

**ENVIRONMENTAL CLEARANCE COMPLIANCE STATUS
REPORT**

**October 2024 TO March 2025
AMBA RIVER COKE LTD, DOLVI WORKS**

Six Monthly Compliance, Status report

Compliance status of Specific and General Conditions of Environmental Clearance for Coke Oven Plant (1.0 MTPA) at Geetapuram, Village Dolvi, District Raigad, Maharashtra.

EC No - F No J-11011/286/2007-IA-II(I) dated 12/01/2009.

**ENVIRONMENTAL MANAGEMENT DEPARTMENT
JSW STEEL LTD, DOLVI WORKS, TALUKA PEN, RAIGAD-DISTRICT,
MAHARASHTRA 402107**

Compliance Report to Conditions stipulated in 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 by M/s Amba River Coke Limited, for period (October 2024 to March 2025)

A. Specific Conditions:

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i	Proper and full utilization of coke oven gases in power plant using heat recovery steam generator (WHRB) shall be ensure and no flue gas shall be discharged into the air. Tar, NH ₃ shall be cleaned in the process and H ₂ 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 ₂ S. Wet quenching will be adopted to minimize escape of particulate matter.	<p>Complied.</p> <p>The Coke Oven Gas is presently fully utilized as a fuel in Coke Oven, Sponge Iron Plant, Pellet Plant, CSP - Tunnel Furnace, Sinter Plants, Lime Calcination Plant (LCP) & 55 MW Power Plant.</p> <p>Following recovery & control systems are installed;</p> <ul style="list-style-type: none"> • Wet Quenching of coke has been adopted. Presently Coke Dry Quenching system has been installed. • Boiler for steam generation (Waste Heat Recovery Boiler (WHRB) • Waste gas recovery & Gas Holding Tank • Coal Tar & Tar Recovery system • Scrubbing System for Ammonia & H₂S • Desulphurization system for sulphur recovery • Crude Benzol is not recovered.
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 install to recover Sulphur.	<p>Complied.</p> <p>Following systems are provided;</p> <ul style="list-style-type: none"> • Scrubbing System for Ammonia & H₂S & destructed in Process • Crude Tar Recovery system • Desulphurization system for sulphur recovery. • Crude Benzol is not recovered.
iii	The prescribed emission standards for coke oven plants e.g. 10ng/m ³ as notified vide notification no. GSR 46 (E) dated 3 rd February, 2006 and subsequently amended shall be complied with.	<p>As notified vide notification no. GSR 46 (E) dated 3rd February, 2006, this norm is for Benzo-Alpha pyrene (BaP) under work zone air quality.</p> <p>The work zone ambient air emission is well within the norms.</p> <p>Hence it is complied.</p>
iv	Continuous stack monitoring facilities for all	Complied with

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	the major stack and adequate air pollution systems shall be provided to control air emission within 100 mg/Nm ³ and report submitted to the Ministry's Regional Office at the Bhopal, Central Pollution Control Board (CPCB) and Maharashtra Pollution Control Board(MPCB)	<ul style="list-style-type: none"> • The Coke Oven has one Main Stack of 145 mtr. height connected to 2 nos. of batteries (110 ovens). • Installed Online Continuous stack emission monitoring system at Main Stack, Ground Dedusting system for Charging and Pushing side (total 3 Nos CEMS). • Air Pollution Control systems are provided to control the air emissions. The details are as follows; <ol style="list-style-type: none"> 1. Bag Filters for coal crushing & mixing station & route 2. Ground De-dusting system with Bag Filters – connected to charging and pushing, primary crusher, coke cutter, secondary coke crusher area 3. Bag Filters for coke screen house & Silo. 4. Main Stack - 2 Nos. of batteries (110 Ovens) connected to 145 meter Concrete chimney 5. Flare Stack – attached to pipeline of Coke oven Gas (COG) 6. Boiler Stack – Attached to Waste Heat Recovery Boiler ((WHRB) 7. Dust suppression system in all the transfer points, coal handling and coke handling area. <p>Environmental Monitoring reports are submitted to MOEF&CC, CPCB & MPCB as per guidelines.</p>
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	<p>To control the fugitive emissions following Control Measures are provided;</p> <ol style="list-style-type: none"> 1. Bag Filters for coal crushing & mixing station & route 2. Ground De-dusting system with Bag Filters – connected to charging and pushing, primary crusher, coke cutter, secondary coke crusher area 3. Bag Filters for coke screen house & Silo.

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	to control dust emissions, fugitive emissions from coal handling plant shall be controlled by sprinkling water.	<p>4. Dust suppression system at all the transfer points, coal handling and coke handling route.</p> <p>Hence it is complied.</p>
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.	<p>Complying with</p> <ul style="list-style-type: none"> • Secondary fugitive emission is controlled by provision of ground de-dusting systems at charging and pushing side and coal and coke handling area. • The work zone 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 time to time.
vii	Total requirement of the water from the reservoir shall not exceed 6000 m3/day. Wet quenching system shall be adopted for cooling of hot coke coming out of the coke oven. Phenolic wastewater shall 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>Complying with</p> <ul style="list-style-type: none"> • The total water requirement for the Coke Oven Plant is within the limits prescribed, present water consumption is 5400 M3/day • Wet Quenching System Provided and presently Coke Dry Quenching system installed. • Biological Oxidization and de-phenolization (BOD) plant has been provided to treat the waste water from the By product & coke oven plant. • BOD plant consists of <ul style="list-style-type: none"> (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 • Zero liquid discharge is being maintained in the plant. • Septic tanks followed by soak pits have been

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		<p>provided for treatment of domestic waste water, overflow of soak pits are connected to sewage treatment of BOD plant.</p> <ul style="list-style-type: none"> Treated water from the BOD plant is utilized for Coke Quenching process.
viii	Prior permission for the drawl of 6000 m3/day water shall be obtained from the concerned department.	Complying with the Permission obtained from irrigation department withdrawal of Raw water dated 21/06/2013.
ix	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.	Complying with the 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.
x	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 & Handling) Rules, 1989 and subsequent amendments	<p>Complying with</p> <ul style="list-style-type: none"> Coal & Coke fines is recycled & reused in the process with coal charge. Broken refractory mass will be properly disposed off in environment-friendly manner. Crude tar is sold to outside party; as a by product Sulphur and waste oil are properly disposed off as per the HW (M & H) Rules. Presently Crude Benzol is not recovered.
xi	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>Green Belt within Plant:</p> <p>Presently, 13% green belt is developed over 80.00 ha land within the plant premises with 2,17,457 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.</p> <p>Green Belt Outside Plant in 10 Km area:</p> <p>Green belt outside the plant premises has been developed over 203.00 Ha i.e. 33 % as per EC.</p>

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		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 Hence, condition is complied.
xii	Prior permission from the State Forest 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.	Conservation Plan for the conservation 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.	Complied with <ul style="list-style-type: none"> • As per CREP guidelines for Coke Oven plant, implementations done. • The Coal tar generated from the coke oven plant is reused for coke processing. • Sludge generated from the Waste water treatment plant (BOD) plant is reused for coke processing. • Coke Oven Gas generated from the plant is collected in the Gas Holder and used as fuel for other plants. • Installed ground de-dusting systems with bag filters in charging side and pushing side of the Coke oven battery to control the secondary emissions
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.	Project proponent has complied for housing for construction labors during construction work of the Coke oven plant. Plant construction work is already completed and the temporary structures have been already removed
xv	All the environment management measures	Environment Management measures given in

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	given in the EIA/EMP shall be implemented and complied with.	the EIA/EMP has been already implemented and complied by the project proponent

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 and complied the Consent to operate conditions. Hence it is complied
ii	No further expansion or modification in the plant should be carried out without prior approval of the Ministry of Environment and Forests.	Noted and shall be complied. No Modifications done in Coke oven plant
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 ₂ and NO _x 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"> • Coke oven plant is located in existing Integrated Steel Plant complex. • Hence, already 5 Nos. Online AAQM locations installed in consultation with MPCB & four stations are in downward directions in the Integrated Steel Plant Complex. • Parameters PM_{2.5}, PM₁₀, SO₂, NO_x, CO are being monitored • Ambient Air Quality & Stack Emission Monitoring data is submitted to MOEFCC, RO Office, Nagpur, MPCB & CPCB on six monthly, quarterly and monthly basis. Copy of the six monthly Environment monitoring report for plants under Amba River Coke Ltd is attached in Annexure 1
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.	Complying with <ul style="list-style-type: none"> • Air Pollution Control systems are provided to control the fugitive emissions with checking facility at sources of raw material and finished product handling area.

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	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"> • Ground de-dusting system with bag filters has been provided for control of Fume and dust emissions from pushing & charging • Concrete roads have been provided inside the plant.
v	Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	Complied <ul style="list-style-type: none"> • BOD plant has been provided to treat the waste water generated from Coke oven. • Treated water is recycled in quenching process.
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.	Complying with the 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).	Complied. Ambient Noise level is monitored on regular basis and the 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. Hence it is complied
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, educational programmes, drinking water supply and health care etc.	<ul style="list-style-type: none"> • Environmental protection measures and safeguards recommended in the EIA/EMP report is being implemented and complied. <p>Amount spent on CSR Activities: For 2022-23 (April to March 2023): Rs 3.865 Crores For 2023-24 (April 2023 to March 2024): Rs</p>

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		<p>7.90 Crores.</p> <p>The above amount has been spent on Social Development- (Education & Training), Skill Development, Water and Sanitization, Agriculture, Mangrove Plantation, Rural Development, Health Checkup, Solid Wastes Management and Community Development.</p> <p>The Industry has taken up many socio-economic development activities in the surrounding villages as part of our CSR activities and they are going on.</p> <ul style="list-style-type: none"> • Drinking water supply for surrounding villagers. • Various community development programs, Educational programmes and Skill Development, • Health care – Regular Medical Camps for villagers for health check up.
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.	<ul style="list-style-type: none"> • 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.	<p>The project proponent has submitted Six Monthly Environmental Clearance compliance reports to the Regional office, MoEFCC, MPCB and CPCB on regular basis. Please refer Annexure 1.</p> <p>Environment statement report for the year 2023-24 is submitted to MPCB and the copy of the report is attached in Annexure 2.</p> <p>Hence it is Complied</p>

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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 http://envfor.nic.in . 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.	<p>Complied.</p> <p>The project proponent has already uploaded the copy of Environment Clearance in the Company's Website.</p>
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"> • Financial closure Letter submitted to MoEF&CC vide letter ARCL/ENV/MoEF/2011 Dated April 8, 2011. • Final approval of the project done by M/s. Soham Consultants. <p>Hence it is Complied.</p>