

Ref: JSL/D-Mines/BHL/2017-18/ 97

Dated: 08.09.2017

To,

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

Sub: Environmental Statement report for the Financial Year ended on 31st March' 2017 in respect of Dhedwas Iron Ore, Copper and Associated Minerals Mine & Beneficiation Plant.

Ref: Consent to operate letter no. F (Mines) /Bhilwara/ Bhilwara /15 (1) 2010-11/ 6050 – 6054 dated 29.10.2014.

Dear Sir,

Kindly find enclosed herewith Environmental Statement report for the period of 1st April 2016 to 31st March 2017 in respect of our Dhedwas Iron Ore, Copper and Associated Minerals Mine and Beneficiation Plant of M/s Jindal Saw Limited located near Village Dhedwas/ Pur, Tehsil & Distt. Bhilwara (Rajasthan) for your reference and records.

Thanking you,

Yours faithfully,
For: JINDAL SAW LTD.


**Dinesh Patil
Agent-Dhedwas Iron Ore Mine**

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)

FORM - V
(See rule 14)

Environmental statement for the financial year ending the **31st March 2017**

PART-A

(i)	Name and address of the owner/ occupier of the industry operation or process.	:	M/s Jindal Saw Limited Araji No. 9697/6711, Near Tiranga Hill, Village: Pur, Tehsil & Distt. Bhilwara, Rajasthan, Pin-311008 Industry: Dhedwas Iron Ore, Copper and Associated Mineral Mines & Beneficiations Plant (ML No. 631/05)									
(ii)	Industry Category	:	Red									
(iii)	Production Capacity	:	<u>DETAIL OF PRODUCT WITH QUANTITIES</u>									
			<table border="1" style="width: 100%;"><thead><tr><th style="width: 5%;">SN</th><th style="width: 70%;">Products</th><th style="width: 25%;">Existing capacity</th></tr></thead><tbody><tr><td style="text-align: center;">1</td><td>Iron Ore (Magnetite)</td><td style="text-align: center;">7.0 MMTPA</td></tr><tr><td style="text-align: center;">2</td><td>Mineral Beneficiation Plant (Magnetite Concentrate)</td><td style="text-align: center;">2.5 MMTPA</td></tr></tbody></table>	SN	Products	Existing capacity	1	Iron Ore (Magnetite)	7.0 MMTPA	2	Mineral Beneficiation Plant (Magnetite Concentrate)	2.5 MMTPA
SN	Products	Existing capacity										
1	Iron Ore (Magnetite)	7.0 MMTPA										
2	Mineral Beneficiation Plant (Magnetite Concentrate)	2.5 MMTPA										
(iv)	Year of Establishment	:	21 June 2011									
(v)	Date of Last Environment Statement Submitted	:	07 Sep. 2016									

PART - B

Water and Raw Material Consumption

(1) Water consumption m³/d

Process	-	2876 (approx)
Dust Suppression &	-	876 (approx)
Cooling		
Domestic	-	30 (approx)
Green Belt	-	459 (approx)



(1) Name of Products

Nature of Products	Process Water Consumption per unit of product output	
	During the previous financial year	During the current financial year
1) Iron Ore (Magnetite)	0.05	0.05
2) Mineral Beneficiation Plant (Magnetite Concentrate)	0.95	0.85

(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	During the current Financial year
1. Magnetite Concentrate	1. Iron Ore- 2.85 Ton/ton concentrate	1. Iron Ore- 3.04 Ton/ton concentrate

- 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:	No effluent is discharged from the mine and Beneficiations process. Water contained in tailing and concentrate is being recovered with the help of thickener and advanced filter press technology and reused in Mineral Beneficiations process. Tailing / Recycling water monitoring report is enclosed as Annexure-I	Well Within the Prescribed Limits
	Domestic:	Domestic waste water generated from office toilets is directly discharged into septic tank/ soak pit.	
(b) Air		Concentrations of the pollutants in the air are being measured by MoEF & GOI approved agency in every quarter and Fortnightly basis. Ambient Air Quality & Noise Monitoring reports are enclosed as Annexure-II & III	Well within the prescribed limits.

PART - D
HAZARDOUS WASTES

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

Hazardous Wastes	Total Quantity (KL)	
	During the previous financial year	During the current financial year
(a) From process During Mining and Mineral beneficiation no hazardous waste was generated from the process except used oil which is generated from machinery /equipment and being sent to authorize recycler along with used cotton waste and barrels.	Dhedwas Mine & Beneficiation Plant: 1. Used/Spent Oil: <ul style="list-style-type: none">• Earlier balanced: 28.99 KL• Generated Quantity: 21.87 KL• Reused Quantity: 4.53 KL• Sent to recycler: 33.49 KL• Balance upto Mar'16: 12.84 KL for reuse and selling to recycler 2. Discarded Container/ Barrel <ul style="list-style-type: none">• Earlier balanced: 112 Nos.• Generated Quantity: 55 Nos.• Sent to recycler: 135 Nos. Balance upto Mar 2016: 32 Nos. for reuse and selling to recycler 3. Used Cotton Waste <ul style="list-style-type: none">• Generated Quantity: 2.5 Ton• Sent to recycler: Nil• Balance upto Mar 2016: 2.5 Ton	Dhedwas Mine & Beneficiation Plant: 1. Used/Spent Oil: <ul style="list-style-type: none">• Earlier balanced: 12.84 KL• Generated Quantity: 28.04 KL• Reused Quantity: 9.15 KL• Sent to recycler: 18.99 KL• Balance upto Mar'2017: 12.74 KL for reuse and selling to recycler 2. Discarded Container/ Barrel <ul style="list-style-type: none">• Earlier balanced: 32 Nos.• Generated Quantity: 59 Nos.• Sent to recycler: Nil Balance upto Mar 2017: 91 Nos. for reuse and selling to recycler 3. Used Cotton Waste <ul style="list-style-type: none">• Generated Quantity: 2.63 Ton• Sent to recycler: 4.11• Balance upto Mar' 17: 1.02 Ton Kept in storage shed and will be sent to authorized incinerator for final disposal.
(b) From pollution control facilities	NIL	NIL

PART – E
SOLID WASTES

	Total Quantity	
	During the previous financial year	During the current financial year
(a) From process	1. Overburden from Mine : 8,506,971 Tonnes 2. Tailing from Beneficiation Unit : 1,904,523 Tonnes	1. Overburden from Mine : 7,776,279 Tonnes 2. Tailing from Beneficiation Unit : 2,258,092 Tonnes
(b) From pollution control facilities	Nil	Nil
(C)(1) Quantity recycled or reutilized within the unit	1. Overburden from Mine Overburden generated during the current year (Apr 2015 to Mar 2016) has been stacked in external dump at earmarked place as per condition given in Mining Plan. 516525 Tonnes of OB was utilized for leveling of low laying/depressed ground outside the lease area in Bhadalilkhera site etc as per the guideline of DMG, Rajasthan. 2. Tailing from Beneficiation Unit Tailing cake in dry form is stacked in earmarked place and will be recycled in future to recover the minerals contained therein.	1. Overburden from Mine Overburden generated during the current year (Apr 2016 to Mar 2017) has been stacked in external dump at earmarked place as per condition given in Mining Plan. 379,028 Tonnes of OB was utilized for leveling of low laying/depressed ground outside the lease area in Bhadalilkhera site etc as per the guideline of DMG, Rajasthan. 2. Tailing from Beneficiation Unit Tailing cake in dry form is stacked in earmarked place and will be recycled in future to recover the minerals contained therein.
(2) Sold	NA	NA
(3) Disposed	3,00,000 Tonnes	4,06,715 Tonnes

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

Used oil generated from machineries/equipments is being sent to authorized recycler, small quantity is being reused for lubrication of chains of mounted machines and conveyor roller for transportation of raw materials. Empty barrel and Cotton waste are sent to authorize recycler from time to time.

Solid Waste:

1. Overburden from Mine

The OB generated from the mine consists of Calc Silicate, Calc schist and calc gneiss. During the year 7776279 tonnes of overburden was generated, out of which 379028 Tonnes of OB was utilized for leveling of low laying/depressed ground outside the lease area in Bhadalikhhera site as per the request of the Directorate of Mines and Geology, Govt of Rajasthan. Balance Overburden quantity is stacked in earmarked place as per condition given in Mining Plan.

2. Tailing from Beneficiation Unit

A total of 22,58,092 tonnes of Tailing was generated from beneficiation plant. It was recovered by the advanced filter press through thickener and tailing pond. Tailing cake in dry form is stacked in earmarked place and will be recycled in future to recover the mineral present there in. It contains quartzites, Calc Silicates and very low grade magnetite, goethite and limonite.

PART - G

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

1. **Water Conservation:** 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 MLD (5.5+4.5 MLD) Sewage Treatment Plant at Bhilwara city. This Sewage Treatment Plant is treating the sewage of Bhilwara city and the treated clean water is being used for Mining, Mineral Beneficiations, Dust suppression, Cooling, Horticulture / Plantation etc. in JSAW plant located near Village Pur, at Bhilwara and by this way we are meeting our water requirement for plant operation and also helping to reduce sewerage pollution of Kothari River near Bhilwara city.

Water contained in tailing and concentrate is being recovered with the help of tailing pond, thickener and advanced filter press technology and 100% is being reused in Mineral Beneficiations process. The system is helping to conserve water resources.

2. **Air Pollution Control:** To mitigate fugitive dust emission water is being sprayed on ore stacks to suppress the dust before handling the same. Water is being regularly sprinkled near the crusher zone, haul road loading and unloading point etc.

In Crusher Unit Closed Conveyor belt, dry fog system and continuous water sprinkling system have been installed to control the fugitive dust emission. Routine maintenance of Water spray nozzle is being carried out by Operation and Maintenance team.

Beneficiation Plant is based upon wet process; raw material i.e. crushed magnetite iron ore is transferred through covered/closed conveyor belt from Crusher Unit to beneficiation plant Hoppers. Mist water sprinkling system has been installed to control fugitive dust emission in raw material hoppers in beneficiation plant.

3. **Noise Pollution Control:** Appropriate mitigation measures are being adapted to control the noise level in Mine lease boundary and plant area. Controlled blasting techniques are being used as approved by DGMS. Noise level at lease boundary is within the standards during day and night time. Regular monitoring of Noise Level in and around the mine lease area is being carried out by MoEF & GOI approved agency. Adequate PPEs have been provided to workmen and employees to maintenance of safe working environment
4. **Energy Saving:** To conserve energy resources we have installed solar light panels in haul road site and our mine weigh bridges are running on solar energy. It is helping to reduce our electrical cost and it is environmental friendly.

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 2016-17, **8805** Nos. new saplings have been planted inside the lease area and **235** Nos. new sapling have been planted outside the lease area (In Bhilwara City, Malikhara Village, Various Govt Offices, Schools, nearby Villages and Out Side Road,). Up to March 2017 our total green area inside the mining lease area is **60.74** hectares with **60,696** plants and outside the lease area is around **11.82** hectare with **11,159** Plants.

Apart from this JSAW is committed to ensure Environmental Sustainability, Ecological balance, protection of Flora & Fauna, Animal Welfare by providing fodders, Agro-forestry, Conservation of Natural Resources & Maintaining Quality of Air, Water and Soil. JSAW is also providing full support and sponsoring maintenance of all parks and drainage cleaning etc. to Municipal Council, Bhilwara.

The expenditure made by us for the purpose of environmental management during the period April 2016 to March 2017 are as follows:

Greenery Development/ Maintenance	:	192.1 Lakh
Pollution Control	:	26.5 Lakh
Environment Monitoring Cost	:	6.5 Lakh
Rural Development / CSR (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 Bhilwara Under Swachh Bharat Abhiyan , Jal Swavlamban Abhiyan etc.	:	809.7 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 ambient air, Noise, and water quality is being carried out by MoEF & GOI approved lab on fortnightly and quarterly basis.
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.



(Dinesh Chandra Patil)
Agent, Dhedwas Iron Ore Mine

Process Water Quality Comproative Monitoring Statement for the period of April 2016 to March 2017

Dhedwas Iron Ore Mines & Beneficiation Plant, Jindal Saw Limited, Bhilwara

Sr. No.	Parameter/ Date of Monitoring	Units	Tailing filter Recycling Water				Tailing Pond			
			03.06.2016	18.09.2016	05.12.2016	10.03.2017	03.06.2016	18.09.2016	05.12.2016	10.03.2017
1	Color		20	25	5	5	20	20	10	10
2	pH Value		7.56	7.48	7.52	7.71	7.48	7.69	7.16	7.45
3	Total Suspended Solid	Mg/l	25	36	47	27	31	27	31	22
4	Oil & Grees	Mg/l	4	5	3	4	3	5	5	4
5	Biological Oxygen Demand (3 Days at 27°C)	Mg/l	14.33	10.26	10.2	8.5	14.67	12.33	4.8	6
6	Chemical Oxygen Demand	Mg/l	49.11	38.24	35.62	30.56	58.93	46.85	31.13	48
7	Disolve Oxygen	Mg/l	5.6	6.4	7	6.8	6.9	6.7	7.2	7.5
8	Ammonium Nitrogen as NH4-N	Mg/l	4.7	8.22	3.84	2.48	7.84	7.25	5.88	5.88
9	Total Kjeldehal Nitrogen as N	Mg/l	16.4	17.3	10.4	7.45	13.4	15.2	8.71	8.71
10	Free Ammonia as NH3	Mg/l	1.85	2.14	0.52	0.61	0.71	0.85	1.18	1.18
11	Nitrate Nitrogen as NO3-N	Mg/l	8.08	8.63	5.14	7.54	7.94	6.5	4.39	4.39
12	Total Residual chlorine	Mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
13	Fluoride	Mg/l	1.36	1.43	0.71	1.26	1.62	1.53	0.76	1.17
14	Total Dissolved Solids	Mg/l	2639	2587	1448	1577	3017	2874	1832	1884
15	Total Phosphate as PO4-P	Mg/l	3.69	3.16	2.52	2.81	3.21	2.36	0.32	1.3
16	Sulphate (as SO4)	Mg/l	0.41	0.55	BDL	BDL	0.65	0.68	BDL	BDL
17	Phenoilic Compound	Mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
18	Arsenic as S	Mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
19	Mercury as Hg	Mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
20	Lead (as Pb)	Mg/l	0.13	0.1	0.03	0.02	0.05	0.04	0.06	0.29
21	Cadmium (as Cd)	Mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.05
22	Copper (as Cu)	Mg/l	0.17	0.15	0.04	0.07	0.13	0.11	0.05	0.04
23	Zinc (as Zn)	Mg/l	0.86	0.93	0.12	0.17	1.25	1.22	0.13	0.13
24	Selenium as Se	Mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
25	Nickel (as Ni)	Mg/l	0.04	0.05	0.02	BDL	0.04	0.03	0.04	0.04
26	Cyanide (as CN)	Mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
27	Manganese as Mn	Mg/l	0.12	0.17	0.1	0.16	0.13	0.15	0.03	0.32
28	Iron as Fe	Mg/l	0.22	0.2	0.07	0.08	0.2	0.26	0.09	0.06

Sr. No.	Parameter/ Date of Monitoring	Units	STP Incoming/Reservoir Pond			
			03.06.2016	18.09.2016	05.12.2016	10.03.2017
1	Color		30	20	10	10
2	pH Value		8.2	7.84	7.93	7.75
3	Total Suspended Solid	Mg/l	30	47	28	33
4	Oil & Grees	Mg/l	6	5	3	4
5	Biological Oxygen Demand (3 Days at 27°C)	Mg/l	12.67	16.38	7.2	10.56
6	Chemical Oxygen Demand	Mg/l	67.35	74.25	29.4	53.33
7	Disolve Oxygen	Mg/l	4.8	4.6	5.3	5.5
8	Ammonium Nitrogen as NH4-N	Mg/l	3.6	4.31	3.08	4.22
9	Total Kjeldehal Nitrogen as N	Mg/l	8.95	14.8	10.85	13.25
10	Free Ammonia as NH3	Mg/l	0.52	1.25	0.61	0.75
11	Nitrate Nitrogen as NO3-N	Mg/l	8.12	7.84	7.18	7.85
12	Total Residual chlorine	Mg/l	BDL	BDL	BDL	BDL
13	Fluoride	Mg/l	1.68	1.78	1.22	1.43
14	Total Dissolved Solids	Mg/l	3318	3261	1645	1623
15	Total Phosphate as PO4-P	Mg/l	2.7	3.65	3.15	2.8
16	Sulphate (as SO4)	Mg/l	0.87	0.98	0.52	0.45
17	Phenoilic Compound	Mg/l	0.16	0.2	0.11	0.1
18	Arsenic as S	Mg/l	BDL	BDL	BDL	BDL
19	Mercury as Hg	Mg/l	BDL	BDL	BDL	BDL
20	Lead (as Pb)	Mg/l	0.18	0.14	0.09	0.06
21	Cadmium (as Cd)	Mg/l	BDL	BDL	BDL	0.02
22	Copper (as Cu)	Mg/l	0.21	0.17	0.12	0.08
23	Zinc (as Zn)	Mg/l	1.26	0.85	0.41	0.22
24	Selenium as Se	Mg/l	BDL	BDL	BDL	BDL
25	Nickel (as Ni)	Mg/l	0.07	0.06	0.08	0.05
26	Cyanide (as CN)	Mg/l	BDL	BDL	BDL	BDL
27	Manganese as Mn	Mg/l	0.13	0.12	0.15	0.1
28	Iron as Fe	Mg/l	0.22	0.19	0.17	0.12

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

Annexure-II

Ambient Air Quality Comparative Monitoring Statement for the period of April 2016 to March 2017												
Dhedwas Iron Ore Mines & Beneficiations Plant, Jindal Saw Limited, Bhilwara												
Location/ Month	Gandhisagar Village						Kanoli Village					
	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
Jun-16	78.11	31.30	304.10	8.44	15.70	230.00	62.67	25.17	206.35	5.53	9.53	260.00
Sep-16	75.76	30.51	256.57	7.55	15.63	240.00	55.81	26.15	198.44	4.71	11.25	210.00
Dec-16	76.19	30.75	253.03	7.54	14.77	290.00	60.37	25.67	180.22	6.30	11.57	170.00
Mar-17	68.36	30.72	246.33	7.45	13.21	270	73.87	19.77	179.18	7.70	11.73	190.00
Min	68.36	30.51	246.33	7.45	13.21	230.00	55.81	19.77	179.18	4.71	9.53	170.00
Max	78.11	31.30	304.10	8.44	15.70	290.00	73.87	26.15	206.35	7.70	11.73	260.00
Avg.	74.61	30.82	265.01	7.75	14.83	257.50	63.18	24.19	191.05	6.06	11.02	207.50
Location/ Month	Pur Village						Dariba Village					
	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
Jun-16	78.37	39.58	355.18	10.13	15.03	290.00	72.96	21.82	319.53	8.19	15.58	200.00
Sep-16	69.17	24.74	231.85	6.96	15.25	290.00	65.95	25.49	184.54	5.34	14.84	180.00
Dec-16	73.71	28.87	225.10	7.75	13.30	310.00	63.26	24.39	168.86	7.48	11.72	240.00
Mar-17	80.85	33.88	264.56	6.62	17.54	230.00	67.99	21.98	263.63	6.22	10.78	200.00
Min	69.17	24.74	225.10	6.62	13.30	230.00	63.26	21.82	168.86	5.34	10.78	180.00
Max	80.85	39.58	355.18	10.13	17.54	310.00	72.96	25.49	319.53	8.19	15.58	240.00
Avg.	75.53	31.77	269.17	7.87	15.28	280.00	67.54	23.42	234.14	6.81	13.23	205.00
Location/ Month	Mines Workshop (Near CIL Camp)						Near PMS Building					
	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
Jun-16	96.74	39.73	397.73	9.53	19.13	470.00	83.66	32.99	288.42	12.17	15.68	320.00
Sep-16	79.90	32.43	245.65	6.98	14.75	460.00	80.67	30.31	229.62	7.91	15.25	390.00
Dec-16	80.06	29.92	255.60	9.59	15.67	360.00	72.80	28.43	367.24	8.93	14.15	390.00
Mar-17	89.23	30.91	352.74	7.4	19.69	430	75.59	41.09	322.91	9.39	17.11	380.00
Min	79.90	29.92	245.65	6.98	14.75	360.00	72.80	28.43	229.62	7.91	14.15	320.00
Max	96.74	39.73	397.73	9.59	19.69	470.00	83.66	41.09	367.24	12.17	17.11	390.00
Avg.	86.48	33.25	312.93	8.38	17.31	430.00	78.18	33.21	302.05	9.60	15.55	370.00

Note: Above monitoring result is based upon Environment Monitoring carried out by MoEF, RPCB and NABL Approved Ager

Summarized Fortnightly Ambient Air Quality Monitoring Results for the period of Apr 2016 to Mar 2017

Dhedwas Iron Ore Mines & Beneficiations Plant, Jindal Saw Limited, Bhilwara

Location/ Date of Monitoring	Tiranga Pit (Core Zone)						Location/ Date of Monitoring	Samodi Village (Core Zone)					
	PM10	PM 2.5	SO ₂	Nox	CO	SPM		PM10	PM 2.5	SO ₂	Nox	CO	SPM
	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³		ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³	ug/m ³
13.04.2016	80.79	46.25	8.33	12.55	430.00	367.20	13.04.2016	79.98	35.65	6.72	12.65	260.00	375.31
28.04.2016	71.87	32.42	5.16	11.90	410.00	398.57	29.04.2016	75.83	34.91	3.85	10.61	230.00	410.18
13.05.2016	82.47	34.90	8.38	18.43	290.00	368.40	14.05.2016	71.95	30.14	7.16	10.45	240.00	325.33
24.05.2016	87.91	35.67	9.85	19.87	350.00	347.52	23.05.2016	76.39	32.56	7.05	16.47	280.00	278.36
02.06.2016	83.53	40.66	11.82	17.98	420.00	289.13	02.06.2016	74.91	31.95	5.40	10.47	210.00	255.76
27.06.2016	70.39	29.53	9.04	17.06	380.00	311.08	27.06.2016	73.91	29.79	6.19	14.13	190.00	278.11
07.07.2016	57.77	27.81	7.82	14.6	360	208.41	07.07.2016	45.16	19.85	4.41	7.47	150	119.96
28.07.2016	56.02	19.54	5.12	13.25	210	163.51	28.07.2016	39.27	16.2	4.57	10.36	140	124.03
06.08.2016	23.71	14.25	4.16	11.82	390	51.51	06.08.2016	36.56	14.1	4.57	12.18	220	76.11
29.08.2016	56.24	27.42	7.84	13.93	290	214.41	29.08.2016	47.17	18.07	3.62	8.48	130	104.11
13.09.2016	84.57	26.57	9.30	16.33	390.00	311.29	11.09.2016	66.50	27.44	5.11	13.78	230.00	179.51
27.09.2016	80.60	28.62	6.79	19.29	380.00	341.84	28.09.2016	60.32	18.20	5.73	11.80	210.00	177.51
06.10.2016	55.41	24.42	5.37	14.73	390.00	154.49	07.10.2016	89.89	22.50	5.44	15.10	460.00	207.22
24.10.2016	73.81	40.39	6.78	16.88	240.00	172.91	24.10.2016	50.06	27.13	7.16	12.97	180.00	201.48
10.11.2016	78.74	30.47	8.58	16.81	380.00	277.27	10.11.2016	62.62	26.56	6.15	13.31	210.00	196.61
28.11.2016	80.13	23.24	5.80	13.58	380.00	225.26	29.11.2016	55.05	38.62	5.67	11.74	210.00	207.42
01.12.2016	79.49	33.31	10.12	16.30	460.00	294.79	02.12.2016	67.94	27.52	6.57	14.23	260.00	211.10
27.12.2016	79.18	32.55	7.72	13.52	370.00	247.76	27.12.2016	64.44	26.53	7.50	13.36	190.00	224.15
02.01.2017	81.52	34.25	9.72	15.76	370.00	277.37	02.01.2017	66.99	23.87	5.23	11.11	220.00	225.01
30.01.2017	83.37	33.54	9.62	17.84	470.00	270.14	30.01.2017	68.28	23.51	5.28	12.75	230.00	229.57
01.02.2017	82.53	41.24	9.02	17.13	490.00	350.26	01.02.2017	66.47	26.69	7.27	17.85	210.00	252.21
22.02.2017	78.01	35.91	9.03	15.47	370.00	339.70	22.02.2017	68.38	26.52	6.65	10.83	260.00	228.38
04.03.2017	85.41	34.09	8.62	17.15	460.00	305.02	07.03.2017	64.43	26.78	7.72	11.89	220.00	236.78
28.03.2017	84.10	33.27	8.34	17.26	330.00	236.56	27.03.2017	63.58	25.61	6.47	13.25	260.00	252.30
Min	23.71	14.25	4.16	11.82	210.00	51.51	Min	36.56	14.10	3.62	7.47	130.00	76.11
Max	87.91	46.25	11.82	19.87	490.00	398.57	Max	89.89	38.62	7.72	17.85	460.00	410.18
Average	52.87	19.85	11.91	195.61	323.63	271.85	Average	64.00	26.28	5.90	12.39	225.00	224.02

Location/ Date of Monitoring	Suras (Core Zone)						Location/ Date of Monitoring	Dhulkheda (Core Zone)					
	PM10	PM 2.5	SO _x	NO _x	CO	SPM		PM10	PM 2.5	SO _x	NO _x	CO	SPM
13.04.2016	81.77	38.23	5.05	11.31	380.00	352.30	13.04.2016	89.00	48.15	4.85	15.63	410.00	372.36
29.04.2016	82.63	42.34	4.53	11.44	430.00	331.14	28.04.2016	87.42	33.01	3.46	9.98	460.00	419.19
13.05.2016	73.10	28.73	5.58	10.51	190.00	287.28	13.05.2016	71.59	25.04	5.79	14.22	220.00	258.82
24.05.2016	76.38	28.17	7.69	15.67	270.00	274.36	23.05.2016	84.70	32.56	7.64	16.74	280.00	314.62
04.06.2016	69.74	25.59	7.42	13.55	250.00	238.07	05.06.2016	83.24	25.86	6.96	12.71	340.00	251.83
28.06.2016	76.89	31.30	7.17	14.19	390.00	249.73	28.06.2016	61.48	35.85	5.97	13.07	360.00	295.85
08.07.2016	63.92	25.26	6.16	11.57	160.00	165.74	08.07.2016	50.58	21.63	4.16	8.74	140.00	179.38
29.07.2016	48.62	20.00	4.22	8.99	130.00	154.7	29.07.2016	54.41	23.75	5.96	10.32	160.00	144.93
09.08.2016	56.37	11.25	5.96	5.45	190.00	107.03	07.08.2016	25.84	12.5	9.17	9.77	450.00	114.29
31.08.2016	47.35	23.02	5.64	8.42	170.00	134.22	29.08.2016	57.67	28.84	7.64	13.84	210.00	183.45
11.09.2016	74.41	23.67	7.30	15.20	320.00	283.78	12.09.2016	76.80	29.49	6.03	14.78	360.00	236.96
27.09.2016	73.70	28.85	6.82	14.90	240.00	312.22	27.09.2016	69.70	23.46	8.70	13.10	310.00	225.05
07.10.2016	57.13	35.22	4.97	14.89	350.00	177.80	06.10.2016	59.58	23.75	5.62	16.99	380.00	240.22
24.10.2016	65.19	20.08	6.55	14.05	210.00	218.29	25.10.2016	54.30	32.44	4.54	14.62	190.00	216.34
11.11.2016	68.93	35.55	7.96	14.95	350.00	232.73	10.11.2016	72.95	22.50	7.11	15.09	320.00	235.07
28.11.2016	91.86	34.66	6.09	13.27	430.00	244.32	28.11.2016	91.85	28.57	5.32	13.82	370.00	321.95
03.12.2016	82.75	31.37	7.63	16.06	430.00	265.95	02.12.2016	85.61	33.18	8.78	16.13	380.00	301.25
28.12.2016	76.43	22.45	7.05	15.13	350.00	228.92	27.12.2016	77.11	35.53	7.45	16.79	390.00	350.62
03.01.2017	80.40	32.96	8.94	15.31	360.00	247.63	02.01.2017	78.33	33.67	8.61	14.51	350.00	278.46
30.01.2017	73.13	26.30	8.30	15.05	290.00	274.41	30.01.2017	88.01	26.87	9.96	15.97	410.00	239.55
02.02.2017	82.01	37.30	7.77	18.30	390.00	274.69	02.02.2017	75.19	37.76	8.67	14.90	410.00	284.46
23.02.2017	80.05	36.56	7.94	13.93	310.00	349.58	22.02.2017	80.12	30.82	7.74	16.52	390.00	305.22
07.03.2017	82.58	30.32	8.71	16.59	410.00	337.63	07.03.2017	79.84	32.12	8.84	14.97	390.00	317.14
27.03.2017	80.24	32.61	7.82	15.12	310.00	312.45	27.03.2017	86.47	34.12	8.12	16.52	340.00	326.50
Min	47.35	11.25	4.22	5.45	130.00	107.03	Min	25.84	12.50	3.46	8.74	140.00	114.29
Max	91.86	42.34	8.94	18.30	430.00	352.30	Max	91.85	48.15	9.96	16.99	460.00	419.19
Average	72.73	29.24	6.80	13.49	304.58	252.29	Average	72.57	29.64	6.96	14.16	334.17	267.23

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

Ambient Noise Level Comparative Monitoring Statement for the period of April 2016 to March 2017

Dhedwas Iron Ore Mines & Beneficiations Plant, Jindal Saw Limited, Bhilwara

Sr. No.	Location of Sampling/ Month/	Date of Monitoring	Pur Village		Samodi Village		Dariba Village		Dhulkhera Village	
			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-16	10.06.2016	53.4	43.6	48.5	40.2	51.7	41.7	52.8	42.5
02	Sep-16	23.9.2016	52.2	43.7	50.4	42.4	52.5	40.3	53.7	42.4
03	Dec-16	12.12.2016	53.8	42.2	49.3	40.5	52.4	40.2	50.8	41.3
04	Mar-17	10.03.2017	52.6	43.1	48.2	38.4	50.2	40.5	52.7	42.7
AVERAGE			53.00	43.15	49.10	40.38	51.70	40.68	52.45	42.23
Sr. No.	Location of Sampling/ Month/	Date of Monitoring	Gandhi Sagar Village		Suras Village		Kanoli Village			
			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-16	10.06.2016	53.6	43.8	50.7	40.3	47.6	38.5		
02	Sep-16	23.9.2016	54.2	42.9	53.1	41.7	46.4	37.6		
03	Dec-16	12.12.2016	54.2	43.5	48.5	38.6	48.2	38.2		
04	Mar-17	10.03.2017	49.8	40.5	51.4	40.2	47.3	37.6		
AVERAGE			52.90	42.68	50.93	40.20	47.88	37.88		
Sr. No.	Location of Sampling/ Month/	Date of Monitoring	Tiranga Pit		Suras Pit		Crusher working area near CCR building		Dhulkhera Pit	
			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-16	10.06.2016	66.4	57.8	65.4	57.3	71.2	64.7	68.7	61.2
02	Sep-16	23.9.2016	64.3	56.7	67.5	66.9	72.4	63.2	65.2	57.4
03	Dec-16	12.12.2016	70.2	62.5	68.4	58.2	70.3	61.3	69.5	57.8
04	Mar-17	10.03.2017	70.6	62	70.3	61.2	71.6	58.6	69.5	57.8
AVERAGE			67.88	59.75	67.90	57.85	71.38	61.95	67.23	58.55
Sr. No.	Location of Sampling/ Month/	Date of Monitoring	BFN CCR Building		TATA Blue Scop Shed		Near Raw material storage yard mine area		Filter press building	
			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-16	10.06.2016	73.6	66.2	71.8	63.4	66.5	56.8	70.2	63.4
02	Sep-16	23.9.2016	71.5	63.5	67.8	60.2	64.4	58.3	66.5	58.4
03	Dec-16	12.12.2016	70.5	65.4	68.4	66.2	60.2	60.3	71.5	63.2
04	Mar-17	10.03.2017	68.4	61.2	66.4	57.2	67.4	58.3	69.3	60.4
AVERAGE			71.00	64.08	66.55	59.25	66.66	58.43	69.38	61.35

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