F. No. J-11011/76/2013-IA.II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

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Dated: 16.06.2020

To,

M/s JSW Steel Ltd.,
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Subject: Changes in plant configuration for proposed Expansion of Integrated Steel Plant from 5.0 to 10.0 MTPA by **M/s JSW Steel Ltd.**, located at village Dolvi, District Raigad, **Maharashtra.–Environmental Clearance** -regarding.

Sir,

This is reference to your online application vide proposal No. IA/MH/IND/117746/2012 dated 12th October, 2019 in the prescribed Form -2 along with copies of EIA/EMP report and other documents seeking Environmental Clearance (EC) under the provisions of para 7(ii) of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the proposal is appraised at Central level.

Details submitted by the project proponent

2. The proposal for configuration change in the expansion project of Integrated Steel Plant (5.0 MTPA to 10.0 MTPA), by revising the production capacities of Sinter Plant (8 to 4 MTPA) and Pelletization Plant (4 to 9 MTPA), was initially received in the Ministry on 2nd November, 2018 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised in the 2nd meeting of the Re-constituted EAC (Industry-I) held during 10-12th December, 2018 and prescribed ToRs to the project for undertaking detailed EIA study for obtaining Environmental Clearance (EC) under provisions of para 7(ii) of EIA Notification, 2006. Accordingly, the Ministry of Environment, Forest and Climate Change had prescribed ToRs to the project on 21st December, 2018 vide letter no. IA-J-11011/76/2013-IA.II (I).

3. The Integrated Steel Plant of M/s. JSW Steel Ltd is located in Dolvi Village, Pen Taluka, Raigad District, Maharashtra for which the Environmental Clearance (EC) was accorded for expansion (from 5.0 MTPA to 10.0 MTPA) vide letter no. J-11011/76/2013-IA II (I) dated 25th August, 2015. Consequent upon transfer of part the facilities, i.e., Coke plant (1+2.5 MTPA) to M/s Dolvi Coke Projects Ltd and Slag and Clinker grinding unit (10 MTPA) to M/s JSW Cement Ltd, an amendment was made to the EC vide letter F.No.J-11011/76/2013 dated 23rd January 2018. Now, it is proposed to Change the Configuration of the plant

facilities which were granted in aforesaid EC for expansion by revising the production capacities of Sinter Plant (8 to 4 MTPA) and Pelletization Plant (4 to 9 MTPA).

4. No non-compliances were reported in the compliance report of earlier EC which was obtained from Regional office, Nagpur vide letter no. 5-71/2015(ENV)/5695 dated 12.09.2019.

5. Details of production capacities after proposed Change in Plant Configuration are given in below table:

S. No.	Unit Name	Existing Capacity	Granted vide EC dated 25.08.2015	Proposed Change in Plant Configuration	Total Capacity after change in configuration
		A	B	C	A+C
1	DRI (Gas based Mega Module)	2.0 MTPA	2.0 MTPA	2.0 MTPA	4.0 MTPA
2	**Pellet Plant**	**4.0 MTPA**	**4.0 MTPA**	**9.0 MTPA**	**13.0 MTPA**
3	Coke Oven including By-product plant	1.0 MTPA	-	-	1.0 MTPA
4	**Sinter Plant**	**6.0 MTPA**	**8.0 MTPA**	**4.0 MTPA**	**10.0 MTPA**
5	Blast furnace including pig casting	3.6 MTPA	4.5 MTPA	4.5 MTPA	8.1 MTPA
6	SMS(CONARC)	5.2 MTPA	-	-	5.2 MTPA
7	SMS(BOF)	-	6.0 MTPA	6.0 MTPA	6.0 MTPA
8	Ladle Furnace(LF)	2X200+250T	2 X 300 T	2 X 300 T	2X200T+ 250T+ 2 X 300 T
9	VD/VOD & RH-TP	1X200T+ 1X205T	2 X 300 T	2 X 300 T	1X200t+1X205t+2 X 300T
10	CSP(HRC Coil) Thin Caster-cum- Hot Strip Finishing Train	3.5 MTPA	-	-	3.5 MTPA
11	Conventional Slab Caster	2X1Strand 3.68MTPA	2X2 Slab Casters 5.73 MTPA	2X2 Slab Casters 5.73 MTPA	9.41 MTPA
12	Billet Caster	-	1X6 Strands	1X6 Strands	1X6 Strands
13	Plate Mill	1.5 MTPA	-	-	1.5 MTPA
14	Hot Rolling Mill with Shearing and Slitting	-	5.0 MTPA	5.0 MTPA	5.0 MTPA
15	Bar Mill	-	1.4 MTPA	1.4 MTPA	1.4 MTPA
16	CRM	1 MTPA	1.5 MTPA	1.5 MTPA	2.5 MTPA
17	Galvanizing Line	0.6 MTPA	-	-	0.6 MTPA
18	Electrical Steel CRGO Line	0.4 MTPA	-	-	0.4 MTPA
19	Tin Plate Mill	0.4 MTPA	-	-	0.4 MTPA
20	Colour Coating line	0.5 MTPA	-	-	0.5 MTPA
21	Lime/dolo Plant	1800 tpd	3X600 TPD	3X600 TPD	3600 TPD

S. No.	Unit Name	Existing Capacity	Granted vide EC dated 25.08.2015	Proposed Change in Plant Configuration	Total Capacity after change in configuration
		A	B	C	A+C
22	Oxygen Plant	4100 tpd	3500 TPD	3500 TPD	7600 TPD
23	Captive Power Plant	300 MW	300 MW	300 MW	600 MW
24	Township	-	150 acres township of 7500 dwellings	150 acres township of 7500 dwellings	150 acres township of 7500 dwellings
25	**Solid waste Incinerator**	-	-	**250 kg/hr**	**250 kg/hr**

6. The total land required for the project is 615.135 ha (1520 acre) which is already industrial land and Change in Plant Configuration will be carried out within the existing plant premises. No forest land is involved. A sub-creek passes through the project area. It has been reported that four water bodies i.e. Amba River, Bhogeswari river, Nigade Nadi and Konjar Nala, exist within the study area and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.
7. The topography of the areas in the eastern and south eastern portions is at higher elevation and rest of the study area is at lower elevation except few parts in south west direction. The plant site is reported to lies between18°40'38.7" N to 18°42'14.3" N Latitude and 73°01'40.9" E to 73°04'20.74" E Longitude in Survey of India topo sheet no. E43 G13, E43 H1, E43 G14, E43 H2 at an elevation difference of more than 400m.
8. The groundwater level reported to ranges between 0.9 m to 7.1 m below the land surface during the study period. The water table is observed at average depth of about 2.8 m in the project area. Based on CGWB data, it has been reported that the area is designated as safe area.
9. No National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. is located within the study area. It is reported that there are no schedule-I species in the study area as per the Primary survey and Secondary data.
10. The additional raw materials requirement for the proposed Changes in Plant Configuration are iron ore fines, iron ore lumps, limestone, dolomite etc. The proposed project involves setting up of 9.0 MTPA Pellet Plant (PP II) and 4.0MTPA Sinter Plant (SP III).

i. Pellet Plant II – Main Plant Facilities

The palletization process involves three steps: Raw material preparation, Forming green pellets and Pellet hardening.

ii. Sinter Plant III

Sintering is an agglomeration process in which iron ore fines are mixed with return materials, limestone, and finely sized fuel such as coke breeze. The raw materials are mixed before they are placed on the traveling grate of the sinter machine. Near the head end of the grate, the surface of the raw materials is ignited by a gas fired ignition furnace located over the bed. As the bed burns, carbon dioxide, cyanides, sulfur compounds, chlorides, fluorides and oil and grease are driven off with the gases.

The sinter drops off the grate at the discharge end and is cooled (by air), crushed, and screened to maintain uniformity in the size of the sinter fed to blast furnaces. Improperly sized sinter and fines from screening are returned for reprocessing. Dust, fines, scraps, used oils sludge etc. will be generated as waste in the process.

11. The reduction in production capacity of Sinter Plant will be 8 to 4 MTPA and enhancement in pellet production will be 4 to 9 MTPA. Iron ore will be sourced from NMDC- Bacheli & Kirandul, which will be sourced through by Rail/sea; Limestone will be sourced from Rajasthan or imported, which will be sourced through by Rail/Sea and Dolomite will be sourced from Rajasthan/Karnataka and Egypt, which will be sourced through by Rail/Sea.
12. Water requirement for the project is estimated as115123 m^3/day; which will be sourced from the Amba River. The permission for drawl of Surface Water (113.66 MLD) has been obtained from Irrigation Dept of Govt. of Maharashtra vide 4/566/2016 dated 06/02/2016 (For 7 MLD), vide letter no. 2507/2018 dated 03/08/2018 (For 7 MLD), vide letter no. 594/2016 dated 08/02/2016 (For 46.6 MLD) and vide letter no. 2019/(44/15) dated 28/05/2019 (for 55 MLD).
13. Total power requirement after proposed configuration is estimated as 843MW will be met from Captive Power Plant and MSEB Grid.
14. Baseline Environmental Studies were conducted during post monsoon season i.e. from November 2018 to January 2019. Ambient air quality monitoring was carried out at eight locations during 01st Nov., 2018 to 31st Jan., 2019 and the data indicated: PM_{10} (70.7 to 812.9 $\mu g/m^3$), $PM_{2.5}$ (28.6 to 295.2 $\mu g/m^3$), SO_2 (0.3 to 14.5 $\mu g/m^3$) and NO_2 (0.9 to 50.5 $\mu g/m^3$).The high level of dust is mainly attributed to the construction work of National Highway Roads widening of existing 2 lane to 4 lane and the construction activity is at its peak. Due to road construction using heavy equipment and machinery, congestion of traffic and unpaved road surfaces, the air borne dust generation is very high in the study period. This is expected to be reduced to pre-construction levels after the completion of road widening. The results of the modeling study indicate that the maximum increase of GLC for the proposed change in Project is 1.3 $\mu g/m^3$ with respect to the PM_{10} ; 11.6 $\mu g/m^3$ with respect to the SO_2 ; 2.3 $\mu g/m^3$ with respect to the NOx. The variation of predicted GLC of PM_{10} during EIA study in 2019 is lower (PM_{10} - 0.08 to 1.3 $\mu g/m^3$; SO_2 - 0.11 to 11.6 $\mu g/m^3$; NOx - 0.14 to 0.23 $\mu g/m^3$) than earlier EIA done by M/s MECON (wherein PM_{10} -1.0 to 15.3; SO_2 - 0.1 to 4.2 $\mu g/m^3$; NOx - 0.1 to 7.3 $\mu g/m^3$) due to reduction in the pollution load considering the change in configuration and up-gradation of the existing plant in the assessment.
15. Ground water quality has been monitored at eight locations in the study area and analyzed. The water quality parameters in the ground water are reported as pH: 6.8 - 7.6, Total Hardness: 100 - 280 mg/l, Chlorides: 20 to 189 mg/l. Heavy metals are within the limits. Surface water samples were analyzed from twelve locations in the estuarine waters. The estuarine water quality parameters are reported as pH: 7.1 - 8.3, DO: 2.2 to 5.7 mg/l and COD: 298 – 346 mg/l. Surface water samples were analyzed from five locations for Lake/Pond/Dam water also. The Lake/pond/dam water quality parameters are reported as pH: 7.1 - 8.9, DO: 0.7 to 3.0 mg/l and BOD: 64 to 459 mg/l, COD: 48 - 252 mg/l.
16. Treated wastewater, after meeting norms, will be discharged to sea after obtaining permission from concerned authorities.
17. Noise levels are in the range of 55.8 to 96.4 Leq dB(A) during daytime on working days and from 41.7 to 97.2 Leq dB(A) during night time on working days. Noise levels are in the range

of 57.5 to 96.0 Leq dB (A) during daytime and from 41.1 to 96.8 Leq dB (A) during night time on non-working days.

18. It has been reported that there is no population / habitation in the core zone of the project. No R&R is involved.
19. Dust, fines and scraps collected from various air pollution control equipment will be totally circulated into the process. Sludge and filters will be sent to TSDF authorized recyclers. Used or spent oil, wastes or residue containing oil and Empty barrels / containers/ liners contaminated with hazardous chemicals / wastes contaminated with oil to the authorized recyclers for disposal.
20. It has been reported that the Consent to Establish for the expansion capacities from the Maharashtra Pollution Control Board is obtained vide Consent Order no. Format 1.0 /BO/CAC-Cell/UAN No 0000022288-18/CAC-1802000 254 dated 07/02/2018 and consent is valid up to Commissioning of the unit or 5 years whichever is earlier. The Consent to Operate has been obtained from MPCB for existing Sinter Plant – I & II vide letter no. Format1.0/BO/CAC-Cell/Uan No. 0000056996-18/8th CAC -1901000686 dated 10.01.2019 (Valid up to 31.12.2023) and for Pellet Plant – I vide letter no. Format1.0/BO/CAC-Cell/Uan No.0000045570-18/5th CAC -1811000098 dated 02.11.2018 (Valid upto 30.09.2022)
21. Public hearing for the proposed change in configuration in the expansion project was exempted.
22. The capital cost of the project is Rs 17242 Cr (Expansion project is Rs. 17000 Cr; for Change in Plant Configuration is Rs. 242 Cr); and the capital cost for environmental protection measures is proposed as Rs. 2327 Cr. The annual recurring cost towards the environmental protection measures is proposed as Rs. 455.85 Cr. The employment generation from the proposed Change in Plant Configuration project is 5000 persons.
23. Greenbelt will be developed in 250 acres within the plant premises and another 510 acres outside the plant; out of which 447 acre area (29.21% of total plant area) have already been developed under greenbelt / plantation. In addition to this, dense Mangrove vegetation (Natural) covers the Northwestern to Southwestern boundary of Plant site in 152 acre (10% of total plant area), making a total of 39.21 % of existing Greenbelt. Other than the above, JSWSL has proposed to do the part plantation outside the premises in the nearby areas over 578.0 acre land.
24. The proponent has mentioned that there are two court cases, viz. 1) before NGT Pune (WZ) Appeal No. 59 of 2015 in the matter of Dwarkanath Patil and Anr. Vs MoEF and Ors; 2) before High Court of Bombay Civil Writ Petition No. 13483 of 2016 in the matter of JSW Steel vs MoEF and Ors.
25. The proposal was reconsidered by the Reconstituted Expert Appraisal Committee (Indutry-1) in its 12th meeting held during 21- 23rd October, 2019.

Observations of EAC:

26. The Committee observed ToR was issued to M/s. JSW Steel Ltd with recommendations for fresh ToR for preparation of EIA report without fresh public consultation as provided under para 7(ii) a of the EIA Notification, 2006. Therefore, the proposal is for modification of the existing Environmental Clearance for expansion project under para 7(ii) of EIA Notification, 2006.

Recommendations of EAC:

27. After detailed deliberations, the Committee recommended the proposal for grant of Environmental Clearance under the provisions of the EIA Notification, 2006 subject to specific condition (i) mentioned in the para 27 below in addition to the applicable general conditions as per the Ministry's Office Memorandum no. 22-34/2018-IA.III dated 9/8/2018.

Decision of MoEF&CC

28. The Ministry considered the above recommendation of EAC and here by decide to accord Environmental Clearance for expansion of existing steel plant with change in configuration of M/s JSW Steels Ltd, along with the other facilities mentioned above at para 5 above within the existing steel plant premises, located at village Dolvi, District Raigad, Maharashtra along with following specific and general conditions.

A. SPECIFIC CONDITIONS:

i. PP shall develop green belt in an area of 16% of project area within the project site and 33% of project area within the 10km of study area."

ii. The CER activities shall be implemented in accordance with this Ministry's OM vide F.No. 22-65/2017 -IAIII dated 1st May 2018 within the project implementation period.

iii. Treated domestic wastewater generated from township shall be reused and recycled.

iv. The Project Proponent shall achieve Zero Liquid Discharge (ZLD) at the end completion of all the facilities. In the meantime the treated wastewater shall be discharged into sea after obtaining necessary permission /clearance from the concerned regulatory authority.

B. GENERAL CONDITIONS:

I. Statutory compliance:

i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.

ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012(Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants)as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognised under Environment (Protection) Act, 1986.

iii. The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released

(e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NO_x 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.

iv. The cameras shall be installed at suitable locations for 24X7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.

v. Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.

vi. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

vii. 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.

viii. The project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.

ix. Secondary emission control system shall be provided at SMS Converters.

x. Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.

xi. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

xii. 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.

xiii. The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

xiv. Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).

xv. Land-based APC system shall be installed to control coke pushing emissions.

xvi. Monitor CO, HC and O_2 in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.

xvii. Vapour absorption system shall be provided in place of vapour compression system for cooling of coke oven gas in case of recovery type coke ovens.

xviii. In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NOx control facility shall be provided to meet the prescribed standards.

xix. The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.

xx. Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.

xxi. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

xxii. The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.

xxiii. Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing 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.

iv. The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R 277 (E) dated 31st March 2012 (Integrated iron & Steel); G.S.R 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time as amended from time to time;

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. 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.

vii. Tyre washing facilities shall be provided at the entrance of the plant gates

viii. CO_2 injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.

ix. The project proponent shall practice rainwater harvesting to maximum possible extent.

x. Treated water from ETP of COBP shall not be used for coke quenching.

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

xii. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines 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

V. Energy Conservation measures

i. The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.

ii. Coke Dry Quenching (CDQ) shall be provided for coke quenching for both recovery and non-recovery type coke ovens;

iii. Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.

iv. Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.

v. Use hot charging of slabs and billets/blooms as far as possible.

vi. Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.

vii. Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.

viii. Restrict Gas flaring to < 1%.

ix. 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;

x. Provide LED lights in their offices and residential areas.

xi. Ensure installation of regenerative type burners on all reheating furnaces.

VI. Waste management

i. An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 Kg/l shall be installed to use slag as river sand in construction industry.

ii. In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler, shall be insulated to conserve heat and to maximise heat recovery.

iii. Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery type coke ovens).

iv. Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.

v. Waste recycling Plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.

vi. Used refractories shall be recycled as far as possible.

vii. SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.

viii. 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.

ix. Oil Collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.

x. The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanising, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens

xi. Kitchen waste shall be composted or converted to biogas for further use.

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

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 of Factory Act.

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, crèche 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 as per the Factories Act.

IX. Corporate Environment Responsibility

i. 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.

ii. 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.

iii. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

iv. Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

v. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.

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; PM_{10}, SO_2, 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.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

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. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

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

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

xiv. 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.

xv. 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.

xvi. 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.

(A.K. Agrawal)
Director

Copy to:-

1. **Secretary**, Department of Environment, Government of Maharashtra, Secretariat Mumbai.
2. **Deputy Director General of Forests (C),** Ministry of Environment, Forest and Climate Change, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building Civil Lines, Nagpur-440001
3. **Chairman,** Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-1100032.
4. **Member Secretary**, Central Ground Water Authority, 18/11, Jamnagar House, Man Singh Road, New Delhi-110011.
5. **Chairman**, Maharashtra Pollution Control Board, Kalpatru Point, Sion Circle, Sion (East), Mumbai-400 022, Maharashtra.
6. **District Collector**, **Raigad** District, State Maharashtra.
7. Guard File/Record File/Monitoring File.
8. MoEF&CC Website.

(A.K. Agrawal)
Director