



**Consent For Operation  
(CFO-Air,Water)**

**Consent No. AW-329465  
Valid upto: 30/06/2026**

**Karnataka State Pollution Control Board  
Parisara Bhavana, No.49, Church  
Street, Bengaluru-560001  
Tele : 080-25589112/3, 25581383  
Fax:080-25586321  
email id: ho@kspcb.gov.in**

Industry Colour: RED Industry Scale: LARGE

(This document contains 6 pages including annexure & excluding additional conditions)

**Combined Consent Order No.** AW-329465 **PCB ID:** 10365 **Date:** 28/01/2022

**Combined consent for discharge of effluents under the Water (Prevention and Control of Pollution) Act , 1974 and emission under the Air (Prevention and Control of Pollution) Act , 1981**

- Ref: 1. Application filed by the applicant/organization on 30/09/2021  
2. Inspection of the Industry/organization/by RO, on 25/10/2021  
3. Proceedings of the ECM dated 01/01/2022 ,held on 21/12/2021

Consent is hereby granted to the Occupier under Section 25(4) of the Water (Prevention & Control of Pollution) Act, 1974 ( herein referred to as the Water Act) & Section 21 of Air (Prevention & Control of Pollution) Act, 1981, ( herein referred to as the Air Act) and the Rules and Orders made there under and authorized the Occupier to operate /carryout industry/activity & to make discharge of the effluents & emissions conforming to the stipulated standards from the premises mentioned below and subject to the terms and conditions as detailed in the Schedule Annexed to this order.

**Location:**

Name of the Industry: JSW Energy Ltd 860 MW Power Plant  
Address: P.B. No.9, , Vidyanagara  
Industrial Area: Not In I.A, Toranagallu,  
Taluk: Sanduru, District: Bellary

**CONDITIONS:**

**a) Discharge of effluents under the Water Act:**

Sr	Water Code	WC(KLD)	WWG(KLD)	Remark
1	Cooling Water	49265.000	7613.000	Water is used for Cooling purposes and Treated in Recycling RO Plant and remaining taken to Guard pond and used for Ore Benefication Plant of JSW Steel Ltd.
2	Domestic Purpose	90.000	72.000	Water is used for domestic purposes and domestic sewage treated in STP, the treated water used for Greenbelt development.
3	Manufacturing Processes	612.000	281.000	Water is used for Process Boilers and Auxiliaries and effluents treated in Neutralization Plant and after used for ash conditioning purposes.

**b) Discharge of Air emissions under the Air Act from the following stacks etc.**

Sl. No.	Description of chimney/outlet	Limits specified refer schedule
The details of Sources, control equipments and its specification, type of fuel, constituents to be controlled in emissions etc. are detailed in Annexure-II.		

The consent for operation is granted considering the following activities/Products;

Sr	Product Name	Applied Qty/Month	Unit
1	Electricity Generation Thermal Power 860MW/hr(2x130MW, 2x300MW)	627800.0000	MWH

**This consent is valid for the period from 01/07/2021 to 30/06/2026**

To,  
JSW Energy Ltd 860 MW Power Plant

**COPY TO:**

- The Environmental Officer, KSPCB, Regional Office Bellary for information and necessary action.  
2. Master Register.  
3. Case file.



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Consent Fee paid : Rs. 2260000

**SCHEDULE**

**TERMS AND CONDITIONS**

**A. TREATMENT AND DISPOSAL OF EFFLUENTS UNDER THE WATER ACT.**

1. The discharge from the premises of the occupier shall pass through the terminal manhole/manholes where from the Board shall be free to collect samples in accordance with the provisions of the Act/Rules made there under.
- 2(a). The sewage/domestic effluent shall be treated in septic tank and with soak pit. No overflow from the soak pit is allowed. The septic tank and soak pit shall be as per IS 2470 Part-I & Part-II.
- 2(b). The treated sewage effluent discharged shall conform to the standards specified in Annexure-I.
- 3(a). The trade effluent generated in the industry shall be treated in the ETP and treated effluent shall conform to the standards stipulated by the Board in Annexure-I
- 3(b). The trade effluent shall be handed over to CETP and maintain logbook of effluent generated & sent every day.
4. The applicant shall install flow measuring/recording devices to record the discharge quantity and maintain the record.
5. The applicant shall not change or alter either the quality or the quantity or the place of discharge or temperature or the point of discharge without the previous consent/ permission of the Board.
6. The applicant shall not allow the discharge from the other premises to mix with the discharge from his premises. Storm water shall not be allowed to mix with the effluents on the upstream of the terminal manhole where the flow measuring devices are installed.
7. The daily quantity of domestic effluent and trade effluent from the industry shall not exceed the limits as indicated in this consent order:
8. The applicant shall discharge the effluents only to the place mentioned in the Consent order and discharge of treated/untreated outside the premises is not permitted.

**B. EMISSIONS:**

1. The discharge of emissions from the premises of the applicant shall pass through the air pollution control equipment and discharged through stacks/chimneys mentioned in **Annexure-II** where from the Board shall be free to collect the samples at any time in accordance with the provisions of the Act and Rules made there under. The tolerance limits of the constituents forming the emissions in each of the stacks shall not exceed the limits laid down in Annexure-II.
2. The applicant shall provide port holes for sampling of emission, access platforms for carrying out stack sampling, electrical points and all other necessary arrangements including ladder as indicated in Annexure-II.
3. The applicant shall upgrade/modify/replace the control equipment with prior permission of the Board.

**C. MONITORING & REPORTING:**

1. The applicant shall get the samples of effluents & emissions collected and get them analyzed once a month/either by in house monitoring laboratory or through EP approved laboratories for the parameters as Indicated in Annexure I & II.
2. The applicant shall maintain log books to reflect the working condition of pollution control systems and also self monitoring results and keep it open for inspection.

**D. SOLID WASTE (OTHER THAN HAZARDOUS WASTE) DISPOSAL:**

1. The applicant shall segregate solid waste from Hazardous Waste, Municipal Solid Waste and store it properly till treatment/disposal without causing pollution to the surrounding Environment.
2. The solid waste generated shall be handled & disposed by scientific method without causing eye sore to the general public and to the surrounding environment.



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**E. NOISE POLLUTION CONTROL:**

The applicant shall ensure that the ambient noise levels within its premises during construction and during operational period shall not exceed w.r.t Area/Zone as per Noise Pollution (Regulation and Control) Rules, 2000 as mentioned below:-

- a) In Industrial Area 75 dB(A) Leq during day time and 70 dB(A) Leq during night time.
- b) In Commercial Area 65 dB(A) Leq during day time and 55 dB(A) Leq during night time.
- c) In Residential Area 55 dB(A) Leq during day time and 45 dB(A) Leq during night time.
- d) In Silence Zone 50 dB(A) Leq during day time and 40 dB(A) Leq during night time.

Note: - \* Day time shall mean 6 am to 10 pm and Night time shall mean 10 pm to 6 am.

- \* dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.
- \* A “decibel” is a unit in which noise is measured.
- \* “A”, in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.
- \* Leq: It is an energy mean of the noise level over a specified period.

**F. HAZARDOUS AND OTHER WASTES (MANAGEMENT & TRANSBOUNDARY MOVEMENT) Rules 2016:**

The applicant shall comply with the provisions of the Hazardous and other Wastes (Management & Transboundary Movement) Rules 2016.

**G. GENERAL CONDITIONS:**

1. The applicant shall not allow the discharge from the other premises to mix with the discharge from his premises.
2. The applicant shall promptly comply with all orders and instructions issued by the Board from time to time or any other officers of the Board duly authorized in this behalf.
3. The applicant shall set-up Environmental Cell comprising of qualified and competent personnel for complying with the conditions specified.
4. The Board reserves the right to review, impose additional conditions, revoke, change or alter terms and conditions of this consent.
5. The applicant shall forthwith keep the Board informed of any accidental discharge of emissions/effluents into the atmosphere in excess of the standards laid down by the Board. The applicant shall also take corrective steps to mitigate the impact.
6. The applicant shall provide alternate power supply sufficient to operate all Pollution control equipments.
7. The entire premises shall always be kept clean. The effluent holding area, inspection chambers, outlets, flow measuring points should be made easily approachable.
8. The applicant shall display the consent granted in a prominent place for perusal of the inspecting officers of the Board.
9. The applicant his heirs, legal representatives or assignee shall have no claims what so ever to the continuation or renewal of this consent after expiry of the validity of consent.



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10. The applicant shall make an application for consent for subsequent period at least 45 days before expiry of this consent.
11. The applicant shall develop and maintain adequate green belt all around the periphery.
12. The applicant shall provide rain water harvesting system and shall provide proper storm water management system.
13. This consent is issued without prejudice to any Court Cases pending in any Hon'ble Court
14. The applicant shall furnish the Environmental statement for every financial year ending with 31st March in Form-V as per Environment (Protection) Rules, 1986. The statement shall be furnished before the end of September.
15. The applicant shall display flow diagram of the pollution control system near the pollution control system/s.

**NOTE:**

The Conditions A (2b), (3b) mentioned in the schedule are not applicable.

**Additional Conditions:**

1. The occupier shall comply with all the additional terms and conditions stipulated in Annexures I, A & B attached here.
2. This consent order contains 11 pages including Annexures.



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Chimney No.	Chimney attached to	Capacity/ KVA Rating	Minimum chimney height to be provided above ground level (in Mts)	Constituents to be controlled in the emission	Tolerance limits mg/NM3	Fuel	Air pollution Control equipment to be installed, in addition to chimney height as per col.(4)	Date of which air pollution control equipments shall be provided to achieve the stipulated tolerance limits and chimney heights conforming to stipulated heights.
1	D.G. Sets	DG Set-750 KVA cap for 300 MW-Unit-II	13	PM(mg/NM3),SO2 (PPM),NOx(PPM)	0,0,0	DIE	AEC	Before commissioning.
2	D.G. Sets	DG Set-750 KVA cap for 300 MW-Unit-I	13	PM(mg/NM3),SO2 (PPM),NOx(PPM)	0,0,0	DIE	AEC	Before commissioning.
3	D.G. Sets	DG Set-350 KVA cap for 130 MW-Unit-II	13	PM(mg/NM3),SO2 (PPM),NOx(PPM)	0,0,0	DIE	AEC	Before commissioning.
4	D.G. Sets	DG Set-350 KVA cap for 130 MW-Unit-I	13	PM(mg/NM3),SO2 (PPM),NOx(PPM)	0,0,0	DIE	AEC	Before commissioning.
5	Boiler	1015TP Hx2 (Common chimney 2x300 MW Coal& by product/waste mixed Gas)	275	PM(mg/NM3),SO2 (PPM),NOx(PPM)	100,0,0	COA	ESP	Before commissioning.
6	Boiler	Boiler-415TPH (130 MW Coal& by product/waste mixed Gas)	115	PM(mg/NM3),SO2 (PPM),NOx(PPM)	100,0,0	COA	ESP	Before commissioning.
7	Boiler	Boiler-415TPH (130 MW Coal& by product/waste mixed Gas)	115	PM(mg/NM3),SO2 (PPM),NOx(PPM)	100,0,0	COA	ESP	Before commissioning.

Note:

AEC : Accoustic Enclosures

ESP : E.S.P

**Note:**

- The Noise levels within the premises shall not exceed 75 dB (A) leq during day time and 70 dB(A) leq during night time respectively.
- The DG set shall be provided with acoustic measures as per SI.No.94 in Schedule-I of Environment (Protection)Rules.
- There shall be no smell or odour nuisance from the industry.



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**LOCATION OF SAMPLING PORTHOLES, PLATFORMS, ELECTRICAL OUTLET.**

1. Location of Portholes and approach platform:

Portholes shall be provided for all chimneys, stacks and other sources of emission. These shall serve as the sampling points. The sampling point should be located at a distance equal to at least eight times the stack or duct diameters downstream and two diameters upstream from source of low disturbance such as a Bend, Expansion, Construction Valve, Fitting or Visible Flame for rectangular stacks, the equivalent diameter can be calculated from the following equation.

$$\text{Equivalent Diameter} = \frac{2 (\text{Length} \times \text{Width})}{(\text{Length} + \text{Width})}$$

2. The diameter of the sampling port should not be less than 100 mm dia". Arrangements should be made so that the porthole is closed firmly during the non sampling period
3. An easily accessible platform to accommodate 3 to 4 persons to conveniently monitor the stack emission from the portholes shall be provided. Arrangements for an Electric Outlet Point of 230 V 15 A with suitable switch control and 3 Pin Point shall be provided at the Porthole location.
4. The ladder shall be provided with adequate safety features so as to approach the monitoring location with ease.

For and on behalf of the  
Karnataka State Pollution Control Board

**Annexure-I**  
**Additional Conditions**

1. **This Consent for Operation is issued for the Period from 01.07.2021 to 30.06.2026.**
2. **This CFO is issued for the production of Electricity of capacity 860 MW/Hr.**
3. The authorities have paid Rs 1,27,60,000/- as Consent fee for 5 years based on the CI of Rs.3346 Crores/-. The applicant shall pay the balance fee, if any, after the final notification of revised consent fee and as per the affidavit submitted by the industry.
4. The applicant shall comply with the quantity of water consumption, waste water generation and treatment and disposal of treated water for Power generation plant as per the following table

Sl. No	Type of Effluents	Consumption of water in KLD	Waste water generated in KLD	Mode of Disposal
1	Domestic Purpose	90.0	72	The domestic sewage generated from the industry shall be treated in 2 Nos. of Reed bed sewage treatment plant of capacity 30 KLD and 50 KLD respectively and the treated water shall be used on land for gardening within the premises after confirming to the standards stipulated as <b>Annexure-A..</b>
2	Cooling Water	49265	7613	Shall be treated in RO plant and Maximum quantity of treated water shall be used back for Cooling purposes and the balance treated water shall be collected in Guard Pond and used for Ore Beneficiation Plant.
3	Manufacturing Process	612	281	The water shall be used for Process Boilers and Auxiliaries after treating in Neutralization Plant and after treatment the treated water shall be used for ash conditioning Purposes.
<b>Total</b>		<b>49967</b>	<b>7966</b>	

5. The domestic sewage generated from the industry shall be treated in 2 Nos. of Reed bed sewage treatment plant of capacity 30 KLD and 50 KLD respectively and the treated water shall be used on land for gardening within the premises after confirming to the standards stipulated as **Annexure-A-**.
6. The applicant shall not change or alter either the quality or the quantity or the rate of discharge or temperature or the route of discharge without the previous written permission of the Board.

7. The applicant shall not dig the new Bore wells within the premises.
8. The applicant shall take suitable steps so that there will be reduction of the fresh water consumption as well as waste water generation from the industry.
9. The industry shall cover the coal which is used for CPP Power Plant and ensure that there shall not be any fugitive emission.
10. The industry shall store all the scrap materials in a designated separate scrap yard and all type of scraps shall be stored in this dedicated area only.
11. The industry shall maintain the housekeeping all round the industry.
12. The industry shall store all types of hazardous wastes in a covered shed with proper labelling on the container.

#### **B. DISCHARGE OF EMISSIONS UNDER THE AIR ACT:-**

1. The discharge of emissions from the premises of the applicant shall pass through the air pollution control equipment and discharged through stacks/chimneys mentioned in **Annexure-B** where from the Board shall be free to collect the samples at any time in accordance with the provisions of the Act and Rules made there under.
2. Applicant shall provide water sprinkling system to suppress dust for coal unloading from the wagons coal handling area, and coal rejected yard at all the time
3. The applicant shall at his own cost get the samples of emissions collected and get them analyzed once a month for the parameters stipulated.
4. The applicant shall keep daily record of the readings of Sox and NOx from the continuous online recorder and average-2 daily readings shall be computed once in a month and reported along with the manual monitoring results and the data shall be analyzed, and reported to the Board Office.
5. The applicant shall carryout the ambient air quality monitoring and submit the report to the Regional Office of the Board. The AAQM stations shall be carried out in all the established stations as per the requirement under the National Ambient Air Quality Monitoring Standards stipulated in Environmental (Protection) Rules, 1986. Monitoring shall include the parameters, PM2.5, PM10 sulphur dioxide, Nitrogen Oxide, Hydrocarbons, carbon monoxide, and H2S. Additional stations shall be established as and when directed by the Board.
6. The industry shall furnish statistical analysis for annual average of pollutants at all the locations per Ambient Air Quality standards Notification once in a year.
7. The applicant shall provide and maintain at his own cost a meteorological station to collect the data on wind velocity, directions, temperature, humidity, rainfall etc., and the daily reading shall be recorded and the extract be sent to the Board once in a year.
8. Fugitive emission near manufacturing area has to be controlled by adopting advance technology. Progress made in this regard shall be furnished.
9. If there is going to be any new air pollution sources in future, the project authorities shall apply and obtain consent for establishment for the same from the Board.

#### **C. HAZARDOUS WASTES (MANAGEMENT, HANDLING & TRANSBOUNDRY MOVEMENT) RULES 2016:**

1. The industry shall apply and obtain authorization under Hazardous Wastes (Management, Handling & Transboundry Movement) Rules 2016, and comply with the conditions of the authorization. The applicant shall comply with the terms and conditions stipulated in authorization.
2. The applicant shall dispose the empty raw material cans back to the supplier and shall maintain the manifesto to this process. The details shall be submitted to the Board



#### D. GENERAL CONDITIONS

1. The applicant shall submit the Environmental Statement every year for the period ending 31st March in Form V of Rule as per Rule 14 of Environment (Protection) Rule 1986 on or before 30th September.
2. The applicant shall not allow the discharge from the other premises to mix with the discharge from his premises. Storm water shall not be allowed to mix with the effluents on the upstream of the terminal manhole where the flow measuring devices are installed.
3. The Noise generated in the factory shall be within the prescribed limits of 75 dB (A) leq. During day time and 70 dB (A) leq during night time.
4. There shall not be any complaint against the industry on water, air, noise pollution from the surrounding general public.
5. The applicant shall carryout intensive plantation/ thick vegetation all round, especially towards residential apartment to minimize air & noise pollution. The action taken report shall be submitted to the Board immediately.
6. The applicant shall adhere to the directions contained in the fly ash utilization Notification issued by Ministry of Environment and Forest Government of India vide No.S.O.763(E), dated 14.09.1999 and No. SO 979 (E), dated 17.08.2003 & 03.11.2009.
7. The ash & solid waste shall be handled & disposed as below.

SI. No.	Category	Quantity	Disposal Details
<b>2 x 300MW Plant</b>			
1	Bottom Ash	342 TPD	Collected in dry form in water impounded hopperand this as after grinding should be transported to ash pond area.
2	Fly Ash	1370 TPD	Collected in dry form in ash silo and made available for Cement Plants, brick manufacturing industries etc., The ash shall be transported closed pipe conveyor pneumatically (up to fly ash silos).
<b>2 x 130MW Plant</b>			
1	Bottom Ash	36TPD	Collected in dry form in water impounded hopperand this ash after grinding should be transported to ash pond area.
2	Fly Ash	324 TPD	Collected m dry form in ash silo and made available for Cement Plants, brick manufacturing industries etc., The ash shall be transported closed pipe conveyor pneumatically (up to fly ash silos).

8. 100% fly ash shall be collected in dry form and its full utilization shall be achieved in accordance with the notification on fly ash utilization S.O. 763E dated 14.09.1999 and the amendment made there on from time to time.
9. The applicant shall provide with water sprinkling arrangement in ash pond area to avoid any fugitive emission due to wind.

10. The power plant should make available dry ash to end users and provide uninterrupted access.
11. The applicant shall comply with the guidelines under Corporate Environmental Responsibilities for Environment protection issued by Ministry of Environmental Forests and CPCB.

For and on behalf of the KSPCB

**SENIOR ENVIRONMENTAL OFFICER**

**ANNEXURE -A**

**Standards for using the treated sewage on land for irrigation/green belt development:**

Sl No	Characteristics	Standards
1	pH	6.5 to 9.0
2	BOD, mg/l , (3 days at 270 C)	10
3	COD, mg/l	50
4	TSS, mg/l	20
5	Ammonical Nitrogen, mg/l	5
6	Total Nitrogen, mg/l	10
7	Fecal Coli form, MPN/100ml	< 100

Note: All efforts should be made to remove colour and unpleasant odour as far as practicable.

**TABLE  
HYDRAULIC LOADING APPLICABLE FOR DIFERENT SOILS**

Sl. No.	Soil Texture	Loading rate in M <sup>3</sup> /Hec/day
1	Sandy	225 to 280
2	Sandy Loam	170 to 225
3	Loam	110 to 170
4	Clay Loam	055 to 110
5	Clayey	035 to 055

*[Handwritten Signature]*

**SENIOR ENVIRONMENTAL OFFICER**

The Air pollution sources, Chimney height and the control equipments provided by the industry shall be as below and the Air pollution sources mentioned in the main consent at Page No: 5 shall be replaced with this **Annexure-B**

Sl. No.	Chimney Attached to	Minimum Chimney Height to be Provided	Constituents to be controlled in the emission.	Tolerance limits Mg/NM3	Air Pollution Control equipment to be installed, in addition to Chimney height as per Col (3)	Date of which air pollution Control equipments shall be provided to achieve the stipulated tolerance limits and chimney heights conforming to stipulated heights.	Remarks
1	Boiler- 415 TPH x 2 ( 2x130MW – Coal and Byproduct/Waste Mixed Gas)	115 m AGL	PM SO2	100 --	With individual ESP	At All Times	<p>1. The emission rate of all chimneys shall be reported within 30 days.</p> <p>2. Details of D.G. Sets if any like KVA rating fuel consumption in Kg/hr., Chimney height above roof level and dia to be furnished within 30 days. D.G. Sets and other noise generating machinery to be provided with Silencers /Mufflers to reduce the noise pollution.</p> <p>3. There shall be no smell or odour nuisance from the industry.</p> <p>4. There shall be no other sources of air pollution.</p>
2	Boiler- 1015 TPH x 2 ( 2x300MW - Coal and Byproduct/Waste Mixed Gas)	275 m AGL	PM SO2	100 --	With individual ESP	At All Times	
3	DG Sets- 750 KVA x 2 Nos	13 m AGL	SO2	--	With Acoustic Enclosure	At All Times	
4	DG Set 350 KVA x 2 Nos	6 m ARL	SO2	--	With Acoustic Enclosure	At All Times	

  
**SENIOR ENVIRONMENTAL OFFICER**