State Level Environment Impact Assessment Authority, Jharkhand
Nursery Complex, Near Dhurwa Bus Stand, P.O+P.S-Dhurwa, Ranchi, Jharkhand-834 004
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Letter No.-**EC/SEIAA/2018-19/2233/2019**/696 Ranchi, Date: 08.11.2019

To: **Sri Raj Kumar Choudhary (Director)**
M/s Jai Prabhuji Iron & Steel Private Limited
Kaprapatti Main Road, Ram Kanali,
Katrasgarh, Dist - Dhanbad,
Jharkhand – 828113.

Sub: Prescribing of ToR to **"Expansion and modernization of existing plant to Induction Furnaces 4x12 T (Billets/Ingots – 158400 TPA) with Slag Crusher – 52800 TPA and Rolling Mill 158400 TPA for Jai Prabhuji Iron & Steel (P) Limited at Village –Kandra Industrial Area, Govindpur, Tehsil – Govindpur, Dist : – Dhanbad, Jharkhand" (Proposal No. SIA/JH/IND/37479/2019) - regarding.**

Ref: Your application no.- Nil dated – 15.10.2019.

Sir,

It is in reference to the project **"Expansion and modernization of existing plant to Induction Furnaces 4x12 T (Billets/Ingots – 158400 TPA) with Slag Crusher – 52800 TPA and Rolling Mill 158400 TPA for Jai Prabhuji Iron & Steel (P) Limited at Village –Kandra Industrial Area, Govindpur, Tehsil – Govindpur, Dist : – Dhanbad, Jharkhand"** submitted by you for seeking Terms of Reference (ToR).

Jai Prabhuji Iron & Steel Ltd. proposes for Expansion & Modernization of existing plant of – M.S. Billets 36000 TPA to Final Configuration of Induction Furnaces 4x12T (Billets/Ingots- 158400 TPA) with Slag Crusher- 52800 TPA and Rolling Mill 158400 TPA in 2 phases.

Environment Clearance for the existing unit has been obtained vide Letter No. J-11011/180/2010-IA-II(I), dated 13.07.2011 for MS Ingots 36000 TPA and Silico Manganese 15000 TPA. Subsequently under section 7 (ii) of EIA Notification the modification was undertaken to change the ingot production to Billets Production of same capacity i.e. 36000 TPA. Proposal for Silico Manganese was dropped. Current CTO obtained for Billets Production 36000 TPA from JSPCB vide Ref No. JSPCB/HO/RNC/CTO-3706288/2018/169, dated 30.10.2018 valid up to 31.12.2023.

Project at a Glance

1	Name of the Company	Jai Prabhuji Iron & Steel Limited
2	Address of the Company	Plot No C-21 to C-25, Kandra Industrial Area, Govindpur, District – Dhanbad, Jharkhand
3	Constitution	Private Limited Company
4	Promoters Of The Project	1. Prabhu Narayan Singh 2. Raj Kumar Choudhary 3.NawdeepKhaitan

		4. Kailash Goyal 5. Sushil Singh 6. Rajendra Singh Chhabra
5	Units &Product	EXISTING Induction Furnace (Billets/Ingots) -1x3T + 2x6T – 36000 TPA **PROPOSED PHASE 1** Induction Furnace (Billets/Ingots) -1x3T + 2x6T – 49500 TPA By upgrading supply panel and reducing thickness of lining to increase holding capacity. Increasing number of heats per day to 10 and 330 working days. Addition of Slag crusher 10 TPH -52800 TPA **PROPOSED PHASE 2** Induction Furnace 1x3T + 2x6T to be replaced by 3 x 12T Addition of 1x12T Furnace, Total Billets/Ingots – 158400 TPA Addition of Direct Hot Charging Rolling Mill – 158400 TPA PROPOSED FINAL CONFIGURATIONS: AT 330 OPERATING DAYS Billets/Ingots– 158400 TPA Rolling Mill – 158400 TPA Slag Crusher – 52800 TPA
6	Total Power Requirement	Existing Power Sanctioned – 9.5 MVA Total Power requirement After Final Expansion –25 MVA
7	Man Power Requirement	Present- 80 numbers After Expansion – 150 numbers
8	Land Area	3.38Acres (1.37Ha) existing. Additional 1.50 acres acquired. Total 4.88 acres (1.975 Ha). Full Land is in possession. Entire land in in industrial area.

Site Location

This project is located in Kandra Industrial Area over Plot Nos C-21, C-22, C-23, C-24, C-25 P.O. Govindpur, District- Dhanbad in the state of Jharkhand over an area of 4.88 acres (1.975 ha). The Latitude and Longitude of the proposed site is 23^0 50' 55.49" N and 86^0 28' 43.00"E respectively.

Project Profile

Existing and Proposed Units

Plant	Existing installed Units		Proposed Phase-1 Expansion		
	Unit	Capacity TPA	Unit	Operation Days	Capacity TPA
Steel Melting Shop Induction Furnace	1x3 Tons + 2x6 Tons	120 TPD (36000 TPA)	1x3 Tons + 2x6 Tons (By upgrading panel and reducing lining thickness)	330	49,500
Continuous Casting Machine (CCM)	2 Strand, 4/7m rad	120 TPD (36000 TPA)	2 Strand, 4/7 m radius(existing)	330	49500
Slag Crusher Unit	-	-	1 x 10 TPH	330	52800 TPA (Metal Recovery - 5280 TPA)
			Proposed Phase-2 Expansion		
Steel Melting Shop Induction Furnace	1x3 Tons + 2x6 Tons	150 TPD (49500 TPA)	4x12 Tons Existing furnaces to be replaced & addition of one new furnace	330	158,400
Continuous Casting Machine (CCM)	2 Strand, 4/7m rad	49500 TPA	2 Strand, 6/11m	330	158,400
Reheating Furnace			1x30 TPH	330	99000
Rolling Mill			480 TPD	330	158400

Process flow description

Section	Technology	Process flow
SMS Unit	Induction Furnace (IF)& CCM	Feeding of RM → Melting in IF (adding alloys as per requirement) → Metal in Liquid form → casting & cooling → dispatch. Other outputs : Slag from Induction Furnace
Rolling Mill	Direct Rolling of hot billets/Ingots/Re-heating	Feeding of hot billets/Ingots → roughing strands → rolling → cutting & bundle → dispatch

Slag Crusher	Crushing of slag & Metal recovery	Feeding of Slag→Primary crusher→Screening →Metal recovery in magnetic separator→ disposal of crushed slag

Raw Material Requirement

Raw Materials	Required materials for Per Ton of product	Total Raw materials required After Expansion	Source
Billets/Ingots (Total production: 158400 TPA)			
Sponge Iron	0.800	126720 TPA	Local Plants in vicinity Through Road
Pig Iron	0.300	47520 TPA	
Scrap	0.150	23760 TPA	In-house & nearby Plants. Through Road
Ferro Alloys (SiMn/FeSi)	0.002	317 TPA	Local Plants in vicinity Through Road
Rolling Mill – TMT Bars/Strips(Total production: 158400 TPA)			
Hot Billets/Ingots/M.S. Billets/Ingots	1.00	158400 TPA	158400 TPA, In-house – Hot Billets/Ingots direct charging & rest from nearby Plants. Through Road
Coal/Furnace Oil for re-heating furnace	0.07	11088 TPA/3300 KL	Purchase from open market

Water and Power Requirement

The total water requirement for the proposed project is estimated to be 170 KLD which will be sourced through ground water. A total of 25 MVA power will be required for the proposed project which will be sourced from DVC.

Solid Waste Generation and Management

Units	Solid Wastes	Qty In TPA	Disposal practice
Induction Furnace	Slag	39600	After metal extraction it will be supplied to flyash bricks manufacturing.
Rolling Mill	Mill Scale	3168	Recycled in-house along with scrap in the induction furnace.
Re-heating furnace	Ash & Bag filter dust	2100*	Supplied to fly ash block manufacturers. *No generation if furnace oil is used.
Bag Filter Dust from process	Dust from process	480	Partly recycled (metal content). Rest supplied to fly ash bricks manufacturing.

Hazardous waste: There is no hazardous waste from the plant except for used oil (approx. 300 lit/year) from equipment, which is saleable to the registered recyclers in the market.

Rehabilitation and Resettlements (R & R) Plan

No R & R involved.

Project Cost

Total un-depreciated cost of the existing project as on 31.3.2019 is Rs. 6.60 Crores. An indicative total project cost after expansion/modernization of the plant is envisaged as Rs. 22.05 Crores. (i.e. Rs.6.60 Crores + Rs.15.45 Crores.

DFO, Wildlife Hazaribagh vide letter no. 1347, dated 11.07.2019 certified that the Topchanchi Wildlife Sanctuary is 26860 m from project site and proposed project is not within 10 km from National Park, Bio-Diversity & Sanctuary and not situated in any ESZ.

The DFO, Dhanbad Division vide letter no. 1678, dated 06.11.18 certified that the distance of notified forest is 2037 m from proposed project site.

The CO, Govindpur vide letter no. 634, dated 05.07.19 has mentioned the plots of the project are not recorded as "Jangle Jhari" in R.S Khatiyan & Register II.

SEAC, Jharkhand has suggested the ToRs in its 82nd meeting dated 04th, 05th, 06th and 07th November, 2019 and SEIAA, Jharkhand has approved the ToRs in its meeting held on 08th November, 2019.

The TORs prescribed for undertaking detailed EIA study are as follows:

A. Standard Terms of Reference

1. Executive Summary

2. Introduction

i. Details of the EIA Consultant including NABET accreditation.
ii. Information about the project proponent.
iii. Importance and benefits of the project.

3. Project Description

i. Cost of project and time of completion.
ii. Products with capacities for the proposed project.
iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
iv. List of raw materials required and their source along with mode of transportation.
v. Other chemicals and materials required with quantities and storage capacities
vi. Details of Emission, effluents, hazardous waste generation and their management.
vii. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
viii. Process description along with major equipments and machineries, process flow sheet (quantative) from raw material to products to be provided.
ix. Hazard identification and details of proposed safety systems.
x. Expansion/modernization proposals:
    a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Regional Office of the Ministry of Environment and Forests as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, status of

compliance of Consent to Operate for the ongoing / existing operation of the project from SPCB shall be attached with the EIA-EMP report.

b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification, 2006 shall be provided. Copies of Consent to Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4. Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.

ii. A toposheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places).

iii. Details w.r.t. option analysis for selection of site

iv. Co-ordinates (lat-long) of all four corners of the site. .

v. Google map-Earth downloaded of the project site.

vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.

vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.

viii. Landuse break-up of total land of the project site (identified and acquired), government/ private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)

ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area

x. Geological features and Geo-hydrological status of the study area shall be included.

xi. Details of Drainage of the project upto 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)

xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land.

xiii. R&R details in respect of land in line with state Government policy.

5. Forest and Wildlife related issues (if applicable):

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable).

ii. Landuse map based on High resolution satellite imagery (GPS) of the proposed site delineating the forestland (in case of projects involving forest land more than 40 ha)

iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.

iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the project proponent shall submit the map duly authenticated by Chief Wildlife Warden showing these features vis-à-vis the

project location and the recommendations or comments of the Chief Wildlife Warden-thereon

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area

vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife.

6. Environmental Status

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.

ii. AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests.

iii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with - min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.

iv. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF & CC guidelines.

v. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF & CC, if yes give details.

vi. Ground water monitoring at minimum at 8 locations shall be included.

vii. Noise levels monitoring at 8 locations within the study area.

viii. Soil Characteristic as per CPCB guidelines.

ix. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.

x. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule- I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.

xi. Socio-economic status of the study area.

7. Impact and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality modelling - in case of discharge in water body

iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor- cum-rail transport shall be examined.

iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment.

Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules.

v. Details of stack emission and action plan for control of emissions to meet standards.

vi. Measures for fugitive emission control.

vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle / reuse / recover techniques, Energy conservation, and natural resource conservation.

viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.

ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.

x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.

xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.

xii. Action plan for post-project environmental monitoring shall be submitted.

xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8. Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers.

ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG, during pre placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of heath status of workers with special reference to Occupational Health and Safety.

9. Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report.

10. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

11. Enterprise Social Commitment (ESC)

i. Adequate funds (at least 2.5 % of the project cost) shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be included. Socio-economic development activities need to be elaborated upon.

12. Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13. A tabular chart with index for point wise compliance of above TOR.

B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR METALLURGICAL INDUSTRIES (FERROUS & NON FERROUS)

1. Complete process flow diagram describing each unit, its processes and operations, along with material and energy inputs & outputs (material and energy balance).
2. Details on blast furnace/ open hearth furnace/ basic oxygen furnace/ladle refining, casting and rolling plants etc.
3. Details on installation/activation of opacity meters with recording with proper calibration system
4. Details on toxic metals including mercury, arsenic and fluoride emissions
5. Details on stack height requirement for integrated steel
6. Details on ash disposal and management -Non-ferrous metal
7. Complete process flow diagram describing production of lead/zinc/copper/ aluminium, etc.
8. Raw materials substitution or elimination
9. Details on smelting, thermal refining, melting, slag fuming, and Waelz kiln operation
10. Details on Holding and de-gassing of molten metal from primary and secondary aluminum, materials pre-treatment, and from melting and smelting of secondary aluminium
11. Details on solvent recycling
12. Details on precious metals recovery
13. Details on composition, generation and utilization of waste/fuel gases from coke oven plant and their utilization.
14. Details on toxic metal content in the waste material and its composition and end use (particularly of slag).
15. Trace metals Mercury, arsenic and fluoride emissions in the raw material.
16. Trace metals in waste material especially slag.
17. Plan for trace metal recovery
18. Trace metals in water

C. ADDITIONAL TOR FOR INTEGRATED STEEL PLANT

1. Respirable Suspended particulate matter (RSPM) present in the ambient air must be analyzed for source analysis - natural dust/RSPM generated from plant operations (trace

elements). The RSPM shall also be analyzed for presence of poly-aromatic hydrocarbons (PAH), i.e. Benzene soluble fraction, where applicable. Chemical characterization of RSPM and incorporating of RSPM data.

2. All stock piles will have to be on top of a stable liner to avoid leaching of materials to ground water.
3. Plan for the implementation of the recommendations made for the steel plants in the CREP guidelines.
4. Plan for slag utilization
5. Plan for utilization of energy in off gases (coke oven, blast furnace).

D. Other

1. Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of SEIAA, Jharkhand with reasons for such changes and permission should be sought, as the TOR may also have to be altered.
2. After preparing the draft EIA (as per the generic structure prescribed in Appendix- III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.
3. The prescribed TORs would be valid for a period of three years for submission of the EIA / EMP reports, as per the O.M. No. J-11015/109/2013-IA.II(M) , dated 12.01.2017.

Sd/-
Member Secretary
State Level Environment Impact
Assessment Authority, Jharkhand.

Memo No.-**EC/SEIAA/2018-19/2233/2019/** 696 Dated: 08.11.2019

Copy to:

1. Member Secretary, Jharkhand State Pollution Control Board, Ranchi for information and necessary action.
2. Member Secretary, SEAC, Jharkhand, Ranchi for information and necessary action.

Member Secretary
State Level Environment Impact
Assessment Authority, Jharkhand.