



**No. J-13012/52/2006-IA.II (T)**  
**Government of India**  
**Ministry of Environment, Forests and Climate Change**

3<sup>rd</sup> Floor, Vayu Block,  
Indira Paryavaran Bhawan, Jor Bagh Road,  
Aliganj, New Delhi-110003

Dated: 10.07.2017

To

The Sr. Vice President  
M/s JSW Energy (Ratnagiri) Limited  
Village Nandiwade, Post. Jaigad  
Taluka and Dist. Ratnagiri.  
Ratnagiri- 415 614,  
**Maharashtra.**

**Sub: 4x300 MW Thermal Power Plant at village Nandiwade Jaigad, District Ratnagiri, Maharashtra by M/s JSW ENERGY (RATNAGIRI) LTD.- reg.amendment in EC.**

Sir,

This has reference to your online application dated 2.2.2017 w.r.t. aforesaid Project and the documents submitted vide your letters dated 23.2.2017, 25.2.2017, 8.3.2017 and 8.5.2017.

2. It has also been noted that you have requested for amendment in EC for change in coal source. The plant started its commercial operations in 2011. The EC issued was based on 100% imported coal with ash and sulphur contents are less than 12% and 0.6%. The total imported coal requirement is 4.015 MTPA with GCV of 6,000 kcal/kg. Ash generation from imported coal is 0.4818 MTPA. It is proposed to source 50% of domestic coal through special forward E-auction for power producer with flexible lifting validity up to 3 years<sup>7</sup> notified by CIL vide notice CIL/S&M/Spl E-auction/32 dated 9.1.2017. It is proposed to increase the total quantity of coal to 5.0 MTPA (Blended: 50% domestic and 50% imported coal) from 4.015 MTPA (100% imported coal). Total ash generation will also increase from 0.48 MTPA to 1.25 MTPA.

3. It has been submitted that domestic coal will be sourced from Eastern Coal Fields (ECL) Ltd with indicative characteristics of GCV: >5000 kCal/kg, Ash content: 22-30%, Moisture content: 6-10%, Sulphur: 0.4-0.6% and from Mahanadi Coal Fields Ltd (MCL/Talcher Coal fields) with indicative characteristic of GCV: >4000 kcal/kg, Ash content: 34%, Moisture content: 7-12%, Sulphur: 0.4-0.5%. Coal from ECL will be transported by rail (from Sonapur Bazari siding/Bankola siding/Jhanjra siding/Kajora siding (Jambod OCP)) up to Paradeep /Dhamra port. Thereafter, the coal will brought to Jaigad port through sea route. Coal from MCL will be transported by rail (from Balram siding, Jaggannath siding, Bhubaneswari siding and any other siding designated by ECL) up to Paradeep/Dhamra port. Subsequently, the coal will be brought to Jaigad port through sea route. The proposed plant is situated next to port area. The existing conveying and storage facilities are sufficient and will be used for handling of domestic coal.

4. It has also been noted that an Impact Assessment has been carried out for the proposed change in coal source. Due to proposed amendment, there is no increase in water and land requirement. 100% flyash utilisation will be achieved as the agreements with several cement industries/ RMC plants/flyash traders and exporters have been made. Pollution loads at present stage is PM: 209 kg/hr; SO<sub>2</sub>: 2231 kg/hr and NO<sub>x</sub>: 1710 kg/hr. Estimated pollution loads due change in coal source is PM: 229 kg/hr; SO<sub>2</sub>: 2446 kg/hr and NO<sub>x</sub>: 1875 kg/hr. There is an increase of about 9.6% from the existing pollution loads.

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Net increase in GLCs are in the range of for PM: 0.1 Incremental GLCs for PM: 0.1  $\mu\text{g}/\text{m}^3$ ,  $\text{SO}_2$ : 0.7-1.3  $\mu\text{g}/\text{m}^3$  and  $\text{NO}_x$ : 0.4-1.0  $\mu\text{g}/\text{m}^3$ . Other impacts on land, fugitive emissions, road traffic, etc. have been estimated. The study reveals that the proposed project would not have much significant impact on the environment.

5. The matter has been placed before the Re-constituted EAC (Thermal Power) in its 5<sup>th</sup> Meeting held on 26.4.2017. EAC has recommended for permission for change of fuel from 100% imported coal to 50% imported and 50% domestic coal which is to be procured through e-auction. In acceptance of the recommendations of the EAC (Thermal Power) in its 5<sup>th</sup> meeting held on 26.4.2017 and based on the information/documents furnished by you, **the Ministry hereby amends the Environmental Clearance dated 17.5.2007 for change in coal source from 100% imported coal to 50% imported and 50% domestic coal** subject to following additional conditions:

- i. Extraction of Cenospheres from the Fly Ash is to be explored.
- ii. In case any STPs are located within 50 km distance from the proposed Project then the treated water from the STPs shall be used in the plant.
- iii. Plantation should be raised at the rate of 2,500 saplings per hectare. The tree species should be of local variety having hardened and broad leaves types. Plantation be preferred by using 2 years old seedlings than new seedlings for better survival of plantation.
- iv. Domestic coal will be sourced from Eastern Coal Fields (ECL) Ltd with indicative coal characteristics of GCV: >5,000 kCal/kg, Ash content: 22-30%, Moisture content: 6-10%, Sulphur: 0.4-0.6% and from Mahanadi Coal Fields Ltd (MCL/Talcher Coal fields) with indicative coal characteristic of GCV: >4000 kcal/kg, Ash content: 34%, Moisture content: 7-12%, Sulphur: 0.4-0.5%.
- v. Coal from ECL will be transported by rail (from Sonapur Bazari siding/Bankola siding/Jhanjra siding/Kajora siding (Jambad OCP)) up to Paradeep /Dhamra port. Thereafter, the coal will brought to Jaigad port through sea route. Similarly, coal from MCL, Talcher would be brought to Paradeep/Dhamra port and therefore sea route to Jaigad port.
- vi. Total coal requirement shall not exceed 5 Million Ton per Annum. Ash and Sulphur content in the blended coal (Domestic: 50% and Imported 50%) shall be less than 25% and 0.6 respectively.
- vii. The preventive health programme be preferred than the curative health programme such as nutrition development of kids of the girl child be taken up in the area to minimize health problems among the local people as a part of CSR activities.
- viii. Modern means of agriculture be introduced in and around the Project area as part of CSR activities. Mixed type of irrigation, i.e. flood irrigation /micro irrigation be taken up in the area using organic farming as a part of a long term livelihood training programme.
- ix. As a part of CSR, water supply provisions shall be made for all the bio toilets under Swachh Bharat Abhiyan.
- x. Ground water levels at the plant site and in the surrounding villages shall be monitored once in six months (pre and post monsoon).
- xi. As per the Revised Tariff Policy notified by Ministry of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality/ local bodies/ similar organization located within 50 km radius of the proposed power project.



- xii. Compliance of EC conditions, E(P) Act, 1986, Rules and MoEF&CC Notifications issued time to time shall be achieved by a qualified environment officer to be nominated by the Project Head of the Company who shall be responsible for implementation and necessary compliance.
  - xiii. MoEF&CC Notification S.O. 3305(E) dated 7.12.2015 shall be implemented with respect to specific water consumption, zero liquid discharge and revised emission standards.
  - xiv. MoEF&CC Notification G.S.R 02(E) dated 2.1.2014 regarding use of raw or blended or beneficiated or washed coal with ash content not exceeding 34% shall be complied with, as applicable.
  - xv. MoEF&CC Notifications on flyash utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 and subsequent amendments shall be complied with.
6. All other conditions stipulated in the Ministry's even letters dated 17.5.2007, 16.4.2010, 28.6.2010 and 9.7.2012 remain same as applicable.

This issues with the approval of the Competent Authority

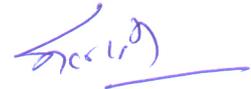
Yours faithfully,



(Dr. S. Kerketta)  
Director

Copy to:-

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Addl. Principal Chief Conservator of Forests (C), Ministry of Env., Forest and Climate Change, Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Lines, Nagpur- 440001.
5. The Secretary, Department of Environment, Mantralaya, Govt. of Maharashtra, Mumbai-400032.
6. The Chairman, Maharashtra Pollution Control Board, Kalpataru Point, 3<sup>rd</sup> & 4<sup>th</sup> Floors, Sion Matunga Scheme Road No. 6, Opp. cine Planet, Sion Circle, Sion (E), Mumbai - 400 022.
7. The District Collector, Ratnagiri District, Maharashtra.
8. Monitoring/Guard file.
9. Website of MoEF&CC.



(Dr. S. Kerketta)  
Director