

### **COMPLIANCE OF ENVIRONMENTAL CLEARANCE**

**3.0 MTPA integrated Steel Plant at Raigad District, Maharashtra by M/s. JSW Steel Ltd.  
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>CONDITIONS</b>	<b>COMPLIANCE STATUS</b>
i)	The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board and the State Government.	JSW Steel Ltd., Dolvi works has obtained Consent to operate from Maharashtra Pollution Control Board and following the guidelines given by Maharashtra Pollution Control Board (MPCB) Consent conditions and State Government time to time.  <b>Hence, Condition is complied.</b>
ii)	No expansion or modifications of the plant should carried out without prior approval of this Ministry	All the amendments and expansions till date, are carried out after obtaining prior approval of this Ministry.  <b>Hence, Condition is complied,</b>
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.	Gaseous emissions from various process units should confirm to the load / mass based standards notified in the latest applicable emission standards of GSR277(E) dated 31st March 2012 and MPCB stipulated Norms in Consent. Copy of stack emission monitoring report is enclosed as <b>Annexure-1</b> . Emissions from the process units are well within the prescribed standards as notified by the Ministry.  <b>Hence, Condition is complied,</b>

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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>Continuous Stack Emission Monitoring systems are installed at all process 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 monitored and submitted as per guidelines to;               <ol style="list-style-type: none"> <li>MPCB - Once in three months, MOEF&amp;CC, Nagpur &amp; Delhi – Once in Six month</li> <li>CPCB, New Delhi – Monthly basis</li> </ol> </li> </ul> <p><b>Hence, Condition is complied.</b></p>
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>Following measures are implemented for control of fugitive emissions-</p> <ul style="list-style-type: none"> <li>Raw Material handling area with yard sprinklers, dry fog system, Dust extraction systems to control the fugitive emissions. Covered sheds for Raw Material storage provided.</li> <li>Covered shed for Jetty yard-A with a capacity of 110,000MT for Coal Storage</li> <li>Covered shed for Jetty Yard-B with a total capacity of 305,000 MT for Iron Ore and Flux.</li> <li>Covered Sheds (2 Nos) for Pellet and Coke Storage of Capacity-1,20,000 MT each.</li> <li>Covered shed for storing Iron Ore Bearing Material and Flux is in progress. Capacity of the covered shed is 4,27,000 MT.</li> <li>Investment on Yard sprinklers, De-dusting system and Dry fogging system to the amount of Rs 77.29 Crores</li> <li>Bag filter, ESPs with adequate capacity to keep the emission levels below 30 mg/Nm<sup>3</sup> in all plants (Steel Melting Shop II, Hot Strip Mill II, Blast Furnace II and Lime Calcination Plants 5,6,7)</li> <li>Energy efficient technologies in the Plant like waste heat recovery system, Top gas</li> </ul>

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		<p>recovery turbine from Blast furnace and Gas Based power plant.</p> <ul style="list-style-type: none"> <li>• All internal roads made of concrete.</li> <li>• Road Sweeping machines (04nos) and water sprinkler tankers (02 nos).</li> <li>• Transferring dust of De-dusting system and other secondary dusts generated from Pollution Control equipment by bulkers.</li> <li>• Transferring raw material from Jetty to plant 100 % through belt and pipe conveyors thereby eliminating any chances of fugitive emission through transportation of material from outside plant to the raw material yard there by improving the Ambient Air Quality.</li> </ul> <p><b>Hence, condition is complied.</b></p>
vi	Adequate effluent treatment facilities should be provided so that the treated effluent conforms to the prescribed standards.	<p>Adequate effluent treatment facilities have been provided at all units and the treated water is recycled back in the process.</p> <ul style="list-style-type: none"> <li>• In Blast Furnace 1, Waste Water treatment plant of capacity 2496 CMD, provided with Flash Mixer, Common, Collection Tank, Thickener, Sludge Storage Tank, Vacuum Drum Filters</li> <li>• Steel Melting Shop (SMS) 1 and Hot Strip Mill (HSM) 1, the Waste Water treatment plant of Capacity 3408 CMD provided with Scale Pits, Pressure Sand Filters, Flash Mixer, Thickener, Sludge Holding Tank, Filter Press the water system are closed loop system.</li> <li>• In Sponge Iron Plant, Waste Water treatment facility provided with Capacity 3624 CMD. Waste water is treated in Classifier, Clarifier, High rate thickner and routed through Sludge pond wherein the sludge is separated and water is reused for Electric Arc Furnace (EAF) slag cooling at SMS1.</li> <li>• All the cooling tower blowdown is being treated in the ETP of capacity 250 M3/hr and the treated water is reused in process and slag cooling purpose. There is no waste water discharge outside the plant premises.</li> </ul>

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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 to outside, 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; <ul style="list-style-type: none"> <li>a) MPCB - Once in three months, MOEF&amp;CC, Nagpur &amp; Delhi – Once in Six month</li> <li>b) CPCB, New Delhi – Monthly basis</li> </ul> </li> </ul> <p><b>Hence, condition is complied.</b></p>
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.	<p>Effluent treatment facility is provided in all plants and the treated water is recycled in the process and reused for EAF slag cooling and dust suppression.</p> <p>Treated domestic wastewater from the Sewage Treatment Plant is used for plantation purpose. There is no waste water discharge from the plant.</p> <p><b>Hence, condition is complied.</b></p>
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.	<p>Entire requirement of cooling water is not met from fresh water, water lost by evaporation and drift loss is sourced from fresh water as make-up water. Cooling tower blow down/wastewater is re-circulated in colling system/ process after treatment in close loop treatment facility.</p> <p>Colling water is not drawn from creek and there is no discharge to creek.</p> <p>Cooling water is sourced from Amba River as per Agreement with Irrigation Department.</p> <p><b>Hence, condition is complied.</b></p>
x	No Coke oven plant should be set up without the approval of this Ministry.	<p><b>Coke Oven plant</b> has been set up after obtaining separate EC from MoEF&amp;CC vide letter No J-11011/286/2007-IA-II(I) dated 12/01/2009.</p> <p><b>Hence, condition is complied.</b></p>
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	<p>Wastewater treatment system is installed at various units with collection and equalization tank considering exigencies and the treated waste water is recycled / reused.</p> <p>Details of ETP and tanks is submitted with six monthly compliances.</p>

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	Ministry within a period of 6 months.	<b>Hence, condition is complied.</b>
xii	A perspective plan for 100 % utilization of 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.	Granulated slag of Blast Furnace entirely is used in Cement Plant for making Cement in JSW Group Company (JSW Cement Ltd) located within the Plant Premises.  <b>Hence, condition is complied.</b>
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.	All the raw materials are being brought to the plant site by sea route through our Captive Jetty of JSW Dharamtar Port Pvt. Ltd. Followed by rail to the production facility.  Finished products (HR Coils) are transported through rail / sea and minimum by road.  Very less Transportation within plants for materials like lime etc. is through closed bulker and truck.  <b>Hence, condition is complied.</b>
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.	<b>Green Belt within Plant:</b> Presently, 13% green belt is developed over 18.00 ha land within the plant premises with 2,11,388 nos of trees. Balance 18.42 Ha (3%) green belt area is to being developed with 46,200 nos of trees. Green belt developed with tree density 2500 trees/hectare and local species.  Green Belt Outside Plant in 10 Km area: Green belt outside the plant premises has been developed over 203.00 Ha i.e. 33 % as per EC.  Green belt outside the plant premises is developed in forest land in proximity of the plant area in consultation with local forest department over 51 Ha land and Mangrove Plantation over 152.00 Ha.  <b>Hence, condition is complied.</b>
xv	Approval from the Sate 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	The creek or the river has not been dredged for leveling the site. All requisite steps were taken to ensure that the run off material do not flow into the river/creek during site leveling. Material is stored in covered sheds to control the runoff of materials into drains and concrete roads are provided within the plant

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	flow into the river / creek during the site leveling.	premises along with storm water drains. <b>Hence, condition is complied.</b>
xvi	Approval under CRZ notification should be obtained for the extension of the existing jetty. The proposed storages facilities should be beyond 150 m from HTL of creek / river.	Jetty is operated by separate entity in the Name of JSW Infrastructure Ltd, all approvals including EC, CRZ clearance are obtained and conditions complied by JSW Infrastructure Ltd. <b>Hence, condition is complied.</b>
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 with reporting to Senior position. <b>Hence, condition is complied.</b>
xviii	A 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.	Separate Environment Cell is in place having qualified Environment personnel. The Environment Cell team size is around 25 nos. The Team reports to Site Environment head and Site Environment head reports to Site Head and Corporate Environment Head, who reports to Chief Operations Officers- COO. <b>Hence, condition is complied.</b>
xix	Medical surveillance of workers especially wrt the pneumoconiosis etc. should be done regularly and records maintained.	As per the Factories Act, regular health checkups done for workers and employees & records are maintained on regular basis. <b>Hence, condition is complied.</b>
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.	Environmental expenditure for the year 2022-23 for operation and maintenance cost, Power cost, Treatment Cost for Pollution Control systems and Solid Waste Management are Rs 592.26 Crores. Expenditure of environment expanses are reported to Ministry and MPCB. <b>Hence, condition is complied.</b>
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.	Agreed and complied for the conditions of MoEF&CC. <b>Hence, condition is complied.</b>
4	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	All the required conditions are implemented. <b>Hence, condition is complied.</b>
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)	The plant is complying for: <ul style="list-style-type: none"> <li>• The Water (Prevention and Control of Pollution) Act 1974</li> <li>• The Air (Prevention and Control of</li> </ul>

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	Act, 1981, the Environment (Protection) Act 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	<p>Pollution) Act 1981</p> <ul style="list-style-type: none"> <li>• The Environment (Protection) Act 1986, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules 2008</li> <li>• The Public (Insurance) Liability Act 1991 along with their amendments and Rules.</li> </ul> <p><b>Hence, condition is complied.</b></p>