

File No: IA-J-11011/13/2023-IA-II(IND-I)

Government of India Ministry of Environment, Forest and Climate Change IA Division



Date 05/02/2024



To,

M/s THAKUR PRASAD SAO AND SONS PRIVATE LIMITED UNIT IVAT LAHANDABUD PO H KATAPALI DIST JHARSUGUDA, Lahandabud, JHARSUGUDA, ODISHA, , 768202

tpsl.jsg@tpslgroup.in

Subject:

Proposed Integrated Steel Plant with Pelletization Plant (2 x 0.6 MTPA), DRI Plant (3 x 1,10,000 TPA), MS Billets production of 4,00,000 TPA with IF of 2 x 8 Tonnes and 1 x 15 Tonnes and EAF (2 x 25 tonnes), Rolling Mill (2,00,000 TPA) Coal Washery (0.576 MTPA) with 78 MW CPP (24 MW #WHRB and 54MW #AFBC) by M/s Thakur Prasad Sao and Sons Pvt. Ltd., located at Village- Lahandabud, P.O.- H. Kantapali, Tehsil & District-Jharsuguda, Odisha –Grant of Environmental Clearance under the provisions EIA Notification, 2006 & Ministry's notification dated 08.03.2021 [Revalidation of EC]-regarding.

Sir/Madam,

This refers to your proposal no IA/OR/IND1/429702/2023 dated 28.07.2023 along with copy of EIA report, Forms (Part A, B and C) seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The PP has submitted/uploaded ADS reply on Parivesh portal on dated 08.09.2023, 04.10.2023 and 05.01.2024. Further, the Ministry has also issued Transfer of EC from M/s Eastern Steel Private Limited to M/s Thakur Prasad Sao and Sons Private Limited on 02.01.2024.

2. The particulars of the proposal are as below:

(i) EC Identification No. EC23A1001OR5738873N

(ii) File No. IA-J-11011/13/2023-IA-II(IND-I)

(iii) Clearance Type Fresh EC

(iv) Category A

3(a) Metallurgical Industries (ferrous and non

(v) **Project/Activity Included Schedule No.** ferrous),1(d) Thermal Power Plants,2(a) Coal

washeries

(vi) Sector Industrial Projects - 1

(vii) Name of Project Environment Clearance for Integrated Steel Plant with Pelletization Plant (2 x 0.6 MTPA), DRI Plant

(3 x 1,10,000 TPA), MS Billets production of 4,00,000 TPA with IF of 2 x 8 Tonnes and 1 x 15 Tonnes and EAF (2 x 25 tonnes), Rolling Mill (2,00,000 TPA) Coal Washery (0.576 MTPA) with 78 MW CPP (24 MW #WHRB and 54MW #AFBC) at Village- Lahandabud, P.O.- H. Kantapali, Tehsil & District-Jharsuguda, Odisha by M/s Thakur Prasad Sao and Sons Pvt Ltd - Revalidation as per notification dtd 08.03.2021 M/s THAKUR PRASAD SAO AND SONS

(viii) Name of Company/Organization

PRIVATE LIMITED

(ix) Location of Project (District, State)

JHARSUGUDA, ODISHA

(x) Issuing Authority

MoEF&CC

(xi) Applicability of General Conditions as per

T-4°C --4° -- 2006

EIA Notification, 2006

Yes

- 3. As per the provisions of the Environment Impact Assessment (EIA) Notification, 2006, the above-mentioned project/activity is covered schedule Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) 1(d) Thermal Power Plant and 2(a) Coal Washery under Category "A" of the schedule of the EIA Notification, 2006 and attracts general condition "Project site falling under critical polluted area" due to which it will be appraised at Central Level.
- 4. The proposal is considered in the 42nd meeting of the EAC for Industry-I sector held during 17th -18th August, 2023, wherein the Committee, after detailed deliberations, recommended the proposal. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed at https://parivesh.nic.in.
- 5. The details of the proposal are as per the EIA/EMP report submitted by the proponent. The salient features of the proposal as presented during the above-mentioned meetings of EAC (Industry 1 Sector) are given at **Annexure 1**, Unit configuration and capacity are given at **Annexure II**.
- 6. The EAC, in its meeting held during 17th -18th August, 2023, inter-alia, deliberated the following:
- (i). The instant proposal is for setting of Integrated Steel plant with facilities of Iron Ore Pelletization Plant (2 x 0.6 MTPA), DRI Plant (3 x 1,10,000 TPA), MS Billets production of 4,00,000 TPA with IF of 2 x 8 tonnes and 1 x 15 tonnes and Electric Arc Furnace (2 x 25 tonnes), Rolling Mill (2,00,000 TPA) Coal Washery (0.576 MTPA) with 78 MW CPP (24 MW #WHRB and 54MW #AFBC).
- (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 EAC noted the following with respect to the instant proposal:

- Steel plant was established by M/s Eastern Steel private limited with facilities of 350 TPD DRI plant, 4 x 8 tonnes IF, 2 x 15 tonnes LRF, CPP (8 MW WHRB+4 MW AFBC), 150 TPH Coal Washery (576000 TPA), and TMT/Wire Rod Mill (100000 TPA), for which CTO from State Pollution Control Board was obtained vide letter no. 1534/Ind-II-NOC-3474 dtd. 27.01.2006.
- Expansion was proposed in the steel plant by addition of 2 x 1,10,000 TPA DRI Kiln, 2 x 25 tonne LRF, 1 x 2 & 1 x 3 strand compatible CCM, 2 x 157 m3 Mini Blast Furnace, 2x8 MW CPP (WHRB), 3x 25 tonne Electric Arc Furnace producing 400000 TPA of crude steel, 150 TPH Coal Washery suitable for 576000 TPA capacity, 1x50 MW Fluidized Bed boiler, and 2,00,000 TPA TMT/Wire Rod Mill for which environment clearance was obtained from MoEF&CC vide File No. J-11011/525/2007-IA.II.I dated 22.02.2008.
- Meanwhile the plant was acquired by M/s Thakur Prasad Sao and Sons Private Limited.
- Further expansion and modification was proposed by the company for installation of 2 x 0.6 MTPA Iron ore Pelletisation Plant with deletion of Mini Blast Furnace and 1 x 25 tonnes Electric Arc Furnace for which EC was granted by MoEF&CC vide File No. J- 11011/48/2012-IA-II(I), dated 26.09.2012 under Para 7(II) of EIA Notification, 2006 as recorded in the Minutes of 36th Meeting of EAC (Industry-1) held during 24-25th May, 2012.
- The company applied for re-configuration of 2 x 8 tonnes IF into 1 x 15 tonnes IF to the state pollution control board, Odisha. The approval for this re-configuration was granted by the SPCB Odisha vide letter no. 8366/IND-II-NOC-6384 dated 07.09.2020.
- Project proponent was unable to complete the project due to some unavoidable reasons and financial issues and project could not get completed within the validity period of earlier granted environment clearance and approx. 55% of the construction work was completed at the project site as per the granted EC within validity period of EC. Hence, PP is applying for revalidation as per MoEF&CC Notification vide S.O 1247(E) dated 18th March 2021 and clause 7(i) (x) of EIA Notification 2006 as amended and has requested for exemption of Public Hearing.
- (vi). The EAC noted that PP has submitted CA Certificate dated 15.02.2023 stating that the invested amount i.e., Rs 226.34 Crores is approximately 59% against the total project cost of Rs. 379.56 Crores taking into consideration the EC dated 22.02.2008 and 26.09.2012. PP has also submitted an affidavit dated 15.02.2023 for 55% percent construction completion.
- (vii). PP has also stated that Pellet plant is not stand-alone unit and it's part of integrated steel plant. Construction of the pelletization plant has not started yet. However, Letter of intent has already been issued for setting up the proposed pelletization plant to M/s. Mineral and Metal Technologies.
- (viii). The EAC further noted that Public Hearing has been conducted on 13.03.2007 during the time of appraisal of EC dated 22.02.2008 and EC dated 26.09.2012 for expansion and modification by installation of 2 x 0.6 MTPA Iron ore Pelletisation Plant with deletion of Mini Blast Furnace and 1 x 25 tonnes Electric Arc Furnace, was granted under the provisions of Para 7(II) of EIA Notification, 2006 with exemption of Public Hearing as recorded in the Minutes of 36th Meeting of EAC (Industry-1) held during 24-25th May, 2012.
- (ix). Total project area is 72.04 ha which is private land and under the possession of the company. 46.64 ha has been purchased by Company and converted for industrial use. 25.53 ha industrial land has been given by Odisha Industrial Infrastructure Development on lease vide allotment letter No. HO: P&A: LA:E-3842/06-334 dated 09.01.2007 for 90 years.
- (x). The EAC noted that the Project site falling under CPA of Jharsuguda, Odisha and is of the opinion that CEPI guidelines shall be complied.
- (xi). The Ibi River is reported to be at a distance of 0.05 km in the North direction with other water bodies within the study area of 10 km of the project site. The EAC is of the opinion that the water bodies shall not be disturbed. NOC from irrigation department alongwith action plan comprising of mitigation measures for conservation of the water bodies submitted shall be included in EIA/EMP report.
- (xii). The water requirement for the proposed expansion project is estimated 16116 m3/day. Water for operational units is being sourced from Ib River and same will be followed for units under construction. For domestic purpose water is being

sourced from Ground water. The EAC is of the opinion that necessary permission shall be obtained from competent authority prior to commencement of project.

- (xiii). Schedule-I species Elephant, Sloth Bear, Leopard and Python has been found in the study area. Conservation plan has been submitted to Regional Chief Conservator of Forest, Sambalpur Region for approval dated 18th April 2023 and approval is under process. PP assures to get the Conservation plan approved within 2 months from grant of EC. An affidavit regarding the same is submitted.
- (xiv). The Committee has deliberated on the baseline data and incremental GLC due to the proposed project and if the opinion that as committed PP shall undertake measures like tree plantation, Mobile Water Sprinklers, ensuring transport of materials in covered trucks, encouraging use of energy efficient bulbs etc in nearby areas for reduction in pollution level.
- (xv). PP reported that existing greenbelt is developed in 28.81 ha which is about 40 percent of total existing project area with total 48000 Nos trees with a density of 1670 trees/ha. Total 25000 more trees will be planted to meet the density of 2500 trees per hectare. The EAC deliberated on the greenbelt action plan along with the budget earmarked and found it satisfactory.
- (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 deliberated on the certified compliance report of IRO along with the ATR submitted and is of the view that conditions shall be strictly complied as per the action plan and timelines.
- (xviii). The EAC also deliberated on the submitted written representation 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.
- (xxi). The EAC also reviewed the EC conditions (specific and general) pertaining to Industry-I projects and observed that some of the specific conditions stipulated so far in the previously recommended EC projects are common and applicable to most of the projects in general. In view of the same, the General Conditions (in case of EC projects) have been revised through reallocation of these common conditions from specific to General Conditions (in case of EC projects). Accordingly, the instant project is also being stipulated with the modified General conditions.
- 7. The EAC, in its 42nd meeting of Expert Appraisal Committee (Industry-1 Sector) held during 17th 18th August, 2023, based on information & clarifications provided by the project proponent and after detailed deliberations **recommended** the instant proposal for grant of Environment Clearance under the EIA Notification, 2006 subject to stipulation of following specific conditions and general conditions as per the Ministry's Office Memorandum No. 22-34/2018-III dated 9/8/2018 based on project specific requirements.
- 8. The PP has submitted the application w.r.t. transfer of EC from M/s Eastern Steel Private Limited to M/s Thakur Prasad Sao and Sons Private Limited [vide proposal no. IA/OR/IND1/452651/2023 dated 5/12/2023] and accordingly the Ministry has issued EC Transfer from M/s Eastern Steel Private Limited to M/s Thakur Prasad Sao and Sons Private Limited on 02.01.2024.
- 9. The MoEF&CC has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006, as amended and Ministry's Notification vide S.O 1247(E) dated 18th March 2021 and further

amendments thereto and after accepting the recommendations of the Expert Appraisal Committee (Industry-1 Sector) hereby decided to grant **Environment Clearance** for instant proposal of **M/s Thakur Prasad Sao and Sons Pvt. Ltd under** the provisions of EIA Notification, 2006 subject to specific conditions and general conditions at **Annexure III.**

- 10. 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.
- 11. 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.
- 12. 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.
- 13. 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.
- 14. This issues with approval of the competent authority.

Copy To

- 1. The Principal Secretary, Department of Forest and Environment, Government of Odisha, Bhubaneswar, Odisha
- 2. Director General of Forest, Ministry of Environment, Forest and Climate Change, New Delhi
- 3. Principal Chief Conservator of Forests & HoFF, Aranya Bhawan, Chandrasekharpur, Bhubaneswar 751 023, Odisha
- 4. The Regional Officer, Ministry of Environment, Forest and Climate Change, Integrated Regional Office, A/3, Chandersekharpur, Bhubaneswar 751023 Odisha
- 5. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi 32
- 6. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
- 7. The Member Secretary, Odisha State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit VIII, Bhubaneswar -12 Odisha.
- 8. Monitoring Cell, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi.
- 9. District Collector, Jharsuguda, Odisha.
- 10. Guard File/Monitoring File/Parivesh Portal /Record File.

Annexure 1

Additional EC Conditions

- 1. This EC 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.
- 2. This 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.

AnnexureI

Environmental site settings:

S.	Particulars		Remarks						
No									
1	Total Land	72.04 ha	Land use:						
			Industrial						
2	I and conviction details as	F ('-	1 1	C 70.04	1 ' 1	- (1	Land		
2	Land acquisition details as				ha is unde	r the			
	per MoEF&CC O.M dated 7/10/2014	•		proponent.	1 h C				
	7/10/2014		• 46.64 ha has been purchased by Company						
	6-1		and converted for industrial use.						
			• 25.53 ha industrial land has been given by Odisha Industrial Infrastructure						
					de allotment				
			_		842/06-334				
				r 90 years.	012/00 331	autea			
3	Existence of habitation &	Nil	edila :	, , , , , , , , , , , , , , , , , , ,	A. 14				
	involvement of R&R, if any.	(E)							
4	Latitude and Longitude of the	S.No	Lat	itude	Longitud	le	3		
	project site	1	21°54	'9.39"N	83°59'16.1		∽		
		2	21°54'	12.26"N	83°59'16.0	8"E	<i>S</i>		
		3	21°54'	18.85"N	83°59'2.89	"E			
	3.	4	21°54'	18.09"N	83°58'44'	'E			
	3	5	21°54'	13.42"N	83°58'50.6	9"E			
	9	6	21°54'	12.89"N	83°58'51.4	2"E			
	8	7	21°54'	10.19"N	83°58'48.7	2"E			
	3	8	21°54	'9.45"N	83°58'51.3	1"E			
		9	21°54	'6.97"N	83°58'47.7				
	30	10	21°54	'6.01"N	83°58'51.0	0"E			
		11							
		12							
			13 21°53'46.96"N 83°58'55.58"E						
			14 21°53'45.38"N 83°58'56.03"E						
		15							
		16		51.53"N 5.53"N	83°59'19.9' 83°59'20.2				
		17							
5	Elevation of the project site		er above	the sea leve	el				
6	Involvement of Forest land if	Nil							
7	Wyster hadry swists within the	D. L. Gir. Nil.							
7	Water body exists within the	Project Site – Nil							
	project site as well as study area	l	Study Area Water Body Distance Direction						
	arca	vv ater 1							

S.	Particulars		Remarks		
No					
		Ib River	0.05 km	N	
		Funleela water	0.33 km	W]
		park			
		Basundhara	4 km	W]
		Naala			
		Sapai River	8.5 km	NE]
		Bhedan River	9.4 km	NW]
8	Existence of ESZ /	Nil			
	ESA/national park /wildlife	C.			
	sanctuary / biosphere reserve				
	/tiger reserve /elephant				
	reserve etc. if any within the				
	study <mark>area</mark>	~ I \/			



Annexure II

The unit configuration and capacity of proposed project is given as below:

	The unit configuration and capacity of proposed project is given as below:													
S.											Final			
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	Plant			W										
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5	Captive F	DOWA* D	lant											
	WHRB	24 M		8 MW	O MXX		16 N	16 MW		8 MW		24 MW		
								16 MW				24 MW		
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6	Coal		5,76,0	150	5,76					150	5,76,0	150		
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S.	Plant		Exist	Final	Final						
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	er's										
	Gas										
	Plant										
8	Slag							10 TP	Н	10 TPH	
	Crusher										



A. Specific Condition:

- i. 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.
- ii. 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.
- iii. The Ib River is at a distance of 0.05 km in the North direction along with other water bodies within the study area of 10 km of the project site. A robust and full proof Micro-Drainage Conservation scheme to protect the natural drainage/water bodies and its flow parameters; along with Soil conservation scheme and multiple Erosion control measures shall be implemented. As the project is very adjacent to the IB river, PP shall take strict action w.r.t. ZLD.
- iv. The PP shall do best practices and standard House keeping in and around the project premises. PP shall do greening and paving in the project to avoid soil erosion. PP shall also develop Bio-Swales at different locations in the project premises.
- v. In pursuance to MoEF&CC OMs dated 31st October, 2019 & 30th December, 2019 issued in compliance of the order of Hon'ble NGT in OA No. 1038/2018 dated 19th August, 2019, the compliance of all the conditions applicable to CEPI shall be implemented.
- vi. The water requirement of 16116 m³/day shall be from Ib River and water for domestic purpose water from Ground water after prior approval from competent authorities. As committed, the Company shall not use any groundwater in its premises except for domestic purpose.
- vii. Three tier Green Belt shall be developed in at least 40% 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. 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 also 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 along with windshield inside the plant premises to act as green barrier for air pollution & noise levels towards habitations. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.
- viii. The PP shall strictly comply with the observation of IRO in the CCR as per the submitted action plan and timelines. Compliance status in this regard, shall be submitted to concerned Regional Office of the MoEF&CC.

- ix. The PP shall undertake strict mitigative measures in nearby areas for reduction in pollution level.
- x. All the commitments made towards socio-economic development of the nearby villages 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.
- xi. The PP shall undertake village adoption programme, prepare and implement the action plan to develop them into model villages.
- xii. The specific water consumption for the production of steel is 5.81 m³/tonne of steel. As committed by the PP, a road-map must be implemented to lower this consumption to less than 4 m³/tonne of steel.
- xiii. The recommendations of the approved Site-Specific Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.

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. 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. 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 (CAAQMS) 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 carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NOx in reference to SO₂ and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

- iii. 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.
- iv. Sampling facility at process stacks shall be provided as per CPCB guidelines for manual monitoring of emissions.
- v. 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.
- vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.
- vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.
- viii. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.
- ix. 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.
- x. The project proponent shall provide primary and secondary fume extraction system at all heat treatment furnaces.
- xi. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.
- xii. Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.
- xiii. Pollution control system in the plant shall be provided as per the CREP Guidelines of CPCB.
- xiv. 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.
- xv. Bag filters shall be cleaned regularly and efficiency of bag filter system shall be monitored at regular intervals.
- xvi. Water Sprinklers/Water mist system shall be installed near raw material yards, operational units and other strategic locations to control fugitive emissions from the plant.
- xvii. The particulate matter emissions from the process stacks shall be less than 30 mg/Nm³ and measures shall be undertaken as per the submitted action plan. Efficient Air monitoring equipment shall be installed.
- xviii. Following additional arrangements to control fugitive dust shall be provided:

- a. Fog / Mist Sprinklers at all 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.
- xix. Hoppers of the coal crushing unit and other washery units shall be fitted with high efficiency bag filters/mist spray water sprinkling system shall be installed and operated effectively at all times of operation to check fugitive emissions from crushing operations, transfer points of closed belt conveyor systems and from transportation roads
- xx. The raw coal, washed coal and coal wastes (rejects) shall be stacked properly at earmarked site (s) within stockyards fitted with wind breakers/shields. Adequate measures shall be taken to ensure that the stored mineral does not catch fire.
- xxi. The temporary reject sites should appropriate planned and designed to avoid air and water pollution from such sites.
- xxii. During operational phase at Captive Power Plant, Action Plan to monitor coke/coal dust exposures in different process plants using personal and area air samplers and to compare with permissible limits as per Indian Factories Act, 1948 shall be implemented.
- xxiii. The coal dust should be monitored at coal unloading, crushing, furnace areas and should be within 2 mg/m³, respirable dust fraction containing less than 5% quartz as per Indian Factories Act, 1948.
- xxiv. Online stack monitoring system for IF and RHF shall be installed and monitoring report shall be submitted to the concerned Regional Office of the MoEF&CC along with the six monthly compliance report.
- xxv. Low NOx Burners will be installed at Reheating Furnace for control of Gaseous emissions generated while using PNG.

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 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. 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. Water meters shall be provided at the inlet to all unit processes in the plants.

- v. The project proponent shall make efforts to minimise water consumption in the plant complex by segregation of used water, practicing cascade use and by recycling treated water.
- vi. 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. Suitable measures shall be adopted for sewage water handling to ensure no contamination of any kind of water body.
- vii. All stockyards shall have impervious flooring and shall be equipped with water spray system for dust suppression. Stock yards shall also have garland drains and catch pits to trap the run off material and shall be implemented as per the action plan submitted in EIA/EMP report.
- viii. Rain water harvesting shall be implemented to recharge/harvest water as per the action plan submitted in the EIA/EMP report.
- ix. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.
- x. The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25.9.2000 and as amended from time to time by the Central Pollution Control Board.
- xi. Heavy metal content in raw coal and washed coal shall be analysed once in a year and records maintained thereof.
- xii. The rejects should preferably be utilized in FBC power plant or disposed off through sale for its gainful utilization. If the coal washery rejects are to be disposed off, it should be done in a safe and sustainable manner with adequate compaction and post closure arrangement to avoid water pollution due to leachate from rejects and surface run of from reject dumping sites.
- xiii. An Integrated Surface Water Management Plan for the washery area up to its buffer zone considering the presence of any river/rivulet/pond/lake etc. with impact of coal washing activities on it, shall be prepared, submitted to MoEFCC and implemented.
- xiv. Waste Water shall be effectively treated and recycled completely either for washery operations or maintenance of green belt around the plant.
- xv. Rainwater harvesting in the washery premises shall be implemented for conservation and augmentation of ground water resources in consultation with Central Ground Water Board.
- xvi. No ground water shall be used for coal washing unless otherwise permitted in writing by competent authority (CGWA) or MoEFCC. The make-up water requirement of washery should not exceed 1.5 m³/tonne of raw coal.
- xvii. Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-

- monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.
- xviii. The project proponent shall take all precautionary measures to ensure riverine/ riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.
 - xix. Air Cooled condensers shall be used in the captive power plant.

IV. Noise monitoring and prevention

- i. Noise pollution shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and amendments thereof, and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.
- iii. 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.

V. Energy Conservation measures

- i. 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;
- ii. Provide LED lights in their offices and residential areas.
- iii. Ensure installation of regenerative type burners on all reheating furnaces.
- iv. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.
- v. Practice hot charging of slabs and billets/blooms as far as possible.
- vi. The project proponent shall provide waste heat recovery system on the DRI Kilns.
- vii. The dolochar generated shall be used for power generation.
- viii. 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.
 - ix. The PP shall implement the guidelines on sponge iron plants issued by the CPCB/SPCB in this regard.

VI. Waste management

- i. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil.
- ii. Kitchen waste shall be composted or converted to biogas for further use.
- iii. 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.

- iv. 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.
- v. A proper action plan must be implemented to dispose of the electronic waste generated in the industry.
- vi. 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 solid waste generated in the plant as far as possible.
 - c. Used refractories shall be recycled as far as possible.
- vii. Rejects from coal washery shall only be used either in the captive power plant (or) in the Thermal Power Plants meeting emission standards.

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 by trees.
- 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 capture, use and storage and 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 monitor able with defined time frames.
- iii. Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.

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. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile

- STP. Safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv. 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, company shall adopt nearby villages 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.
- iv. Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Integrated Regional Office of the MoEF&CC.

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. Action plan for developing connecting and internal road in terms of MSA as per IRC guidelines shall be implemented
- vi. 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.
- vii. 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.
- viii. 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.
- ix. 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.
- x. The recommendations of the approved Site-Specific Wildlife Management Plan (in case of involvement of Schedule-I species) shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report to the concerned Regional Office of the MoEF&CC.
- xi. 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.
- xii. 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).
- xiii. 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.
- xiv. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xv. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xvi. 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.
- xvii. Any appeal against this EC 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.