTPA	2.4 Million TPA	1 x 2.4 MTPA	2.4 Million TPA	--	--	1 x 2.4 MTPA	2.4 Million TPA	No change same Pellet module	(+) 0.6 Million TPA	1 x 3.0 MTPA (Same kiln) + 2 x 4.0 MTPA	11.0 Million TPA	Iron ore Pellet
	New Pellet Plant with matching Beneficiation Plant	***	***	***	***	***	***	***	***	Additional (2 x 4.0 MTPA)	(+) 8.0 Million TPA			
17	Producer Gas Plant	20 x 7,500 Nm ³ /hr	1,50,000	20 x 7,500 Nm ³ /hr	1,50,000	--	--	1 x 2.4 MTPA	2.4 Million TPA	Additional (6 x 7,500 Nm ³ /hr)	(+) 45,000 Nm ³ /hr	26 x 7,500 Nm ³ /hr	1,95,000 Nm ³ /hr	Producer Gas
18	Railway Siding	01 No.	01 No.	01 No.	01 No.	--	--	01 No.	01 No.	**	**	01 No.	01 No.	***

6. The Consent to Operate for the existing unit was accorded by West Bengal Pollution Control Board vide Ir. No. CO128946 dated 29.05.2020, CO131937 dated 23.04.2021, CO131949 dated 20.07.2021, CO132105 dated 08.12.2021 and CO132139 dated 24.03.2022. The validity of CTO is up to 31.07.2024.

7. The EAC, in its 6th meeting of Re-Constituted Expert Appraisal Committee (Industry-1 Sector) held on 30th -31st May, 2022, based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of Environment Clearance subject to stipulation of specific and general conditions as detailed in the paragraph given below.

8. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1) hereby decided to grant **Environment Clearance for instant proposal of M/s. Orissa Alloy Steel Pvt. Ltd** under the provisions of EIA Notification, 2006 subject to the following specific conditions and general conditions:

A. Specific Condition:

- i. This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.
- 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 activities and the action plan proposed by the project proponent to address the issues raised during public hearing and socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.
- v. Water bodies exists within the study area from the project site. The water bodies shall not be disturbed. Landscaping shall be done on both embankments, with green belt covering 10 m land on both sides. This shall be in addition to the 33% green belt development.
- vi. Tailings from Iron Ore washing plant shall be dewatered in filter press and no slime /tailing pond shall be permitted.
- vii. Iron ore slimes shall be dewatered and disposed dry. The recovered water shall be reused in the process. Ponding of tailings shall not be permitted. Maximum storage for tailings in the plant shall not exceed 90 days.
- viii. Rejects from coal washery shall only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.
- ix. Solid waste utilization
 - 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.
 - PP shall recycle/reuse 100 % solid waste generated in the plant.
 - Used refractories shall be recycled as far as possible.
- x. Sinter Plant shall be equipped with Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant.
- xi. Tar shall be recovered from producer gas and shall be sold to registered processors and phenolic water shall be incinerated in After Burn Chamber (ABC) of DRI kilns.
- xii. Coke oven plant shall be equipped with modified wet quenching system.
- xiii. Coke Oven Gas shall be desulfurized.
- xiv. Blast Furnaces shall be equipped with Top Recovery Turbine (capacity more than 550m³), dry gas cleaning plant, stove waste heat recovery, cast house and stock house ventilation system and slag granulation facility.
- xv. Secondary fume extraction system shall be installed on converters of Steel Melting Shop.
- xvi. Basic Oxygen Furnace (BOF) gas shall be cleaned dry.
- xvii. Electric Arc Furnace shall be closed type with 4th hole extraction system.
- xviii. 85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil or Mixed BF/CO gas/Producer gas.
- xix. Cold Rolling Mill (CRM), color coating and galvanizing plants shall have CETP to treat and recycle the treated water from CRM complex. Sludge generated at CRM ETP shall be sent to TSDF.
- xx. Dust emission from Steel Plant stacks shall be up to 30 mg/Nm³.
- xxi. The net water requirement of the ISP after implementation of proposed expansion project would be around 491.67 m³/hr (11,800 KLD) which will be obtained from Kharagpur



Municipality and Treated waste water. Bore well supply as envisaged earlier will be completely replaced by surface water/ treated waste water in the present proposal for operation phase of the project. No ground water extraction is permitted.

- xxii. Three tier Green Belt shall be developed in a time frame of one 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. 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. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.
- xxiii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.
- xxiv. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.
 - i. Ductile Iron (DI) plant shall have the following provisions:
 - a. Bag filter for Zn coating and Mg converter area.
 - b. Wet scrubbers in paint and bitumen coating area.
 - c. Bag Filter in Cement lining area.
 - d. PTFE dipped bags shall be used in the plant.
 - e. PM emissions from BF in Zinc coating area shall be 5 mg/Nm³.
 - f. ETP with recycling facility shall be included.
- xxv. Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.
- xxvi. The proposed project shall be designed as "Zero Liquid Discharge" Plant. No waste water will be discharged outside the plant boundary.
- xxvii. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
- xxviii. Railway siding shall be completed by June 2022, as committed by the PP.
- xxix. PP shall prepare and implement an action plan giving annual improvement targets for resource conservation and environment improvement. This plan shall be monitored by the concerned Regional Office of the MoEF&CC.
- xxx. The heat rate of coal based power plant as specified by Central Electricity Authority shall be maintained and monitored.
- xxxi. Energy efficient drives, VFD for auxiliary motors and slip power recovery system for motors above 1000 kw shall be provided.
- xxxii. PTFE Membrane bags shall be used in filter bag house and designed for 150% of normal design air flow.
- xxxiii. Shall use ultralow NO_x burner with three stage combustion, flue gas recirculation and auto combustion control system. Shall use Post combustion control system (SCR/SCNR process) with NH₃ monitoring when Ammonia is used.
- xxxiv. Parking area for trucks/dumpers shall be provided within the steel plant. No truck/dumper shall be parked outside the steel plant premises.
- xxxv. PP reported that out of the 145.69 hectare of land, 131.53 hectare of land is already in possession of M/s Orissa Alloy Steel Private Limited (Formerly M/s Rashmi Alloy Steel Private Limited) and for rest of land (14.16 ha) consent from private rayat obtained, however



land is not yet acquired. This EC is subject to obtaining complete acquisition of land required for the proposed expansion project.

- xxxvi. This is an existing Unit. PP shall controlled the air pollutants-PM2.5, PM10 , SO2, NOx, CO emissions in the occupational environment of different process plants, within the permissible exposure limits of as per the Factories Act. PP shall do the monitoring of industrial hygiene survey within occupational environments in order to ensure good environment within the industry, so that workers health is ensured.
- xxxvii. During operational phase at Captive Power Plant PP shall to measure coal dust exposures and to maintain coal dust exposures within stipulated standards at coal handling areas, conveyer belt and coal crushing area-ball mill. 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.
- xxxviii. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.

B. 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 04 Nos. 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. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.
- iv. 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.
- v. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- vii. 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.
- viii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.



- ix. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).
- x. Land-based APC system shall be installed to control coke pushing emissions.
- xi. Monitor CO, HC and O₂ in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.
- xii. Vapor absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.
- xiii. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xiv. 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 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; 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 recognized 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 recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.
- iii. The project proponent shall provide the ETP to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time.
- iv. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.
- v. 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.
- vi. Tyre washing facilities shall be provided at the entrance of the plant gates.
- vii. Water meters shall be provided at the inlet to all unit processes in the steel plants.

IV. Noise monitoring and prevention

- i. Noise pollution 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. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.
- ii. Restrict Gas flaring to < 1%.
- iii. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- iv. Provide LED lights in their offices and residential areas.
- v. Ensure installation of regenerative/recuperative type burners on all reheating furnaces.



VI. Waste management

- i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/I shall be installed to use slag as river sand in construction industry.
- ii. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.
- iii. Used refractories shall be recycled as far as possible.
- iv. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.
- v. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.
- vi. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

- i. PP shall undertake the backlog and gap filling of greenbelt work@ 2500plants/hactare in the 2022 monsoon season itself and shall accordingly increase the budget for green belt purpose.
- ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration by trees.
- iii. Project proponent shall submit a study report within six months 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.

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) as per the norms.
- 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. As part of Corporate Environment Responsibility (CER) activity, and as committee by the PP, the company shall adopt eleven villages namely Bargai, Dangarpara, Amba, Gokulpur, Kantapal, Keshpal, Ajabpur, Barkola, Wallipur, Mohanpur and Risha based on the socio-economic survey and undertake community developmental activities in consultation with the village Panchayat and the District Administration as committed.
- ii. The company shall have a well laid down environmental policy duly approve 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 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. 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).
- x. 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.
- xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xii. 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.



8. 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.

9. 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.

10. 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.

11. 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.

12. This issues with approval of the competent authority.

(Dr. R. B. Lal)

Scientist 'E'/Additional Director

Tel: 011-20819346

Email-rb.lal@nic.in

Encl. as above at Annexure-I

Copy to: -

1. The Secretary, Department of Environment, Government of West Bengal, Secretariat Kolkata.
2. The Secretary, Department of Forests, Government of West Bengal, Kolkata.
3. The Director General of Forest, Ministry of Environment, Forest and Climate Change, New Delhi
4. The Principal Chief Conservator of Forests, Government of West Bengal, Block LA, 10A Sector-III, Salt Lake City, Kolkata-700098
5. The Regional Officer, Ministry of Environment, Forest and Climate Change, Integrated Regional Office, IB – 198, Sector-III, Salt Lake City, Kolkata - 700106.
6. The Chairman, Central Pollution Control Board, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
7. The Chairman, West Bengal State Pollution Control Board, Paribesh Bhawan, 10A- Block LA, Sector –III, Salt Lake City, Kolkata – 700 098.
8. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001.
9. The District Collector, Paschim Medinipur District, West Bengal.

10. Guard File/Record File/Monitoring File/MoEFCC website/Parivesh Portal



(Dr. R. B. Lal)
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Action plan as per MoEF&CC O.M. F.No. 22-65/2017-IA.III dated 30/09/2020

S. No.	Physical activity and action plan		Year of implementation (Budget in INR)			Total Expenditure (Rs. in Lakhs)																																
	Name of the Activity	Physical Targets	1 st	2 nd	3 rd																																	
1.	Proper action to control pollution	<p>Most effective and advanced stage technology having techno-economic viability for air pollution control devices of adequate capacity have been installed for existing operational units and will be installed in parallel with implementation of the proposed plant and it will be regularly monitored by dedicated team. Also third party audit / monitoring will be conducted by approved lab / agency on quarterly basis.</p> <p>Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEFCC/WBPCB with EC compliance report.</p> <p>Plant is being design as Zero Liquid Discharge plant and entire waste water after treatment used in plant. Once in three months treated waste water quality will be monitored by NABL/ MOEFCC approved laboratory.</p>	<table border="1"> <thead> <tr> <th>Description</th> <th>Capital cost, Rs. in crore</th> <th>Recurring cost Rs. in crore</th> </tr> </thead> <tbody> <tr> <td>Air pollution control</td> <td>96.00</td> <td>8.40</td> </tr> <tr> <td>Water pollution control</td> <td>8.00</td> <td>0.80</td> </tr> <tr> <td>Solid Waste Management System</td> <td>10.00</td> <td>1.00</td> </tr> <tr> <td>Green belt Development</td> <td>15.00</td> <td>0.83</td> </tr> <tr> <td>Noise pollution control</td> <td>8.00</td> <td>1.00</td> </tr> <tr> <td>Env. Monitoring and management</td> <td>5.04</td> <td>1.32</td> </tr> <tr> <td>Setting Environmental Management Cell</td> <td>3.00</td> <td>0.70</td> </tr> <tr> <td>Setting Environmental Laboratory</td> <td>1.50</td> <td>0.50</td> </tr> <tr> <td>Total</td> <td>146.54</td> <td>14.55</td> </tr> </tbody> </table>			Description	Capital cost, Rs. in crore	Recurring cost Rs. in crore	Air pollution control	96.00	8.40	Water pollution control	8.00	0.80	Solid Waste Management System	10.00	1.00	Green belt Development	15.00	0.83	Noise pollution control	8.00	1.00	Env. Monitoring and management	5.04	1.32	Setting Environmental Management Cell	3.00	0.70	Setting Environmental Laboratory	1.50	0.50	Total	146.54	14.55			
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2.	Local employment	Maximum employment will be given to the Local youth as per State Government norms based on their knowledge and skill. In addition, vocational training will be given for the employment to local. Total 192 persons will receive stipend of Rs. 12,500 per month for three months training	Rs. 8.0 Lakhs	Rs. 8.0 Lakhs	Rs. 8.0 Lakhs	24.00																																
3.	Drinking water facilities	10 nos. of bore well/ tube well in the village of Barkola	5.0 Lakhs	--	--	5.00																																
4.	Development of schools	Development of school building, construction of toilets, drinking water facilities, procurement of tables & benches, computer etc. will be done in the schools of Barkola village in 1 st year, and in 3 rd year in Shyamraipur village.	12.00 Lakhs	-	12.00 Lakhs	24.00																																
5.	Toilet facilities	Construction of 08 nos. of toilet with well chamber facilities in the	4.0 Lakhs	4.0 Lakhs	-	8.00																																



S. No.	Physical activity and action plan		Year of implementation (Budget in INR)			Total Expenditure (Rs. in Lakhs)
	Name of the Activity	Physical Targets	1 st	2 nd	3 rd	
		village of Shyamraipur (04 nos. in 1 st year and 04 nos. in 2 nd year).				
6.	Completion of local 'Shiv Temple'	Under EMP for Social & Infrastructure development activities 'Shiv Temple' in Gokulpur village will be developed in 1 st year.	3.0 Lakhs			3.00
7.	Improvement of local roads	Construction/ improvement & repairing of 2.0 km metal road in Gokulpur & Barkola village (1.0 km in 1 st year in Gokulpur & village and 1.0 km in 3 rd year in Barkola village).	25.0 Lakhs	-	25.0 Lakhs	50.0
NEED BASED ACTIVITIES						
8.	Construction of community hall	Construction of community hall in Kanjarichak (1 st year), Rajagram (2 nd year) and Gokulpur (3 rd year).	10.00 Lakhs	10.00 Lakhs	10.00 Lakhs	30.00
9.	Ambulance facility	Ambulance facility to Kalaikunda (2 nd year) & Barkola (3 rd year) Panchayat.	--	12.00 Lakhs	12.00 Lakhs	24.00
10.	Financial support to charitable Dispensary with specialist doctor / Primary Health Center	Samraipur (1 st year), Bargai (2 nd year) and Walipur (3 rd year) - Cost for 1 doctor, 2 nurses, Support staffs, medicines etc.	12.00 Lakhs	12.00 Lakhs	12.00 Lakhs	36.00
11.	Installation of Solar street light.	15 numbers of solar street light with pole each in Walipur (1 st year) Bargai (2 nd year) and Barkola (3 rd year) villages.	7.00 Lakhs	7.00 Lakhs	7.00 Lakhs	21.00
12.	Providing collection bins/ dustbin.	10 nos. of collection bins with stand each in Barkola (1 st year), Bargai (2 nd year) and Samraipur (3 rd year) villages.	3.00 Lakhs	3.00 Lakhs	3.00 Lakhs	9.00
13.	Avenue Plantation	Avenue plantation/ development of park in Risha (1 st year), Krishnanagar (2 nd year), Samraipur village (3 rd year).	10.00 Lakhs	10.00 Lakhs	10.00 Lakhs	30.00
Total			99.00 Lakhs	66.00 Lakhs	99.00 Lakhs	264.00

