



**JSW Steel Limited**

**Dolvi Works:** Geetapuram,  
Dolvi, Taluka - Pen,  
Dist Raigad - 402 107, Maharashtra, India.  
CIN : L27102MH1994PLC152925  
Phone : +91 2143 277501-15  
Fax : +91 2143 277533/42  
Website : www.jsw.in

**BY COURIER**

May 26, 2021

JSWSL/ENV/MoEF&CC/2021

To

The Regional Officer  
Ministry of Environment, Forest and Climate Change  
Regional Office (WCZ), Ground Floor  
East Wing, New Secretariat Building,  
Civil Line, Nagpur-440001

Sub: Six monthly compliance report of EC conditions for i) 3.0 MTPA steel plant, ii) expansion from 3 to 5 MTPA integrated steel plant and iii) expansion from 5 to 10 MTPA integrated steel plant of JSW Steel Ltd. located at Geetapuram, Village Dolvi, Tehsil Pen, District Raigad, Maharashtra.

Ref: i) Environmental Clearance for 3 MTPA vide letter No J-11011/4/96-IA-II dated 31-12-1996.  
ii) Environmental Clearance for expansion of steel plant from 3 to 5 MTPA vide letter No J-11011/166/2011-IA-II(I) dated 21-11-2012.  
iii) Environmental Clearance for expansion of steel plant from 5 to 10 MTPA vide letter No J-11011/176/2013-IA-II(I) dated 25-08-2015.  
iv) Environmental Clearance for changes in configuration for proposed expansion of integrated steel plant from 5 to 10 MTPA vide letter No J-11011/76/2013-IA-II(I) dated 16/06/2020

Sir,

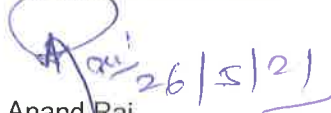
With reference to above, please find enclosed herewith six monthly compliance report of EC conditions for following:

- i) 3.0 MTPA steel plant – **Annexure I**
- ii) Expansion from 3 to 5 MTPA integrated steel plant - **Annexure II**
- iii) Expansion from 5 to 10 MTPA integrated steel plant of JSW Steel Ltd., Dolvi Works – **Annexure III**
- iv) Environmental Clearance for changes in configuration for proposed expansion of integrated steel plant from 5 to 10 MTPA vide letter No J-11011/76/2013-IA-II(I) dated 16/06/2020 – **Annexure IV**

Submitted for kind information & records please.

Thanking you,

Yours faithfully,  
For JSW Steel Limited

  
26/5/21

Anand Rai  
General Manager (Environment)



- CC:** 1) The Director, MoEF&CC, Indira Paryavaran Bhawan, Jor Bagh, Lodi Road, New Delhi-110003.  
2) The Zonal officer, CPCB, Parivesh Bhawan, Opp. VMC Ward Office No. 10, Subhanpura, Vadodara-390 023, Gujarat.  
3) The Regional Officer, MPCB, Raigad, Raigad Bhavan, CBD Belapur, Navi Mumbai



**JINDAL** Part of O.P. Jindal Group

**Regd. Office:** JSW Centre,  
Bandra Kurla Complex,  
Bandra(East), Mumbai - 400 051.  
Phone : +91 22 4286 1000  
Fax : +91 22 4286 3000

**COMPLIANCE CONDITIONS OF LETTER No J-11011 / 4 / 96 – IA – II  
dated 31-12-1996.**

**Subject: 3.0 MTPA integrated Steel Plant at Raigad District, Maharashtra by M/s. JSW Steel Ltd.**

**Ref: Environmental Clearance for 3 MTPA steel plant vide letter No J-11011/4/ 96 – IA–II, dated 31-12-1996 & vide letter No J-11011/76/2013-IA II(I), dated July 30, 2015.**

The status report on stipulated Environmental condition, point-wise explanations are as follows.

<b>S. NO</b>	<b>ENVIRONMENTAL CLEARANCE CONDITIONS</b>	<b>COMPLIANCE STATUS AS ON March, 2021</b>
i)	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board and the State Government.	Regularly following the guidelines given by Maharashtra Pollution Control Board (MPCB) and State Government.
ii)	No expansion or modifications of the plant should carried out without prior approval of this Ministry	<ul style="list-style-type: none"> <li>• Expansion or modifications of the plant is being carried out only after obtaining prior approval from the Ministry</li> <li>• Obtained EC for Expansion of Integrated Steel Plant capacity from 3 to 5 MTPA.</li> <li>• Obtained EC for Expansion of Integrated Steel Plant capacity from 5 to 10 MTPA</li> </ul>
iii)	The Gaseous emissions from various process units should confirm to the load / mass based standards notified by this Ministry on 19th May 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters, keeping in view the nature of the industry and its size and location. At no time the emission level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit should be put out of operation immediately and should not be restarted until the control measures and rectified to achieve the desired efficiency.	<ul style="list-style-type: none"> <li>• Adequate Air Pollution Control measures have been provided to each unit of the plant.</li> <li>• Gaseous emissions from the process units are well within the prescribed standards as notified by the Ministry.</li> </ul>

iv)	At least five ambient air quality monitoring stations should be provided in consultation with the State Pollution Control Board for measurement of SO <sub>2</sub> , NO <sub>x</sub> , Particulate Matter etc. Stack emissions should also be monitored regularly by setting up automatic stack monitoring facilities. Data on stack emissions also with the ambient air quality and work environment air quality should be submitted along with statistical analysis to the state pollution control board once in three months and to this Ministry once in six months.	<ul style="list-style-type: none"> <li>• Five Continuous Ambient Air Quality Monitoring stations have been installed in consultation with MPCB. All these stations are connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> &amp; CO.</li> <li>• 22 Nos. Continuous Stack Emission Monitoring systems are installed at all major stacks &amp; connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis.</li> <li>• Data on Stack Emission, Ambient Air Quality and Work Environment Air Quality are submitted as per guidelines to; <ul style="list-style-type: none"> <li>• MPCB - Once in three months, also as &amp; when required,</li> <li>• MOEF&amp;CC, Nagpur &amp; Delhi – Once in Six month,</li> <li>• CPCB, New Delhi – Monthly basis</li> </ul> </li> </ul>
v	In plant control measures for checking fugitive emissions, spillage of chemicals / raw materials etc. should be provided and properly maintained specially in the critical areas like blast furnace, sintering plant etc.	<p>Various measures have been provided to control the fugitive emissions;</p> <ul style="list-style-type: none"> <li>• Dust Suppression such as; <ol style="list-style-type: none"> <li>1) Dry Fog System / Water spraying in junction houses / Transfer Towers at RMHS &amp; other units.</li> <li>2) Cyclone with Venturi Scrubbing system at Sponge Iron Plant, SMS and Gas Cleaning Plant at Blast Furnace.</li> <li>3) Vacuum based road sweeping machines and mist type mobile water tankers are provided for control of road emissions.</li> </ol> </li> <li>• Dust Extraction system have been provided for; <ol style="list-style-type: none"> <li>1) Blast Furnace 1 - Stock House – Bag Filters and Cast House – Reverse Air Bag Filter &amp; ESP.</li> <li>2) Sinter Plants – ESP &amp; Bag Filters</li> <li>3) SMS1 – GCP 1, 2 &amp; 3 for primary &amp; secondary fume extraction system.</li> </ol> </li> </ul>
vi	Adequate effluent treatment facilities should be provided so that the treated effluent conforms to the prescribed standards.	<ul style="list-style-type: none"> <li>• Adequate effluent treatment facilities have been provided at all units and the treated water is recycled back in the process at Blast Furnace 1, SMS1, HSM1 and all are closed loop system.</li> <li>• At Sponge Iron Plant, the scrubbed water is treated in Classifier, Clarifier, High rate thickener and routed through Sludge pond wherein the sludge is</li> </ul>

		separated and water reused for EAF slag cooling at SMS1. There is no waste water discharge.
vii	Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the state Pollution Control Board. Regular monitoring should be carried out for the relevant parameters. Routine toxicology test of effluent with fish and fish food organisms should also be regularly done at least once in a month. Monitored data along with statistical analysis and interpretation in the form of report should be submitted to this Ministry once in six months and to the state pollution Control Board once in three months.	<ul style="list-style-type: none"> <li>• There is no discharge of waste water from the plant, however, water &amp; wastewater sampling points have been set up in consultation with MPCB.</li> <li>• Regular monitoring is being carried out; Toxicology test of effluent with fish is being done once in a month.</li> <li>• All monitoring reports are submitted as per guidelines to; <ol style="list-style-type: none"> <li>1) MPCB - Once in three months, also as &amp; when required,</li> <li>2) MOEF&amp;CC, Nagpur &amp; Delhi – Once in Six month,</li> <li>3) CPCB, New Delhi – Monthly basis</li> </ol> </li> </ul>
viii	There will be no discharge of treated effluents outside the plant premises. The treated effluent should be recycled and reused as process water. Treated domestic waste should be used for development of green belt.	<ul style="list-style-type: none"> <li>• As mentioned above in point - vi.</li> <li>• Water pollution control systems are provided to all plants and the treated water is recycled in the process and reused for EAF slag cooling and dust suppression.</li> <li>• Treated domestic water used for plantation.</li> </ul>
ix	Fresh water should not utilized as cooling water. The cooling water drawn from the creek should be discharged into the creek at an outfall point recommended by NIO. Feasibility of recycling the cooling water should also be evaluated and the report should be submitted to the Ministry within three month.	<ul style="list-style-type: none"> <li>• Cooling water is re-circulated in the system / process after treatment in close loop treatment facility and only makeup water is added.</li> <li>• No water is either drawn or discharged into the creek.</li> </ul>
x	No Coke oven plant should be set up without the approval of this Ministry.	<ul style="list-style-type: none"> <li>• <b>Coke Oven plant</b> has been set up after obtaining of separate EC from MoEF&amp;CC vide letter No J-11011/286/2007-IA-II(I) dated 12/01/2009.</li> </ul>
xi	Guard pond of sufficient holding capacity should be provided to cope up with the effluents discharged due to process disturbances. The contributing units shall be immediately shutdown and will not be restarted without bringing the system back to normalcy. Details of design and capacity of the guard pond should be submitted to the Ministry within a period of 6 months.	<ul style="list-style-type: none"> <li>• The water table of the sub surface water is very high, therefore it is technically not feasible to construct guard pond below ground level for holding wastewater.</li> <li>• However wastewater treatment system is installed at various units and the treated waste water is recycled / reused.</li> <li>• Construction of guard pond in this area is not technically feasible and therefore has not been constructed.</li> </ul>
xii	A perspective plan for 100 % utilization of	<ul style="list-style-type: none"> <li>• 100% granulated slag of Blast furnace</li> </ul>

	slag should be prepared and submitted to this Ministry within six months for approval. The project authorities in their own interest should have a long term to tie-up with the user industry like cement.	1 is used in Cement Plant for making of Cement in JSW Group Company.
xiii	Raw materials should be brought to the plant site by sea / rail to the extent possible. Finished products should also be transported through road should kept to the bare minimum to avoid any traffic congestion in the area and cities.	<ul style="list-style-type: none"> <li>• All the raw materials are being brought to the plant site by sea route through our captive jetty</li> <li>• Finished products (HR Coils) are transported through rail / sea and minimum by road.</li> </ul>
xiv	A green belt of adequate width and density should be provided in all around the plant in consultation with the State forest Department, specially selecting local species. About 2500 plants per HA of the land should be provided. 30 % of the total land area should be developed as green belt.	<ul style="list-style-type: none"> <li>• Green Belt of adequate width is being developed</li> <li>• Rs 1.5301 Crores spent on Mass plantation drive for a target of One Million tree plantations in and outside the premises &amp; in nearby villages are being carried out (2016-2020).</li> <li>• We have entered into a tripartite agreement with an NGO – TERRE of Pune for plantation.</li> <li>• Programs for making people aware of importance of plantation are being done through Gram-Panchayat.</li> </ul>
xv	Approval from the State Government should be obtained for quarrying the adjacent hillocks to obtain fill materials for leveling the proposed site to 3 – 3.5 m above MSL. The creek / river should not be dredged to be obtained fill material for leveling the site. The project proponent should also take adequate care to ensure that run off material does not flow into the river / creek during the site leveling.	<ul style="list-style-type: none"> <li>• The fill material taken from authorized material suppliers for leveling of site.</li> <li>• The creek or the river has not been dredged for leveling the site.</li> <li>• All requisite steps were taken to ensure that the run off material do not flow into the river/creek during site leveling.</li> </ul>
xvi	Approval under CRZ notification should be obtained for the extension of the existing jetty. The proposed storage facilities should be beyond 150 m from HTL of creek / river.	<ul style="list-style-type: none"> <li>• Noted, approval shall be obtained for construction of jetty.</li> <li>• The Raw material is stored beyond 150 m from HTL of Creek / river.</li> </ul>
xvii	The project authorities should set up laboratory facilities for collection and analysis of samples under supervision of the competent technical personnel. Who will directly report to the Chief Executive.	Environmental Laboratory is in place for collection and analysis of samples under the supervision of competent technical personnel and he is directly reporting to President.
xviii	An environment Management cell should be established with suitably qualified people to carry out various functions under the control of the Senior Executive who will report directly to Head of the Organization.	An Environment Management cell is established with qualified people to carry out various functions under the control of the Senior Executive who reports directly to Head of the Plant.
xix	Medical surveillance of workers especially w r t the pneumoconiosis etc. should be	As per the Factories Act, regular health checkups done for workers and

	done regularly and records maintained.	employees & records are maintained on regular basis.
xx	The funds earmarked for the Environmental protection measures should not be diverted for other purpose its break up and year wise expenditure should be reported to this Ministry.	<ul style="list-style-type: none"> <li>The funds earmarked for environmental protection is utilized for the same purpose.</li> </ul>
3	This Ministry or any competent authority may stipulate any further conditions or alternations in the existing conditions after review of the compliance report and other reports submitted by the project proponent from time to time.	Noted
4	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
5	The above conditions will be enforced, inter-alia under the provisions of the water (Prevention& Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted

**COMPLIANCE CONDITIONS OF File No J-11011/166/2011-IA-II (I) dated 21<sup>st</sup> November 2012.**

**Sub : Expansion from 3.0 MTPA to 5.0 MTPA Integrated Steel Plant along with installation of Pellet Plant - 4.0 MTPA and 300 MW Captive Power Plant at Geethapuram, Village Dolvi, Tehsil Pen, District Raigad in Maharashtra by M/s JSW Steel Limited.**

**Ref: Environmental Clearance for expansion of integrated steel plant from 3 to 5 MTPA vide letter No J-11011/166/2011-IA-II (I) dated 21<sup>st</sup> November 2012 & vide letter No J-11011/76/2013-IA II(I), dated July 30, 2015.**

Sr. No.	ENVIRONMENTAL CLEARANCE CONDITIONS	COMPLIANCE STATUS AS ON March, 2021
1	Waste gases from Blast furnace and coke ovens will be utilised for power generation. Fugitive emissions from raw material handling section will be suppressed by dry fogging system / water sprinkling.	<ul style="list-style-type: none"> <li>• Waste Gas from BF is used in 55 MW Captive Power Plant.</li> <li>• Installed Bag filters at Junction houses of raw material handling section</li> <li>• Also dust suppression by dry fog systems / water spraying systems was provided at Raw Material Handling Section (RMHS) and other applicable areas.</li> </ul>
2	The makeup water requirement for the proposed expansion will be 2,590 m <sup>3</sup> /day and the existing consumption is 833.3 m <sup>3</sup> /day, which shall be sourced from the State Water Resources Dept. from Nagothane dam at K.T. Bandhara. Maximum recycling of wastewater will be done after treatment to achieve zero discharge. Treated wastewater will be used for dust suppression and green belt development. Effluent streams such as cooling tower blow down, floor washings etc. will be used for fugitive dust suppression, water sprinkling etc. Sewage will be treated in septic tanks. Bag filter dust will be recycled in the process. Blow down water from power plant will be reused in steel melting shop slag yards for spraying on hot slag. Blow down water from Blast furnace recirculation system will be reused in the slag granulation plant as make up water to SGP recirculation water	<ul style="list-style-type: none"> <li>• The makeup water requirement for the proposed expansion is limited to 2590 m<sup>3</sup>/hr (inadvertently mentioned as m<sup>3</sup>/day) besides the existing consumption for 3 MTPA plant</li> <li>• The water is sourced from the Nagothane dam at K.T. Bandhara as per the allocation from the Water Resources Department of Maharashtra.</li> <li>• Treated waste water &amp; cooling tower blow down (CTBD) are used for dust suppression, slag cooling &amp; plantation. There is no waste water discharge from the plant.</li> <li>• Sewage is treated in septic tanks &amp; STPs &amp; reused for gardening.</li> <li>• Bag Filter dust is recycled &amp; reused in the process of Sinter &amp; Pellet Making.</li> <li>• Blow down of power plant is used in SMS slag recovery plant for dust</li> </ul>

	system. Treated waste water from coke oven by products plant will be used in the system itself.	<p>suppression.</p> <ul style="list-style-type: none"> <li>• Blow down water from Blast furnace 1 recirculation system is reused in the slag granulation plant as make up water to SGP recirculation water system.</li> <li>• Treated water from Coke oven by-product is used in coke quenching</li> </ul>
3	<p>BF slag will be granulated and used for cement manufacturing. Slag from SMS production will be used in the sinter plant, in land / road / area development or for manufacturing of insulated bricks etc. Mill scale, flue dust from the blast furnace, dust from the bag filters will be used in Sinter plant.</p> <p>All pumps and motors will be selected from less noise generating types. Ear plugs will be provided to employees working in high noise prone areas. DG set will be provided with silencer.</p>	<ul style="list-style-type: none"> <li>• 100% granulated slag of Blast furnace 1 is used in Cement Plant for making of Cement in JSW Group Company.</li> <li>• SMS- EAF slag is used in the sinter plant, in internal roads / land filling / area development</li> <li>• Mill scale, flue dust from Blast Furnace 1, dust from Bag Filters used in Sinter plant / GCP dust from SMS 1 in Pellet plant</li> <li>• Low noise level pumps and motors are used. Ear plugs provided to employees working in high noise prone areas.</li> <li>• DG set provided with silencer</li> </ul>
4	All the integrated steel plant are listed as S.No 3 (a) as Primary Metallurgy Industries under category A of the Schedule of EIA Notification 2006 and appraised by the Expert Appraisal Committee (Industry-I) of MoEF.	Noted
5	The proposal was considered by the expert Appraisal Committee -1 (industry) in its 37 <sup>th</sup> Meeting held during 14 <sup>th</sup> and 15 <sup>th</sup> June 2012. The Committee recommended the proposal for Environmental clearance subject to stipulation of specific conditions along with other environmental conditions. Public hearing was conducted on 28.02.2012.	Noted
6	Based on the information submitted by you, presentation made by you and consultant, M/s. MECON Limited., Ranchi, the Ministry of Environment and Forests hereby accords Environmental clearance to the above project under the provision of EIA Notification dated 14 <sup>th</sup> September 2006 subject to strict compliance of the following specific and general conditions.	Noted & shall be complied
<b>Specific Conditions;</b>		



i	Measures shall be undertaken to mitigate particulate levels in the ambient air and a time bound action plans shall be submitted. On-line ambient air quality monitoring with proper O&M and continuous stack monitoring facilities for all the process stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), gas cleaning plant, scrubber, bag filters etc. shall be provided to keep the emission levels below 50 mg/Nm <sup>3</sup> by installing energy efficient technology.	<ul style="list-style-type: none"> <li>• Adequate dust control measures have been provided to all the units to mitigate particulate levels in the ambient air and all environmental monitoring parameters are well within the prescribed standards as per the Consent granted by MPCB.</li> <li>• Five Continuous Ambient Air Quality Monitoring stations have been installed in consultation with MPCB. All these stations are connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> &amp; CO with proper O&amp;M</li> <li>• Continuous Stack Emission Monitoring systems are installed at all major stacks &amp; connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis.</li> <li>• Electrostatic precipitator (ESPs), gas cleaning plants, scrubbers, bag filters etc. are provided to all units &amp; PM levels are well within the prescribed norms as per MPCB Consent conditions.</li> </ul>
ii	As proposed, Electrostatic precipitator (ESP) shall be provided to sinter / Pellet plant, WHRB, DE Plants and dust catcher followed by venturi scrubbers to blast furnace to control SPM levels within 50 mg/Nm <sup>3</sup> . Fume extraction system shall be provided to induction furnaces to control the emissions within the prescribed standards.	<ul style="list-style-type: none"> <li>• Electrostatic precipitator provided to Blast Furnace 1, Sinter Plants &amp; Pellet plant,</li> <li>• Cast House Fume Extraction System, WHRB, DES and dust catcher followed by venturi scrubbers to Blast Furnace are provided &amp; emission level well with in the prescribed standards.</li> <li>• There is no Induction Furnace, but in the Steel Melt Shop 1 (SMS1), Gas Cleaning Plants with bag filters having primary and secondary fume extraction systems have been provided &amp; emission level well with in the prescribed standards.</li> </ul>
iii	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be followed.	Being complied
iv	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines/Code of Practice issued by the CPCB shall be	Adequate measures have been taken to control the gaseous emission levels including secondary fugitive emissions at Blast Furnace 1 - Cast House with Bag filters and Gas Cleaning Plants for Electric Arc Furnace (EAF) of SMS1

	followed. New standards for the sponge iron plant issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 should be followed.	from all the sources and are well within the permissible limits issued by the Ministry and regularly monitored. A new standard for the sponge iron plant issued by the Ministry is being followed.
v	Total makeup water requirement for expansion shall not exceed 2,590 KLD. Efforts shall further be made to use maximum water from the rain water harvesting sources. Use of air cooled condensers shall be explored and closed circuit cooling system shall be provided to reduce water consumption and water requirement shall be modified accordingly. All the effluent should be treated and used for ash handling, dust suppression and green belt development. No effluent shall be discharged and 'zero' discharge shall be adopted. Sanitary sewage should be treated in septic tank followed by soak pit.	<ul style="list-style-type: none"> <li>• The makeup water requirement for the proposed expansion is within the water allocated and less than 2590 m<sup>3</sup>/hr.</li> <li>• Roof Top Rain water harvesting system have been implemented.</li> <li>• Closed circuit cooling towers are provided to optimize water consumption.</li> <li>• All effluent is treated &amp; recycled in the process and reused in slag cooling, dust suppression &amp; plantation purpose.</li> <li>• No waste water is discharged to outside the plant premises except run off during monsoon.</li> <li>• Septic tank followed by soak pit and STP (3 Nos.) provided for sewage treatment.</li> </ul>
vi	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	<ul style="list-style-type: none"> <li>• Roof top Rain water harvesting system has been established (at 12 various buildings of Oxygen Plant, Coke Oven, Power Plant, MRSS and Admin.)</li> <li>• The harvested rain water is being used in the cooling towers as make up water.</li> </ul>
vii	Regular monitoring of influent and effluent surface, sub-surface and ground water (including chromite) should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E (P) Act whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.	<ul style="list-style-type: none"> <li>• Regular monitoring of influent and effluent surface, sub-surface and ground water is being done by MoEF approved and NABL accredited labs &amp; the results of all parameters are well within the prescribed standards</li> <li>• Analysis reports are being regularly submitted to the Regional Office, MoEF&amp;CC, MPCB &amp; CPCB.</li> </ul>
viii	The water consumption shall not exceed as per the standard prescribed for the steel plants.	Water consumption is well within the prescribed norms & CREP guidelines for the steel plants (less than 5 m <sup>3</sup> /ton of crude steel)
ix	Vehicle pollution due to transportation of raw material and finished products shall be controlled. Proper arrangements shall also be made to control dust emissions during	<ul style="list-style-type: none"> <li>• Transportation of raw material is mainly through sea route to captive jetty and further to the steel plant via closed conveyors.</li> </ul>

	loading and unloading of the raw material and finished product.	<ul style="list-style-type: none"> <li>• Rs 71.5 Crores have been spent for covered shed for storage of raw material at Jetty &amp; RMHS to control the dust emission</li> <li>• Transportation of finished products is mainly by rail.</li> <li>• Adequate dust suppression systems have been provided to control dust emissions during loading and unloading of the raw material and finished product.</li> </ul>
x	All internal roads shall be black topped. The roads shall be regularly cleaned with mechanical sweepers. A 3 tier avenue plantation using native species shall be developed along the roads.	<ul style="list-style-type: none"> <li>• All internal roads are concreted &amp; Vacuum based road sweeping machines and mist type mobile water tankers are provided for control of road emissions.</li> <li>• Avenue plantation using native species have been planted along the roads.</li> </ul>
xi	Proper handling, storage, utilization and disposal of all the solid waste shall be ensured and regular report regarding toxic metal content in the waste material and its composition, end use of Solid/hazardous waste should be submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB.	<p>Proper handling, storage, utilization and disposal of all the solid wastes like Iron ore fines, coke fines, fluxes and scales generated from the plant is used in Sinter Plants &amp; Pellet Plant.</p> <ul style="list-style-type: none"> <li>• The report of Solid wastes and Hazardous wastes generation and disposal are regularly submitted as mentioned below.</li> <li>• MPCB - Once in three months, also as &amp; when required,</li> <li>• MOEF&amp;CC, Nagpur &amp; Delhi – Once in Six month,</li> <li>• CPCB, New Delhi – on Monthly Basis</li> </ul>
xii	Proper embankment shall be provided for the sludge disposal area.	<ul style="list-style-type: none"> <li>• Proper embankment provided to contain sludge at all generating points- Sponge Iron Plant, Blast Furnace 1 and HSM 1.</li> <li>• Sludge's are used in sinter making process</li> </ul>
xiii	Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office at Bhopal, SPCB and CPCB within 3 months of issue of environment clearance letter.	Risk and Disaster Management plan is prepared and has been already submitted to MoEF&CC,
xiv	As proposed, green belt shall be developed in 33 % of plant area as per the CPCB guidelines in consultation with the DFO.	<ul style="list-style-type: none"> <li>• The expansion of the steel plant from 3 to 5 to 10 MTPA in contiguous to earlier facilities, Accordingly, Green Belt is being developed and 33% green belt shall be completed in and outside premises as recommended</li> </ul>

		<p>by the EAC, MoEF&amp;CC in the next 5 years once the expansion projects are completed.</p> <ul style="list-style-type: none"> <li>Rs 1.5301 Crores spent on Mass plantation drive for a target of One Million tree plantation in and outside the premises &amp; in nearby villages is being carried out (2016-2020).</li> <li>Programs for making people aware of importance of plantation are being done through Gram-Panchayat.</li> </ul>
xv	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.	Being Complied
xvi	The company shall adopt well laid down corporate environment policy and identified and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with environmental clearance, environmental laws and regulations.	Environment Policy is in place and being complied in adherence to Environmental Clearance, Environmental Laws and regulations.
xvii	All the commitments made to the public during the Public Hearing / Public Consultation meeting held on 28th February, 2012 should be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bhopal.	Being Complied
xviii	At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan should be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.	<ul style="list-style-type: none"> <li>CSR activities in various sectors are being done in the surrounding villages and a time bound action plan for various CSR activities have been submitted to MoEF&amp;CC as per EAC recommendation of 2.5% of project cost.</li> </ul>
xix	The company shall provide housing for 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.	Complied
<b>General Conditions:</b>		
i	The project authorities must strictly adhere to the stipulations made by the Maharashtra State Pollution Control Board and the state	All the terms & conditions stipulated by Maharashtra Pollution Control Board (MPCB) and State Government

	government.	are being followed.
ii	No further expansion or modification in the plant shall be carried out without prior approval of the ministry of Environment and Forests.	All expansion activities are being done after obtaining prior EC from MoEF&CC.
iii	The gaseous emission from various process units shall conform to the load/mass based standards notified by this ministry on 19 <sup>th</sup> may, 1993 and standards prescribed from time to time. The State Boards may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	Adequate Air Pollution Control measures have been provided to each unit of the plant and the Gaseous emissions from the process units are well within the prescribed standards as notified by the Ministry
iv	At least four ambient monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this ministry including its regional office at Bhopal and the SPCB/CPCB ones six months.	<ul style="list-style-type: none"> <li>• Five Continuous Ambient Air Quality Monitoring stations have been installed in consultation with MPCB. All these stations are connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis for PM2.5, PM10, SO2, NOx &amp; CO.</li> <li>• 22 Nos. Continuous Stack Emission Monitoring systems are installed at all major stacks &amp; connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis.</li> <li>• Data on Stack Emission, Ambient Air Quality and Work Environment Air Quality are being submitted to; <ul style="list-style-type: none"> <li>• MPCB - Once in three months,</li> <li>• MOEF&amp;CC, Nagpur &amp; Delhi – Once in Six month,</li> <li>• CPCB, New Delhi – Monthly basis</li> </ul> </li> </ul>
v	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> may, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilised for plantation purpose.	Being Complied
vi	The overall noise level in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise level should conform to the standards prescribed under EPA rules, 1989 viz. 75dBA (daytime) and 70 dBA (night time).	<ul style="list-style-type: none"> <li>• Adequate noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation have been provided &amp; measured noise level are well with in prescribed standards.</li> <li>• The ambient noise level is well within the standards prescribed</li> </ul>

		under EPA rules, 1989 viz. 75dBA (daytime) & 70 dBA (night time).
vii	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the factory Act.	As per the Factories Act, regular health surveillance done for the workers and employees & records are maintained on regular basis
viii	The company shall develop surface water harvesting structure to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Roof top Rain water harvesting system is being implemented and the harvested rain water is being used in the cooling towers. Since the water table is very high, therefore recharging ground water table is not being done.
ix	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, drinking water supply and health care etc.	<ul style="list-style-type: none"> <li>• Environmental protection measures &amp; safeguards recommended in EIA/EMP report are being complied.</li> <li>• Socio – economic development activities / programmes like supply of drinking water, health care camp &amp; community development programmes are being carried out on regular basis and will be continued as per plan.</li> </ul>
x	Requisite amount shall be earmarked towards capital cost and recurring cost/annum for environment pollution controls measures to implement the conditions stipulated by the ministry of environment and forest as well as the state Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the regional office of the ministry of the Bhopal. The funds so provided shall not be diverted for any other purpose.	Requisite amount is earmarked towards capital cost and recurring cost/annum for environment pollution controls measures to implement the conditions stipulated by the MoEF&CC as well as the State Government.
xi	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad /municipal corporation, Urban local body and the local NGO, if any, from whom suggestions / representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	<p>Complied</p> <p>A copy of clearance letter is already submitted to concerned Panchayat, Zillah Parishad/Municipal Corporation, Urban Local Body and the local NGO,</p>
xii	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitoring data on their website and shall	Complied

	update the same periodically. It shall simultaneously be sent to the regional office of the MOEF at Bhopal. The respective zonal office of the CPCB and the CECB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emission) or critical sectoral parameters, indicated project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	
xiii	The project proponent shall also submit six monthly reports on the status of 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, the respective Zonal office of CPCB and the SPCB. The Regional office of this Ministry at Bhopal / CPCB / SPCB shall monitor the stipulated conditions.	Being Complied
xiv	The Environmental Statement for each financial year ending 31 <sup>st</sup> March in Form V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance conditions and shall also be sent to the respective Regional Office of the MoEF at Bhopal by e-mail.	Being submitted regularly
xv	The project proponent shall inform the public 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 and Forests at <a href="http://moef.nic.in">http://moef.nic.in</a> . This shall be advertised 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 of the locally concerned and a copy of the same should be forwarded to the Regional Office, Bhopal.	Complied
xvi	Project authorities 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 and the date of concerned authorities and the date of commencing the land development work.	Complied
11	The ministry may revoke or suspend the clearance, if implementation of any of the	Noted

	above conditions is not satisfactory.	
12	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted
13	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules 2008 and the Public (Insurance) Liability Act 1991 along with their amendments and Rules.	Noted



## SIX MONTHLY COMPLIANCE REPORTS OF ENVIRONMENT CLEARANCE CONDITIONS

**Sub: Expansion of Integrated Steel Plant from 5 to 10 MTPA and Power Plant from 300 MW to 600 MW (Gas Based) of M/s JSW Steel Limited at Geethapuram, Village Dolvi, Tehsil Pen, District Raigarh in Maharashtra**

**Ref: Environmental Clearance for expansion of integrated steel plant from 5 to 10 MTPA vide letter No J-11011/176/2013-IA-II(I) dated 25/08/2015 amendment dated 23/01/2018.**

The production facilities after the expansion are given below:

S. No	Technological Facility	EC accorded for Facilities under 5 MTPA	EC accorded for Facilities under 5 to 10 MTPA	Total unit capacities at 10 MTPA	Status as on March, 2021
1.	DR1 (Gas based Mega Module)	2.0 MTPA (by augmentation)	2.0 MTPA	4.0 MTPA	<ul style="list-style-type: none"> <li>2 MTPA plant in operation</li> <li>2 MTPA plant under 5-10 MTPA, &amp; technology finalization under progress</li> </ul>
2.	Pellet Plant	4.0 MTPA	9.0 MTPA	13.0 MTPA	<ul style="list-style-type: none"> <li>4 MTPA plant in operation</li> <li>9 MTPA plant under 5-10 MTPA under trial stage, It is proposed to enhance the capacity to total 13 MTPA.</li> </ul>
3.	Coke Ovens including By-product plant	2.0 MTPA	2.5 MTPA	4.5 MTPA	<ul style="list-style-type: none"> <li>1.0 MTPA in operation under EC M/s. Amba River Coke Ltd</li> <li>3.5 MTPA Coke Oven, EC transferred to Dolvi Coke Projects Ltd (DCPL) and further changed as JSW Steel Ltd.</li> </ul> <p>1.5 MTPA plant is in operation 1.5 MTPA (0.75 MTPA commissioned &amp; 0.75 MTPA under Construction stage.</p>
4.	Sinter Plant	2.8+3.2 MTPA	4.0 MTPA	10.0 MTPA	<ul style="list-style-type: none"> <li>2.8+2.5 MTPA plants are in operation.</li> <li>The 8 MTPA plant under 5-10 MTPA is being amended to 4 MTPA for which amendment done</li> </ul>
5.	Blast Furnace including Pig casting	3.6 MTPA (by augmentation)	4.5 MTPA	8.1 MTPA	<ul style="list-style-type: none"> <li>3.5 MTPA plant in operation</li> <li>4.5 MTPA plant under 5-10 MTPA, Commissioning stage</li> </ul>
6.	SMS (CONARC)	5.2 MTPA (by augmentation)	---	5.2 MTPA	5.2 MTPA Plant in operation

7.	SMS -BOF	--	6.0 MTPA	6.0 MTPA	Construction work in progress.
8.	Ladle Furnace (LF)	2x200t +205t	2X300t	2x200t +205t 2X300t	<ul style="list-style-type: none"> <li>• 2x200t +205t LF in operation</li> <li>• 2X300t LF under 5-10 MTPA, Construction work in progress.</li> </ul>
9.	VD/VOD & RH-TP	1x200t+1x205t	2x300t	1x200t +1x205t 2x300t	<ul style="list-style-type: none"> <li>• 1x200t+1x205t in operation</li> <li>• 1x200t +1x205t 2x300t under 5-10 MTPA, techno-commercial discussion in progress.</li> </ul>
10.	CSP(HRC Coil) Thin Caster-cum-Hot Strip Finishing Train	3.5 MTPA (By Augmenting)	-	3.5 MTPA	3.5 MTPA plant in operation.
11.	Conventional Slab Caster	2x1 strands (3.68 MTPA)	2x2 strands (5.72 MTPA)	Total 6 strands (9.4 MTPA)	<ul style="list-style-type: none"> <li>• 2x1 strands (3.68 MTPA) in operation</li> <li>• 2x2 strands (5.72 MTPA) under 5-10 MTPA, Construction work in progress.</li> </ul>
12.	Billet Caster	-	1x6 Strands	6 strands (1.5 MTPA)	1x6 strands (1.5 MTPA) plant in operation.
13.	Plate Mill	1.5 MTPA	-	1.5 MTPA	Technology to be finalised.
14.	CRM (Hot Rolled Skin Pass + Cold Rolled Full Hard Coil + Hot Rolled Pickled & Oiled Coil)	1.0 MTPA	1.5 MTPA	2.5 MTPA	Technology to be finalised.
15.	Galvanizing Line (Cold Rolled Steel Strips, Hot Dip Zinc Coated Full Hard)	0.6 MTPA	-	0.6 MTPA	Technology to be finalised.
16.	Electrical Steel CRGO line	0.4 MTPA	-	0.4 MTPA	Technology to be finalised.
17.	Tin Plate Mill	0.4 MTPA	-	0.4 MTPA	Technology to be finalised.
18.	Colour Coating Plant	0.5 MTPA	-	0.5 MTPA	Technology to be finalised.

19.	Lime/Dolo Plant	1800 TPD	1800 TPD	3600 TPD	<ul style="list-style-type: none"> <li>1800 TPD plant in operation</li> <li>1800 TPD plant under 5-10 MTPA, Construction work in progress.</li> </ul>
20.	Oxygen Plant	4100 TPD	3500 TPD	7600 TPD	<ul style="list-style-type: none"> <li>4100 TPD plant in operation</li> <li>3500 TPD plant under 5-10 MTPA Construction work in progress.</li> </ul>
21.	Hot Rolling Mill with shearing & slitting line	-	5.0 MTPA	5.0 MTPA	5 MTPA plant under 5-10 MTPA, Construction work in progress.
22.	Bar Mill	-	1.4 MTPA	1.4 MTPA	1.4 MTPA Plant in operation.
23.	Slag & Clinker Grinding Unit	"	10 MTPA	10 MTPA	EC transferred to JSW Cement Ltd.
24.	Captive Power Plant	300 MW	300 MW	600 MW (based on surplus gases of BF & Coke Oven)+RL NG	<ul style="list-style-type: none"> <li>55 MW Gas based CPP in operation.</li> <li>300 MW CPP under 5 -10 MTPA construction work in progress.</li> </ul>
25.	Township	-	150 acres	150 acres	Work not yet started.

Sr. No.	ENVIRONMENTAL CLEARANCE CONDITIONS	COMPLIANCE STATUS AS ON March, 2021
<b>A) Specific Conditions</b>		
i	The project proponent should install 24x7 air and water monitoring devices to monitor air emission and effluent discharge, as provided by CPCB and submit report to Ministry and its Regional Office.	<ul style="list-style-type: none"> <li>Five Continuous Ambient Air Quality Monitoring stations have been installed in consultation with MPCB. All these stations are connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis for PM2.5, PM10, SO2, NOx &amp; CO with proper O&amp;M</li> <li>For existing plants, Continuous Stack Emission Monitoring systems are installed at all major stacks &amp; connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis.</li> <li>Data on Stack Emission, Ambient Air Quality and Work Environment Air Quality are being submitted to;</li> <li>MPCB - Once in three months,</li> <li>MOEF&amp;CC, Nagpur &amp; Delhi – Once in Six month</li> <li>CPCB, New Delhi – Monthly basis</li> </ul> <p>And shall be extended to 5 to 10 MTPA expansion units.</p>

ii	The PP should ensure treatment of effluent particularly from Blast Furnace (BF) and Coke Oven plant. The plant should be designed to meet the cyanide standards stipulated by MoEF&CC under EPA Act 1986.	<ul style="list-style-type: none"> <li>ETP is designed to meet the norms both for BF and Coke Oven plant in the expansion project.</li> </ul>
iii	The commitment made by the PP for plantation of the green belt to the tune of 655 acres should be expedited. Three rows of green belt, 12-15 meters wide, all along the periphery of the plant should be planted.	The expansion of the steel plant project from 5 to 10 MTPA is in contiguous to the 3 to 5 MTPA. Accordingly, 33% green belt shall be completed in and outside premises as recommended by the EAC, MoEF&CC in the next 5 years once the expansion projects are completed.
iv	The CSR plan as submitted by the PP in the area of health care, rural infrastructure development, education, sports and cultural activity, Swachh Bharat Abhiyan with respect to the earlier projects and the ongoing project at Dolvi site are very slow in implementation. The CSR activities should be implemented expeditiously and simultaneously with the implementation of the project, and annual report on CSR activity should be submitted to the Ministry.	JSW foundation is the apex organization which is responsible for implementation of CSR activity in and around Dolvi works. JSW foundation is supported by JSW Steel Limited & will be complied.
v	At least 5 % of the total cost of the project should be earmarked towards the Enterprise Social Commitment (ESC) based on local needs. The proponent should prepare a detailed CSR Plan for every next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head should be created and the annual capital and revenue expenditure on various activities of the Plan should be submitted as part of the Compliance Report to RO, at Bhopal. The details of the CSR Plan should also be uploaded on the company website and should also be provided in the Annual Report of the company.	<p>CSR activities in various sectors are being done in the surrounding villages and a time bound action plan for various CSR activities have been submitted to MoEF&amp;CC as per EAC recommendation of 2.5% of project cost.</p> <p>JSW Sanjeevani Hospital of 73 Beds are under construction stage for take care of health related problem for the locals.</p> <p>COVID Care centre developed</p> <p>with supply of Oxygen by dedicated pipe line from plant</p>

vi	No development should be done on the creek-ward side of the land. Land area between HTL to 100 mts or width of the creek, whichever is less, on the landward side should be kept free from any type of development.	Development of plant is beyond 100 mtrs from HTL & kept free. Survey was carried out by IRS, Chennai
vii	Full utilization of slag both BF and SMS should be implemented. The details should be submitted along with 6 monthly compliance reports.	For 5 to 10 MTPA full utilization of both slags will be implemented, It will be complied once the projects are completed.
viii	No waste water will be discharged outside the plant boundary during normal operation. In case it become necessary to discharge effluent meeting norms fit to the marine environment, permission of the relevant authority should be obtained.	No waste water will be discharged outside the plant boundary during normal operation. In case of discharge effluent meeting norms fit to the marine environment, permission of the relevant authority will be obtained
ix	No untreated effluent should be reused for any process.	Untreated waste water will not be reused for any process.
x	Measures should be taken to reduce PM levels in the ambient air. Stack of adequate height & diameter with continuous stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), bag house, bag filters etc. should be provided to keep the emission levels below 50mg/Nm <sup>3</sup> and installing energy efficient technologies in the Plant	For new unit under 5 to 10 MTPA all necessary air pollution control devices shall be provided to keep the emission levels below 50mg/Nm <sup>3</sup> .
xi	On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks should be provided and sufficient air pollution control devices. Gaseous emission levels including secondary fugitive emissions from all the sources should be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB should be followed.	<ul style="list-style-type: none"> <li>• Five Continuous Ambient Air Quality Monitoring stations have been installed in consultation with MPCB. All these stations are connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> &amp; CO with proper O&amp;M</li> <li>• Noted &amp; will be complied</li> </ul>
xii	Dust suppression system and bag filters should be installed to control the fugitive dust emissions at conveyor and transfer points, product handling, loading and unloading points,	Noted & will be complied
xiii	Water consumption should not exceed as per the CREP standard prescribed for the steel plants. Additional water, if any, required for the plant project operations. Should be met from rainwater stored in rainwater harvesting structures.	Noted & will be complied

xiv	Rainwater harvesting scheme should be prepared so that the rainwater can be collected, re-used and may be used for ground water recharge. The concrete drains should be de-silted and regular supervision of the areas should be carried out so that blocking of drains may be avoided for quick discharge of rainwater. Efforts should further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement.	Noted and will be complied.  Rain Water Harvesting system has been implemented in the existing plant (at 12 various buildings of Oxygen Plant, Coke Oven, Power Plant, MRSS and Admin.) and shall be extended to the expansion projects
xv	All the effluents should be treated and reused for dust suppression/green belt development. No effluent should be discharged and 'zero' discharge should be adopted.	Noted & will be complied.
xvi	Full utilization of fly ash should be ensured as per Fly Ash Notification, 1999 and subsequent amendment in 2003 and 2010. All the fly ash should be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding should be submitted to the Ministry's Regional Office at Bhopal.	The Captive Power plant for the existing and the expansion project are gas based. Hence Fly Ash is not generated in the process. Therefore Fly Ash utilization is not relevant to us.
xvii	Hazardous materials required during construction phase and in plant operations should be stored properly as per the regulations and reused/recycled as per the E(P)A Rules.	Noted & will be complied
xviii	Vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.	Noted
xix	Risk and Disaster Management Plan along with the mitigation measures should be prepared and implemented.	Risk & Disaster Management plan has been submitted to MoEF&CC, New Delhi along with EIA.
xx	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.	Noted & shall be complied
xxi	All the commitments made to the public during public hearing/public consultation should be satisfactorily implemented and adequate budget provision should be made accordingly.	Noted & shall be complied
xxii	All the permanent workers should be covered under ESI Scheme. The company should have the provision for treatment of its workers at the local Nursing Homes & Hospitals in case of emergency. Annual Medical Check-up on	Noted & shall be complied as per earlier practice. As per the Factories Act, regular health checkups have been done for workers and employees & records are maintained on regular basis.

	some medical parameters like Blood test, Chest X-Ray, Eye test, Audiometry, Spirometry etc. should be conducted amongst the employees of the Company.	
<b>B) General Conditions</b>		
i	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board and the State Government.	The guidelines given by Maharashtra Pollution Control Board (MPCB) and State Government are followed.
ii	No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Noted and is being complied
iii	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, PM2.5, SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission should be regularly submitted to this Ministry including its Regional Office at Nagpur and the SPCB/CPCB once in six months.	Already 5 Nos. online Ambient Air Quality Monitoring Station Installed with consultation of SPSB & data connected to MPCB & CPCB Website.
iv	Industrial wastewater should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 313' December, 1993 or as amended from time to time. The treated wastewater should be utilized for plantation purpose.	Noted & will be complied,
v	The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	Overall noise levels in and around the plant area will be maintained well within the standards (85 dBA). Ambient noise levels will be maintained as prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).
vi	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	As per the Factories Act, regular health checkups have done for workers and employees & records are maintained on regular basis.
vii	The company should develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Noted and will be complied.  Rain Water Harvesting system has been implemented in the existing plant (at 12 various buildings of Oxygen Plant, Coke

		Oven, Power Plant, MRSS and Admin.) and shall be extended to the expansion projects
viii	The project proponent should also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	Noted & will be complied  All Environment Protection measures have been taken and undertaking the community development program in nearby villages and same will be continued for expansion projects.
ix	Requisite funds should be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forests and Climate Change (MoEF&CC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein should be submitted to the Regional Office of the Ministry at Nagpur. The funds so provided should not be diverted for any other purpose.	Noted & will be complied.
x	A copy of clearance letter should be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter should also be put on the web site of the company by the proponent.	A copy of clearance letter is already submitted to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the local NGO,
xi	The project proponent should upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and should update the same periodically. It should simultaneously be sent to the Regional Office of the MOEFCC at Nagpur. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects should be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Being Complied.



xii	The project proponent should also 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 MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Nagpur / CPCB / SPCB should monitor the stipulated conditions.	Being Complied.
xiii	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, should also be put on the website of the company along with the status of compliance of environmental conditions and should also be sent to the respective Regional Office of the MOEFCC at Nagpur by e-mail.	Being Complied.
xiv	The Project Proponent should inform the public 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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This should be advertised 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 should be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Nagpur.	Complied.  Published in news paper as per guidelines namely in Local news paper Dainik Krushiwal, Raigad Times, Ramprahar dated August 30, 2015 and English news paper Indian Express dated September 01, 2015.
xv	Project authorities should 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.	Noted & will be complied time to time.

## SIX MONTHLY COMPLIANCE REPORTS OF ENVIRONMENT CLEARANCE CONDITIONS

**Sub: Changes in Plant configuration for proposed expansion of Integrated Steel Plant from 5 to 10 MTPA by M/s JSW Steel Limited at Geethapuram, Village Dolvi, Tehsil Pen, District Raigarh in Maharashtra**

**Ref: Environmental Clearance for changes in configuration for Pellet Plant II (9 MTPA) proposed expansion of integrated steel plant from 5 to 10 MTPA vide letter No J-11011/76/2013-IA-II(I) dated 16/06/2020.**

The production facilities after the expansion are given below:

S. No	Unit Name	Existing Capacity	Granted vide EC dated 25.08.2015	Proposed Change plant Configurati	Total Capacity after change in	Status as on March 2021
		A	B	C	A+C	
1.	DR1 (Gas based Mega Module)	2.0 MTPA (by augmentation )	2.0 MTPA	2.0 MTPA	4.0MTPA	2 MTPA plant in operation 2 MTPA plant under 5-10 MTPA, & technology finalization under progress
2.	Pellet Plant	4.0 MTPA	4.0 MTPA	9.0 MTPA	13.0 MTPA	4 MTPA plant in operation  9 MTPA plant under 5-10 MTPA, It is proposed to enhance the capacity to total 13 MTPA
3.	Coke Ovens including By-product plant	1.0 MTPA	-	-	1.0 MTPA	1.0 MTPA in operation under EC M/s. Amba River Coke Ltd  <b>3.5 MTPA Coke Oven,</b> • 1.5 MTPA is in operation. Another • 1.5 MTPA Construction work in progress.
4.	Sinter Plant	6.0 MTPA	8.0 MTPA	4.0 MTPA	10.0 MTPA	2.8+2.5 MTPA plants are in operation. The 8 MTPA plant under 5-10 MTPA is being amended to 4 MTPA for which amendment done

5.	Blast Furnace including Pig casting	3.6 MTPA	4.5 MTPA	4.5 MTPA	8.1 MTPA	3.5 MTPA plant in operation  4.5 MTPA plant under 5-10 MTPA, Construction work in progress.
6.	SMS (CONARC)	5.2 MTPA	-	-	5.2 MTPA	5.2 MTPA Plant in operation
7.	SMS -BOF	-	6.0 MTPA	6.0 MTPA	6.0 MTPA	Construction work in progress.
8.	Ladle Furnace (LF)	2x200t +205LT	2X300T	2X300 T	2 X200 T+250T +2X300 T	2x200t +205t LF in operation  2X300t LF under 5-10 MTPA, Construction work in progress.
9.	VD/VOD & RH-TP	1x200T+1x205T	2x300T	2x300T	1x200T+1x250T+2X300 T	1x200t+1x205t in operation  1x200t +1x205t 2x300t under 5-10 MTPA, techno-commercial discussion in Progress.
10.	CSP (HRC Coil) Thin Caster-cum-Hot Strip Finishing Train	3.5 MTPA	-	-	3.5 MTPA	3.5 MTPA plant in operation.
11.	Conventional Slab Caster	2x1 strands (3.68 MTPA)	2x2 Slab Casters 5.73 MTPA	2x2 Slab Casters 5.73 MTPA	9.41 MTPA	2x1 strands (3.68 MTPA) in operation  2x2 strands (5.72 MTPA) under 5-10 MTPA, Construction
12.	Billet Caster	-	1x6 Strands	1x6 Strands	1x6 strands	1x6 strands (1.5 MTPA) plant in operation.
13.	Plate Mill	1.5 MTPA	-	-	1.5 MTPA	Technology to be finalised.
14.	Hot Rolling Mill with Shearing and	-	5.0 MTPA	5.0 MTPA	5.0 MTPA	Technology to be finalised.
15.	Bar Mill	-	1.4 MTPA	1.4 MTPA	1.4 MTPA	1.4 MTPA Plant in operation.
16.	CRM	1 MTPA	1.5 MTPA	1.5 MTPA	2.5 MTPA	Technology to be finalised.
17.	Galvanizing Line	0.6 MTPA	-	-	0.6 MTPA	Technology to be finalised.
18.	Electrical Steel CRGO Line	0.4 MTPA	-	-	0.4 MTPA	Technology to be finalised.
19.	Tin Plate Mill	0.4 MTPA	-	-	0.4 MTPA	Technology to be finalised.

20.	Colour Coating line	0.5 MTPA	-	-	0.5 MTPA	Technology to be finalised.
21.	Lime /dolo Plant	1800 TPD	3X600 TPD	3X600 TPD	3600 TPD	1800 TPD plant in operation  1800 TPD plant under 5-10 MTPA, Construction work in progress.
22.	Oxygen Plant	4100 TPD	3500 TPD	3500TPD	7600 TPD	4100 TPD plant in operation  3500 TPD plant under 5-10 MTPA Construction work in progress.
23.	Captive Power Plant	300MV	300MV	300MV	600 MW.	55 MW Gas based CPP in operation.  300 MW CPP under 5 - 10 MTPA construction work in progress.
24.	Township	-	150 acres township of 7500 dwellings	150 acres township of 7500 dwellings	150 acres township of 7500 dwellings	Work not yet started.
25.	Solid waste Incinerator	-	-	250 kg/hr	250 kg /hr	Work is in progress

Sr. No.	ENVIRONMENTAL CLEARANCE CONDITIONS	COMPLIANCE STATUS AS ON March 2021
<b>A) Specific Conditions</b>		
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 10 km of study area."	Green Belt will be developed 16 % within project site and 33 % will be developed within 10 km of study area. Plantation inside the plant will be done in phase manner as per the land availability.
ii	The CER activities shall be implemented in accordance with this Ministry's OM vide F.No.22 -65/2017-IAIIdated 1 <sup>st</sup> May 2018 within the Project implementation period.	CER activities shall be implemented in accordance with the MoEFCC guidelines.
iii	Treated domestic wastewater generated from township Shall be reused and recycled.	Noted and will be complied after construction of township.
iv	The Project Proponent Shall achieve Zero Liquid Discharge (ZLD) at the end	Zero Liquid Discharge (ZLD) will be

	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.	achieved 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>B) General Conditions</b>		
<b>I. Statutory Compliance:</b>		
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.	Noted and will be complied.
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.	Noted & will be complied. Ground water will not be used for this plant. However permission obtained for withdrawal of surface water for this project.
iii	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules , 2016 as amended from time to time	Noted and will be complied
<b>II. Air quality monitoring and preservation</b>		
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 31 <sup>st</sup> March 2012 ( Integrated iron & Steel ) ; G.S.R 414 (E) dated 30 <sup>th</sup> May 2008(Sponge Iron) as amended from time ; S.O 3305 ( E) dated 7 <sup>th</sup> 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.	Noted and will be complied
ii	The Project Proponent Shall monitor fugitive emission in the plant premise at least once in every quarter through labs recognised under Environment (Protection)Act , 1986.	Noted and will be complied for monitoring fugitive emissions.

iii	<p>The Project Proponent Shall install system to carryout Continuous Ambient Air Quality monitoring for common /criterion parameters relevant to the main pollution released(e.g. PM<sub>10</sub> and PM<sub>2.5</sub> in reference to PM emission , and SO<sub>2</sub> and NO<sub>x</sub> emissions ) Within and outside the Plant area at least at four locations ( one within and three outside the plant area at an angel of 120° each) . covering upwind and downwind directions.</p>	<ul style="list-style-type: none"> <li>• Five Continuous Ambient Air Quality Monitoring stations have been installed in consultation with MPCB. All these stations are connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> &amp; CO with proper O&amp;M</li> <li>• Existing plants, Continuous Stack Emission Monitoring systems are installed at all major stacks &amp; connected to URL of MPCB &amp; CPCB &amp; data is being transmitted online on real time basis.</li> <li>• Data on Stack Emission, Ambient Air Quality and Work Environment Air Quality are being submitted to;</li> <li>• MPCB - Once in three months,</li> <li>• MOEF&amp;CC, Nagpur &amp; Delhi – Once in Six month</li> <li>• CPCB, New Delhi – Monthly basis</li> </ul> <p>And shall be extended to 5 to 10 MTPA expansion units.</p>
iv	<p>The cameras shall be installed at suitable location for 24x7 recording of battery emission on the both sides of coke oven batteries and videos shall be preserved for at least one – month recording.</p>	<p>Separate cameras installed for recording battery emissions on 24 x 7 basis of Coke Oven plant.</p>
v	<p>Sampling facility at process stacks and at quenching towers shall be provide as per CPCB guidelines for manual monitoring of emissions.</p>	<p>Noted &amp; will be complied</p>
vi	<p>The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and result of manual stack monitoring and manual monitoring of air quality /fugitive emissions to Regional office of MoEF&amp;CC, Zonal office of CPCB and regional office of SPCB along with six – Monthly monitoring report</p>	<p>Noted &amp; will be complied</p>
vii	<p>Appropriate Air Pollution Control (APC) system shall be provide for all the dust generating points including fugitive dust from all vulnerable sources so as to comply prescribed stack emission and fugitive emission standards.</p>	<p>Noted &amp; will be complied</p>
Viii	<p>The Project proponent shall provide leakage detection and mechanised bag cleaning facilities for better maintenance of bags.</p>	<p>Noted and is being complied</p>

ix	Secondary emission control system shall be provide at SMS Converters.	Noted & will be complied
x	Pollution control system in the steel plant shall be provided as per the CREP Guidelines of CPCB.	Noted & will be complied,
xi	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors , roofs, regularly.	Road sweeping machines are provided to clean the internal on regular basis. Stationary vacuum cleaners shall be provided for shop floors to clean the shop floor.
xii	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices in the process after briquetting /agglomeration.	Iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices shall be reused in the process after agglomeration.
xiii	The projects proponent use leak proof trucks /dumpers carrying coal and other raw materials and cover them with tarpaulin.	Noted and will be complied.
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).	Noted & will be complied
xv	Land –based APC systems to be installed to control coke pushing emissions	Separate Dedusting systems provided to control the charging and pushing emissions from Coke ovens
xvi	Monitor CO, HC and O <sub>2</sub> in flue gases of the Coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.	Noted & will be complied.
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.	Being Complied.
xviii	In Case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans. Suitable NO <sub>x</sub> control facility shall be provided to meet the prescribed standards.	Being Complied.
xix	The coke oven gas shall be subjected to desulphurization if the sulphur content in the coal exceeds 1%.	Being Complied.
xx	Wind Shelter fence and chemical spraying shall be provide on the raw material stock piles.	Will be complied Closed covering sheds constructed for storing the raw materials. Raw material will be transported through closed conveyors.
xxi	Design the ventilation system for adequate	Noted & will be complied.

	air changes as per ACGIH document for all tunnels, Motor houses, oil Cellares.	
xxi	The project proponent shall install dry Gas Cleaning Plant with bag filter for blast Furnace and SMS converter.	Will be complied for installation of dry Gas Cleaning Plant with bag filter at Blast Furnace II and SMS Converter.
<b>III Water quality monitoring and preservation</b>		
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 31 <sup>st</sup> March 2012 ( Integrated iron & Steel ); G.S.R 414 ( E) dated 30 <sup>th</sup> May 2008 ( Sponge Iron )as amended from time to time; S.O. 3305 ( E ) dated 7 <sup>th</sup> December 2015( Thermal Power Plant ) 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.	Noted and will be complied.
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 recognised under Environment (Protection) Act. 1986 and NABAL accredited laboratories.	Noted and will be complied
iii	The Project Proponent shall 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 CPCB and Regional office of SPCB along with Six – Monthly monitoring report.	The monthly Environment monitoring report will be submitted to CPCB, MPCB and MoEFCC as per the guidelines.
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 31 <sup>st</sup> March 2012 ( Integrated iron & Steel ); 3305 ( E) dated 7 <sup>th</sup> December 2015 ( Thermal Power Plant) as amended from time to time as amended from time to time.	ETP i.e. Biological Oxidation and Dephenaloization (BOD) has been provided to the existing Coke Oven plant and are designed to meet the norms.
v	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Sewage Treatment Plant will 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 runoff in the event of heavy rains and to check the water pollution due to surface runoff.	Various provisions like covered shed, settling tank, Covered conveyor belt etc. shall be provided for Raw Material Handling area to arrest the runoff during monsoon season and avoid pollution due to surface runoff.
vii	Tyre washing facilities shall be provided at the entrance of the plant gates.	Raw material shall be transported through closed conveyor belt from jetty to plant. Tippers and truck movement shall be restricted within premises. All internal road shall be concreted.
viii	CO <sub>2</sub> injection shall be provide in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.	Noted and will be complied.
ix	The projects proponent shall make efforts to maximum possible extent.	Noted and will be complied.
x	Treated water from ETP of COBP shall not be used for coke quenching.	As per the standard procedure for coke oven plants the treated waste water from Coke oven - BOD plant is used for coke quenching.
xi	Water meters shall be provided at the inlet to all unit processes in the steel plant.	Noted and will be complied.
xii	The projects 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.	Noted and will be taken measures to reduce the water consumption.

#### **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	Noted and will be complied. Existing plants the work place noise level is monitored in the plant locations and submitted to MoEFCC on six monthly basis.
ii	The ambient noise levels should conform to the standards prescribed under E (P) rules , 1986 viz . 75 db (A) during day time and 70 db (A) during night time	Noted and will be complied. Noise level is monitored at ambient air quality monitoring locations as per guidelines and submitted to MoEFCC on six monthly basis.

#### **V. Energy Conservation measures**

i	The project proponent shall provide TRTs to recover energy from top gases to blast furnaces.	In Blast Furnace Top Gas Recovery Turbine are provided to recover the energy from top gases.
ii	Coke Dry Quenching (CDQ) Shall be provided for coke quenching for the both recovery and non – recovery type coke ovens ;	Noted and will be complied.

iii	Waste heat shall be recovered from sinter Plant coolers and Sinter Plants coolers and sinter Machines .	Noted and will be complied. Existing Sinter plants I & II waste gas recovery systems are already installed.
iv	Use torpedo ladle for hot metal transfer as far as possible . If ladles not used , provide covers for open top ladles.	Noted and will be complied as per the existing practice.
v	Use hot charging of slabs and billets / blooms as far as possible.	Noted and will be complied.
vi	Waste hot recovery system shall be provide in all units where the flue gas or process gas exceeds 300°C .	Noted and will be complied wherever possible.
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 .	Noted and will be complied for proposed units. Existing Blast Furnace and Sinter plants, Waste Heat Recovery boilers are in place.
viii	Restrict Gas Flaring to < 1%	Noted and will be complied.
ix	Proved solar Power generation on roof tops of buildings . for solar light system for the all common area , stress lights. Parking around projects area and maintain the same regularly ;	Noted and will be complied wherever possible.
x	Proved LED lights in their officers and residential areas.	Noted and will be complied.  LED lights are using in Existing plant offices and plant areas.
xi	Ensure installation of regenerative type burners on all reheating furnace.	Noted and will be complied.

## **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.	Noted and will be complied as per the feasibility.
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.	Noted.  The existing coke oven plants are recovery type. The coke oven gas generated is used as fuel for various processes.
iii	Tar sludge and waste oil shall be blende with coal charged in coke ovens ( applicable only to recovery type coke ovens)	Noted and will be complied As per the standard operating procedures for Coke Oven plants, the Tar sludge is blended with coal and charging in the battery.
iv	Carbon recovery plant to recover the elemental to recover scrap , metallic and flux for recycling to sinter plant and SMS.	Noted and will be complied.
v	Waste Recycling Plant shall be installed to	Noted and will be complied.

	recover scrap , metallic and flux for recycling to sinter plant and SMS.	Slag processing plant with Metal recovery system is in place. All the plant wastes like Bag Filter Dust, ETP sludge and Iron bearing materials are used in Sinter and Pellet Plant.
vi	Used refractories shall be recycling for possible.	Noted and will be complied.
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 Projects 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.	Noted and will be complied. R&D work with various Govt agencies are carrying out the utilization of Steel slag for various purposes
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.	This condition is not relevant.  The Captive Power plant for the existing and the expansion project are gas based. Hence Fly Ash will not be generated in the process. Therefore, Fly Ash utilization is not relevant to us.
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.	Noted and will be complied.
x	The Waste oil grease and other hazardous waste like acidic sludge from picking 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 .	The used and spent oil generated from the plant shall be sold to MPCB/CPCB authorized recyclers.
xi	Kitchen waste shall be composed or converted to biogas for further use.	Noted and will be complied as per the feasibility
<b>VII. Green Belt</b>		
i	Green belt shall be developed in are equal to 33% of the plant area with a native tree species in accordance with CPCB guideline .The greenbelt shall inter alia covert the entire periphery of the plant.	33 % of green belt shall be developed as per CPCB guidelines.
ii	The Projects proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including planation.	GHG emissions inventory shall be prepared for regular monitoring of CO2 emissions including plantation.

<b>VIII. Public hearing and Human health issues</b>		
i	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management plan shall be implemented .	Hazard Identification and Risk Assessment (HIRA) and Disaster Management plan are already in place for existing plants and will be prepared for new units under 5 to 10 MTPA expansion.
ii	The project proponent shall carry out heat stress analysis for the workmen who work in in high temperature work zone provide personal protection Equipment (PPE) as per the norms of factory Act.	Heat Stress analysis is being implemented for the workman who are working in high temperature area and adequate PPEs shall be provided.
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.	During construction of housing colony, necessary infrastructure and facilities such as fuel for cooking mobile toilets, mobile STP, safe drinking water medical health care ,crèche etc is being provided to the labours.
iv	Occupational heath surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Noted & shall be complied as per earlier practice. As per the Factories Act, regular health check-up's have been done for workers and employees & records are maintained on regular basis.
<b>IX Corporate Environment Responsibility</b>		
i	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental police should prescribe for standards operating to have proper check and balance 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.	Environment Policy is in place and being complied in adherence to Environmental Clearance, Environmental Laws and regulations.
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.	Separate Environment Cell is in place having qualified Environment personnel. Head of Environment dept reports to Head of the Plant i.e. President.
iii	Action plan for implementing EMP and environmental conditions along with	Shall be complied

	responsibility matrix of the company shall be prepared and shall 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 environment audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Noted and will be complied
v	All the recommendation made the charter on corporate responsibility for Environment protection (CREP)_ for the Iron and steel plants shall implemented.	Noted and shall be complied for CREP guidelines.
<b>X. Miscellaneous</b>		
i	The Projects proponent shall make public the environmental clearance granted for their projects along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspaper of the District or State ,of which one shall be in the vernacular language within seven days and addition this shall also be displayed in the project proponent's website permanently.	Complied.  Published in news paper as per guidelines namely in Local news paper Dainik Krushiwal, Raigad Times, Ramprahar dated 30 <sup>th</sup> June 2020 and English news paper Free Press Journal dated July 10, 2020 and the same was displayed on JSW website.
	The copies of environmental clearance shall be submitted by the projects 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 .	A copy of clearance letter is already submitted to concerned Panchayat, Zillah Parishad/Municipal Corporation, Urban Local Body and the local NGO,
iii	The project proponent shall up lode the status compliance of stipulated environment clearance conditions including results of monitored date on their website and update the same on half – yearly basis.	Noted and shall be complied on regular basis
iv	The Projects Proponent shall monitor the criteria pollutants level namely; PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>x</sub> ( 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.	Environmental parameters are monitored on monthly basis and the Six monthly environmental monitoring reports are submitted to MoEFCC and displayed the same in JSW Steel website
v	The Project proponent shall submit six-monthly reports on the status of the compliance of the stipulated Environmental	Six monthly environmental Clearance compliance reports are submitted to MoEFCC and displayed

	conditional on the website of the ministry of environment ,Forest and Climate change at environmental Clearance portal.	the same in JSW Steel website
vi	The Project proponent shall submit the environment statemental for each financial year in from –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.	Environment Statement reports are prepared and submitted to MPCB before 30 <sup>th</sup> September of every year. The same is uploaded on JSW Steel Website.
vii	The Project proponent shall inform the Regional office as well as 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.	Noted
viii	The Project authorities must strictly adhere to the stipulations mode by the state pollution control Board and the state Government.	Shall be complied
ix	The Project proponent shall abide 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 .	Noted and shall be complied
x	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment , Forests and Climate Change (MoEF/ CC).	Noted and shall be complied
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.	Noted
xii	The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	Noted
xiii	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner shall implement these conditions.	Noted
xiv	The Regional office of this Ministry Monitor Compliance of stipulated conditional .The Project authorities should extended full cooperation to the officer (s) of the regional office by furnishing the requisite data /information/monitoring reports.	Noted and shall be complied
xv	The above conditions shall be enforced inter – alia under 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	Noted and shall be complied

	Wastes ( Management and transboundary Movement ) Rules ,2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules ,2016 and any other orders passed by the hon'ble supreme Court of India /High Court and any other Court of Law relating to the Subject matter.	
xvi	Any appeal against this EC shall lie with National Green Tribunal ,if preferred, within a period of 3 days as prescribed under section 16of the National green Tribunal Act,2010.	Noted