

F. No. J-11011/226/2007-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi - 110003
E-mail: sharath.kr@gov.in
Tel: 011-24695319

Dated: 19th November, 2018

To,

**M/s Suraj Product Ltd.
Village Borpali, Post Kesramal,
Tehsil Rajgangpur, District Sundargarh,
Orissa-770017.**

Email: info@surajproducts.com, Suproduct@gmail.com, Ph.: 91 94370 49074.

Subject: Expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Post Kesramal, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited- Environmental Clearance regarding.

Sir,

This has reference to your online application vide proposal no. IA/OR/IND/26728/2015 dated 21st February 2018 along with the copies of EIA/EMP, certified monitoring report by the regional office MoEFCC Bhubaneswar, Odisha, seeking Environmental Clearance under the provisions of the EIA Notification, 2006 for the above mentioned proposed project. The proposed project activity is listed at S. No. 1(d) 2 (a), 2 (b) and 3(a) under Category "A" EIA Notification, 2006 and the proposal is appraised at the Central Level

2.0 Expansion of the existing (24000 TPA Pig Iron, 45000 TPA Sponge Iron and 100000 TPA Ore Briquetting plant) unit of M/s Suraj Products Limited located in Village Borpali, Tehsil - Rajgangpur, District- Sundargarh, State-Odisha was initially received in the Ministry on 24th Feb 2015 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry) [EAC(I)] during 37th reconstituted expert appraisal committee (Industry) meeting held on 30th April, 2015 and prescribed ToR to the project on 24th June, 2015 vide Lr. No. J-11011/226/2007-IA.II(I). Further, Project Proponent applied for reduction in the proposed capacity of expansion on dtd. 04.10.2016, the Ministry considered the request in its 13th Expert Committee meeting held on 23 & 24 November 2016 and Amendment in ToR was granted on 28th July 2017.

3.0 The project of M/s. Suraj Products Limited located in Village Borpali, Tehsil - Rajgangpur, District- Sundargarh, State - Odisha is an expansion project. The project is for enhancement of production capacity as per details of existing capacity and expanded capacity as given below:

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

Sl.	Facilities	Existing Capacity	Proposed Capacity	Total Capacity
1.	Sponge Iron (DRI Kilns 50 TPD X 3 Nos.)	45000 TPA	--	45000 TPA
2.	Pig Iron (Mini Blast Furnace)	24000 TPA	36000 TPA	60000 TPA
3.	Iron Ore/ Mineral Ore Briquettes [Mineral Briquetting Plant] (Cold Briquetting Plant)	100000 TPA	5600 TPA	105600 TPA
4.	DG Set (Backup Power) 500 KVA X 3 Nos. + 320 KVA X 1 = 1820 KVA	1820 KVA	-	1820 KVA
5.	Iron Ore and Other Mineral Ore (Like Manganese; Chrome; Nickel Ore; etc) Beneficiation Plant input basis (throughput)	-	105600 TPA (20 TPH)	105600 TPA (20 TPH)
6.	Coal Washery	-	96000 TPA(20 TPH)	96000 TPA (20 TPH)
7.	Reduced Metal Powder from metallic mineral ores such as Iron Powder and chrome ore, manganese ore etc. (through Tunnel Kiln process)	-	40000 TPA (60 TPD each kiln X 2 nos kiln):	40000 TPA (60 TPD each kiln X 2 nos kiln):
8.	Ferro Alloys / Pig Iron from Submerged Arc Furnace	-	Ferro Alloy-20000 TPA Or Pig Iron 40000TPA	Ferro Alloy-20000 TPA Or Pig Iron – 40000TPA
9.	Semi-Finished Steel (Through Induction Furnace; LRF/GOR; Converter; and Continuous Caster)]	-	110000 TPA	110000 TPA
10.	Rerolled Steel [Rolling Mill (Structure / Rolled product)]	-	100000 TPA	100000 TPA
11.	Captive Power generation (AFBC Boiler(with 15 TPH steam based on washery reject + WHRB Boiler with 13 TPH steam)	-	6 MW	6 MW
12.	Bricks (Brick making from waste)	-	66000 TPA	66000 TPA
13.	Producer Gas plants two numbers for firing these Kilns	-	Each 600 kg/hr or 3600 TPA coal gasification Capacity or 2100 Nm ³ /hr	Each 600 kg/hr or 3600 TPA coal gasification Capacity or 2100 Nm ³ /hr i.e. 14

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

Sl.	Facilities	Existing Capacity	Proposed Capacity	Total Capacity
			i.e. 14 Million m ³ / Yr. producer gas.	Million m ³ /Yr. producer gas.

5.0 In the existing 45000 TPA sponge iron project as expansion to produce Pig Iron from of Blast was accorded environmental clearance vide Ir. no. J-11011/226/2007-IA II (I) dated 27th June 2007. The Status of compliance of earlier EC was obtained from Regional Office, Bhubaneswar vide Regional Office File No. 101-305, Date of site visit 12.01.2018 and project proponent reply on 20th Feb. 2018 to Regional officer.

6.0 Total plant area is 45.26 acres (i.e. 18.32 Ha.) in the Kasra No.s: 2482/3528, 2497/3529, 2509/3530, 2510/3531, 2496, 2482, 2494, 2481/3080, 376 (P), 2456, 2459, 2451, 2479, 2480,, 368, 2524(P), 2493, 2454(P), 374, 2491, 2492, 2500, 2457, 2470, 2460, 375, 394, 395, 2484, 2485, 2486, 2489, 2490, 2501, 2488, 2487, 2523(P), 2483, 2458, out of which 11.41 Acre is dedicated to existing industrial land and proposed expansion area will be 33.85 Acres (i.e. 13.70 Ha.). The land is already acquired by company in past. The greenbelt shall be developed within 14.93 Acre (6.04 Ha.). No River passes through the project area. It has been reported that no natural water body exist around the project area:

Sr. No.	Land Use Statement	Area (Sq. Mtr.)	Acre
1.	Green Belt	60400	14.92
2.	Road	5400	1.33
3.	Storage Area	9100	2.25
4.	Open Area	9100	2.25
5.	Factory Shed	82300	20.34
6.	Residential	0	0
7.	Parking	3600	0.90
8.	Water Storage	10000	2.47
9.	Admin building and Laboratory, Workshop etc.	3200	0.80
	Total Area	183100	45.26

7.0 The topography of the area is undulated and reported to lies between 22°08'19.08"N to 22°19'34.59"N Latitude and 84°31'21.17"E to 84°43'17.83"E Longitude in Survey of India topo sheet No 73 B/11 and 73 B/12 at an elevation of 229m AMSL. The ground water table reported to ranges between 3-4 m below the land surface during the post-monsoon season and 8-10m below the land surface during the pre-monsoon season. Based on the hydro-geological study and as per CGWB, SER Bhubaneswar, the Sundargarh Districts in Odisha fall in safe category of groundwater development with observed groundwater development of only 13.50% in core and buffer zone respectively.

8.0 No National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. The authenticated list of flora and fauna in the study area is incorporated in EIA (Given in Chapter – 3 in EIA report).

9.0 The process of project showing the basic raw material used in the various processes involved to produce the final output, waste generated in process are listed in Table below.

Sl.	Facilities	Process	Basic Raw Material Used	Process Flow	Waste Generated
1.	Sponge Iron (DRI Kilns 50 TPD X 3 Nos.)	Primary Metallurgical Process	*Sized Iron ore *Washed Coal *Dolomite	Rotary Kiln	Char/ Dolochar, Flue Dust (ESP), Kiln Accretion
2.	Pig Iron (Mini Blast Furnace)	Primary Metallurgical Process	Beneficiated Iron Ore, Iron Ore; Iron Ore Briquettes, Coke, Dolomite & Quartz	Manufacturing of Pig Iron through Mini Blast Furnace	Granulated Blast Furnace Slag Flue Dust (Bag Filter)
3.	Iron Ore/ Mineral Ore Briquettes [Mineral Briquetting Plant] (Cold Briquetting Plant)		Iron Ore Fines, Binder	Briquetting Machine	--
4.	DG Set (Backup Power) 500 KVA X 3 Nos. + 320 KVA X 1 = 1820 KVA		Diesel is used as Fuel	--	--
5.	Iron Ore and Other Mineral Ore (Like Manganese; Chrome; Nickel Ore; etc) Beneficiation Plant input basis (throughput)	Beneficiation	Iron Ore and Other Mineral Ore (Like Manganese; Chrome; Nickel Ore; etc)	Beneficiated Ore & Low Grade Ore	Low grade mineral residues
6.	Coal Washery	Coal Washery	Un-washed Lumpy Coal	Crushing and Washing of Coal	Coal middling Washery rejects, shale & sand stone
7.	Reduced Metal Powder from metallic mineral ores such as Iron Powder and chrome ore, manganese ore etc. (through Tunnel Kiln process)	Reduction through saggered Tunnel Kiln	Beneficiated Iron Ore, Silicon Carbide Saggeres, Washed Coal for Producer Gas and Lime	Tunnel kiln with Producer Gas Fired thermal energy	Charry Coal Broken saggeres Ash from Producer Gas
8.	Ferro Alloys / Pig Iron from Submerged Arc Furnace	Submerged Arc reduction Process	Mn Ore, Manganese Slag, Coke, Washed Coal, Dolomite	Submerged Arc Furnace operated on Electricity	Slag Generated due to ferro Alloys.
9.	Semi-Finished Steel (Through Induction Furnace;	Induction Furnaces; LRF,	Iron Powder, CI / Pig Iron, Scrap, Ferro Alloys, Coke	Feeding of RM > Melting in IF; Refining as oer	Slag and Flue Dust

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

Sl.	Facilities	Process	Basic Raw Material Used	Process Flow	Waste Generated
	LRF/GOR; Converter; and Continuous Caster]]	GOR.		need in LRF; (adding alloys as per requirement)>Metal in Liquid form>casting>cooling>Billets.	
10.	Rerolled Steel [Rolling Mill (Structure / Rolled product)]	Re Rolling Mills	Hot Metal (Billets)	Feeding of hot billets>roughing strands >rolling >cutting & bundle >TMT Bar>dispatch	Mill Scale and Defective Billets, Miss Rolls
11.	Captive Power generation (AFBC Boiler(with 15 TPH steam based on washery reject + WHRB Boiler with 13 TPH steam)	Waste Heat Recovery Boilers	Industrial waste heat gases	Steam from WHRB+AFBC (char used along with coal as fuel)>Power generation	Fly ash, Bottom Ash
		AFBC Boiler	Char Dolochar Charry Coal Washery reject Coal Middling Coal, Dolomite		
12.	Bricks (Brick making from waste)	Brick pressing machines	Fly Ash with Cement, or Lime with Gypsum Sand & Water	Fly Ash with Cement, Sand & Water>pouring >Drying>Curing >Bricks	
13.	Producer Gas plants two numbers for firing these Kilns	PG Plants	Coal	Combustion and Reduction of Coal	Coal ash and Nominal amount of Tar

10.0 The targeted production capacity of each facility are Sponge Iron – 45000TPA, Pig Iron 60000 TPA, Cold Briquetting Plant 105600 TPA, Beneficiation plant of Iron Ore and other minerals – 105600 TPA, Coal washery 96000 TPA, Reduced Metal Powder 40000 TPA, Ferro Alloys 20000 TPA or Pig Iron 40000 TPA. Semi-Finished steel 110000 TPA, Rerolled Steel 100000 TPA, CPP – 6 MW, Brick making from waste 66000 TPA, Producer Gas – 600 Kg/Hr, DG Set (Backup Power) - 1820 KVA. Mode of transportation for raw material transportation through rail/road both. Majority of inputs will be transported by Road.

11.0 The daily makeup water requirement in peak situation at 100% Capacity utilization is estimated to be 580 KL/day out of which 16 KL is estimated for human consumption. The permission for drawl of ground water is obtained from CGWA, New Delhi vide File No.: 21-4/942/OR/IND/2016-370 (NOC No: CGWA/NOC/IND/ORIG/2017/2428) dated 16th Feb 2017

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

12.0 The total power required for the project will be around 29.48 MW out of which 6 MW power requirements will be met through proposed captive power plant and the balance power requirement will be fulfilled from electricity board (WESCO).

13.0 Baseline Environmental Studies were conducted during pre-monsoon season i.e. from March 2016 to May 2016. Ambient air quality monitoring has been carried out at 8 locations during March 2016 to May 2016 and the data submitted indicated: PM₁₀ (34.8 µg/m³ to 83.6 µg/m³), PM_{2.5} (10.5 µg/m³ to 43.4 µg/m³), SO₂ (5.1 µg/m³ to 19.1 µg/m³) and NO_x (5.5 µg/m³ to 20.0 µg/m³). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 1.9 µg/m³ with respect to the PM₁₀, 22.0 µg/m³ with respect to the SO₂ and 8.5 µg/m³ with respect to the NO_x.

14.0 Ground water quality has been monitored in 12 locations in the study area and analysed. pH: 6.51 to 8.51, Total Hardness: 35.28 to 330 mg/l, Chlorides: 10.68 to 84.50 mg/l, Fluoride: < 0.1 to 0.28 mg/l. Heavy metals are within the limits. Surface water samples were analysed from 4 locations. pH: 8.07 to 8.43; DO: 5.6 to 6.6 mg/l and BOD: < 3 to 10.87 mg/l. COD From < 5 to 34.8 mg/l.

15.0 Noise levels are in the range of 46 to 54 DBA for daytime and 37 to 44 dB(A) for night time.

16.0 No R&R is involved in the project proposal.

17.0 It has been reported that, 100% of 112207 TPA. Solid waste likely to be generated will be utilised or disposed in scientific manner. The AFBC generated bottom ash will be given to the cement plant for iron oxide supplementation, solid waste like Shale & sand stone generated from coal washery will be disposed for road making or land fill, broken saggers will be sold in the open market, low grade ore will be given to nearby cement plant like OCL, Generated fly ash will be used in manufacturing of bricks. Granulated Blast Furnace Slag is given to cement plant or brick plants, Slag generated due to ferro alloys and non-granulated induction furnace slag will be used metal recovery plants and land filling. Miscellaneous dust generated from ESP will be given to cement plant. The hazardous materials like used oil and spent oil will be 10 KL/ year along with marginal quantity of lead acid battery or dry battery will be sent to authorized recycler having authorization from competent authority like OPCB.

18.0 The company has already planted about 17730 tree son 8.23 Acres. Green belt will be developed in 33% i.e. 14.93 Acres.

19.0 It has been reported that, Consent to Operate under Air act and Water act from the Odisha State Pollution Control Board (OPCB) obtained vide Lr. 3063/ IND-I-CON-2880 dtd. 19th February 2016 and consent is valid up to 31st March 2018

20.0 The Public hearing of the project was held on 22.09.2017 at 10:00 AM at Khajurdihi Football Ground (Near EMRS, Laing), Tehsil – Rajgangpur of Sundargarh District under the chairmanship of Shri Bhaskar Chandra Turuk Additional District Magistrate, Sundargarh for Expansion of the existing project. The issues raised during public hearing are inter alia, related to local employment; no further land acquisition; environmental protection; developing health care facilities along with provision of Ambulance in case of emergency; peripheral development; poor public relation; additional greenbelt development; Land acquisition; educational facilities; unavailability of water; Infrastructural facility; etc.

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

21.0 An amount of Rs 262 Lakhs (2.5 % of Project cost) has been earmarked for Enterprise Social Commitment based on public hearing issues. The details of ESC proposed are as follows:

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5	Total
(Rs. In Lakhs)						
Drinking Water Facilities – (Rs. 75 Lakhs)						
Construction of borewell/hand pumps in nearby villages	7	7	7	7	7	35
Construction of rainwater harvesting structures	4	4	4	4	4	20
Deepening of village ponds for improving water storage and availability	4	4	4	4	4	20
Sanitation System (Rs. 30 Lakhs)						
Construction of Public Toilets	5	5	5	0	0	15
Construction of Drainage facilities in nearby villages	3	3	3	3	3	15
Health & Medical facilities (Rs. 35 Lakhs)						
Provision of necessary equipment such as nursing bed, ECG Equipment's, Diabetic monitoring system etc for PHC	3	3	3	3	3	15
Ambulance to nearby panchyats	10	0	0	10	0	20
Infrastructure development (Rs. 48 Lakhs)						
Strengthening/maintenance of village roads	3	3	3	3	3	15
Provision of solar street lights	5	5	5	5	5	25
Provision of waiting shelters at busstop	0	4	0	0	4	8
Women empowerment (Rs. 34 Lakhs)						
Construction of Mahila Vikas Kendra	0	5	0	0	5	10
Computer and other equipment's for MVK	0	3	2	2	5	12
Assistance to woman SHGs (stitching machinery)	1	2	2	2	5	12
Education facilities (Rs. 15 Lakhs)						
Provision of computers, books, furniture to village schools	3	3	3	3	3	15
Agriculture Improvement Program (Rs. 25 Lakhs)						
Financial assistance for Irrigation facilities for installation of solar water pumps	5	5	5	5	5	25
Total	53	56	46	51	56	262

22.0 The capital cost of the project is estimated to Rs. 10438 Lakhs and the capital cost for environmental protection measures is proposed as Rs 260 lakhs. The annual recurring cost towards the environmental protection measures is proposed as Rs 128 lakhs. The employment

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

generation from the proposed project / expansion is (Employment: Existing 348 + Proposed 293 = Total 641). The details of capital cost for environmental protection measures and annual recurring cost towards the environmental protection measures is as follows:

Sr. No.	Activities	Capital Cost , (Rs. in Lakhs)	Recurring cost, (Rs. in Lakhs.)
1.	Pollution Control during Construction Stage	25	0.5
2.	Air Pollution Control Measures ESPs, Bag filters, dust extraction systems, stacks etc.	350	30
3.	Wastewater Management and Effluent Treatment Plant	15	5
4.	Environmental Monitoring Instruments and Laboratory	100	2
5.	Solid waste Management	25	3
6.	Noise Reduction Systems	25	2.0
7.	Occupational Health & Safety (Provision of PPE, Medical Examination)	25	2.0
8.	Greenbelt Development (Plantation and maintenance)	20	5
9.	Environmental Monitoring Program	-	25
10.	Socio-economic Welfare Measures	-	53
11.	Miscellaneous	25	0.5
Total		610	128

23.0 Total plant area is 45.26 Acre (18.32 Ha.). Greenbelt will be carried out within 6.04 Ha. which is about 33% of total plot area @ of 2000 trees/ha. Development of 3 -tier green belt by plantation has already been done within the campus of the factory as per CPCB/MoEF&CC, New Delhi guidelines. Local and native Species will be planted with a density of 2000 trees per hectare. The details of green belt developed as under:

Total Area	In Acre	Particulars	Area (Acre)
Existing Industrial Land	11.41	Existing Plantation	8.23 (3.33 Ha.)
Proposed Industrial Land	33.85	Proposed plantation	6.70 (2.71 Ha.)
Total	45.26 Acre (18.32 Ha.)	Total	14.93 (6.04 Ha.) i.e. 33% of total plot area

24.0 The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

25.0 EIA Consultant: Anacon Laboratories Pvt. Ltd., Nagpur accredited by QCI/NABET

26.0 The proposal was considered by the Expert Appraisal Committee (Industry-I) during its 28th meeting held on 12th to 14th March, 2018 After detailed deliberations, the committee recommended the proposal for Environmental Clearance with the following modification in the ESC activities and its budget for implementation and other conditions.

27.0 The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to grant Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

located in the village Borpali, post Kesramal, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Ltd., under the provision of EIA Notification dated 14th September, 2006, as amended, subject to strict compliance of the following Specific and General conditions:

A. SPECIFIC CONDITION:

1. An amount of Rs 262.0 lakhs proposed towards Enterprise Social Commitment (ESC) shall be utilized as capital expenditure in project mode. The project shall be completed in concurrence with the implementation of the expansion (i.e. spent during five years parallel to the implementation of proposed project) and estimated on the basis of Scheduled Rates.
2. Green belt shall be developed in 6.04 Ha equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. Greenbelt shall be implemented during the coming monsoon in this year only, i.e., 2018.
3. The Capital cost Rs. 610 Lakhs and annual recurring cost Rs. 128 Lakhs towards the environmental protection measures shall be earmarked separately. The funds so provided shall not be diverted for any other purpose.
4. Kitchen waste shall be composted or converted to biogas for further use.

B. GENERAL CONDITIONS:

1. The project proponent shall (Air Quality Monitoring):
 - a. install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008 as amended from time to time; S.O. 3305 (E) dated 7th December 2015 for thermal power plants as amended from time to time) and connected to SPCB and CPCB online and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
 - b. monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.
 - c. Install system carryout Continuous Ambient Air Quality monitoring for parameters relevant to pollutants released as per National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 (as amended from time to time) 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; submit monitoring report to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
2. The project proponent shall (Water Quality Monitoring):
 - a. install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 (G.S.R 414 (E) dated 30th May 2008; S.O. 3305 (E) dated 7th December 2015 for thermal power plants) as amended

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

from time to time and connected to SPCB and CPCB online and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

- b. monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories; and
 - c. submit monthly summary report of continuous effluent monitoring and results of manual effluent testing for calibration of CEMS and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.
3. The project proponent shall (Air Pollution Control):
- a. provide appropriate Air Pollution Control (APC) system for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.
 - b. provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags;
 - c. provide pollution control system in the steel plant as per the CREP Guidelines of CPCB;
 - d. provide sufficient number of mobile or stationery vacuum cleaners to clean plant roads, shop floors, roofs regularly;
 - e. 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;
 - f. ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation;
 - g. provide wind shelter fence and chemical spraying on the raw material stock piles.
4. The project proponent shall (Water Pollution Control):
- a. adhere to 'zero liquid discharge';
 - b. provide Sewage Treatment Plant for domestic wastewater; and
 - c. provide garland drains and collection pits 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.
5. The project proponent shall (Water Conservation):
- a) practice rainwater harvesting to maximum possible extent; and

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited

- b) make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.
6. The PP shall (Energy Conservation):
- a) provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.
 - b) practice hot charging of slabs and billets/blooms as far as possible;
 - c) ensure installation of regenerative type burners on all reheating furnaces;
 - d) 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; and
 - e) Provide the project proponent for LED lights in their offices and residential areas.
7. Used refractories shall be recycled as far as possible.
8. Sufficient number of colour coded waste collection bins shall be constructed at the shop floors in each shop to systematically segregate and store waste materials generated at the shop floors (other than Process waste) in designated coloured bins for value addition by promoting reuse of such wastes and for good housekeeping.
9. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces.
10. The Project Proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.
11. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
12. 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 of Factory Act.
13. The Project Proponent shall adhere to the corporate environmental policy and system of the reporting of any infringements/ non-compliance of EC conditions at least once in a year to the Board of Directors and the copy of the board resolution shall be submitted to the MoEF&CC as a part of six-monthly report.
14. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Induction/ Electric Arc Furnace and Rolling Mills shall be implemented.
15. A dedicated environmental cell with qualified personnel shall be established. The head of the environment cell shall report directly to the head of the organization.

16. 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, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
17. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
18. 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).
19. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.
20. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.
21. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
22. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
23. The project proponent shall (Post-EC monitoring):
 - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - b. put on the clearance letter on the web site of the company for access to the public.
 - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forests and Climate Change (MoEF&CC) at <http://envfor.nic.in>.
 - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
 - e. monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (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;
 - f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
 - g. 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;

- h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

28.0 The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

29.0 The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.


30.0 The PP shall abide by all the commitments and recommendations made in the EIA/EMP report and that during their presentation to the EAC. The commitment made by the project proponent to the issue raised during Public Hearing shall be implemented by the proponent.

31.0 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.

32.0 This environmental clearance is issued in supersession of earlier environmental clearance vide Lr. no. J-11011/226/2007-IA II (I) dated 27th June 2007.

33.0 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.

This issues with the approval of Competent Authority.


(Sharath Kumar Pallerla)
Scientist 'F' / Director

Copy to:-

1. **The Secretary**, Department of Environment, Government of Odisha, Secretariat, Bhubaneswar.
2. **The Additional Principal Chief Conservator of Forests(C)**, Ministry of Environment, Forest and Climate Change, Regional Office (EZ), A/3, Chandersekharpur, Bhubaneswar – 751023.
3. **The Chairman**, Odisha State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneshwar-751012.
4. **The Member Secretary**, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
5. **The District Collector, Sundergarh District**, State of Odisha.
6. **Guard File / Record file / Monitoring file.**
7. **MOEF&CC Website.**


(Sharath Kumar Pallerla)
Scientist 'F'/Director

Environmental Clearance for the proposed expansion of the existing (24,000 TPA pig iron, 45000 TPA sponge iron and 100000 TPA iron briquetting plant) unit located at Village Borpali, Tehsil Rajgangpur, Dist. Sundargarh, Orissa by M/s Suraj Product Limited