

o/c



A wholly owned subsidiary of JSW Steel Ltd.

**Amba River Coke Limited**

**Dolvi Works:** Geetapuram, Taluka Pen,  
Dist Raigad (Maharashtra),  
Dolvi - 402 107

CIN. : U23100MH1997PLC110901

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**BY COURIER**

October 20, 2018

ARCL/ENV/MoEF&CC/2018

To

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

Sub: Submission of Compliance report of Environmental Clearance for 1.0 MTPA Coke Oven Plant of M/s. Amba River Coke Ltd. at Geetapuram, Village Dolvi, Tehsil Pen, District Raigad in Maharashtra.

Ref: i) MoEF Letter - F No J-11011/286/2007-IA-II(I) dated 12/01/2009.

Dear Sir,

With reference to above, please find enclosed herewith Compliance report of Environmental Clearance for 1.0 MTPA Coke Oven Plant of M/s. Amba River Coke Ltd. at Geetapuram, Village Dolvi, Tehsil Pen, District Raigad in Maharashtra.

This is for your kind information & record please.

Thanking you,

Yours faithfully,  
For Amba River Coke Limited

Mallineni Sukumar  
General Manager

- CC: 1) The Director, MoEF&CC, Indira Paryavaran Bhawan, Jor Bagh, Lodi Road, New Delhi-110003 for kind information.  
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

JSW Steel Limited  
Dolvi, Pen-Raigad.

23 OCT 2018

RECEIVED

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## **AMBA RIVER COKE LTD**

**Geetapuram, Dolvi, Taluka – Pen, District – Raigad, Maharashtra**

Compliance status of Specific and General Conditions of Environmental Clearance for Coke Oven Plant (1.0 MTPA) at Geetapuram, Village Dolvi, District Raigad, Maharashtra MoEF Letter - F No J-11011/286/2007-IA-II(I) dated 12/01/2009.

### **A. Specific Conditions:**

<b>Sr. No.</b>	<b>Specific Conditions</b>	<b>Status as on September, 2018</b>
i	Proper and full utilization of coke oven gases in power plant using heat recovery steam generator (WHRB) shall be ensured and no flue gas shall be discharged into the air. Tar, NH <sub>3</sub> shall be cleaned in the process and H <sub>2</sub> S recovery from the coke oven shall be ensured. Coal Tar, elemental sulphur and crude Benzol shall be recovered from coke oven gas. Scrubbers shall be provided to scrub ammonia Benzol and H <sub>2</sub> S. Wet quenching will be adopted to minimize escape of particulate matter.	<p>The Coke Oven Gas is presently utilized fully in Sponge Iron Plant, Pellet Plant, CSP - Tunnel Furnace, Sinter Plant &amp; 55 MW Power Plant.</p> <p>Following recovery &amp; control systems are installed;</p> <ul style="list-style-type: none"><li>• Wet Quenching of coke has been adopted</li><li>• Boiler for steam generation (WHRB)</li><li>• Waste gas recovery &amp; Gas Holding Tank</li><li>• Coal Tar &amp; Tar Recovery system</li><li>• Scrubbing System for Ammonia &amp; H<sub>2</sub>S</li><li>• Desulphurization system for sulphur recovery</li><li>• Crude Benzol is not recovered.</li></ul>
ii	As proposed, ammonia in coke oven gas shall be scrubbed and destructed in the process, crude tar; crude Benzol and element sulphur shall be recovered. Crude tar shall not be processed. Sulphur recovery unit shall be installed to recover Sulphur.	<p>Following systems are provided;</p> <ul style="list-style-type: none"><li>• Scrubbing System for Ammonia &amp; H<sub>2</sub>S &amp; destructed in Process</li><li>• Crude Tar Recovery system</li><li>• Desulphurization system for sulphur recovery.</li><li>• Crude Benzol is not recovered.</li></ul>
iii	The prescribed emission standards for coke oven plants e.g. 10ng/m <sup>3</sup> as notified vide notification no. GSR 46 (E) dated 3 <sup>rd</sup> February, 2006 and subsequently amended shall be complied with.	<p>As notified vide notification no. GSR 46 (E) dated 3<sup>rd</sup> February, 2006, this norm is for Benzo-Alpha pyrene (BaP) under work zone air quality. The work zone ambient air emission is well within the norms.</p>
iv	Continuous stack monitoring facilities for all the major stack and adequate air pollution systems shall be provided to control air emission within 100 mg/Nm <sup>3</sup> and report submitted to the Ministry's Regional Office at the Bhopal, Central Pollution Control Board (CPCB) and Maharashtra Pollution Control	<ul style="list-style-type: none"><li>• The Coke Oven has one Main Stack of 145 mtr. height connected to 2 nos. of batteries (110 ovens).</li><li>• Installed Online Continuous stack emission monitoring system at Main Stack</li><li>• Air Pollution Control systems are provided to control the air emissions.</li></ul>

	Board(MPCB)	<p>The details are as follows;</p> <ol style="list-style-type: none"> <li>1. <b>Bag Filters</b> for coal mixing station route</li> <li>2. <b>Ground De-dusting system with Bag Filters</b> – connected to charging and pushing, primary crusher, coke cutter, secondary coke crusher area</li> <li>3. <b>Bag Filters</b> for coke screen house &amp; Silo.</li> <li>4. <b>Main Stack</b> - 2 Nos. batteries (110 Ovens) connected to 145 meter Concrete chimney.</li> <li>5. <b>Flare Stack</b> – attached to pipeline of COG</li> <li>6. <b>Boiler Stack</b> – Attached to WHR boiler</li> <li>7. <b>Dust suppression system</b> at all the transfer points, coal handling and coke sorting area.</li> </ol> <ul style="list-style-type: none"> <li>• Monitoring reports submitted to MOEF&amp;CC, CPCB &amp; MPCB as per guidelines.</li> </ul>
v	In-plant control measures like bag filters, de-dusting and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Pulse jet type bag filters shall be provided to hoods and dust collector to coal and coke handling to control dust emissions, fugitive emissions from coal handling plant shall be controlled by sprinkling water.	<p>To control fugitive emissions following Control Measures are provided;</p> <ol style="list-style-type: none"> <li>1. <b>Bag Filters</b> for coal mixing station route</li> <li>2. <b>Ground De-dusting system with Bag Filters</b> – connected to charging and pushing, primary crusher, coke cutter, secondary coke crusher area</li> <li>3. <b>Bag Filters</b> for coke screen house &amp; Silo.</li> <li>4. <b>Dust suppression system</b> at all the transfer points, coal handling and coke sorting area.</li> </ol>
vi	Secondary fugitive emission shall be controlled within the prescribed limits, regularly monitored and records maintained Guidelines / Code of practice issued by the CPCB in this regards shall be followed.	<ul style="list-style-type: none"> <li>• Secondary fugitive emission is controlled and the work zone ambient air quality parameters are within the prescribed norms. Records are being maintained and the report has been submitted. Guidelines / Code of practice issued by the CPCB in this regard are being followed.</li> </ul>
vii	Total requirement of the water from the reservoir shall not exceed 6000 m <sup>3</sup> /day. Wet quenching system shall be adopted for cooling of hot coke coming out of the coke oven. Phenolic wastewater shall	<ul style="list-style-type: none"> <li>• The total water requirement for the Coke Oven Plant is within the limits prescribed, present water consumption is 5600.96 M<sup>3</sup>/day</li> <li>• Wet Quenching System Provided</li> </ul>

	<p>be treated in phenolic effluent treatment plant. Tar/Oils shall be separated followed by biological treatment of phenolic wastewater in BOD plant shall be ensured and use of quenching of hot coke to control emissions, dust suppression and green belt development. No wastewater shall be discharged outside the premises. ;Zero' discharge shall be adopted. Domestic wastewater shall be treated in septic tank followed by soak pit and uses for green belt development.</p>	<ul style="list-style-type: none"> <li>• BOD plant has been provided to treat the waste water from the By product &amp; coke oven plant.</li> <li>• BOD plant consists of (i) Pre-treatment: including oil separation pool and air floatation pool, (ii)The second step is biologic treatment stage: including anaerobic pool, anoxic pool, aerobic pool and contact oxidization pool (iii)The third stage is of tertiary treatment- final sedimentation and filter</li> <li>• Zero discharge is being maintained in the plant.</li> <li>• Septic tanks followed by soak pits have been provided for treatment of domestic waste water, overflow of soak pits are connected to sewage treatment of BOD plant.</li> <li>• Treated water from the BOD plant is utilized for Quenching process and is also reused for dust suppression and green belt development</li> </ul>
viii	<p>Prior permission for the drawl of 6000 m3/day water shall be obtained from the concerned department.</p>	<p>Permission obtained from irrigation department dated 21/06/2013.</p>
ix	<p>Cyanide as CN shall be controlled within 0.2 mg/liter and Ammonical Nitrogen within 50 mg/liter as per the standard notified under the E(P) Act.</p>	<p>BOD plant treated water is entirely used for coke quenching and there is no discharge to outside. Free Cyanide as CN and Ammonical Nitrogen are within the prescribed standards.</p>
x	<p>Coal and coke fines shall be recycled and reuses in the process in the coke oven batteries by mixing with coal charges. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner. Crude tar, Benzol, Sulphur and waste oil shall be properly disposed off as per the hazardous Waste ( Management &amp; Handling) Rules, 1989 and subsequent amendments</p>	<ul style="list-style-type: none"> <li>• Coal &amp; Coke fines is recycled &amp; reused in the process with coal charge.</li> <li>• Broken refractory mass will be properly disposed off in environment-friendly manner.</li> <li>• Crude tar is sold to outside party – as a by product</li> <li>• Sulphur and waste oil are properly disposed off as per the HW (M &amp; H) Rules</li> </ul> <p>Crude Benzol is not recovered.</p>
xi	<p>As proposed, green belt shall be developed in 8 ha. (33%) out of total 24 ha. Area within the around the project site to mitigate the impact of fugitive emissions as per the CPCB guidelines in consultation with local DFO.</p>	<ul style="list-style-type: none"> <li>• Coke Oven Plant is located within the JSW Steel Ltd. complex. 33 % area shall be provided green cover in consultation with DFO.</li> </ul>
xii	<p>Prior permission from the State Forest</p>	<ul style="list-style-type: none"> <li>• Conservation Plan for the conservation</li> </ul>

	Department shall be obtained regarding likely impact of the proposed coke oven plant on the surrounding reserve forests. Further, Conservation Plan for the conservation of wild fauna in consultation with the State Forest Department shall be prepared and implemented.	of flora or wild fauna in consultation with the State Forest Department is not applicable as there are no reserve forests in the surroundings of the coke oven plant.
xiii	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the coke oven plants shall be implemented.	As per CREP guidelines, implementations done.
xiv	The company shall provided 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. Plant construction work completed.
xv	All the environment management measures given in the EIA/EMP shall be implemented and complied with.	Implemented and complied.

#### B. General Conditions:

Sr. No.	General Conditions	Status
i	The project authorities must strictly adhere to the stipulation made by the Maharashtra Pollution Control Board (MPCB) and the State Government.	As per MPCB guidelines under Air, Water and HW (M & H) Rules will be followed time to time.
ii	No further expansion or modification in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Noted
iii	At least four ambient air monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO <sub>2</sub> and NO <sub>x</sub> are anticipated in consultation with the MPCB. Data on ambient air quality and stack emission should be regularly submitted to this ministry including it's Regional Office at Bhopal and the MPCB/CPCB once in six months.	<ul style="list-style-type: none"> <li>• Coke oven plant is in existing Integrated Steel Plant complex.</li> <li>• Already 5 Nos. Online AAQM locations installed in consultation with MPCB &amp; four stations are in downward directions.</li> <li>• Parameters PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO are being monitored</li> <li>• Ambient Air Quality &amp; Stack Emission Monitoring data is submitted to RO, Office Nagpur, MPCB &amp; CPCB once in six month.</li> </ul>

iv	In plant control measure for checking fugitive emissions from all the vulnerable source shall be provided. Fume and dust extraction system with bag filters shall be provided at the transfer and discharge point to control fugitive emissions. Further, specific measures like water sprinkling around the raw material storage areas and asphaltting or concreting of the roads shall be done to control fugitive emissions.	<ul style="list-style-type: none"> <li>• Air Pollution Control systems are provided to control the fugitive emissions with checking facility at sources of raw material and finished product handling area.</li> <li>• Ground de-dusting system for Fume and dust extraction with bag filters has been provided</li> <li>• Concrete roads have been provided.</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> December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	<ul style="list-style-type: none"> <li>• BOD plant has been provided to treat the Coke oven waste water</li> <li>• Treated water is recycled in quenching process.</li> </ul>
vi	The company shall developed rain water harvesting structures 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 for safety reasons.
vii	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 levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (Daytime) and 70 dBA (Nighttime).	Ambient Noise level is maintained as per standards.
viii	Occupational Health Surveillances of the workers shall be done on a regular basis and records maintained as per the Factories Act.	As per the Factories Act, regular health checkups done for workers and employees & records are maintained.
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	<ul style="list-style-type: none"> <li>• Environmental protection measures and safeguards recommended in the EIA/EMP report is being implemented and complied.</li> </ul> <p>We have taken up many socio-economic development activities in the surrounding villages as part of our CSR activities and</p>

	like community development programmes, educational programmes, drinking water supply and health care etc.	they are going on. <ul style="list-style-type: none"> <li>• Drinking water in surrounding villagers.</li> <li>• Various community development programs,</li> <li>• Educational programmes,</li> <li>• Health care – Regular Medical Camps for villagers for health check up.</li> </ul>
x	As proposed Rs. 90.00 Crores shall be earmarked towards Environmental Pollution control measures shall be judiciously utilized to implement the conditions stipulated by the ministry of Environment and Forest as well as the State Government. The funds so provided shall not be submitted to them regularly.	As mentioned separate fund has been earmarked for pollution control measures Rs. 66.81 crores have been utilized for pollution control measures.
Xi	The regional Office of this Ministry at Bhopal / CPCB / MPCB shall monitor the stipulated conditions. A six monthly compliances report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Noted, Six monthly compliance reports are submitted regularly.
Xii	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 MPCB and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . this shall be advertised within seven day for the date of issue of the clearance latter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded o the Regional office at Bhopal.	<ul style="list-style-type: none"> <li>• Copy of the Environment Clearance has been uploaded in the Company's Website.</li> </ul>
xiii	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closures and final approval of the project by the concerned authorities and the date of commencing the land development work.	<ul style="list-style-type: none"> <li>• Financial closure Letter submitted to MoEF&amp;CC vide letter ARCL/ENV/MoEF/2011 Dated April 8, 2011.</li> <li>• Final approval of the project done by M/s. Soham Consultants.</li> </ul>