

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

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Dated: 24th August, 2015
25th

To

✓
M/s JSW Steel Ltd.
Thapar House, 3rd Floor
Eastern Side of Central Wing,
124, Janpat Lane,
New Delhi-110001

Email: Nil; Fax No.- 91 11- 43724333

Subject: Expansion of Integrated Steel Plant from 5 MTPA 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 – Environmental Clearance regarding

Sir,

This has reference to your letter No. Nil dated 6th February, 2015 along with copies of EIA/EMP report seeking Environment Clearance under the provisions of the EIA Notification, 2006 for the project mentioned above. The ToR to the project was awarded by MoEFCC vide letter dated 28th May, 2013 for preparation of EIA/EMP report. The proposed project activity is listed at S.No. 3(a) in primary metallurgical industry under Category 'A' of the Schedule of EIA notification 2006 and appraised by the Expert Appraisal Committee (Industry).

2. The Ministry of Environment, Forest and Climate Change (MoEFCC) has examined your application for EC for the aforesaid project. It is noted that M/s JSW Steel Limited (JSWSL) proposes to expand the integrated steel plant to 10.0 MTPA from existing 5.0 MTPA at Geetapuram, Dolvi in Raigad District of Maharashtra. The existing steel plant is based on the Direct Reduced Iron (DRI) - Blast Furnace-CONARC-Ladle Furnace & VD/VOD - Continuous Casting - Rolling Mill (CSP) route. The expansion would be based on proven BF - BOF route. Expansion of 3.0 MTPA Steel Plant to 5.0 MTPA and 300 MW Captive Power Plant is under implementation. The site falls between Longitude - 73°00'00" - 73°05'00" E, Latitude - 18°39'00" - 18°45'00" N. Land comprises Dolvi, Jui Bapuji & khar Karavi Villages. Pen is the nearest railway station at about 8 km (aerial distance) on the Konkan Railway line connecting Mumbai-Mangalore along the West Coast of India. The nearest airport is Mumbai (national and international) located about 80 km in the north direction from the proposed project site. The company has about 1200 acres of land in its possession for its existing operating integrated steel plant complex of 5.0 MTPA capacity. Some of the proposed additional capacities are proposed to be setup within the existing plant

and some need relocated by acquiring additional 600 acres land. There is no national park, biosphere reserve, sanctuary, habitat for migratory birds, archaeological site, defence installation etc. within 10 km of the periphery of the plant boundary. The total project cost is estimated to be Rs. 17,000 Cr. The CSR budget is Rs 225 cr for 5 MTPA project and Rs 425 Cr for 10 MTPA project. The requirement of total manpower for proposed expansion project will be about 5,000. However, the proposed Integrated Steel Plant will additionally generate more than 15,000 indirect secondary and tertiary employment.

3.0 The production facilities after the expansion is given below: (Expansion of JSWSL (existing 5 MTPA to 10 MTPA))

Sl. No.	Technological facility	Units / Facilities (EC accorded) under 5 MTPA	Proposed facilities under 5 to 10 MTPA	Total Plant Capacity AT 10 MTPA
1.	DRI (Gas based Mega Module)	2.0 MTPA (by augmentation)	2.0 MTPA	4.0 MTPA
2.	Pellet Plant	4.0 MTPA	4.0 MTPA	8.0 MTPA
3.	Coke Ovens including By-product plant	2.0 MTPA	2.5 MTPA	4.5 MTPA
4.	Sinter Plant	2.8+ 3.2 MTPA	8.0 MTPA	14.0 MTPA
5.	Blast Furnace including Pig casting	3.6 MTPA by modification of existing Blast Furnace	4.5 MTPA	8.1 MTPA
6.	SMS (CONARC)	5.2 MTPA (By Augmenting the existing facilities)	-	5.2 MTPA
7.	SMS -BOF	-	6.0 MTPA	6.0 MTPA
8.	Ladle Furnace(LF)	2x200 t +205 t	2X300 t	2x200 t + 205 t 2X300 t
9.	VD/VOD & RH-TP	1x200 t + 1x205 t	2x300 t	1x200 t + 1x205 t 2x300 t
10.	CSP(HRC Coil) Thin Caster-cum-Hot Strip Finishing Train	3.5 MTPA (By Augmenting)	-	3.5 MTPA
11.	Conventional Slab Caster	2x1 strands (3.68 MTPA)	2x2 strands (5.72 MTPA)	Total 6 strands (9.4 MTPA)
12.	Billet Caster	-	1x6 Strands	6 strands (1.5 MTPA)

Sl. No.	Technological facility	Units / Facilities (EC accorded) under 5 MTPA	Proposed facilities under 5 to 10 MTPA	Total Plant Capacity AT 10 MTPA
13.	Plate Mill	1.5 MTPA	-	1.5 MTPA
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
15.	Galvanizing Line (Cold Rolled Steel Strips, Hot Dip Zinc Coated Full Hard)	0.6 MTPA	-	0.6 MTPA
16.	Electrical Steel CRGO line	0.4 MTPA	-	0.4 MTPA
17.	Tin Plate Mill	0.4 MTPA	-	0.4 MTPA
18.	Colour Coating Plant	0.5 MTPA	-	0.5 MTPA
19.	Lime /Dolo Plant	1800 TPD	1800 TPD	3600 TPD
20.	Oxygen Plant	4100 TPD	3500 TPD	7600 TPD
21.	Hot Rolling Mill with shearing & slitting line	-	5.0 MTPA	5.0 MTPA
22.	Bar Mill	-	1.4 MTPA	1.4 MTPA
23.	Slag & Clinker Grinding Unit	-	10 MTPA	10 MTPA
24.	Captive Power Plant	300 MW	300 MW	600 MW (based on surplus gases of BF & Coke Oven) +RLNG
25.	Township	-	150 acres	150 acres

The list of raw materials required for the project:

Sr. No	Description	Raw Material Requirements at (10 Mtpa)		
		Quantity	Source	Mode of transport
A	Iron bearing raw materials (IBRM)			
1	C.L.O.	0.38	NMDC/Imported	Rail/ Sea
2	Iron Ore Fines	19.72	Imported	Sea
	Total	20.1		
B	Fluxes			
1	Lime stone (40-80 mm)	1.30	Imported	Sea

2	Dolomite (40 to 80 mm)	0.72	Imported	Sea
3	Lime stone (Sinter grade)	0.71	Imported	Sea
4	Dolomite (Sinter grade)	1.55	Imported	Sea
5	Quartzite	0.24	Rajasthan	Rail
Total		4.52		
C	Carbon bearing raw material (CBRM)			
1	a) Hard Coking coal 60%	3.72	Imported	Sea
	b) Semi Hard Coking coal 40%	2.59	Imported	Sea
2	PCI Coal	1.25	Imported	Sea
3	Coke breeze	0.18	Indigenous	-
4	Anthracite (Low VM, Ash)	0.23	Imported	Sea
Total		8.02		
Grand Total		32.64	All Figures are in Million ton	

4.0 The total water requirement for the 10 MTPA steel plant, 600 MW power plant and township will be about 116 MLD. At present JSW ISPAT Steel Ltd., Dolvi Works has been allocated about 56 MLD water from River Amba, Nagothane, K.T.Bandhara and consent for 30 MLD has been obtained. Application is in progress for the balance amount. M/s JSW has permission for drawl of 53.66MLD from Irrigation Dept., Govt. of Maharashtra. Water drawl from River Amba sanctioned. Permission for additional 65MLD water is under consideration of Govt. of Maharashtra. It was further stated that the region receives heavy rainfall of about 3000mm annually and surplus water is available in the Dam.

5.0 The wastewater generated from the indirect cooling circuit would be routed through the cooling tower and pressure filter for recycling purpose. The wastewater generated from the coke ovens will be treated in a bio-oxidation plant to reduce the level of phenolic compounds, oil & grease and cyanide. The treated wastewater will be reused in the system. The wastewater of gas cleaning plants of blast furnace and steel melt shop containing suspended solids will be clarified in the wastewater treatment plant. The clarified water will be recycled to the waste gas cleaning units. Similarly, the wastewater coming out from the continuous casting machine will be treated to remove scale and oil and the treated water will be recycled after cooling. The plant sanitary waste water will be treated in sewage treatment plant and the treated water will be used for dust suppression and maintenance of plant green belt.

6.0 De-dusting system with bag filters at all dust generating locations in all the units have been installed to control the dust emissions as well as in the BF cast house and SMS and dust emission levels at work zone are within prescribed limits. For the expansion project (5 MTPA), which is under various stages, secondary fugitive dust emission system will be installed at the BF Cast House, SMS and all other units.

7.0 Public hearing was conducted on 28.01.2014 at Pen Education Society's Jaikisan Vidya Mandir and Higher Medium School at Wadhkal, Taluk. Pen, Dist. Raigad, Maharashtra. The issues raised during the public hearing inter alia include measures for pollution control, information on gas holder installed in the project, infrastructure development for water supply in the neighbouring areas, repair of roads, road traffic, development of fishing activity, repair of kharland Bund, arrangement for village candidates sent for training in Bellary, more employment for the locals etc.

8.0 The matter was considered in the 31st EAC meeting held on 8th – 9th January, 2015, when it was decided to visit the site. Accordingly, site visit was conducted on 9th March, 2015 by a sub-committee. Based on the site visit report of the Sub-Committee and its recommendation the proposal was further considered by the Expert Appraisal Committee (Industry) during its 35th meeting held on 26th – 27th March, 2015 and recommended the project for environment clearance subject to stipulation of the following specific conditions and other mitigative measures and conditions for environmental protection:

9.0 The Ministry of Environment, Forest and Climate Change (MoEFCC) on the basis of the aforesaid recommendations of the EAC (I), hereby decided to grant Environmental Clearance to the project under the provisions of EIA Notification dated 14th September 2006, subject to strict compliance of the following Specific and General conditions:

A. SPECIFIC CONDITION:

- 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.
- 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 MoEFCC under EPA Act 1986.
- 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.
- 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.
- 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.

- 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.
- vii. Full utilization of slag both BF and SMS should be implemented. The details should be submitted along with 6 monthly compliance report.
- 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.
- ix. No untreated effluent should 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/Nm³ and installing energy efficient technologies in the Plant.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.
- xviii. Vehicles and construction machinery are properly maintained to minimize the exhaust emission as well as noise generation to meet prescribed standards.
- xix. Risk and Disaster Management Plan along with the mitigation measures should be prepared and implemented.
- xx. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel Plants should be implemented.
- 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.
- 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 some medical parameters like Blood test, Chest X-Ray, Eye test, Audiometry, Spirometry etc. should be conducted amongst the employees of the Company.


B. GENERAL CONDITIONS:

- i. The project authorities must strictly adhere to the stipulations made by the Maharashtra Pollution Control Board and the State Government.
- 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 (MoEFCC).
- 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, PM_{2.5}, SO₂ and NO_x 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.
- 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 31st December, 1993 or as amended from time to time. The treated wastewater should be utilized for plantation purpose.
- 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). h

- vi. Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.
- 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.
- 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.
- 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 (MoEFCC) 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.
- 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.
- 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, NO_x (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.
- 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.
- 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.
- 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 <http://envfor.nic.in>. 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.

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


21/8/2015
(Dr. Satish C. Garkoti)
Scientist 'F'

Copy to:-

1. The Secretary, Department of Environment, Govt. of Maharashtra.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi, 110 032.
3. The Chairman, Maharashtra Pollution Control Board, "Kalpataru Point, 3rd and 4th floor, Opp. Cine Planet, Sion Circle, Road Number 8, Jay Bharat Mata Nagar, Air Force Quarters, Sion, Mumbai, Maharashtra 400022".
4. The Additional Principal Chief Conservator of Forests (C) Ministry of Environment Forest And Climate Change Regional Office Regional Office (WCZ), Nagpur
5. Guard File / Record File/Monitoring file.


(Dr. Satish C. Garkoti)
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