o/c

JINDAL SAW LTD.

Ref: JSL/Pellet/2016-17/54 Dated: 12.09.2016

To,

The Member Secretary,
Rajasthan Pollution Control Board
4, Institutional Area, Jhalana Doongri,
Jaipur (Rajasthan)

Sub: Environmental Statement for the Financial Year ended on 31st March' 2016 in respect of Iron Ore Pellet Plant located near Village Pur, Tehsil & Distt. Bhilwara (Rajasthan).

Ref: Consent to Operate of RPCB vide letter no. F (CPM) /Bhilwara (Bhilwara) /22(1)/ 2016 - 2017/ 1743-1745 dated 18.05.2016.

Dear Sir,

Kindly find enclosed herewith Environmental Statement for the period from 01st April 2015 to 31st March 2016 in respect of Iron Ore Pellet Plant of M/s Jindal Saw Limited located near Village Pur, Tehsil & Distt. Bhilwara (Rajasthan) for your reference and records.

Thanking you,

Yours faithfully,
For: JINDAL SAW LTD.

Rajendra Gaur
Authorised Signatory

Encls: a/a

Copy to:

1. The Director, Regional Office, MOEF, Kendriya Bhawan, 5th Floor, Sector-H, Lucknow- Uttar Pradesh (Pin-226024)

2. The Regional Officer, Rajasthan State Pollution Control Board, 18, Azad Nagar, Pannadhai Circle, Bhilwara-Rajasthan, (Pin-311001)

Araji No. 9697/6711, Near Tiranga Hills, Village-Pur, Tahsil & Distt-Bhilwara - 311802, Rajasthan Phone/Fax No.: +91 (1482) 248417
Corporate Office : Jindal Centre, 12 Bhikaiji Cama Place, New Delhi - 110066 Phone : +91 (11) 26188360-74 Fax : +91 (11) 26170691
Regd. Office : A-1, UPSIDC, Indl. Area, Nandgaon Road, Kosi Kalan, Distt. Mathura (U.P.) - 281403 Website : www.jindalsaw.com
CIN: L27104UP1984PLC023979

FORM No. V
(See rule 14)

Environmental statement for the financial year ended on 31st ***March 2016***

PART-A

(i)	Name and address of the owner/ occupier of the industry operation or process.	:	**M/s Jindal Saw Limited** **Khasra No. 6711, 9697/6711, Near Tiranga Hill** **Village: Pur, Tehsil & Distt. Bhilwara** **Rajasthan, Pin-311802** Industry: Iron Ore Pellet Plant
(ii)	Industry Category	:	**Red**
(iii)	Production Capacity	:	**DETAIL OF PRODUCT WITH QUANTITIES**
(iv)	Year of Establishment	:	**07 Dec 2012**
(v)	Date of Last Environment Statement Submitted	:	**18.09.2015**

SN	Products	Existing capacity
1	Iron Ore Pellet	1.2 MTPA

PART – B

Water and Raw Material Consumption

(1) Water consumption m^3/d

Process & Cooling - 246 approx)

Domestic - 18 (approx)

(1) Name of Products

Name of Products	Process Water Consumption per unit of product output	
	During the previous financial year	**During the current financial year**
1) Iron Ore Pellet	0.05 KL/ ton of Product	0.07 KL/ ton of Product

For Jindal SAW Ltd.
(Rajender Gaur)
Authorised Signatory

(2) Raw material consumption

Name of Raw material:	**Consumption of raw material per unit of product Output**	
Name of product:	**During the previous Financial year** (consumption/ton of product)	**During the current Financial year** (consumption/ton of product)
1. Iron Ore Pellet	**1. Iron Concentrate**-0.98 Ton **2. Bentonite** :- 0.011 Ton **3. Coal :** 0.026 Ton **4. ESP Dust:** 0.002 Ton 5. **Calcined Lime:** 0.0008 Ton **4. Power:** 0.029 Mwh	**1. Iron Concentrate**-0.98 Ton **2. Bentonite** :- 0.013 Ton **3. Coal :** 0.018 Ton 4. **ESP Dust:** 0.0019 Ton **5. Calcined Lime:** 0.0009 Ton **4. Power:** 0.024 Mwh

- Industry may use codes if disclosing details of raw material would violate contractual obligations; otherwise all industries have to name the raw materials used.

PART – C

Pollution discharged to environment/unit of output

(Parameter as specified in the consent issued)

Pollutants	Quantity of pollutants discharged (Mass/day)	Concentration of pollutants in discharges (Mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	**Industrial:** **Domestic:**	No waste water was discharged from the manufacturing process. Domestic sewage water generated from office toilets and plant building is treated in 15 KLD STP unit based on green bio filter bed technology and treated water is being used for plantation / horticulture purpose. STP treated water quality monitoring is enclosed as **Annexure-I**	Well Within the Prescribed Limits
(b) Air		Concentration of the pollutants in the air are being measured by MoEF & GOI approved agency in every quarter Ambient Air Quality, Ambient Noise, Fugitive dust and Stack monitoring reports are enclosed as **Annexure- II to V**	

For Jindal SAW Ltd.

(Rajender Gaur)
Authorised Signatory

PART – D

HAZARDOUS WASTES

(As specified under Hazardous Wastes/Management and Handling Rules, 1989)

Hazardous Wastes	Total Quantity (MT)	
	During the previous financial year	**During the current financial year**
(a) From process During Pellet Plant operation no hazardous waste was generated from the process except used oil which was generated from machinery equipment.	2.29 KL balanced from last year. Current year (Apr 2014 - Mar 2015) Generation was 1.11 KL, Out of which 0.29 KL was self reused for lubrication in conveyor belts for transportation of raw materials and finished product. Total 3.11 KL was balance for reuse and selling to recycler	Earlier Balance: **3.11 KL** Generated Quantity (Apr'15 - Mar'16): **4.68 KL** Sent to recycler: **7.75 KL** Balance Quantity: **0.047 KL** for reuse and selling to recycler
(b)From pollution control facilities	**NA**	**NA**

PART – E

SOLID WASTES

	Total Quantity	
	During the previous financial year	**During the current financial year**
(a) From process	Nil, During pellet manufacturing process, no solid waste was generated.	Nil, During Pellet manufacturing process, no solid waste is generated. Broken Pellets & fines 100% reused in the process for the preparation of pellet.
(b) From pollution control facilities	**1. ESP Dust: 3164 Ton** The dust generated from ESP being stored in dust bin and used in the preparation of Pellet by dispatching to proportioning room.	**1. ESP Dust: 2309 Ton** The dust collected from ESP is being stored in dust bin and used in the preparation of Pellet by dispatching to proportioning room.
(C) (1)Quantity recycled or reutilized within the unit	**2. ESP Dust : 3164 Ton** Reused for preparation of Pellet (100% ESP dust reutilized in process)	**1. ESP Dust : 2309 Ton** Reused for preparation of Pellet (100% ESP dust reutilized in process)
(2)Sold	Nil	Nil
(3)Disposed	Nil	Nil

For Jindal SAW Ltd.

(Rajender Gaur)
Authorised Signatory

PART – F

Please specify the characterizations (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Hazardous Waste

During Pellet Plant operation no hazardous waste is generated from the process except used oil, which is generated from plant equipment/ machinery. Very small quantity of used oil is being reused for lubrication in chains, Stacker and conveyor for transportation of raw materials and finished product. Maximum quantity have been sent to RPCB approved authorized recycler.

Solid Waste:

From ESP (Dust fines):

- Dust fines generating from high quality low ash-content coal is being recovered from ESP and mixed with green balls for the preparation of pellet.
- The Dust fines generated from ESP being recycled to dust bin and used in the preparation of Pellet by dispatching to proportioning room.

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

Jindal Saw Ltd. Bhilwara is continuously making efforts to conserve the natural resources as well as environment by adopting clean and green technology in the process. In this regard JSL has installed 10.0 MLD (5.5 + 4.5 MLD) Sewage Treatment Plant which is helping to reduce sewerage pollution of Bhilwara city and by this way we also meet our water requirement for plant operation.

No waste water is discharged from the pellet manufacturing process. Domestic waste water generated from office toilets in Pellet Plant area is being treated in STP unit based on green bio filter bed technology and treated water completely used in plantation / horticulture purpose.

The pellet plant of M/s Jindal Saw Ltd is being operated in energy efficient technology having 40% less power consumption compare to other pellet plant located in India. The stack emissions from the plant are controlled by ESPs. Bag Filters have been installed at various points to clean the process and arrest the fugitive emissions. The particulate matter collected in the pollution control equipment is recycled in process and reducing the cost of operation of pollution control equipments and hence no cost impact on the production cost.

For Jindal SAW Ltd.

(Jitender Gaur)
Authorised Signatory

PART – H

Additional measures/investment proposed for environmental protection including abatement of pollution, prevention of pollution.

Green belt development and plantation is given its utmost importance. For conservation of environment, the company has carried out plantation of various species of trees within and outside the premises. Every year we carry out more and more plantation and also taking all possible care, i.e. watering, fencing and using pesticides etc.

In the year 2015-16 around 226 new saplings have been planted within the plant area and 2431 outside the premises in (Bhilwara City, Malikhera Village, Various Govt Offices, Schools, nearby Villages and Out Site Road), Up to March 2016 total green cover area in pellet plant site is 2.66 hectare with around 2521 nos. plants. In pellet plant area we are strengthening green belt area in phase manner and our target is to cover minimum 33% green belt cover area within five years

The expenditure made by us for the purpose of environmental management during the period 2015-2016 are as follows:

Greenery Development/ Maintenance	:	17.7 Lakh
Environment Monitoring	:	2.4 Lakh
Rural Development / CSR by M/s Jindal Saw Ltd. in Bhilwara Units (Community Park Maintenance, Tree Guard & Plantation, and other CSR activity i.e. Blood Donation Camp, Drinking water supply, School & Village development, Fodder Distribution, Religious Places Development, Disaster Relief, Hygiene Cleaning in MG Hospital Bhil	:	715.2 Lakh

PART – I

Any other particulars for improving the quality of the environment

1. We have EHS Department with three separate cells, one for monitoring and one for maintenance of pollution control equipment and one for Green Belt development.
2. Monitoring of stack emission, ambient air and water quality is being carried out regularly.
3. Maintenance department is doing regular checking and scheduled maintenance of all the pollution control devices.
4. Civil deptt is taking care of Housekeeping and water supply.
5. Horticulture Department is taking care of plantation and green belt development. Every year we are adding new trees to protect our environment.

(Rajendra Gaur)
Authorized Signatory

Annexure-I

STP Outlet Water Comparative Monitoring Statement for the priod of April 2015 to March 2016 Iron Ore Pellet Plant, Jindal Saw Limited, Bhilwara				
Sr. No.	Parameter/ Date of Monitoring	Units	STP Outlet (15 KLD STP Unit)	
			10.03.2016	03.06.2016
1	pH Value		8.15	7.87
2	Total Suspended Solid	Mg/l	33	38
3	Oil & Grees	Mg/l	5	3
4	Biological Oxygen Demand (3 Days at 27'C)	Mg/l	20	16.8
5	Chemical Oxygen Demand	Mg/l	78.4	72.56
6	Ammonical Nitrogen as NH4-N	Mg/l	-	7.7
7	Total Kjeldehal Nitrogen as N	Mg/l	-	15.8
8	Total Residual chlorine	Mg/l	-	BDL
9	Chloride as Cl	Mg/l	-	271.5
10	Sulphide	Mg/l	-	0.38

Note: Above monitoring result is based upon Environment Monitoring carriedout by MoEF, RPCB and NABL Approved Agency.

For Jindal SAW Ltd.
(Rajender Gaur)
Authorised Signatory

Ambient Air Quality Comparative Monitoring Statement for the priod of April 2015 to March 2016

Iron Ore Pellet Plant, Jindal Saw Limited, Bhilwara

Location/ Month	Near Tiranga House						Switch Yard Station						Near Staff Canteen					
	PM10	PM 2.5	SPM	Sox	Nox	CO	PM10	PM 2.5	SPM	Sox	Nox	CO	PM10	PM 2.5	SPM	Sox	Nox	CO
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
Jun-15	70.40	35.10	170.56	8.65	20.15	BDL	74.20	37.25	204.12	9.82	25.02	BDL	69.50	35.10	174.05	9.18	21.14	BDL
Sep-15	76.31	27.49	307.25	8.91	14.81	BDL	72.50	26.11	297.55	9.01	16.26	BDL	66.64	29.50	305.45	7.19	13.63	BDL
Dec-15	78.18	36.67	373.30	9.92	15.57	NA	76.89	31.61	274.92	8.46	14.48	NA	79.08	47.61	364.26	8.92	18.75	NA
Mar-16	86.09	31.13	351.66	4.42	16.87	620.00	71.89	29.28	319.91	5.83	13.88	460.00	79.67	39.39	366.23	6.50	14.57	580.00
Average	77.75	32.60	300.69	7.98	16.85	620.00	73.87	31.06	274.13	8.28	17.41	460.00	73.72	37.90	302.50	7.95	17.02	580.00

Note: Above monitoring result is based upon Environment Monitoring carriedout by MoEF, RPCB and NABL Approved Agency.

For Jindal SAW Ltd.

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Annexure-III

Fugitive Emission Comparative Monitoring Statement for the priod of April 2015 to March 2016		
Iron Ore Pellet Plant, Jindal Saw Limited, Bhilwara		
Location/ Month	Bentonite Storage Area (Nr Balling disc building)	Coal Pulverize Area (Nr Nitrogen Plant)
	SPM	SPM
	ug/m3	ug/m3
Jun-15	184.23	310.65
Sep-15	494.51	469.37
Dec-15	509.30	456.42
Mar-16	491.92	467.67
Average	419.99	426.03

Note: Above monitoring result is based upon Environment Monitoring carriedout by MoEF, RPCB and NABL Approved Agency.

For Jindal SAW Ltd.
(Rajender Gaur)
Authorised Signatory

Annexure-IV

Stack Emission Comparative Monitoring Statement for the priod of April 2015 to March 2016			
Iron Ore Pellet Plant, Jindal Saw Limited, Bhilwara			
Location/ Month	Rotary Kiln Stack Monitoring Result		
	PM	SO2	NOx
	mg/Nm3	mg/Nm3	mg/Nm3
Jun-15	31.20	12.80	195.60
Sep-15	44.67	86.02	58.40
Dec-15	43.57	370.52	91.20
Mar-16	46.96	292.53	181.00
Average	**41.60**	**190.47**	**131.55**

Note: Above monitoring result is based upon Environment Monitoring carriedout by MoEF, RPCB and NABL Approved Agency.

For Jindal SAW Ltd.

(Rajender Gaur)
Authorised Signatory

Annexure-V

Ambient Noise Level Comparative Monitoring Statement for the priod of April 2015 to March 2016											
Iron Ore Pellet Plant, Jindal Saw Limited, Bhilwara											
Sr. No.	Location of Sampling/ Month/	Nr. Proportioning		Nr. Balling disc Building		Nr. D G Room		Nr. Nitrogen Plant		Nr. Cooler Area	
		Results in dB(A) (Day Time)	Results in dB(A) (Night Time)	Results in dB(A) (Day Time)	Results in dB(A) (Night Time)	Results in dB(A) (Day Time)	Results in dB(A) (Night Time)	Results in dB(A) (Day Time)	Results in dB(A) (Night Time)	Results in dB(A) (Day Time)	Results in dB(A) (Night Time)
01.	Jun-15	68.4	63.3	69.4	63.4	67.4	59.3	70.5	66.0	72.0	62.9
02.	Sep-15	71.3	62.5	72.6	65.8	64.2	57.6	68.6	60.4	69.2	62.5
03.	Dec-15	66.8	60.3	70.6	61.7	72.4	58.2	72.6	63.5	67.4	61.2
04.	Mar-16	62.8	58.6	64.4	63.3	65.7	56.3	60.2	49	70.9	63.3
AVERAGE		67.33	61.18	69.25	63.55	67.43	57.85	67.98	59.73	69.88	62.48

Note: Above monitoring result is based upon Environment Monitoring carriedout by MoEF, RPCB and NABL Approved Agency.

For Jindal SAW Ltd.

(Rajender Gaur)
Authorised Signatory