



Lr.No: JSAW/ENV/MOEF/ECC/2024-25

Date: 03.05.2024

To,
The Joint Director,
Ministry of Environment, Forest and Climate Change,
Sub-Office,
Green House Complex,
Gopal Reddy Road,
Vijayawada, Andhra Pradesh – 52010.

Sub: Submission of Six Months Compliance Report for the Jindal Saw Limited, Sy.42 to 49, haresamudram (V), Bommanhal (M), Ananthapuram, Andhra Pradesh– Reg,

- Ref: 1. F.No.J-11011/125/2010-IA-II (I) Dated: 02.06.2011
- 2. F.No.J-11011/125/2010-IA-II (I) Dated: 13.03.2014
- 3. F.No.J-11011/125/2010-IA-II (I) Dated: 27.09.2023

Dear Sir,

With Reference to the above subject, we are here with submitting six months compliance report of **M/s.Jindal Saw Limited**, operating the Power Plant (30 MW), Sinter Plant (2,98,800 TPA), Pig Iron Hot metal (2,50, 000 TPA) and DI Plant (1,90,000 TPA) located at Haresamudram (V), Bommanhal (M), Ananthapur (Dt) for the period of **October-2023 to March-2024**.

This is for your kind information and records please.

Thanking You,

Your Faithfully,
For Jindal Saw Limited

Authorized Signatory



Survey No. 42 to 49, Haresamudram Village, Bommanahal Mandal, Anantapuram District, Haresamudram,
Andhra Pradesh - 515871, INDIA ; Phone:+91 (8495) 258770, Extn.: 8111, 8204
Corporate Office : Jindal Centre, 12 Bhikaji Cama Place, New Delhi 110066 Phone : +91 (11) 26188345-70; Fax.: +91 (11) 26170691;
Regd. Off.: A-1, UPSIDC Indl. Area, Nandgaon Road, Kosi Kalan, Dist. Mathura (U.P.) - 281403 ; Website: www.jindalsaw.com



JINDAL SAW LTD, Haresamudram

Environmental Compliance (EC) Report for the Period of OCTOBER-2023 to MARCH-2024



Name of the Company	Jindal Saw Limited (JSAL), Haresamudram Village, Bommanahal Mandal, Post Office Bommanahal, Anantapur District, Andhra Pradesh - 515871, India.
Name of the Project	Expansion of existing pig iron plant and CPP by Installation of Ductile Iron Pipe Plant (1,90,000 TPA), Sinter Plant (2,58,800 TPA) and Captive Power Plant (15 MW)
EC Identification No.	EC23A1001AP5270590T
File No.	F. No. J-11011/125/2010-IA II (I) for EC dated 2 nd June, 2011 and Amendment Dated 13 th March 2014
EC Transfer in Name of M/s Jindal Saw Limited	EC Transfer Letter with F. No. J-11011/125/2010-IA II (I) Dated 27 th September, 2023
EC Compliance Status for the Period	October- 2023 to March-2024

Submitted By:

Jindal Saw Limited (JSAL),

Haresamudram Village, Bommanahal Mandal, Post Office Bommanahal, Anantapur District, Andhra Pradesh - 515871, India.

Point wise Compliance to the Environmental Clearance

S.No	Conditions	Compliance
A	Specific Conditions	
I	Electrostatic precipitator (ESP) , Dust catcher, venturi scrubbers, Bag filters etc shall be provided to keep the emission levels below 50mg/Nm ³ by installing energy efficient	ESP's installed for 30 MW Power plant and Sinter Plant to achieve stack particulate matter emissions below 50 mg/Nm3. The blast furnace is being modified by incorporating more energy efficient technology like bell less top, stave cooling, coal injection etc. This will save substantial energy and contribute in bringing down the emission levels. The Stack monitoring results of CPP, Sinter plant and BF is enclosed as Annexure-1 .
II	The National ambient air quality standards issued by the ministry vide G.S.R No:826(E) dated(E) 16th November,2009 should be followed.	Ambient Air Quality is being monitored periodically at four AAQ locations namely at, Plant Main gate, Bommanahal Village, Kuruvalli Village, and Haresamudram Village. The Monitored results are (enclosed as Annexure-2), well below the respective air pollutants standards as specified in National Ambient Air Quality Standards G.S.R. No. 826(E) dated 16th November, 2009 (NAAQ 2009) and the results are regularly submitted to Andhra Pradesh Pollution Control Board (APPCB).
III	Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the ministry vide G.S.R 414(E) dated 30th May, 2008 and regularly mentioned. Guidelines / code of practice issued by the CPCB should be followed.	Fugitive emissions from different sources are controlled and mentioned below: <ul style="list-style-type: none"> o Raw material conveyors to Sinter Plant and Blast Furnace are covered. o Dust Extraction with bag filters are installed in Sinter Plant Areas like, proportioning Stations, Sinter Breaker and Screen House. o Dust Extraction with bag filters are installed in Blast Furnace Stock House Screen areas. o Dust Extraction with bag filters are installed in other process areas like Induction Furnaces, Annealing, and Zinc Spray unit. o Water sprinkling through tankers is regularly undertaken on plant roads at a frequency of twice per day to control

		<p>fugitive dust.</p> <ul style="list-style-type: none"> ○ Fixed / movable water sprinklers are installed in raw handling area to control fugitive dust. ○ Greenbelt / green cover has been planted within and all around the plant at strategic location to control fugitive emissions. <p>Work zone monitoring is periodically undertaken in different units of plant and the results are regularly submitted to APPCB. The work zone fugitive PM levels are below 2000$\mu\text{g}/\text{m}^3$ (as specified in G.S.R 414(E) dated 30th May, 2008). Monitoring Reports are enclosed as Annexure-3.</p>
IV	The total water requirement of the proposed expansion should not exceed 3590 m ³ /day and necessary permission from competent authority shall be obtained for drawl of water. The water consumption shall not exceed as per prescribed standards for the steel plants.	<p>The water consumption is less than 3590 m³/day. The Water balance diagram is enclosed as Annexure-4.</p> <p>Water drawl permission as obtained from Irrigation & Command Area Development Department is enclosed in Annexure-5.</p>
V	Zero effluents discharge should be strictly followed and no waste water should be discharged outside the premises.	<p>No process/ waste water is discharged to outside the plant and plant is operated under Zero effluents discharge.</p> <p>Total process waste water is recycled / re-used in the plant through water recirculating circuit installed at various locations</p>
VI	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	<p>We are having a reservoir where rain water is collected. We will make further use of rain water by incorporating suitable structure for rain water harvesting.</p>
VII	All the blast furnace(BF) slag shall be granulated and provided to cement manufacturers for further utilization. Accretions shall also be properly utilised.	<p>Blast furnace slag is being sold to the cement manufactures.</p>
VIII	Proper utilisation of fly ash should be ensured as per " Fly ash notification" 1999 and subsequent amendment in 2003 and 2009. All the fly ash shall be provided to cement and brick manufacturers for further utilisation and "Memorandum of Understanding " should be submitted to Ministry's regional office at Bengaluru.	<p>Fly ash is being sold to Cement manufactures.</p>

IX	Prior permission and recommendations of the state forest department regarding the impact of the proposed plant Mincheri R.F should be obtained and recommendation if any should be implemented in a time bound manner.	We have obtained clearance from the forest department and the same enclosed as Annexure-6 .
X	As proposed green belt shall be developed in 47.14 acres out of total 142.94 acres as per CPCB guidelines in consultation with local DFO to	<p>Complying.</p> <p>We have been acquired the plant in Nov-2022 only. When the project was acquired, total existing Green belt / green cover was about 28.46 acres.</p> <p>After started the operation in Nov. 2022 and since then green belt is being developed gradually and about 5500 nos saplings have been planted in an area of 4.3 acres. Making total green belt area to about 32.76 acres. The Status of Existing green belt is enclosed as Annexure-7.</p> <p>It has been planned that green belt / green cover will be developed in more than 33% area of the project site. A total of about 47.25 acres of green belt will be developed. The layout drawing showing designated / proposed greenbelt area enclosed as Annexure-8.</p>
XI	All the recommendations made in the charter of corporate responsibility for environmental protection(CREP) for steel plants should be implemented.	<p>Noted.</p> <p>Enclosed in Annexure-9.</p>
XII	All the commitments made to the public during the public hearing / public consultation meeting held on 3 rd November 2010 should be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the ministry's regional office at Bengaluru.	<p>The project was given Environmental Clearance from MoEFCC vide F. No. J-II0II/125/2010-IA-II (I) dated 02.06.2011. For which the Public Hearing / Public Consultation was held on 03.11.2010. The project was under shut down for five years since 2017 and JSAW acquired the project in 2022 from NCLT and re-started the plant operation since Nov. 2022.</p> <p>During Public Hearing, very few specific requirements were demanded. However, public hearing points is being taken care by present management of Jindal Saw Limited (JSAW) such as :</p> <ul style="list-style-type: none"> • Construction of boundary wall – being

		<p>constructed.</p> <ul style="list-style-type: none"> • No dumping the waste outside the plant premises and the solid waste is sold (Fly ash & granulated slag) to cement manufacturers on regular basis. • Infrastructure development – being undertaken. • Green belt development – being undertaken. • Strengthen the control measures of pollution control measures and monitoring facilities – already undertaken. • Strengthen the water recycling / reuse system within unit to ensure zero discharge from plant - implemented. • Priority is being given to local employment direct & indirect – being implemented. <p>CSR activities are being taken care by JSW management in surrounding area as mentioned under point number XIII.</p>
XIII	<p>At least 5% of the total cost of the project shall be earmarked towards the enterprise social commitment based on public hearing & social responsibility and item wise details along with time bound action plan should be prepared and submitted to the ministry's regional office at Bengaluru. Implementation of such programme shall be ensured accordingly in a time bound manner.</p>	<p>As the project was taken over by JSAW in 2022 from NCLT provision. The following activities are being taken under by JSAW management:</p> <ul style="list-style-type: none"> • Provided drinking water in 3 nearby villages with a cost of Rs 10 lakhs • Distributed LED lights for street in nearby villages with a cost of Rs. 2,62,500 lakhs. • Cement concrete roads (CC Road) proposed in nearby village with a cost of Rs 10 lakhs <p>JSAW is committed to develop harmony & eco - friendly and provide pollution free environment in surrounding plant area.</p>
XIV	<p>The company shall provide housing for construction labour within the site with all the necessary infrastructure and facilities such as fuel for cooking , mobile toilets ,mobile STP, safe drinking water , medical health cares, crèche etc., the housing may be in the temporary structure to removed after the completion of the project.</p>	<p>Complied.</p> <p>We have provided housing for construction labour within the site premises and necessary infrastructure facilities also taken care. We have appointed medical officer for our existing employees on regular basis. For construction labour also we are extending doctor facility on their health requirements.</p>

XV	At any time, the power generation from the Captive Power plant shall not exceed 26.43 MW.	Noted and being complied
XVI	In case source of coal supply is to be changed at a later stage (now imported coal from Indonesia) the project proponent shall intimated the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change.	<p>The project as of now is using imported coal.</p> <p>MoEFCC will be intimated (with necessary requisite documents) well in advance for concurrence for allowing the change of coal source.</p> <p>However, under the modernisation-cum-expansion plan the project envisages to replace the imported coal with indigenous coal, for which due environmental clearance will be taken from MoEFCC.</p>
XVII	High efficiency ESP shall be installed to control particulate emission below 50 mg/Nm ³ and emission shall be dispersed through stack of adequate height.	High efficient ESPs are already implemented in the project and the process particulate emissions are regularly being maintained under 50mg/Nm ³ .
XVIII	Low NO _x burners shall be installed to Control NO _x emission from boilers.	The Thermal Power Plant is provided with Circulating Fluidized Bed Combustion (CFBC) Boiler in which the NO _x generation is very low. This is basically due to the fact that the combustion temperature in a CFBC boiler (800 – 900°C) is significantly controlled as compared to Atmospheric Fluidized Bed Combustion (AFBC) Boiler and lower than in Pulverised Coal (PC) Combustion Boiler (1300–1700°C), which results in considerably reduced NO _x formation.
XIX	A detailed study on chemical composition of coal used particularly heavy metal and radio activity contents shall be carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry at Bangalore. Only after ascertaining its radioactive level shall fly ash be supplied for utilization in brick manufacturing.	<p>After shut down in 2017 the project was referred to NCLT and the plant was under shut down for five years, JSL has taken over the project in 2022 and started its operation in Nov. 2022.</p> <p>The fly ash is being sent to cement manufacturers only.</p> <p>However, before selling fly-ash to brick manufacturers the chemical composition of fly-ash particularly heavy metal and radio activity contents will be determined from a reputed institute and the report will be submitted to Regional Office of the MoEFCC.</p>
XX	Adequate dust extraction system such as Cyclones/ bag filters and water spray system in dusty areas such as in coal	Dust extraction (DE) system such as cyclones / bag filters and water spray system has been implemented in areas

	handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	like : <ul style="list-style-type: none"> • Coal handling and ash handling points, • Raw material transfer areas and Other vulnerable dusty areas like, raw material yard, roads etc.
XXI	Total water requirement for the proposed expansion should not exceed 4917 m3/day and necessary permission from the competent authority shall be obtained for drawl of water. The water consumption shall not exceed as per prescribed standards for the steel plants.	Please refer to reply under Point No. iv under specific conditions.
XXII	All other conditions stipulated in the environmental clearance even no. dated 2.6.2011 shall remain the same.	Noted and followed
XXIII	In case, there is a change in the scope of the project, a fresh environmental clearance shall be obtained.	Noted and will be complied with.
B General Conditions		
I	The project authorities must strictly adhere to the stipulations made by the Andhra Pradesh pollution control board APPCB, and the state government.	Noted & agreed. Stipulations made by APPCB and the state government will be adhered. The Present status of the stipulated conditions mentioned in the consent order is enclosed as Annexure-10 .
II	No further expansion or modifications in the plant shall be carried out without prior approval of the ministry of Environment and forest.	Noted & agreed.
III	At least four ambient air quality 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 APPCB including one ambient air quality monitoring station in downwind direction. Data on ambient air quality and stack emission should be regularly submitted to the ministry including its regional office at Bengaluru and APPCB / CPCB once in six months.	Three CAAQMS Station installed within the plant, through which continuous air quality is being monitored and the results are being displayed at main gate / public domain. Ambient Air Quality is being regularly monitored (as per NAAQS 2009. The results are observed within the NAAQS 2009. The monitoring reports have been submitted to the APPCB office on monthly basis.
IV	Industrial waste water shall be properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time. The treated waste water shall be used for plantation purpose.	No process/ waste water is discharged to outside the plant and plant is operated under Zero effluents discharge. Total process waste water is recycled / re-used in the plant through water re-circulating circuit installed at various locations

V	The overall noise levels in and around the plant area shall be kept within the standard (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosure etc., on all sources of noise generation. The ambient noise levels should confirm to the standards prescribed under EPA rules, 1989, viz 75dBA (daytime) and 70 dBA (night time)	Proper noise pollution control measures are implemented in the project to control noise levels. Acoustic hoods and enclosures are installed and noise levels are observed within the specific standard under EPA rules, 1986. Noise levels monitoring is being periodically conducted by Third party (NABL Certified) for work place noise as well as Ambient noise. The results are observed within the permissible limits and reports enclosed as Annexure-11 .
VI	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per factories Act.	Noted, we are following the requirements as stipulated in the factory act. <ul style="list-style-type: none">• The project is under re-developmental stage. However, pre-medical examination test for each & every worker before Joining have been done.• A full-fledged Occupational Health Centre with Medical Officer, Paramedical staffs, Ambulance and other necessary facilities have been developed.
VII	The company shall develop rain water harvesting structures to harvest the rain water for utilisation in lean season beside recharging the ground water table.	We are having a reservoir where rain water is collected. We will make further use of rain water by incorporating suitable structure for rain water harvesting.
VIII	The project proponent shall also comply with all the environmental protection measure and safeguards recommended in the EIA / EMP report. Further the company must undertake socio-economic development activities in the surrounding villages like community development programme, educational programme, drinking water supply and health care etc.	Noted. We have undertaken socio-economic development activities in the surrounding villages like Bommanahal and Haresamudram villages by providing drinking water facilities, LED Street lights etc.
IX	Requisite funds be earmarked towards the capital cost / annum for environmental protection measures and judiciously utilised to implement the condition stipulated by the ministry of environment and forest as well as state government. the funds so provided shall be diverted for any other purpose.	A total of Rs 17.25 crores has been earmarked separately as capital cost of pollution control measures and Rs. 3.0 crores as recurring cost per annum for pollution control measures. Besides the above, recently a cost of about Rs 2.4 Crores have been spent on for installation of CEMS and CAAQMS system
X	A copy of clearance letter shall be sent by proponent to concerned zilla parishad / municipal corporation, urban local body and local NGO , if any from whom suggestions / representations if any were received while processing the	The copies of the EC was submitted to local panchayats and also uploaded in JSAW website.

	proposal. The clearance letter shall also be put on the website of the company by the proponent.	
XI	The project proponent shall upload the status of compliance of the stipulated environment clearing conditions, including the result of mentioned data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of the MoF&CC, the respective zonal office of the CPCB and the APPCB. The criteria pollutant level namely SPM,RSPM,SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the projects shall be monitored and displayed at a convenient location near main gate of the company in the public domain.	Compliance report is uploaded in JSAW website and submitted to concerned authorities along with half yearly compliance report. Critical sectorial parameters like PM, SO _x , NO _x etc are being monitored. Additionally the monitored values are displayed through LED display board at company main gate.
XII	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including the status of monitored data (both in hard copies as well as by e-mail) to the regional office of the MoEF&CC at Bengaluru / CPCB /APPCB shall monitor the stipulated conditions.	Submitting the Six months Half Yearly compliance report regularly.
XIII	The environmental statement for each financial year ending 31 st March in Form – V as is mandated to be submitted by project proponent to the concerned state pollution control board as prescribed under the environment(Protection) Rules 1986, as amended subsequently , shall also be put on website of the company along with status of compliance of environmental conditions and shall also be sent to the respective Regional office of the MoF&CC by e-mail.	Submitting the Environmental Statement in FORM-V regularly to the concerned authorities. Last submitted on 22.09.2023 and enclosed as Annexure-12 .
XIV	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 APPCB and may also be seen at website of the Ministry of environment and forest at http://envfor.nic.in . this shall be advertised within seven days from date of issue of the clearance letter, at least in two local newspapers that we widely circulated in the region of which one shall be in vernacular language of the	Public notice has been published in Indian express, Hyderabad on 10-06-2011 and Varth (telugu) on 09-06-2011 Enclosed as Annexure-13 .

	locality concerned and the copy of the same shall be forwarded to the regional office at Bengaluru.	
XV	Project authorities shall 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.	The project was given Environmental Clearance for expansion from MoEFCC vide F. No. J-IIOil/125/2010-IA-II (I) dated 02.06.2011 and subsequently obtained amendment in EC vide F. No. J-IIOil/125/2010-IA-II (I) dated 13.03.2014. The project after expansion was under shut down for five years since 2017 and JSL acquired the project in 2022 from NCLT and re-started the plant operation since Nov. 2022.
XVI	The Ministry may revoke or suspend the clearance, if implantation of any of the above condition is not satisfactory	Noted.
XVII	The Ministry reserves shall be right to stipulated additional conditions if found necessary, the company in a time bound manner shall implement these conditions.	Noted.
XVIII	The above conditions shall be enforced, inter-alia under the provisions of the Water (prevention & Control of pollution) Act, 1974, the Air (Prevention & pollution)Act, 1981, the Environment (Protection) Act, 1986, Hazardous wastes (Management , Handling & Trans-boundary Movement) Rules 2008 and The Public (Insurance) Liability Act, 1991 along with their amendment and rules.	Noted.



STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986



TEST REPORT

1 of 1

Report No: SAS/STACK/JSL/03/24/401

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report	:	11.03.2024
Sample Registration Date	:	06.03.2024
Sample Collection Date	:	04.03.2024
Sample Description	:	Stack Emission Monitoring
Sample particulars	:	Blast Furnace
Sub Contract Test	:	NA
Registration Number	:	SAS/STACK/03/24-510

S. No	Parameter	Method	Unit	Results	SPCB Limits
01	Stack Diameter	--	Meter	1.65	--
02	Stack Height	--	Meter	40	--
03	Cross section Area (m ²)	--	Sq.m	2.1391	--
04	Ambient Temperature (°C)	IS 11255 (P-3)	°C	32	--
05	Flue Gas Temperature	IS 11255 (P-3)	°C	368	--
06	Flue Gases Velocity	IS 11255 (P-3)	m/sec	20.3	--
07	Particulate Matter (@15%O ₂)	IS 11255 (P-1)	mg/Nm ³	48.4	115
08	Sulphur Dioxide (@15%O ₂)	IS 11255 (P-2)	mg/Nm ³	26.5	--
09	Oxides of Nitrogen as NO ₂	IS 11255 (P-7)	mg/Nm ³	35.2	--

Instrument Details:

S. No	Instrument	Stack Sampler
1	Make	Complete Environmental Solutions
2	Model/S. No	SS - 104/ 45- L - 2018
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

Checked by
Srinivas
Sr. Chemist

-- End of the report --

Alluraiah V
Authorized Signatory
Alluraiah V
Manager-Laboratory



TEST REPORT

1 of 1

Report No: SAS/STACK/JSL/03/24/402

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 11.03.2024

Sample Registration Date : 06.03.2024

Sample Collection Date : 04.03.2024

Sample Description : Stack Emission Monitoring

Sample particulars : Sinter Plant

Sub Contract Test : NA

Registration Number : SAS/STACK/03/24-511

S. No	Parameter	Method	Unit	Results	SPCB Limits
01	Stack Diameter	--	Meter	3.5	--
02	Stack Height	--	Meter	40	--
03	Cross section Area (m ²)	--	Sq.m	9.625	--
04	Ambient Temperature (°C)	IS 11255 (P-3)	°C	29	--
05	Flue Gas Temperature	IS 11255 (P-3)	°C	133	--
06	Flue Gases Velocity	IS 11255 (P-3)	m/sec	14.4	--
07	Particulate Matter (@15%O ₂)	IS 11255 (P-1)	mg/Nm ³	38.2	115
08	Sulphur Dioxide (@15%O ₂)	IS 11255 (P-2)	mg/Nm ³	24.6	--
09	Oxides of Nitrogen as NO ₂	IS 11255 (P-7)	mg/Nm ³	32.8	--

Instrument Details:

S. No	Instrument	Stack Sampler
1	Make	Complete Environmental Solutions
2	Model/S. No	SS - 104/ 45- L - 2018
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

Authorized Signatory
Allurah V GUNTUR
Manager-Laboratory



TEST REPORT

1 of 1

Report No: SAS/STACK/JSL/03/24/403

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 11.03.2024

Sample Registration Date : 06.03.2024

Sample Collection Date : 04.03.2024

Sample Description : Stack Emission Monitoring

Sample particulars : Annealing Furnace

Sub Contract Test : NA

Registration Number : SAS/STACK/03/24-512

S. No	Parameter	Method	Unit	Results	SPCB Limits
01	Stack Diameter	--	Meter	3.0	--
02	Stack Height	--	Meter	40	--
03	Cross section Area (m ²)	--	Sq.m	7.0714	--
04	Ambient Temperature (°C)	IS 11255 (P-3)	°C	31	--
05	Flue Gas Temperature	IS 11255 (P-3)	°C	136	--
06	Flue Gases Velocity	IS 11255 (P-3)	m/sec	15.7	--
07	Particulate Matter (@15%O ₂)	IS 11255 (P-1)	mg/Nm ³	47.1	50
08	Sulphur Dioxide (@15%O ₂)	IS 11255 (P-2)	mg/Nm ³	29.8	--
09	Oxides of Nitrogen as NO ₂	IS 11255 (P-7)	mg/Nm ³	37.2	--

Instrument Details:

S. No	Instrument	Stack Sampler
1	Make	Complete Environmental Solutions
2	Model/S. No	SS – 104/ 45- L - 2018
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

✓
Alluraian V
Authorized Signatory
Alluraian V
Manager-Laboratory



TEST REPORT

1 of 1

Report No: SAS/STACK/JSL/03/24/404

Name and Address of the Client:

M/S. JINDAL SAW LIMITED
Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 11.03.2024
Sample Registration Date : 06.03.2024
Sample Collection Date : 04.03.2024
Sample Description : Stack Emission Monitoring
Sample particulars : Induction Furnace
Sub Contract Test : NA
Registration Number : SAS/STACK/03/24-513

S. No	Parameter	Method	Unit	Results	SPCB Limits
01	Stack Diameter	--	Meter	1.0	--
02	Stack Height	--	Meter	40	--
03	Cross section Area (m ²)	--	Sq.m	0.7857	--
04	Ambient Temperature (°C)	IS 11255 (P-3)	°C	30	--
05	Flue Gas Temperature	IS 11255 (P-3)	°C	131	--
06	Flue Gases Velocity	IS 11255 (P-3)	m/sec	13.8	--
07	Particulate Matter (@15%O ₂)	IS 11255 (P-1)	mg/Nm ³	46.4	50
08	Sulphur Dioxide (@15%O ₂)	IS 11255 (P-2)	mg/Nm ³	25.4	--
09	Oxides of Nitrogen as NO ₂	IS 11255 (P-7)	mg/Nm ³	35.8	--

Instrument Details:

S. No	Instrument	Stack Sampler
1	Make	Complete Environmental Solutions
2	Model/S. No	SS - 104/ 45- L - 2018
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

Authorized Signatory
Alluraiah.V
Manager-Laboratory

TEST REPORT

1 of 1

Report No: SAS/STACK/JSL/03/24/405

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 11.03.2024

Sample Registration Date : 06.03.2024

Sample Collection Date : 04.03.2024

Sample Description : Stack Emission Monitoring

Sample particulars : 130 TPH Boiler

Sub Contract Test : NA

Registration Number : SAS/STACK/03/24-514

S. No	Parameter	Method	Unit	Results	SPCB Limits
01	Stack Diameter	--	Meter	2.57	--
02	Stack Height	--	Meter	40	--
03	Cross section Area (m ²)	--	Sq.m	5.1895	--
04	Ambient Temperature (°C)	IS 11255 (P-3)	°C	31	--
05	Flue Gas Temperature	IS 11255 (P-3)	°C	130	--
06	Flue Gases Velocity	IS 11255 (P-3)	m/sec	18.55	--
07	Particulate Matter (@15%O ₂)	IS 11255 (P-1)	mg/Nm ³	49.2	50
08	Sulphur Dioxide (@15%O ₂)	IS 11255 (P-2)	mg/Nm ³	62.4	--
09	Oxides of Nitrogen as NO ₂	IS 11255 (P-7)	mg/Nm ³	89.7	--

Instrument Details:

S. No	Instrument	Stack Sampler
1	Make	Complete Environmental Solutions
2	Model/S. No	SS - 104/ 45- L - 2018
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

Authorized Signatory
Alluraiah.V
Manager-Laboratory





STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017

MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986

TEST REPORT

1 of 1



Report No: SAS/AAQ/JSL/03/24/311

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 51871 India

Date of Report : 11.03.2024
Sample Registration Date : 06.03.2024
Sample Collection Date : 04.03.2024
Sampling Location : Main Gate
Sample Received In : Polythene covers and Sample Bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description/Code : Ambient Air Quality Monitoring
Sub Contract Test : NA
Registration Number : SAS/AAQ/JSL/03/24/345
Environmental Condition : Weather Condition: Sunny
: Temperature/Humidity: 33°C/58%

S. No	Name of the Parameter	Shift Wise results			Results in Avg.	NAAQS Limits	Test Method
		1	2	3			
	Sample Code	608	609	610			
01	Particulate Matter (<10µm) or PM10 (µg/m³)	79	76	74	76.3	100	IS 5182: Part-23 (2012)
02	Particulate Matter (<2.5µm) or PM2.5(µg/m³)	38	35	32	35.0	60	CPCB Manual (NAAQMS/36/2012-13) Gravimetric Method (Cyclonic Flow technique)
03	Sulphur dioxide as SO₂ in µg/m³	24	26	25	25.0	80	IS 5182: Part-2 (2012)
04	Nitrogen dioxide as NOx in µg/m³	28	29	26	27.7	80	IS 5182: Part-6 (2012)
05*	Carbon monoxide as CO in mg/m³	0.50	0.60	0.30	0.50	02	IS 5182: Part-10 (1999)
06	Ozone (O₃) in µg/m³	24.1	24	22.6	23.6	100	IS 5182: Part-IX (1974)
07	Ammonia (NH₃) in µg/m³	<0.01	<0.0	<0.01	<0.01	400	Methods of Air sampling and Analysis 3 rd Edn. By JAMESP. LODGE; Method 401
08*	Lead (Pb) in µg/m³	0.04	0.05	0.045	0.0	1.0	IS 5182: Part-22 (2009)
09*	Nickel (Ni) in ng/m³	7.6	7.8	7.5	7.6	20	EPA-IO3.2
10*	Arsenic (As) in ng/m³	<0.01	<0.01	<0.01	<0.01	06	APHA 22 nd 3114 C
11*	Benzene(C ₆ H ₆) in µg/m³	<0.01	<0.01	<0.01	<0.01	05	IS 5182: Part-11 (2006)
12*	Benzo(a) pyrene (BaP) in ng/m³ (Particulate phase only)	<0.01	<0.01	<0.01	<0.01	01	IS 5182: Part-12 (2004) & USEPA method (TO-13)

Opinion and interpretation: Nil

NA: Not Applicable

Test reports shall not be reproduced except in full, without written approval of the laboratory

Method: Based on CPCBs Guidelines for the measurement of Ambient Air Pollutants, Volume - 1, 2012-13

Note: "The Parameters marked with ** are not Under NABL Scope".

Date of Calibration: 26.06.2023 (PM_{2.5}) & 26.06.2023 (PM₁₀) Due Date: 25.06.2024 (PM_{2.5}) & 25.06.2024 (PM₁₀)

-- End of the Report --

Checked by
Srinivas
Sr. Chemist

Authorized Signatory
Alluraian V GUNTUR
Manager-Laboratory





STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986



Page 2

TEST REPORT

1 of 1

Report No: SAS/AAQ/JSL/03/24/312

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 11.03.2024
Sample Registration Date : 06.03.2024
Sample Collection Date : 04.03.2024
Sampling Location : Kuruvali Village
Sample Received In : Polythene covers and Sample Bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume - I/2013-14)
Sample Description/Code : Ambient Air Quality Monitoring
Sub Contract Test : NA
Registration Number : SAS/AAQ/JSL /03/24/346
Environmental Condition : Weather Condition: Sunny
: Temperature/Humidity: 33°C/58%

S. No	Name of the Parameter	Shift Wise results			Results in Avg.	NAAQS Limits	Test Method
		1	2	3			
	Sample Code	611	612	613			
01	Particulate Matter (<10 μm) or PM10 ($\mu\text{g}/\text{m}^3$)	48	52	51	50.3	100	IS 5182: Part-23 (2012)
02	Particulate Matter (<2.5 μm) or PM2.5($\mu\text{g}/\text{m}^3$)	21	24	23	22.7	60	CPCB Manual (NAAQMS/36/2012-13) Gravimetric Method (Cyclonic Flow technique)
03	Sulphur dioxide as SO ₂ in $\mu\text{g}/\text{m}^3$	14.2	15.8	13.6	14.5	80	IS 5182: Part-2 (2012)
04	Nitrogen dioxide as NO _x in $\mu\text{g}/\text{m}^3$	17.8	20.4	16.2	18.1	80	IS 5182: Part-6 (2012)
05*	Carbon monoxide as CO in mg/m^3	0.60	0.80	0.80	0.70	02	IS 5182: Part-10 (1999)
06	Ozone (O ₃) in $\mu\text{g}/\text{m}^3$	<0.01	<0.01	<0.01	<0.01	100	IS 5182: Part-IX (1974)
07	Ammonia (NH ₃) in $\mu\text{g}/\text{m}^3$	<0.01	<0.01	<0.01	<0.01	400	Methods of Air sampling and Analysis 3 rd Edn. By JAMESP. LODGE; Method 401
08*	Lead (Pb) in $\mu\text{g}/\text{m}^3$	<0.01	<0.01	<0.01	<0.01	1.0	IS 5182: Part-22 (2009)
09*	Nickel (Ni) in ng/m^3	<0.01	<0.01	<0.01	<0.01	20	EPA-103.2
10*	Arsenic (As) in ng/m^3	<0.01	<0.01	<0.01	<0.01	06	APHA 22 nd 3114 C
11*	Benzene(C ₆ H ₆) in $\mu\text{g}/\text{m}^3$	<0.01	<0.01	<0.01	<0.01	05	IS 5182: Part-11 (2006)
12*	Benzo(a) pyrene (BaP) in ng/m^3 (Particulate phase only)	<0.01	<0.01	<0.01	<0.01	01	IS 5182: Part-12 (2004) & USEPA method (TO-13)

Opinion and interpretation: Nil

NA: Not Applicable

Test reports shall not be reproduced except in full, without written approval of the laboratory

Method: Based on CPCBs Guidelines for the measurement of Ambient Air Pollutants, Volume - 1, 2012-13

Note: "The Parameters marked with "*" are not Under NABL Scope".

Date of Calibration: 26.06.2023 (PM_{2.5}) &26.06.2023 (PM₁₀) Due Date: 25.06.2024 (PM_{2.5}) &25.06.2024 (PM₁₀)

-- End of the Report --

Checked by
Srinivas
Sr. Chemist

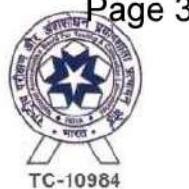
Authorised Signatory
Alluraiah V
Manager-Laboratory *



STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986



TC-10984

Page 3

TEST REPORT

1 of 1

Report No: SAS/AAQ/JSL/03/24/313

Name and Address of the Client:

M/S. JINDAL SAW LIMITED
Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report	: 11.03.2024
Sample Registration Date	: 06.03.2024
Sample Collection Date	: 04.03.2024
Sampling Location	: Haresamudram Village
Sample Received In	: Polythene covers and Sample Bottles
Sampling Procedure	: CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description/Code	: Ambient Air Quality Monitoring
Sub Contract Test	: NA
Registration Number	: SAS/AAQ/JSL /03/24/347
Environmental Condition	: Weather Condition: Sunny : Temperature/Humidity: 33°C/58%

S. No	Name of the Parameter	Shift Wise results			Results in Avg.	NAAQS Limits	Test Method
		1	2	3			
	Sample Code	614	615	616			
01	Particulate Matter (<10µm) or PM10 (µg/m³)	52.2	53.4	52.8	52.8	100	IS 5182: Part-23 (2012)
02	Particulate Matter (<2.5µm) or PM2.5(µg/m³)	24.8	26.2	23.6	24.9	60	CPCB Manual (NAAQMS/36/2012-13) Gravimetric Method (Cyclonic Flow technique)
03	Sulphur dioxide as SO₂ in µg/m³	14.8	16.2	14.5	15.2	80	IS 5182: Part-2 (2012)
04	Nitrogen dioxide as NOx in µg/m³	18.9	20.2	19.8	19.6	80	IS 5182: Part-6 (2012)
05*	Carbon monoxide as CO in mg/m³	0.60	0.80	0.60	0.70	02	IS 5182: Part-10 (1999)
06	Ozone (O₃) in µg/m³	<0.01	<0.01	<0.01	<0.01	100	IS 5182: Part-IX (1974)
07	Ammonia (NH₃) in µg/m³	<0.01	<0.01	<0.01	<0.01	400	Methods of Air sampling and Analysis 3 rd Edn. By JAMESP. LODGE; Method 401
08*	Lead (Pb) in µg/m³	<0.01	<0.01	<0.01	<0.01	1.0	IS 5182: Part-22 (2009)
09*	Nickel (Ni) in ng/m³	<0.01	<0.01	<0.01	<0.01	20	EPA-IO3.2
10*	Arsenic (As) in ng/m³	<0.01	<0.01	<0.01	<0.01	06	APHA 22 nd 3114 C
11*	Benzene(C ₆ H ₆) in µg/m³	<0.01	<0.01	<0.01	<0.01	05	IS 5182: Part-11 (2006)
12*	Benzo(a) pyrene (BaP) in ng/m³ (Particulate phase only)	<0.01	<0.01	<0.01	<0.01	01	IS 5182: Part-12 (2004) & USEPA method (TO-13)

Opinion and interpretation: Nil

NA: Not Applicable

Test reports shall not be reproduced except in full, without written approval of the laboratory

Method: Based on CPCBs Guidelines for the measurement of Ambient Air Pollutants, Volume - 1, 2012-13

Note: "The Parameters marked with ** are not Under NABL Scope".

Date of Calibration: 26.06.2023 (PM_{2.5}) & 26.06.2023 (PM₁₀) Due Date: 25.06.2024 (PM_{2.5}) & 25.06.2024 (PM₁₀)

-- End of the Report --

Checked by
Srinivas
Sr. Chemist

Authorised Signatory
Alluraian V
Manager-Laboratory



STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986 of 1



Page 4

TEST REPORT

Report No: SAS/AAQ/JSL/03/24/314

Name and Address of the Client:

M/S. JINDAL SAW LIMITED
Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 11.03.2024
Sample Registration Date : 06.03.2024
Sample Collection Date : 04.03.2024
Sampling Location : Bommanahal Village
Sample Received In : Polythene covers and Sample Bottles
Sampling Procedure : CPCB Guidelines (NAAQMS/Volume – I/2013-14)
Sample Description/Code : Ambient Air Quality Monitoring
Sub Contract Test : NA
Registration Number : SAS/AAQ/JSL /02/24/348
Environmental Condition : Weather Condition: Sunny
: Temperature/Humidity: 33°C/58%

S. No	Name of the Parameter	Shift Wise results			Results in Avg.	NAAQS Limits	Test Method
		1	2	3			
	Sample Code	617	618	619			
01	Particulate Matter (<10µm) or PM10 (µg/m³)	52.8	56.4	55.1	54.7	100	IS 5182: Part-23 (2012)
02	Particulate Matter (<2.5µm) or PM2.5(µg/m³)	24.2	25.8	26	25.3	60	CPCB Manual (NAAQMS/36/2012-13) Gravimetric Method (Cyclonic Flow technique)
03	Sulphur dioxide as SO₂ in µg/m³	15.4	17.2	16.2	16.3	80	IS 5182: Part-2 (2012)
04	Nitrogen dioxide as NOx in µg/m³	17.8	22.0	18.4	19.4	80	IS 5182: Part-6 (2012)
05*	Carbon monoxide as CO in mg/m³	0.50	0.70	0.60	0.60	02	IS 5182: Part-10 (1999)
06	Ozone (O₃) in µg/m³	<0.01	<0.01	<0.01	<0.01	100	IS 5182: Part-IX (1974)
07	Ammonia (NH₃) in µg/m³	<0.01	<0.01	<0.01	<0.01	400	Methods of Air sampling and Analysis 3 rd Edn. By JAMESP. LODGE; Method 401
08*	Lead (Pb) in µg/m³	<0.01	<0.01	<0.01	<0.01	1.0	IS 5182: Part-22 (2009)
09*	Nickel (Ni) in ng/m³	<0.01	<0.01	<0.01	<0.01	20	EPA-IO3.2
10*	Arsenic (As) in ng/m³	<0.01	<0.01	<0.01	<0.01	06	APHA 22 nd 3114 C
11*	Benzene(C ₆ H ₆) in µg/m³	<0.01	<0.01	<0.01	<0.01	05	IS 5182: Part-11 (2006)
12*	Benzo(a) pyrene (BaP) in ng/m³ (Particulate phase only)	<0.01	<0.01	<0.01	<0.01	01	IS 5182: Part-12 (2004) & USEPA method (TO-13)

Opinion and interpretation: Nil

NA: Not Applicable

Test reports shall not be reproduced except in full, without written approval of the laboratory

Method: Based on CPCBs Guidelines for the measurement of Ambient Air Pollutants, Volume - 1, 2012-13

Note: "The Parameters marked with ** are not Under NABL Scope".

Date of Calibration: 26.06.2023 (PM_{2.5}) & 26.06.2023 (PM₁₀) Due Date: 25.06.2024 (PM_{2.5}) & 25.06.2024 (PM₁₀)

-- End of the Report --

Checked by
Srinivas
Sr. Chemist

Authorized Signatory
Alluraanalytical Services
Manager-Laboratory





STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986



TEST REPORT

1 of 1

Report No: SAS/FE/JSL/03/2024-387

Name and Address of the Client:

M/S. JINDAL SAW LIMITED
Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 11.03.2024
Sample Registration Date : 06.03.2024
Sample Collection Date : 04.03.2024
Sampling duration : 24 Hours
Sample Description : Fugitive Emission
Sample particulars : Suspended Particulate Matter
Registration Number : SAS/FE/03/24/792
Sub Contract Test : NA

S.No	Name of the Location	Result ($\mu\text{g}/\text{m}^3$)	Tolerance limits	Test Method
1	Near Blast Furnace	1850.2	2000	IS-5182(Part-4)-2019

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL – 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

Authorised Signatory
Alluraiah V GUNTUR
Manager-Laboratory

TEST REPORT

1 of 1

Report No: SAS/FE/JSL/03/2024-390

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 18.03.2024

Sample Registration Date : 11.03.2024

Sample Collection Date : 08.03.2024

Sampling duration : 24 Hours

Sample Description : Fugitive Emission

Sample particulars : Suspended Particulate Matter

Registration Number : SAS/FE/03/24/793

Sub Contract Test : NA

S.No	Name of the Location	Result ($\mu\text{g}/\text{m}^3$)	Tolerance limits	Test Method
1	BF Office -2	1874	2000	IS-5182(Part-4)-2019

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL - 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

✓ Alluraiah V
Authorized Signatory
Alluraiah V
Manager-Laboratory



TEST REPORT

1 of 1

Report No: SAS/FE/JSL/03/2024-391

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 19.03.2024

Sample Registration Date : 12.03.2024

Sample Collection Date : 11.03.2024

Sampling duration : 24 Hours

Sample Description : Fugitive Emission

Sample particulars : Suspended Particulate Matter

Registration Number : SAS/FE/03/24/794

Sub Contract Test : NA

S.No	Name of the Location	Result ($\mu\text{g}/\text{m}^3$)	Tolerance limits	Test Method
1	Near Power Plant -2	1862.4	2000	IS-5182(Part-4)-2019

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL – 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

– End of the report –

Checked by
Srinivas
Sr. Chemist

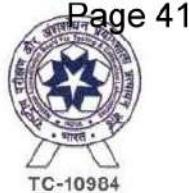
→ Allura A.V
Authorized Signatory
Allura A.V
Manager-Laboratory
* 



STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986



TEST REPORT

1 of 1

Report No: SAS/FE/JSL/03/2024-392

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report	: 21.03.2024
Sample Registration Date	: 18.03.2024
Sample Collection Date	: 16.03.2024
Sampling duration	: 24 Hours
Sample Description	: Fugitive Emission
Sample particulars	: Suspended Particulate Matter
Registration Number	: SAS/FE/03/24/795
Sub Contract Test	: NA

S.No	Name of the Location	Result ($\mu\text{g}/\text{m}^3$)	Tolerance limits	Test Method
1	Near Time Office	1768.2	2000	IS-5182(Part-4)-2019

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL - 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

Alluraiah V
Authorized Signatory
Alluraiah V GUNTUR
Manager-Laboratory

TEST REPORT

1 of 1

Report No: SAS/FE/JSL/03/2024-393

Name and Address of the Client:

M/S. JINDAL SAW LIMITED
Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 23.03.2024

Sample Registration Date : 19.03.2024

Sample Collection Date : 18.03.2024

Sampling duration : 24 Hours

Sample Description : Fugitive Emission

Sample particulars : Suspended Particulate Matter

Registration Number : SAS/FE/03/24/796

Sub Contract Test : NA

S.No	Name of the Location	Result ($\mu\text{g}/\text{m}^3$)	Tolerance limits	Test Method
1	Near Fire Station	1924.8	2000	IS-5182(Part-4)-2019

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL - 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

Authorised Signatory
Alluraian V GUNTUR
Manager-Laboratory



TEST REPORT

1 of 1

Report No: SAS/FE/JSL/03/2024-394

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report	: 26.03.2024
Sample Registration Date	: 23.03.2024
Sample Collection Date	: 22.03.2024
Sampling duration	: 24 Hours
Sample Description	: Fugitive Emission
Sample particulars	: Suspended Particulate Matter
Registration Number	: SAS/FE/03/24/797
Sub Contract Test	: NA

S.No	Name of the Location	Result ($\mu\text{g}/\text{m}^3$)	Tolerance limits	Test Method
1	Near Toll Gate	1824.6	2000	IS-5182(Part-4)-2019

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL - 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist


Authorized Signatory
Alluraiah V.
Manager-Laboratory



STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986



TEST REPORT

1 of 1

Report No: SAS/FE/JSL/03/2024-395

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 03.04.2024

Sample Registration Date : 30.03.2024

Sample Collection Date : 29.03.2024

Sampling duration : 24 Hours

Sample Description : Fugitive Emission

Sample particulars : Suspended Particulate Matter

Registration Number : SAS/FE/03/24/798

Sub Contract Test : NA

S.No	Name of the Location	Result ($\mu\text{g}/\text{m}^3$)	Tolerance limits	Test Method
1	Near Environmental Lab	1752.6	2000	IS-5182(Part-4)-2019

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL - 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

— End of the report —

Checked by
Srinivas
Sr. Chemist

Alluraiah V.
Authorized Signatory
Alluraiah V
Manager-Laboratory



STAR ANALYTICAL SERVICES

(ENVIRONMENTAL MONITORING, TESTING & SERVICES)

Laboratory Accredited by NABL as per ISO/IEC 17025:2017
MoEF & CC Recognized Laboratory Under Environment (Protection) Act - 1986



TEST REPORT

1 of 1

Report No: SAS/FE/JSL/04/2024-396

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 04.04.2024
Sample Registration Date : 01.04.2024
Sample Collection Date : 30.03.2024
Sampling duration : 24 Hours
Sample Description : Fugitive Emission
Sample particulars : Suspended Particulate Matter
Registration Number : SAS/FE/04/24/799
Sub Contract Test : NA

S.No	Name of the Location	Result ($\mu\text{g}/\text{m}^3$)	Tolerance limits	Test Method
1	Near Environmental Lab	1690.8	2000	IS-5182(Part-4)-2019

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL – 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

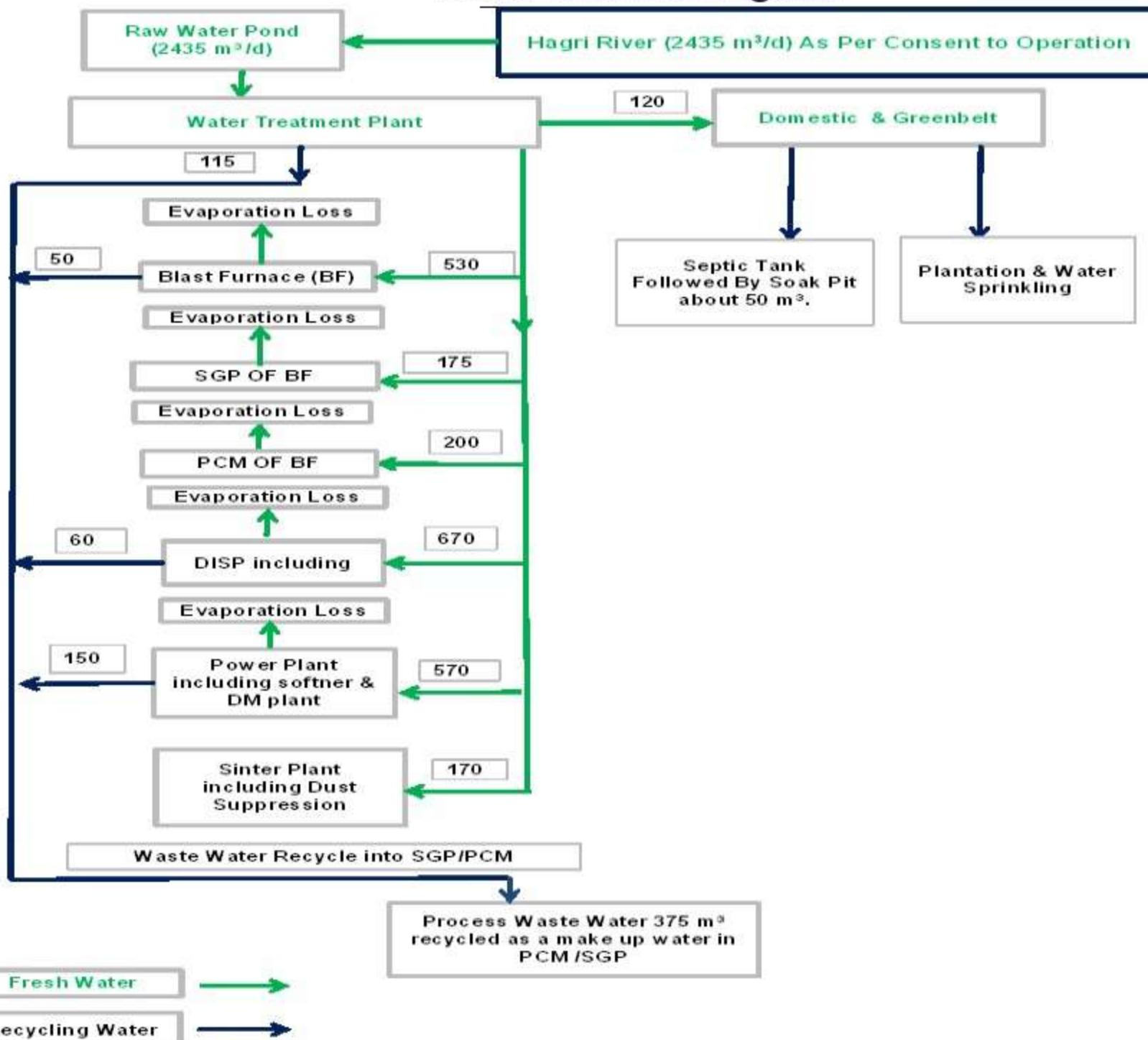
— End of the report —

Checked by
Srinivas
Sr. Chemist

Alluraiah.V
Authorized Signatory
Alluraiah.V
Manager-Laboratory

Water Balance Diagram

Annexure-4



(P31)

isition,
D.
up.

COPY OF: Government of Andhra Pradesh
Irrigation & Command Area Development Department
Memo. No. 1422/Irrgn. III(2)/91-1 dt. 11.2.1991

Sub: Water Permission for new pig iron Project near
Bommanahal, Anantapur District - from Hazari river
Ref.

Ref: From the Chief Engineer, (Major Irrgn., Lt. No. DCE.I/
OT./HLC/SC.I/1903/91 dt. 7.1.1991.

In the circumstances stated by the Chief Engineer,
Major Irrigation in his letter and in view of the recommendation
of the Commissioner of Industries, Hyderabad Government hereby
accept his proposal to permit the Sathavahana Ispat Ltd., Hyderabad
to draw water from Hazari river at the rate of 3000 cum / day
5000 cum / day and 7500 cum / day in phases I, II and III
respectively with the stipulation that the Superintending
Engineer, Irrigation circle, Anantapur will approve the designs
of intake structures, infiltration wells pipe lines, etc., and
on payment of rates decided upon by the Govt. for the water drawn.

C. B. Hara,
Principal Secretary to Govt.

To
The Chief Engineer, Major Irrigation,
Hyderabad.

/true copy/

Office of the Engineer-in-Chief,
Irrigation wing, A.P.,

Emt. No. DCE.I/OT.HLC/SC.I/1903/91 dt. 7.3.91

Copy forwarded to the Superintending Engineer, Irrgn.,
circle, Anantapur for information and necessary action.

K. V. L. Narayana Rao,
Chief Engineer, Major Irrigation,

To
The SE., IC., Anantapur. /true copy/


Head Draughtsman (L)

S
25/10

**GOVERNMENT OF ANDHRA PRADESH
FOREST DEPARTMENT**

Rc.no.30446/2011-F3,
Dated: 17-09-2012.

Office of the Prl. Chief Conservator of Forests,
Andhra Pradesh,
Aranya Bhavan, Saifabad, Hyderabad.
Sri S.V.Kumar, I.F.S.,
Prl. Chief Conservator of Forests
(Head of Forest Force)

Sub: - For modernization works and new facilities to produce value added products for the line of activity Sponge Iron and Coke Plant – in favour of Managing Director, M/s Sathavahana Ispat Ltd., Hyderabad - Reg.

Ref: - 1. M/s Sathavahana Ispat Ltd., Hyderabad Lr.no.nil, dt.29.06.2011 communicated by the Commissioner of Industries, GoAP, Hyderabad in Ref.no.12.2.11-Sathavahana-ID, dt.21.07.2011.
2. PCCF, AP, Hyderabad Rc.no.30446/2011-F3, dt.22.11.2011.
3. Chief Conservator of Forests, Ananthapur Ref.no.4883/2011-TO, dt.02.08.2012.

* * *

Attention of the M/s Sathavahana Ispat Ltd., Hyderabad is invited to the reference 1st cited and they area informed that the Chief Conservator of Forests, Ananthapur to whom the matter was referred, has informed that the project site is 4.34 km from nearest Hagari RF and 5.40 km from Mincheri RF of Ananthapur Division and no National Park/ Wildlife sanctuary are present within 10.00 km radius from the proposed plant site. Further, it is stated that the impact on flora and fauna due to proposed modernization works of the existing plant, can be ascertained only by EIA study carried by a GoI approved competent Agency.

The firm should take necessary action for development of flora and fauna including nearby Reserve Forests as per the EIA /EMP accepted and approved by the Ministry of Environment and Forest, at the cost of the company.

This is for favour of information.

Sd/- S.V.Kumar
Prl. Chief Conservator of Forests.
(Head of Forest Force)

To

Managing Director,
M/s Sathavahana Ispat Ltd., 505,
Block-1, Divyashakthi Complex,
Ameerpet,
Hyderabad –500073.

Copy to the Chief Conservator of Forests, Ananthapur and Divisional Forest Officer, Ananthapur for information and necessary action.

Copy to the Commissioner of Industries, GoAP, Chirag Ali Lane, Hyderabad for information in compliance to lr.no.12-2-11-Sathavahana-ID, dt.21.7.2011.

//t.c.b.o//

Signature
Superintendent

22/9/11

SATHAVAHANA ISPAT LIMITED

H.O. : 505, Block 1, Divyashakti Complex, Ameerpet, Hyderabad - 500 016.
 Phones : 23730812,3,4 Fax : +91-40-23730566 E-mail : sathavahana@eth.net
 web : www.sathavahana.com

September 4, 2014

The Principle Chief Conservator of Forest,
 (Head of Forest Force)
 Government of AP
 Department of Forest
 HYDERABAD.

O/C
 fm
 10/9/14
 PS to



Gentle Remainder

Respected Sir,

Sub: No Objection Certificate – for modernization works and new facilities
 To produce value added products for the line of activity Ductile Iron
 Pipe & Fitting sPlant, Sinter Plant and Power in the existing Pig Iron
 Plant – reg.

Ref: 1) Our letter dated 29-09-2011 addressed to the Principle Chief Conservator of Forst.
 2) RC No.3847/2011/TO, Dated 31-12-2011 from DFO, Anantapur.
 3) RC No.30446/2011-f3, dated 17-09-2012. Orders from Prl. Chief Conservator of Forests (Head of Forest Force)
 4) Our letter dated 20th October, 2012, and several remainders, addressed to the Principle Chief Conservator of Forest.

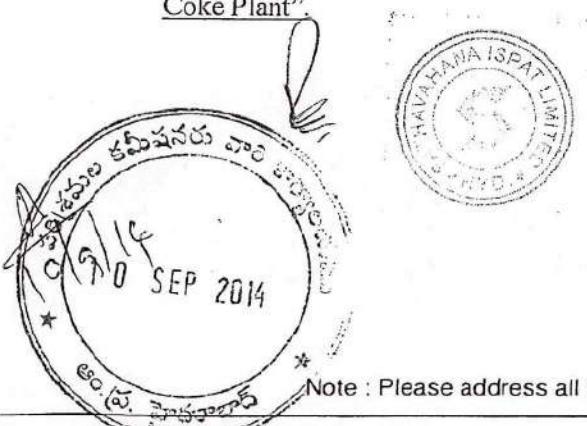
---oo---

This is in contine of our above (1) cited letter for issue of NOC for our project expansion DI Pipe, Sinter and co-generation Captive Power as additional facilities in our existing Pig Iron Industry located at Haresamudram Village, Bommanahal Mandal of Anantapur District, A.P. (Copy enclosed for your ready reference)

As per the orders given by your Hon'ble authority through 3rd cited letter (by Hon'ble Prl. Chief Conservator of Forests, (Head of Forest Force), Hyderabad). Xerox Copy enclosed hereby. The product for the line of activity given wrongly / differently. Ours is a existing Pig Iron Manufacturing Company with a capacity of 2,50,000 TPA. In the same premises we are proposing expansion works for value addition product for producing DI Pipe & fittings, Sinter & Co-generation Captive Power as additional facilities in our existing Pig Iron Industry.

We therefore request you Hon'ble authority to change the product name in the captioned subject matter as "DI Pipe, Sinter & Power" instead of "Spng Iron and Coke Plant".

Contd....



Note : Please address all the correspondence to head office

... 2 ...

Further we were informed to take necessary action for development of flora and fauna near by reserve forest as per the EIA/EMP accepted which was submitted by us at MOEF, NEW DELHI, and same was approved by the MOEF, NEW DELHI. The Company hereby undertakes to comply as per the directions given in clearance of the MOEF, New Delhi, as per their Order Vide F.No.J-11011/125/2010-IA-II(I), Dated 02-06-2011, and its amendment.

In the meantime we have submitted application for EC Amendment to add additional Value added product ie., DI Pipe fittings of 30.000MTPA and 30MW. Captive Power insted of existing 26.43. Copy of EC Amendment enclosed hereby vide order No.F.No.J-11011/125/2010-IA ii(1), dated 13-03-2014, for your ready reference.

This is for your kind information and requested for necessary correction of the subject matter as "for modernization works and new facilities to produce Value Added products for the line of activity DI Pipe & Fittings, Sinter & Power".

Kindly accept and do the needful by change the captioned subject matter in your orders.

Thanking you,

Yours sincerely,
For SATHAVAHANA ISPAT LIMITED

(R.S.V.PRASAD)
SR.MANAGER (HR & LEGAL)



CC to: 1) The Divisional Forst Officer, Anantapur,
2) The Commissioner of Industries (Single Window Cell) Hyderabad
Request for clearance through Single Window.

पी. - R.P. 54

भारतीय डाक विभाग

DEPARTMENT OF POSTS - INDIA
पावती / ACKNOWLEDGEMENT

पंजीकृत पत्र / पार्सल प्राप्त हुआ
Received Registered Letter / Parcels Received

Received Registered Letter / Parcel /
क्रमांक / No तारीक / Dated 09.09.11 का / of

वीमा का मूल्य रुपयों में
Insured for Rupees

प्राप्तकर्ता THE DIVISIONAL FOREST OFFICER
Addressed to Dept. of Forests, Distt. Forest, Agra

प्रेतरण डाकघर का तारीख - मोहर
Date Stamp of Office of delivery



Green Belt Development



Plantation Inside the Colony



Plantation In front of Guest House



Plantation at Coal Yard area



Plantation In front of Power Plant



Plantation at Plant Compound wall



Plantation at way to Sinter Plant



Plantation at Plant Compound wall



Plantation Near Sinter yards



Plantation Near Environment Office



Plantation at Internal Roads beside

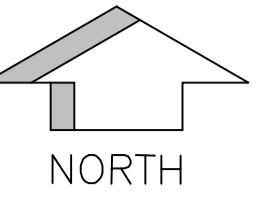


Plantation at inside plant



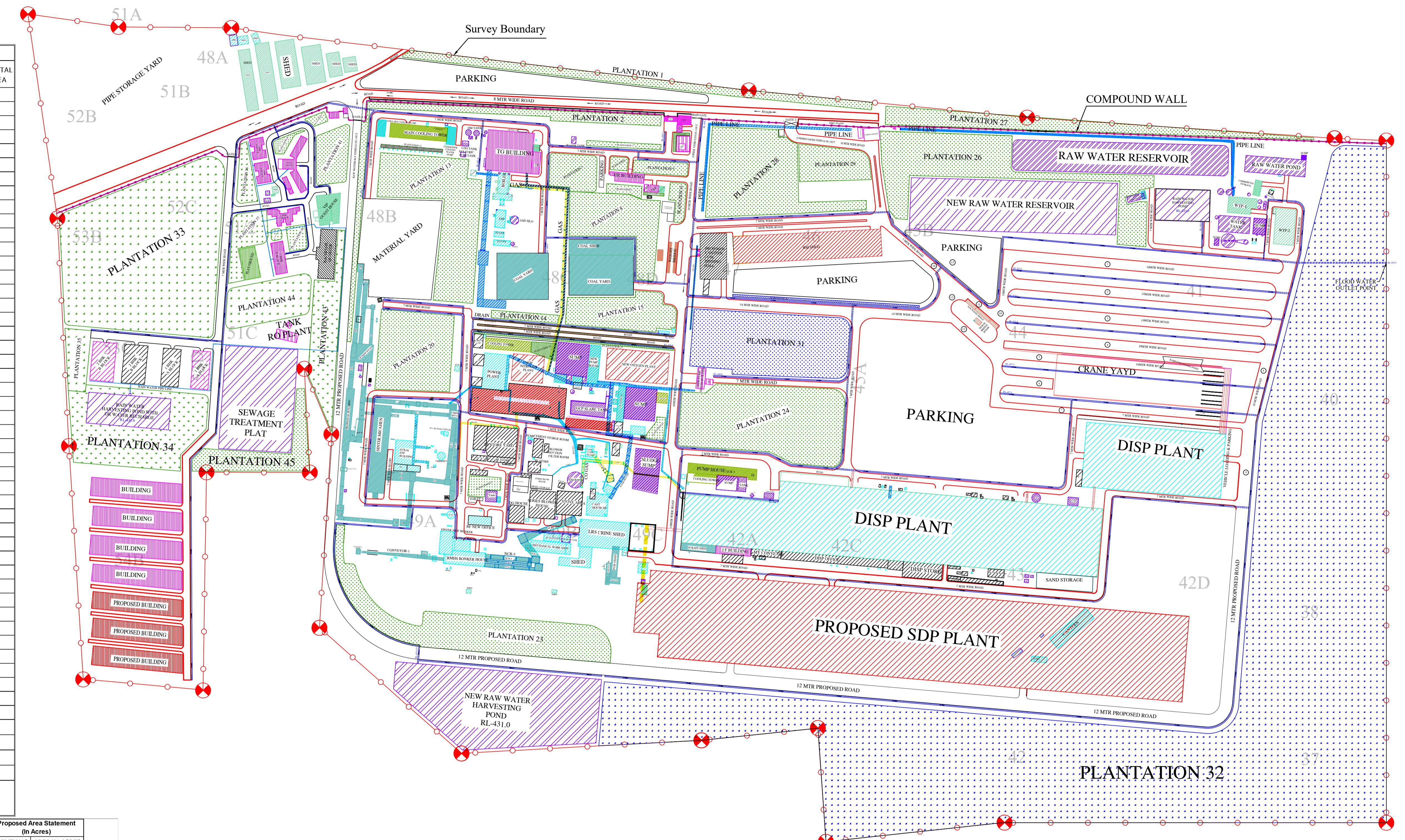
Plantation at Colony

PLANT LAYOUT WITH ROAD NETWORKING, TRAFFIC CHANALIZATION, ALL PLANT STRUCTURES, PARKING, GREEN BELT WITH A DETAILED AREA STATEMENT FOR JINDAL SAW LIMITED SURVEY NO. 37 TO 54, HARESAMUDRAM VILLAGE BOMMANAHAL MANDAL, ANANTAPURAM DISTRICT POST OFFICE BOMMANAHAL ANDRA PRADESH -515871 INDIA.



STATEMENT				
SR.NO	PLANTATION SR.NO	SQ.MTR	ACRE	% AREA OF TOTAL PROJECT AREA
1	PLANTATION 1	3390.601	0.838	0.41
2	PLANTATION 2	3305.037	0.817	0.40
3	PLANTATION 3	359.985	0.089	0.04
4	PLANTATION 4	801.174	0.020	0.01
5	PLANTATION 5	648.743	0.160	0.08
6	PLANTATION 6	210.897	0.052	0.03
7	PLANTATION 7	1541.150	0.381	0.19
8	PLANTATION 8	4250.860	1.050	0.52
9	PLANTATION 9	282.804	0.070	0.03
10	PLANTATION 10	463.014	0.114	0.06
11	PLANTATION 11	49.563	0.012	0.01
12	PLANTATION 12	188.594	0.047	0.02
13	PLANTATION 13	7454.365	1.842	0.91
14	PLANTATION 14	494.553	0.122	0.06
15	PLANTATION 15	3223.711	0.797	0.39
16	PLANTATION 16	179.203	0.044	0.02
17	PLANTATION 17	278.872	0.069	0.03
18	PLANTATION 18	173.041	0.043	0.02
19	PLANTATION 19	334.173	0.083	0.04
20	PLANTATION 20	5435.078	1.343	0.66
21	PLANTATION 21	276.430	0.068	0.03
22	PLANTATION 22	277.880	0.069	0.03
23	PLANTATION 23	501.070	0.124	0.06
24	PLANTATION 24	10293.279	3.044	1.51
25	PLANTATION 25	14010.959	3.462	1.71
26	PLANTATION 26	8574.000	2.119	1.05
27	PLANTATION 27	4127.281	1.020	0.50
28	PLANTATION 28	7708.230	1.905	0.94
29	PLANTATION 29	2167.260	0.536	0.26
30	PROPOSED PLANTATION 30	721.871	0.178	0.09
31	PROPOSED PLANTATION 31	8907.190	2.701	1.34
32	PROPOSED PLANTATION 32	123823.906	31.968	15.81
33	PLANTATION 33	21914.023	5.415	2.68
34	PLANTATION 34	8307.412	2.053	1.02
35	PLANTATION 35	1255.033	0.310	0.15
36	PLANTATION 36	773.934	0.191	0.09
37	PLANTATION 37	1462.222	0.361	0.18
38	PLANTATION 38	419.808	0.104	0.05
39	PLANTATION 39	106.103	0.026	0.01
40	PLANTATION 40	249.730	0.062	0.03
41	PLANTATION 41	1595.897	0.394	0.20
42	PLANTATION 42	172.427	0.043	0.02
43	PLANTATION 43	4445.307	1.098	0.54
44	PLANTATION 44	3193.744	0.789	0.39
45	PLANTATION 45	2836.130	0.701	0.35
TOTAL=		260465.539	66.732	33.00
TOTAL SQ. MTR		260465.54		
TOTAL ACRE		66.73		33.00
TOTAL LAND AREA (IN ACRES): 202.216				
NOTE: NUMBER OF TREES AVAILABLE IN EXISTING PLANTATION AREA ~ 31000 NOS. NUMBER OF TREES IN PROPOSED PLANTATION AREA ~ 34000 NOS.				

DO NOT SCALE, IF IN DOUBT, PLEASE ASK.



Corporate Responsibility for Environmental Protection (CREP)

Under the Corporate Responsibility for Environmental Protection (CREP) charter, Jindal Saw Limited at Haresamudram (V), Bommanhal (M), Anantapur (Dt) is committed to adopt of clean technologies and continual improvement in management practice, to conserve the natural resources and improve surrounding environment.

Status of conditions mentioned in the charter are as follows:

S.No	Conditions	Compliance	Remarks
1	<p>Coke Oven Plants</p> <ul style="list-style-type: none"> • To meet the parameters PLD (% leaking colors), PLL (% leaking lids), PLO (% leaking off take), of the notified standards under EPA within three years by December 2005). Industry will submit time bound action plan and PER Chart along with the Bank Guarantee for the implementation or the time. • To rebuild at least 40% of the coke oven batteries in next 10 years (by December 2012.). 	Not Applicable	No Coke Ovens in the project
2	<p>Steel Melting Shop</p> <ul style="list-style-type: none"> • Fugitive emissions - To reduce 30% by March 2004 and 100% by March 2008 (including installation of secondary dedusting facilities). 	Not Applicable	No Steel Melting Shop in the project
3	<p>Blast Furnace</p> <ul style="list-style-type: none"> • Direct inject of reducing Agent – By Sep-2013 	Direct injection system of reducing agent [Pulverized Coal Injection (PCI) System] in BF is envisaged in the modernization-cum-expansion project and will be undertaken after obtaining Environment Clearance from MoEFCC.	The project has been acquired by JSW in 2022 from NCLT, before which the project was under shut down since previous five years. JSL has restarted the project in Nov. 2022 and now envisages modernization-cum-expansion plan.
4	<p>Solid waste / Hazardous Waste Management :</p> <ul style="list-style-type: none"> • Utilization of steel melting shop (SMS) / Blast furnace (BF) Slag as per the following schedule) : <ul style="list-style-type: none"> - By 2004 – 70% - By 2006 – 80% and - By 2007 – 100% 	<ul style="list-style-type: none"> • No SMS Slag generated. • 100% of the Blast Furnace slag is being sold to the cement manufacturers. 	<ul style="list-style-type: none"> • There is no SMS in the project. • Only Blast Furnace slag is generated – Complied.

	<ul style="list-style-type: none"> Hazardous Wastes : <ul style="list-style-type: none"> - Charge of tar sludge / ETP sludge to coke oven by June 2003. - Inventorization of Hazardous Waste as per Hazardous Waste (M&H) Rules, 1989 as amended in 2000 and implementation of the rules by Dec 2003 (tar sludge, acid sludge, waste lubricating oil and type fuel falls in the category of Hazardous Waste. 	<ul style="list-style-type: none"> - No Tar Sludge generation from the project. - Other Hazardous wastes generated from the project have been inventorised and after due permission from APPCB are being disposed / sent to authorized handlers. 	<ul style="list-style-type: none"> - No Coke Oven in the project: Not Applicable. - Complied
5	<p>Water conservation / Water pollution</p> <ul style="list-style-type: none"> • To reduce specific water consumption to 5m³/t for long product and 8m³/t for flat products by December 2005. <p>—</p> <ul style="list-style-type: none"> • To operate the Co-BP effluent treatment plant efficiently to achieve the notified effluent discharge standards. by June 2003. 	<ul style="list-style-type: none"> • 100% wastewater from process is being recycled / re-used in the plant process of Blast Furness, Sinter, DISP & Power Plant. • The project maintains Zero discharge status. 	<ul style="list-style-type: none"> • The project has Blast furnace facility, producing Hot Metal which is converted in to Ductile Iron Pipes. • As such Long & Flat product are not produced.
	Not Applicable		Coke Oven & Bi-Product Plant (COBP) not present in plant.
6	Installations of Continuous stack monitoring system & its calibration in major stacks and setting up of the online ambient air quality monitoring stations by June 2005.	Complied	<ul style="list-style-type: none"> • Continuous Emission Monitoring Systems (CEMS) installed at all process stack, viz. Thermal Power Plant, BF, Sinter Plant. <ul style="list-style-type: none"> ○ Power Plant ○ Sinter Plant Furnace & cooler ○ Blast Furnace Stoves ○ Annealing Furnace • Air Quality Monitoring Station (AQMS)– three in numbers at <ul style="list-style-type: none"> ○ Near WTP (Eastern Side). ○ Plant Main Gate No.2 (North Side) ○ Block B (Western Side).

7	To operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard be submitted to CPCB/SPCB every three months.	Complied	All pollution control equipment's are being monitored every month and report is submitted to APPCB. The results are found well within the specified limit.
8	To implement the recommendations of Life Cycle Assessment (LCA) study sponsored by MoEF by December 2003.	Noted	All major / feasible recommendations implemented.
9	The industry will initiate the steps to adopt the following clean technologies / measure to enhance the performance of industry towards production, energy and environment.	Noted	<ul style="list-style-type: none"> The project was under shut down for five years since July 2017 to October 2022. In 2022 JSL has taken over the project through National Company Law Tribunal (NCLT) and started its operation in November 2022. Now JSL envisages Modernization-cum-expansion of the project and implement clean technologies / measures to enhance the performance of industry towards production, energy efficiency and environment like Dry De-dusting System (DDS), Pulverized Coal Injection (PCI) System)etc.after environmental Clearance (EC) from MoEFCC.
	Energy recovery to top Blast Furnace (BF) gases.	Envisaged under the modernization and expansion program.	BF gas is being utilized in stoves of Blast Furnace, Annealing Furnace, Sinter Plant and other Units as a fuel.
	Use of tar free runner lining, De-dusting of cast house at tap holes, runners, skimmers ladle and charging points.	Tar free runners is being used in BF	-
	Suppression of fugitive emissions using nitrogen or other inert gas.	Not applicable for the present project.	<p>For fugitive emission control the project has installed the following de-dusting methods in the project, viz.</p> <ul style="list-style-type: none"> De-Dusting System (Bag Filter) at Sinter Screen Area. Dust Extraction (Bag Filter) in Sinter Plant Proportionate Building Area. Dust Extraction (Bag Filter) in

			<p>Sinter Breaker Area.</p> <ul style="list-style-type: none"> • Water Sprinkler in Sinter Yard. • Raw material conveyors to Sinter Plant and Blast Furnace are covered. • DE System (Bag Filter) for Blast Furnace Stock House Screen Area. • Dust Extraction system with bag filters for Induction Furnace. • Dust Extraction system with bag filters for Annealing Furnace. • Dust Extraction system with bag filters for Zinc Coating Area. • Water Sprinkling on Plant Roads. • Water Sprinklers in Raw Material Yard. • Greenbelt / green cover has been planted within and all around the plant at strategic location to control fugitive emissions.
	To study the possibility of slag and fly ash transportation back to abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation.	Complied	Fly ash and Granulated Blast Furness Slag is being 100% sold to cement manufacturers.
	Processing of the waste containing flux & ferrous wastes through waste recycling plant.	Complied	All fines generated from iron ore, coke, lime stone, dolomite & quartzite, captured dust of dedusting system etc are being collected and utilized in sinter plant for sinter production.
	To implement rain water harvesting.	Complied	Rain water harvesting is through rain water harvesting pond. The system will be further strengthened in the up-coming modernization-cum-expansion plan.
	Reduction Green House Gases by :		
	- Reduction in power consumption.	Energy audit will be conducted and the recommendations to reduce power consumption will be	<ul style="list-style-type: none"> • LED bulbs installed to save electricity along with tube light. • Incorporation of automatic

		implemented.	<p>timing control mechanism in street lighting to save energy. Mechanism involving staggering of on-off sequence of street lights.</p> <ul style="list-style-type: none"> • Designing of building structures with proper ventilation and natural light. • Energy efficient mechanical systems: The energy efficiency of transformer and motors as per Indian Standard (IS 2026 for transformers and IS 12615 for motors).
	<ul style="list-style-type: none"> - Use of by products gases for power generation. 	100% of the BF gas is utilized in the project.	The project utilizes 100% BF gas in Sinter Plant. Annealing Furnace, BF stoves, etc. as fuel.
	<ul style="list-style-type: none"> - Promotion of Energy Optimisation technology including energy / audit. 	<ul style="list-style-type: none"> • Envisaged under modernization-cum-expansion plan. • Energy audit will be conducted and the recommendations to reduce power consumption will be implemented. 	
	<ul style="list-style-type: none"> - To set targets for Resource Conservation such as Raw material, energy and water consumption to match International Standards. 	<ul style="list-style-type: none"> • ISO 14000 Environment Management Standards will be adopted / implemented in the modernization-cum-expansion project for continual improvement / reduction in Raw material, energy and water consumption to match International Standards. 	<ul style="list-style-type: none"> • Presently, all blast furnace undersized raw material / reject is being used in the sinter plant. • Under the proposed Renovation / Modernisation-cum-expansion project the following resource conservation measures will be adopted: <ul style="list-style-type: none"> ○ Gas Cleaning Plant (GCP): The wet gas cleaning system will be replaced by Dry De-dusting system (DDS) vide which about 200m³/day of water will be conserved. ○ In BF, Pulverized Coal Injection (PCI) System will be installed to save coke consumption. ○

	<ul style="list-style-type: none"> - Up- gradation in the monitoring and analysis facilities for air and water pollution. Also to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories. 	<ul style="list-style-type: none"> • Will be adopted under modernization-cum- expansion project. 	
	<ul style="list-style-type: none"> - To improve overall housekeeping 	<p>House keeping of the project is consistently being improved since handover from NCLT in 2022.</p>	

Jindal Saw Limited
Condition Wise CFO Compliance Report
Consent order no: 1857856/APPCB/KNL/ATP/HO/CFO&HWA/2022 Dated: 17.10.2022

S.No	Conditions	Compliance
SCHEDULE – A		
1	Any up-set condition in any industrial plant / activity of the industry, which result in, increased effluent / emission discharge and/or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.	So far we didn't face any disturbance in the industrial activities. In case of any upset conditions the management will intimate to the board.
2	The industry should carryout analysis of waste water discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.	Our plant is zero discharge plant and no waste water is being discharged outside the plant.
3	All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 should be followed as applicable.	Agreed to comply
4	The industry should put up two sign boards (6x4 ft. each) at publicly visible places at the main gate indicating the products, effluent discharge standards, air emission standards, hazardous waste quantities and validity of CFO and exhibit the CFO order at a prominent place in the factory premises.	Complied.
5	Notwithstanding anything contained in this consent order, the Board hereby reserves the right and powers to review / revoke any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.	Noted
6	The industry shall ensure that there shall not be any change in the process technology, source & composition of raw materials and scope of working without prior approval from the Board.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC)
7	The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.	Submitting the environment statement to APPCB RO. Last submitted on 22.09.2023
8	The applicant should make applications through Online for renewal of Consent (under Water and Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed	Agreed to follow.

	compliance of CFO conditions for obtaining Consent & HW Authorization of the Board.	
9	The industry should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.	Revised application will be submitted to the board whenever the changes in the industrial activities.
10	Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to Appellate authority constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.	Noted.
11	The industry shall be liable to pay Environmental Compensation / Other Environmental Taxes, if any environmental damage caused to the surroundings, as fixed by the Collector & District Magistrate or any other competent authority as per the Rules in vogue.	Noted;.
12	The industry may explore the possibility of tapping the solar energy for their energy requirements.	Noted
13	The industry should educate the workers and nearby public of possible accidents and remedial measures.	Being Complied
SCHEDULE-B		
1	The industry should provide interlocking system for air pollution control equipment provided with raw material feeding system within one month.	Installed interlocking facility between APC equipment and raw material feeding system to stop feeding the raw material in case of failure of pollution control equipments.
2	The industry shall provide separate energy meters for APCE and ETP within one month and shall maintain records for energy meters for operation of air pollution control equipments provided to induction furnace.	Provided separate Energy meters for each SGP Motor 1, 2 & 3 at Blast Furnace.
3	The industry shall connect online stack monitoring system provided to coal fired boilers, blast furnace, sinter plant, annealing furnaces and induction furnaces to APPCB website within one month.	System already in place. Order placed for New CEMS based on modern technology, one by one installation under progress

4	The industry shall complete the construction of STP within three months.			STP Purchase order is released, we will comply as early as possible.
5	The industry shall provide mechanical water sprinklers all along the internal roads, raw material storage yards within one month.			We have provided a dedicated water tankers of capacity 4500 liters per trip to sprinkle water for dust suppression, sprinklers were provided wherever the possible on roads.
6	The industry shall procure mechanical dust sweeping machine to remove the dust accumulated at the premises within one month.			Noted and Will be complied. Present provided the dedicated manpower for roads sweeping.
7	The industry shall complete the construction of concrete internal roads in an area of 1.8 KM within three months.			90% completed balance under progress
8	The industry shall provide shed for storage of other raw materials within three months.			Storage sheds construction under progress (Final Stage).
9	The industry shall provide additional 2 CAAQMs stations in addition to the existing one and connect to APPCB website within three months.			Installed 2 CAAQMS stations.
	WATER POLLUTION:			
10	The source of water is Hagari River. The following is the permitted water consumption			Being complied. The management is not using more than the stipulated quantity of water. Plant is zero discharge.
	S. No.	Purpose	Quantity (in KLD)	Water
	1	Shell cooling	125	Water
	2	Tuyers and stove valves	180	Water
	3	Turbine condenser cooling	450	Water
	4	DM and regeneration	50	Water
	5	Gas cleaning Plant	225	Water
	6	Pig Iron cooling	200	Water
	7	Slag Granulation	175	Water
	8	Water spray for dust suppression	20	Water
	9	Softener regeneration	70	Water
	10	Water spray for dust suppression (Sinter Plant)	5	Water
	11	Moisturing in Sinter Plant	145	Water
	12	DI Plant cooling water	575	Water

	13	DI Plant steam for curing	95	Water	
	14	Domestic and Green Belt	120	Water	
		Total	2435	Water	
11	The industry shall provide flow meters for assessing the water consumption for various purposes and maintain records for the same.				Complied and maintaining the log book.
12	The industry shall provide and maintain magnetic flow meters with totalizers to the water consumption and waste water generation permitted in this order.				Complied.
13	The industry shall construct separate storm water drains and provide rain water harvesting structures. No effluents shall be discharged into the storm water drains.				We have 4000m ³ rainwater harvesting pond. The pond is having the capacity to cater the quantity of 4000KL is sufficient enough to accumulate the water from the catchment area. Our plant is zero liquid discharge system.
14	Effluents shall not be discharged on land or any water bodies or aquifers or outside under any circumstances.				Agreed to Comply.
15	Rain water shall not be allowed to mix with domestic wastewater. Industry shall maintain storm water drains, properly.				Strom run – off water as well as rainwater is collected from roof top of building in a pond meant for rain water harvesting.
16	The industry shall maintain rainwater runoff tank with pump for collection and storage of first flush contaminated storm water and the same shall be sent for further treatment. The industry shall maintain dry condition in outside drains during non-rainy season.				Will comply
17	Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas. All pipe valves, sewers, drains shall be leak proof.				Noted
	AIR POLLUTION:				
18	The emissions shall not contain constituents in excess of the prescribed limits mentioned below: The emissions shall not contain constituents in excess of the prescribed limits mentioned below:				We have adequate pollution equipments are provided at the existing sources which are in regular operation. The Emissions from the stacks meet the prescribed standards.
	Chimney No.	Parameter	Emission Standards		
	1 – 5	Particulate Matter	115 mg/Nm ³		
	6 – 9	Particulate Matter	50 mg/Nm ³		
19	The industry shall comply with ambient air quality standards of PM10–100 micrograms/m ³ ; PM2.5- 60 micrograms/m ³ ; SO ₂ - 80 micrograms/m ³ ; NO _x – 80micrograms/m ³ (day				Ambient air quality monitoring carried out by M/s MSV Laboratory (MoEF&CC and NABL accredited agency). Results are furnished to the authorities at regular interval.

	average standards) outside the factory premises at the periphery of the industry. Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009. Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A) Night time (10 PM to 6 AM) - 70 dB (A)	
20	The industry should comply with emission limits for DG Sets of capacity up to 800KW as per the Notification G.S.R. 520(E), dated 01.07.2003 under Environment(Protection) Amendment Rules, 2003 and G.S.R. 448(E), dated 12.07.2004 under the Environment (Protection) Second Amendment Rules, 2004. In case of DG sets of capacity more than 800 KW should comply with emission limits as per the notification GSR 489(E), dated 09.07.2002 at Serial No.96, under the Environment (Protection) Act, 1986.	The DG emissions are maintained within limits as per latest limits issued by the ministry. DG sets are stand by only.
21	The overall noise levels in and around the plant shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc., on all sources of noise generation.	We shall make sure that the noise levels during day or night shall not exceed the prescribed decibel levels.
22	The industry shall provide a sampling port with removable dummy of not less than 15cm diameter in the stack at a distance of 8 times the diameter of the stack from the nearest constraint such as bends etc. A platform with suitable ladder shall be provided below 1 meter of sampling port to accommodate three persons with instruments. A 15 AMP 250 V plug point shall be provided on the platform.	We have provided sufficient platform and ladder with port hole for monitoring.
23	The industry shall connect the online monitoring systems to the APPCB website for data display.	All the stacks connected to APPCB website.
24	The industry shall provide mechanical sprinkling system for dust suppression	We have deployed water tanker of capacity 4500 litters per trip to sprinkle water for dust suppression, mechanical sprinklers installed
25	The industry shall remove all the dust accumulated at the premises by the mechanical dust sweeping machine.	Noted.
26	All the fine dust collected from gas cleaning plant shall be disposed of in the scientific landfill.	All fine dust collected from dust catcher / gas cleaning plant of blast furnace is being utilised in sinter plant as a raw material.
27	The industry shall comply with all the conditions mentioned in EC order dt.02.06.2011 & CFO Order dated 10.03.2015.	Noted and Agreed to comply.
GENERAL CONDITIONS:		
28	The industry shall not produce beyond the permitted capacity as mentioned in this order,	No expansion or modifications in the plant shall be carried out without prior approval of the

	without obtaining prior CFE & CFO of the Board mentioned in this order, without obtaining prior CFE & CFO of the Board.	Ministry of Environment, Forests and Climate Change (MoEFCC) and APPCB.
29	The industry shall maintain good house keeping.	Complying.
30	The industry shall appoint Environmental Engineer for environmental management within the plant.	Complied. Appointed the Environment person for environment management.
31	The industry shall complete construction of concrete / asphalted internal roads immediately to control fugitive emissions.	We have already concrete internal road, further we will complete the internal roads where ever required.
32	The industry shall store all the raw materials in closed roof sheds to avoid fugitive emissions.	Will be complied.
33	The industry shall dispose the granulated slag to the cement industries.	Complying. Selling to cement industries.
34	The industry shall provide and maintain permanent water sprinklers on internal roads and at raw material yards, to control fugitive emissions, as committed vide Ir.dt.03.09.2014.	We have deployed water tanker of capacity 4500 litters per trip to sprinkle water for dust suppression, mechanical sprinklers also installed.
35	The industry should maintain continuous monitoring system for particulate matter to Sinter plant Stacks with data recorder facility and connect the data to the APPCB server.	Installed continuous monitoring system and connected to APPCB website.
36	The industry should maintain 25% of additional capacity of ESPs provided as spare to meet the emergency requirements.	Maintaining the spares of ESP's, De dusting bag filters on emergency requirements.
37	The industry should maintain the following records and the same should be made available to the Board Officials during the inspection. a. Daily production details, RG-I records and Central Excise Returns. b. Quantity of Effluents generated and reused. c. Log Books for pollution control systems. d. Daily solid waste generated and reused.	Noted and maintaining the records
38	Thick green belt should be developed and maintained by the industry with tall growing trees in the vacant spaces of the unit.	We are developed in house plant nursery for greenbelt development inside and outside the plant.
39	The industry shall comply with the Task Force directions issued by the Board from time to time.	Noted and agreed to comply.
40	All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991, should be followed.	Noted.
41	The conditions stipulated in this order are without prejudice to rights and contentions of this Board in any Hon'ble court of Law.	Noted.
42	The industry shall submit Half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), Consent for Establishments (CFE) and Consent for Operation (CFO) through website i.e.,	Submitting the EC, CFO Half yearly compliance reports regularly to the concerned regulatory authorities.

	https://pcb.ap.gov.in by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through NABL accredited third party.	
Schedule-C		
1	The authorized person shall comply with the provision of the Environment (Protection) Act, 1986, and the rules made there under.	Agreed and complied
2	The authorization shall be produced for inspection at the request of an officer authorized by the State Pollution Control Board.	complied
3	The person authorized shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorization.	complied
4	Any authorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization	Noted
5	The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time	Noted
6	The person authorized comply with the provisions outline in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty"	Noted.
7	It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility..	Agreed and followed.
8	An application for the renewal of an authorization shall be made as laid down under these Rules	Agreed and followed.
9	Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.	Complied.
Specific Conditions:		
10	The industry shall not store hazardous waste for more than 90 days as per the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.	No hazardous waste is being stored more than 90 days.

11	The industry shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its internal use / disposal to the manufacturers / dealers on buyback basis.	Separate shed constructed to store the waste materials till disposal.
12	The industry shall maintain 7 copy manifest system for transportation of waste generated and a copy shall be submitted to concerned Regional Office of APPCB	Complied.
13	The industry shall maintain proper records for Hazardous Wastes stated in Authorisation in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 20(2) of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules,2016.	Maintaining Form-3 and filling form-4 returns every year as per the condition.

TEST REPORT

1 of 1

Report No: SAS/WZN/JSL/03/2024-386

Name and Address of the Client:

M/S. JINDAL SAW LIMITED

Survey No. 42 to 49, Haresamudram Village
Bommanahal Mandal, Anantapuram District
Post Office Bommanahal Andhra Pradesh 515871 India

Date of Report : 11.03.2024
Sample Collection Date : 04.03.2024
Sampling duration : 8 Hours
Sample Description/Code : Work Zone Noise Level Monitoring
Sub Contract Test : NA
Registration Number : SAS/WZN/03/779- to 783

S. No	Sampling Location	Day Time Results			Permissible Limit in dB(A)
		Maximum In Leq dB (A)	Minimum In Leq dB(A)	Average .in dB(A)Leq	
1	Near Blast furnace	78.5	75.4	76.9	
2	Near Power Plant	73.2	71.3	72.2	
3	Sinter Plant	74.8	70.4	72.6	90 dB (A)

Instrument Details:

S. No	Instrument	Sound Level Meter
1	Make	Lutron
2	Model/S. No	SL – 4010/GE: 2408982
3	Calibrated On	26.06.2023
4	Calibration Due Date	25.06.2024

Opinion and interpretation: Nil

NA: Not Applicable

- Test reports shall not be reproduced except in full, without written approval of the laboratory.

-- End of the report --

Checked by
Srinivas
Sr. Chemist

Authorised Signatory
Alluraiah V
Manager-Laboratory



APPCB Acknowledgement for submission of Environment Statement (FORM-V)



JINDAL SAW LTD.

JSL/ENV/HARI/APPCB/2022-23 Date :21.09.2023

To,
Environment Engineer,
Andhra Pradesh Pollution Control Board,
Regional Office
Anantapuram

Subject: Environmental Statement (FORM-V) for Jindal Saw Limited (Formerly Sathvahana Ispat Limited), Haresamudram, Andhra Pradesh

Ref: Consent Order No : 1857856/APPCB/KNL/ATP/HO/CFO&HWA/2022-17/10/2022

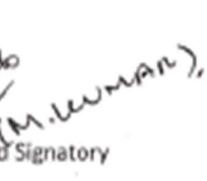
Dear Sir,

This has reference to above; we are submitting herewith Environmental Statement (FORM-V) for Jindal Saw Limited (Formerly Sathvahana Ispat Limited), Haresamudram, Andhra Pradesh for the period April 2022 to March 2023.

Kindly acknowledge the receipt for the same.

Thanking you,

Yours Faithfully
For Jindal Saw Limited, Haresamudram



Authorized Signatory



End: As ABOVE

Survey No. 42 to 49, Haresamudram Village, Bommanahalli Mandal, Anantapuram District, Haresamudram, Andhra Pradesh - 515871, INDIA ; Phone: +91 (8495) 258770, Extn.: 8111, 8204
Corporate Office : Jindal Centre, 12 Bhikaji Cama Place, New Delhi 110068 Phone : +91 (11) 26188345-70; Fax: +91 (11) 26170501;
Regd. Off.: A-1, UPSIDC Indl. Area, Nandgaon Road, Kesi Kalan, Dist. Mathura (U.P.) - 281403 ; Website: www.jindalsaw.com

PUBLIC NOTICE

M/s. Sathavahana Ispat Ltd has been accorded Environmental Clearance by the Ministry of Environment and Forest, New Delhi vide its order F.No.J-11011/125/2010-IA-II(I)

Dated : 2-6-2011 for their expansion works. The copies of clearance available at APPCB, Hyderabad and may also be seen at website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This is for the information of Public.