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Ref. No. : /23/12/2015-16

Date: 03/01/2016

Performance Evaluation of Air Pollution Control Equipments

Sinter Plant-1 (GPCB ID 35456)

Name of company : JINDAL SAW LIMITED.
Village: Samaghogha.
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255 Part - 1/3

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 6
01	Date of Sampling	---	Not in operation during visit	Not in operation during visit	Not in operation during visit	Not in operation during visit
02	Attached to	---	Fuel & Flux crusher & screening building	Fuel & Flux crushing house	Sinter Furnace	Discharge end
03	Stack Height	Meter	32	27	50	32
04	Stack Diameter	Meter	1.4	1.4	2.0	1.3
05	Stack Temperature	°C				
06	Ambient Temperature	°C				
07	Average Velocity of Flue Gases	m/sec	Not in operation during visit	Not in operation during visit	Not in operation during visit	Not in operation during visit
08	IsoKinetic Flowrate for Sampling	LPM				
09	Inlet	mg/Nm³				
10	Outlet	mg/Nm³				
11	Efficiency	%				

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Ref. No. : 745/12/2015-16

Date: 03/01/2016

WORK ZONE NOISE LEVEL MEASUREMENT

SINTER PLANT- 1 (GPCB ID:35456)

Name of company : JINDAL SAW LIMITED.
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Date of sampling : 06th December, 2015

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
1	Inside Control Room	41.5	47.3	43.6
2	Inside Mechanical Room	47.8	53.6	49.5
3	Inside Electrical Room	48.6	54.2	50.2
4	Inside Plant Office	50.7	58.5	52.7

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB,C-80 to 130 dB.

Recalibration is due on : 25/09/2016

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Ref. No. :741/12/2015-16

Date: 03.01.2016

Form No. 37
(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment recured under Section 7-A (a)(e).

1. Name of the Department/Plant: **Sinter Plant-1 at JINDAL SAW LIMITED, Samaghogha. (GPCB ID: 35456)**

2. Raw materials, by products and finished products involved in the process: **TOTAL DUST**

3. Particulars of sampling

Date of Sampling: 20th December, 2015

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average	mg/m3					
1	Sinter plant at First Floor	Total Dust	Personal Respirable Dust sampler IAS 001	02	4-5	4.5	10	Gravimetric	4	-		Mr. MANOJ SONRA

Instruments used: Envirotech make personal sampler, Model No. IAS 001

Submitted on Date: 03.01.2016

For, Royal Environment Auditing & Consultancy Services

Authorized Sign

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Ref. No. 730/12/2015-16

Date: 03/01/2016

STACK EMISSION MONITORING RESULTS

Sinter Plant - 1(GPCB ID:35456)

Name of company JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Metnod : As per IS Standards - 11255_Part - 1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 4	S - 5	S - 6
01	Date of Sampling	---	Not Running During Visit	Not in operation during visit	Not Running During Visit	Not Running During Visit	Not Running During Visit	Not Running During Visit
02	Time of sampling	---						
03	**Stack Attached to**	---	**Fuel & Flux Crusher and Screening building**	**Fuel & Flux Crushing House**	**Sinter Furnace**	**Primary Mixture House**	**Secondary Mixture House**	**Discharge End**
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter	ESP	---	---	ESP
05	Stack Height	Meter	32.0	27.00	50	19.75	36.08	32
06	Stack Diameter	Meter	1.40	1.40	2.0	1.25	1.25	1.30
07	Stack Temperature	°C	---	---	---	---	---	---
08	Ambient Temperature	°C	---	---	---	---	---	---
09	Average Velocity of Flue Gases	m/sec	---	---	---	---	---	---
10	Isokinetic flow rate for P.M. Sampling	LPM	---	---	---	---		
11	Gaseous Sampling Flow Rate	LPM	---	---	---	---		
12	**Permissible limits for PM**	**mg/Nm3**	**150**	**150**	**150**	**150**	**150**	**150**
13	Measured Concentration of PM.	mg/Nm3	---	---	---			
14	**Permissible limits for SO2**	**ppm**	**NA**	**NA**	**100**	**NA**	**NA**	**NA**
15	Measured Concentration of SO2	ppm	---	---	---	---	---	
16	**Permissible limits for NOx**	**ppm**	**NA**	**NA**	**50**	**NA**	**NA**	**NA**
17	Measured Concentration of NOx	ppm	---	---	---	---	---	---

NA= Not Applicable

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Ref. No : 724/12/2015-16

Date: 03/01/2016

Blast Furnace Plant-1(GPCB ID:18037)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 1
01	Date of Sampling	---	12/12/2015
02	**Attached to**	---	**De-dustingSystem**
03	Stack Height	Meter	35
04	Stack Duct Diameter	Meter	1.4
05	Stack Temperature	°C	56
06	Ambient Temperature	°C	28
07	Average Velocity of Flue Gases	m/sec.	16.1
08	IsoKinetic Flowrate for Sampling	LPM	27
09	Inlet	mg/Nm^3	2025
10	Outlet	mg/Nm^3	9
11	Efficiency	%	99.56

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on 25/09/2016

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Ref. No. 733/12/2015-16

Date 03.01.2016

STACK EMISSION MONITORING RESULTS

BLAST FURNACE-1 (GPCB ID:18037)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 4	S - 5
01	Date of Sampling	---	16/12/2015	16/12/2015	16/12/2015	16/12/2015	Monitoring Not Possible
02	Time of sampling	Hr.	16.15	8.50	10.00	15.10	
03	**Stack Attached to**	---	**Dedusting System**	**Boiler - I**	**Boiler - II**	**Stove Stack**	**Flare Stack**
04	Air Pollution Control Measures	---	Bag Filter	---	---	---	---
05	Stack Height	Meter	35.0	45	45	50.0	30
06	Stack Diameter	Meter	1.5	1.4	1.4	2.25	---
07	Stack Temperature	°C	44	168	175	218	---
08	Ambient Temperature	°C	28	25	25	28	---
09	Average Velocity of Flue Gases	m/sec.	11.4	4.8	4.9	3.6	---
10	Isokinetic flow rate for P.M. Sampling	LPM	20	14	14	9	---
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0	---
12	**Permissible limits for PM**	**mg/Nm3**	**150**	**150**	**150**	**150**	**150**
13	Measured Concentration of PM.	mg/Nm3	3	10	11	2	---
14	**Permissible limits for SO2**	**mg/Nm3**	**40**	**40**	**40**	**40**	**40**
15	Measured Concentration of SO2	mg/Nm3	ND	ND	ND	ND	---
16	**Permissible limits for NOx**	**mg/Nm3**	**25**	**25**	**25**	**25**	**25**
17	Measured Concentration of Nox	mg/Nm3	ND	ND	ND	ND	---

Note : Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively
N D=Not Detectable
Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on 25/09/2016

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Manoj
Analyst

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Ref No 734/12/2015-16

Date 03/01/2016

STACK EMISSION MONITORING RESULTS

Captive Power Plant (GPCB ID:18037)

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 4
01	Date of Sampling	---	Not In Operation During The Visit	Not In Operation During The Visit	Not In Operation During The Visit	Not In Operation During The Visit
02	Time of sampling	Hr.				
03	**Stack Attached to**	---	6000 KVA D.G.	3240 KVA D.G.	3240 KVA D.G.	1180 KVA D.G.
04	Air Pollution Control Measures	---	---	---	---	---
05	Stack Height	Meter	57.0	35	35	35
06	Stack Diameter	Meter	1.984	1.484	1.484	0.980
07	Stack Temperature	°C	---	---	---	---
08	Ambient Temperature	°C	---	---	---	---
09	Average Velocity of Flue Gases	m/sec	---	---	---	---
10	Isokinetic flow rate for P.M. Sampling	LPM	---	---	---	---
11	Gaseous Sampling Flow Rate	LPM	---	---	---	---
12	**Permissible limits for PM**	**mg/Nm3**	150	150	150	150
13	Measured Concentration of PM.	mg/Nm3	---	---	---	---
14	**Permissible limits for SO2**	**ppm**	100	100	100	100
15	Measured Concentration of SO2	ppm	---	---	---	---
16	**Permissible limits for Nox**	**ppm**	50	50	50	50
17	Measured Concentration of Nox	ppm	---	---	---	---

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Analyst

Ref. No. /42/12/2015-16 Date: 03/01/2016

Form No. 37
(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7 A (a)(e).

1. Name of the Department/Plant : **BF Plant 1 at JINDAL SAW LIMITED, Samaghogha. (GPCB ID: 18037)**
2. Raw materials, by products and finished products involved in the process: TOTAL DUST & CO.
3. Particulars of sampling

Date of Sampling : 20th December, 2015

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remark	Signature person taking samples	Name (in block letters)
				Number of sample	Range	Average	mg/m3					
1	BF Plant (Cast House)	CO	Personal Respirable Dust sampler IAS 001	02	15-17	16.0	55	Gravimetric	4	--		M. RANGI SONKAR
		Total Dust			4-6	5.0	10					

Instruments used : Envirotech make personal sampler, Model No. AS 001
Calibration Due on : 02/11/2016

For Royal Environment Auditing & Consultancy Service

Authorized Sign

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Ref. No : 746/12/2015-16

Date: 03/01/2016

WORK ZONE NOISE LEVEL MEASUREMENT
BLAST FURNACE- 1 (GPCB ID:18037)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Date of sampling : 06th December, 2015

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Nr. Stock House	63.7	74.5	66.8
02.	Inside Control Room	45.2	53.8	47.6
03.	Inside Control room of Cast House	46.5	51.2	48.2
04.	Inside Laboratory	42.7	47.8	43.8
05.	Inside Control Room of Blower House	55.9	62.5	58.9
06.	Inside Control Room of CPP	52.7	61.7	54.5

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB,C-80 to 130 dB.

Recalibration is due on : 25/09/2016

Royal Environment Auditing & Consultancy Service

Analyst

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Ref. No. : 751/12/2015-16

Date: 03/01/2016

REPORT OF DOMESTIC WASTE WATER ANALYSIS

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Source of Sample Collection : Sewage Treatment Plant (Inlet & Outlet)

Date of Sampling : 28/12/2015

Test Method : As per IS Standards - 3024

Sr. No.	Parameters	Unit	GPCB limits for Treated Effluent	Raw Sewage	Treated Effluent
01.	pH	pH Unit	----	7.54	7.25
02.	BOD (3 Days at 27°C)	mg/l	<20	160	10
03	Total Dissolve Solid	mg/l	...	1520	1650
04	COD	mg/l	...	260	45
05	Total Suspended Solid	mg/l	<30	245	18
06	Oil & Grease	mg/l	...	ND	ND
07	Residual Chlorine	mg/l	Min. 0.5	----	0.58

ND=Not Detectable

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Ref. No. : 725/12/2015-16

Date: 03/01/2016

Performance Evaluation of Air Pollution Control Equipments

Sinter Plant-2 (GPCB ID:29017)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 7	S - 9	S-10
01	Date of Sampling	---	21/12/2015	21/12/2015	21/12/2015	22/12/2015	22/12/2015	21/12/2015
02	Attached to	---	Fuel crushing de-duster system (Fuel)	Fuel crushing de-duster system (Flux)	Fuel screening deduster system (Flux screening)	Sinter Furnace	Discharging end of Sinter de-dusting System	Pulverised Coal Injection
03	Stack Height	Meter	30	30	30	50	50	32
04	Stack Diameter	Meter	0.7	0.7	0.7	2.0	1.3	1.0
05	Stack Temperature	C	44	48	40	141	103	158
06	Ambient Temperature	C	27	28	31	27	28	31
07	Average Velocity of Flue Gases	m/sec	15.2	14.3	13.5	38.4	40.2	17.5
08	Isokinetic Flowrate for Sampling	LPM	27	25	24	13	15	23
09	Inlet	mg/Nm³	2235	2856	2535	3716	3418	2485
10	Outlet	mg/Nm³	15	12	22	36	27	20
11	Efficiency	%	99.33	99.58	99.13	99.03	99.21	99.19

Instrument Used : Stack Monitoring Kit, Fabtech make, FSS 100
Calibration Due on 29-12-2016

Royal Environment Auditing & Consultancy Service

Analyst

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Ref. No. : 31/12/2015-16

Date: 03/01/2016

STACK EMISSION MONITORING RESULTS

Sinter Plant -2 (GPCB ID:29017)

Name of company : JINDAL SAW LIMITED.

Village : Samaghogha.

Tal. : Mundra Dist. Kutch

Test Method : As per IS Standards 11255 (Part 1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 4	S - 5	S - 6	S - 7	S - 8	S - 9	S - 10
1	Date of Sampling	-	21/12/2015	21/12/2015	21/12/2015	Not in operation during visit	NA	NA	22/12/2015	Not in operation during visit	22/12/2015	21/12/2015
2	Time of sampling	Hr.	10.00	11.30	13.15				10.15		11.45	15.15
3	Stack Attached to	---	Fuel crushing de-duster systen (Flux)	Fuel crushing de-duster system(Fuel)	Fuel Screening deduster System (Flux Screening)	No. 1 Transfer Station De-duster System	Primary Mixer De-duster system	Secondary Mixer De-duster system	Sinter Furnace	Transfer station no. 4 & 5 dedusting system	Discharging End of sinter de-dusting system	Pulverized Coal Injection
4	Air Pollution Control Measures	-	Dust Collector	Dust Collector	Dust Collector	Dust Collector	Dust Collector	Dust Collector	ESP	Dust Collector	ESP	Bag Filter
5	Stack Height	Meter	30	30	30	30	20	30	50	30	50	32
6	Stack Diameter	Meter	0.7	0.7	0.7	0.7	---	---	2	0.7	1.3	1.20
7	Stack Temperature	°C	43	3	39	---	---	---	149	35	105	132
8	Ambient Temperature	°C	2	25	31	---	---	---	27	25	28	31
9	Average Velocity of Flue Gases	m/sec.	14.4	11.5	6.8	---	---	---	11.6	4.5	15.9	11.5
10	Sampling Flow Rate for PM Sampling	LPM	25	21	19	---	---	---	16	19	11	18
11	Gaseous Sampling Flow Rate	LPM				---	---	---	2.0			2.0
12	Permissible limits for PM	mg/Nm3	150	150	150	150	150	150	150	150	150	150
13	Measured Concentration of PM	mg Nm3	16	12	27	---	---	---	35	5	7	23
14	Permissible limits for SO2	ppm	NA	NA	NA	NA	NA	NA	100	NA	NA	100 (ppm)
15	Measured Concentration of SO2	ppm	---	---				---	ND	---		1.80
16	Permissible limits for NOx	ppm	NA	NA	NA	NA	NA	NA	50	NA	NA	50 (ppm)
17	Measured Concentration of NOx	ppm	---	---	---	---	---	---	11.7		---	3.95

Note : Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively

NA= Not Applicable

Instrument Used : Stack Monitoring Kit Ecotech make ESS 100

Calibration due on : 25.09.2016

Royal Environment Auditing & Consultancy Service

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Ref. No. /40/12/2015-16

Date: 03/01/2016

Form No. 37

(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e).

1. Name of the Department/Plant.: **Sinter Plant-2 at JINDAL SAW LIMITED, Samaghogha. (GPCB ID:29017)**
2. Raw materials, by products and finished products involved in the process **TOTAL DUST**
3. Particulars of sampling

Date of Sampling : 20th December, 2015

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA concentration (As given in Second Schedule)	Reference Method	Number of workers exposed at the location being monitored	Remarks	Signature of person taking samples	Name (in block letters)
				Number of sample	Range	Average	mg/m3					
	Sinter Plant At First Floor	Total Dust	Personal Respirable Dust sampler IAS 001	02	3-5	4.0	10	Gravimetric	5	---		MR. MANOJ SONRAT

Instruments used : Envirotech make personal sampler. Model No. IAS 001

Calibration Due on : 02/11/2016

For, Royal Environment Auditing & Consultancy Service

Authorized Sign

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Ref. No : 750/12/2015-16

Date: 03/01/2016

WORK ZONE NOISE LEVEL MEASUREMENT

SINTER PLANT - 2 (29017)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Date of sampling : 06th December, 2015

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room	50.6	52.8	51.4
02.	Inside Operator Room	59.5	64.1	60.8
03.	Near Proportioning Bulding	63.2	65.6	64.1
04.	Near Crusher House	67.8	75.7	70.3

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)
Range : A - 30 to 80 dB, B-50 to 100 dB,C-80 to 130 dB.
Recalibration is due on : 25/09/2016

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Ref. No /29/12/2015-16

Date: 03/01/2016

Performance Evaluation of Air Pollution Control Equipments

Blast Furnace Plant-2 (GPCB ID:29026)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_Part - 1/3

Sr. No.	Particulars	Unit	S - 1	S - 4	S - 5
01	Date of Sampling	---	25/12/2015	25/12/2015	25/12/2015
02	Attached to	---	Dedusting System	Coke fine building dust collecting system	Iron Ore fine & Dust Collecting System
03	Stack Height	Meter	40	30	30
04	Stack Duct Diameter	Meter	1.5	0.85	0.65
05	Stack Temperature	°C	67	69	43
06	Ambient Temperature	°C	28	29	30
07	Average Velocity of Flue Gases	m/sec.	35.5	16.7	15.3
08	IsoKinetic Flowrate for Sampling	LPM	15	27	27
09	Inlet	mg/Nm^3	4235	2105	1845
10	Outlet	mg/Nm^3	40	6	5
11	Efficiency	%	99.06	99.71	99.73

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on 25/09/2016

Royal Environment Auditing & Consultancy Service

Analyst

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Ref. No. 732/12/2015-16

Date: 03/01/2016

STACK EMISSION MONITORING RESULTS

BLAST FURNACE - 2 (GPCB ID:29026)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255 ,Part - 1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 4	S - 5
01	Date of Sampling	---	25/12/2015	25/12/2015	Monitoring Not Possible	25/12/2015	25/12/2015
02	Time of sampling	Hr.	10.00	11.15		13.15	15.15
03	Stack Attached to	---	Dedusting System	Stove Stack	Flare Stack	Coke fine building dust collecting system	Iron Ore fine & Dust Collecting System
04	Air Pollution Control Measures	---	Bag Filter	----	---	Bag Filter	Bag Filter
05	Stack Height	Meter	40.0	65.0	45	30.0	30.0
06	Stack Diameter	Meter	1.5	2.250	---	---	0.85
07	Stack Temperature	°C	47	225	---	57	36
08	Ambient Temperature	°C	28	29	---	30	30
09	Average Velocity of Flue Gases	m/sec	28.7	2.6	---	12.5	10.5
10	Isokinetic flow rate for P.M. Sampling	LPM	13	7	---	22	19
11	Gaseous Sampling Flow Rate	LPM	---	---	---	---	---
12	Permissible limits for PM	mg/Nm3	150	150	150	150	150
13	Measured Concentration of PM.	mg/Nm3	40	3	---	6	5
14	Permissible limits for SO2	mg/Nm3	NA	NA	NA	NA	NA
15	Measured Concentration of SO2	mg/Nm3	---	---	---	---	---
16	Permissible limits for NOx	mg/Nm3	NA	NA	NA	NA	NA
17	Measured Concentration of Nox	mg/Nm3	---	---	---	---	---

Note : Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively
NA=Not Applicable

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on 25/09/2016

Royal Environment Auditing & Consultancy Service

Analyst

For No. 743 12 2015 16

Date: 03.01.2016

Form No. 37
(Prescribed under Rule 12-B)

Register containing particulars of monitoring of working environment required under Section 7-A (a)(e)

1. Name of the Department/Plant : **BF Plant-2 at JINDAL SAW LIMITED, Samaghogha. (GPCB ID: 29026)**

2. Raw materials, by products and finished products involved in the process: **TOTAL DUST & CO.**

3. Particulars of sampling

Date of Sampling : 29th December, 2015

Sr. No	Location Operation monitored	Identified Contaminate	Sampling Instrument used	Airborne Contamination			TWA concert ration (As given in Second Schedule)	Refrance Method	Number of workers exposed at the location being monitored	Remark	Signature person taking samples	Name (in block letters)
				Number of sample	Range	Average	mg/m3					
	BF Plant Cast House	CO	Personal Respirable Dust sampler IAS 001	02	14-15	14.5	55	Gravimetric	5			Mr. MANOJ SONARA
		Total Dust			4-5	4.5	10					

Instruments used : Envirotech make personal sampler, Model No. IAS 001

Date of Submission : 2.1.2016

For Royal Environment Auditing & Consultancy Service

Authorized Sign

Royal
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Ref. No. : 749/12/2015-16

Date: 03/01/2016

WORK ZONE NOISE LEVEL MEASUREMENT
BLAST FURNACE - 2 (GPCB ID:29026)

Name of company : JINDAL SAW LIMITED,

Village: Samaghogha,

Tal. : Mundra, Dist. Kutch

Date of sampling : 06th December, 2015

Sr. No.	Location of Sampling	Value in dB(A)		
		Min.	Max.	Leq
01.	Inside Control Room	57.3	62.8	58.7
02.	Nr. Stock House	64.7	69.4	66.3
03.	C/R Blower House	64.7	73.2	67.6

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB,C-80 to 130 dB.

Recalibration is due on : 25/09/2016

Royal Environment Auditing & Consultancy Service

Analyst

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Ref. No. /39.12.2015.16

Date: 05.01.2016

STACK EMISSION MONITORING RESULTS

Pipe Plant (SDP-2) (GPCB ID:18036)

Name of company: JINDAL SAW LIMITED
Village: Samaghogha,
Tal.: Mundra Dist. Kutch

Test Method: As per IS Standards - 11255_1,2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 4	S - 5	S - 6	S - 7	S - 8
01	Date of Sampling	---	19/12/2015	19/12/2015	19/12/2015	19/12/2015	19/12/2015	Not in operation during visit	Not in operation during visit	19/12/2015
02	Time of sampling	Hr	10.00	14.30	15.30	16.30	11.30			13.30
03	Stack Attached to	-	Magnesium Treatment	Socket Cleaning	Annealing Furnace - I	Annealing Furnace - II	Zinc Coating	Tri- Grinding Section	Pre & Post Heating	Zinc Coating Machine
04	Air Pollution Control Measures	---	Bag Filter	Bag Filter	-	---	Bag Filter	Bag Filter		
05	Stack Height	Meter	30	30	45	45	30	30	30	30
06	Stack Diameter	Meter	1.00	0.80	0.85	0.85	1.00	1.00	0.85	1.20
07	Stack Temperature	C	44	36	141	131	42		-	40
08	Ambient Temperature	C	28	31	31	28	29			30
09	Average Velocity of Flue Gases	m/sec	9.5	9.2	4.5	4.4	4.3		-	4.1
10	Isokinetic Flow Rate for P.M. Sampling	LPM	14	13	14	14	14	-	---	14
11	Gaseous Sampling Flow Rate	LPM	---		2.0	2.0	-	-		-
12	Permissible limits for PM	mg/Nm3	50	50	50	50	50	50	50	50
13	Measured Concentration of PM	mg/Nm3	34	14	12	19	20.4	-	-	18
14	Permissible limits for SO2	PPM	NA	NA	100	100	NA	NA	NA	NA
15	Measured Concentration of SO2	PPM		-	1.5	2.2		-	-	
16	Permissible limits for Nox	PPM	NA	NA	50	50	NA	NA	NA	NA
17	Measured Concentration of Nox	PPM		-	4.1	4.5				

Note: Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively
Instrument used: Stack Monitoring Kit - E cotech make - ESS 100
Calibration due on 25.09.2016

N.D.: Not Detectable
N.A.: Not Applicable

For, Royal Environment Auditing & Consultancy Service

Analyst

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Ref. No. : 736/12/2015-16

Date: 28.01.2016

STACK EMISSION MONITORING RESULTS

Pipe Plant (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Ta: Mundra, Dist: Kutch

Ref. Method : As per IS Standards - 11255 1/2/3/7

Sr. No.	Particulars	Unit	S - 7	S - 10	S - 13	S - 14	S - 16	S - 19	S - 21	S - 24
01	Date of Sampling		11/12/2015	Not in operation during visit	24/12/2015	24/12/2015	Not in operation during visit	24/12/2015	Not in operation during visit	Not in operation during visit
02	Time of sampling	Hr	10.00		9.30	10.10		11.15		
03	Stack Attached to	-	Sand Reclamation	Barrel Grinding - I	Annealing Furnace - I	Annealing Furnace - II	Barrel Grinding - II	Annealing Furnace - III	Barrel Grinding-III	Barrel Grinding -IV&V
04	Air Pollution Control Measures		Bag Filter	Bag Filter	---	---	Bag Filter		Bag Filter	Bag Filter
05	Stack Height	Meter	30	30	32	32	30	32	30	30
06	Stack Diameter	Meter	0.6	0.6	1.3/1.5	1.3/1.5	0.6	1.3/1.5	1.5	1.5
07	Stack Temperature	C	62		160	165		167		
08	Ambient Temperature	C	29		27	28		29		
09	Velocity of Flue Gases	m/sec	13.1		8.7	8.5		9.2		
10	Sampling Flow rate for PM Sampling	LPM	27		15	16		17		
11	Gaseous Sampling Flow Rate	LPM	2.0		2.0	2.0		2.0		
12	Permissible limits for PM	mg/Nm3	150	150	150	150	150	150	150	150
13	Measured Concentration of PM	mg/Nm3	20		15	19		21		
14	Permissible limits for SO2	mg/Nm3	40	40	100 (PPM)	100 (PPM)	40	100 (ppm)	40	40
15	Measured Concentration of SO2	mg/Nm3	5.5		7.5	8.1		9.1		
16	Permissible limits for Nox	mg/Nm3	25	25	50 (PPM)	50 (PPM)	25	50 (PPM)	25	25
17	Measured Concentration of Nox	mg/Nm3	12.3		6.1 (PPM)	7.2 (PPM)		6.5 (PPM)		

Note : Minimum detectable limit of SO2 & Nox is 0.1 and 0.01 ppm respectively

N.D. : Not Detectable

Instrument Used : Stack Monitoring Kit - Eutech make - ESS 102

Date of Sampling : 24.12.2015

Royal Environment Auditing & Consultancy Service

Manager
Analyst

Care for Environment
Environment Will Care for You

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Ref. No. : /3/12/2015-16

Date: 03/01/2016

STACK EMISSION MONITORING RESULTS

Pipe Plant (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_1/2/3/7

Sr. No.	Particulars	Unit	S - 1	S - 2	S - 3	S - 4	S - 5	S - 6	S - 12	S - 18
01	Date of Sampling		09/12/2015	09/12/2015	09/12/2015	09/12/2015	09/12/2015	09/12/2015	14/12/2015	Not In Operation During The Visit
02	Time of sampling	Hr	9.00	9.50	10.45	11.35	15.10	16.15	11.05	
03	Stack Attached to		Core Shop-I	Core Shop-II	Core Shop-III	Core Shop-IV	Core Shop-V	Core Shop-VI	Core Cleaning & Dusting-I	Core Cleaning & Dusting-II
04	Air Pollution Control Measures		---	-	-	-	-	---	Bag Filter	Bag Filter
05	Stack Height	Meter	30	30	30	30	30	30	30	30
06	Stack Diameter	Meter	0.584	0.584	0.584	0.584	0.584	0.584	0.6	0.6
07	Stack Temperature	C	38	36	37	40	39	38	45	
08	Ambient Temperature	C	27	27	27	28	28	28	28	
09	Average Velocity of Flue Gases	m/sec	4.3	4.2	4.5	5.2	5.4	5.3	13.7	
10	Isokinetic flow rate for P.M. Sampling	LPM	18	17	18	21	22	22	24	---
11	Gaseous Sampling Flow Rate	LPM	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
12	**Permissible limits for PM**	**mg/Nm3**	**150**	**150**	**150**	**150**	**150**	**150**	**150**	**150**
13	Measured Concentration of PM	mg/Nm3	15	21	39	34	42	20	37	
14	**Permissible limits for SO2**	**mg/Nm3**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**
15	Measured Concentration of SO2	mg/Nm3	2.1	2.7	1.9	2.4	2.9	1.6	ND	
16	**Permissible limits for Nox**	**mg/Nm3**	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**25**
17	Measured Concentration of Nox	mg/Nm3	1.3	2.2	1.8	1.5	2.8	2.1	4.3	

Note : Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively ND: Not Detectable

Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100

Calibration due on 25/09/2016

Royal Environment Auditing & Consultancy Service

Analyst

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Ref. No. : 736/12/2015-16

Date: 03.01.2016

STACK EMISSION MONITORING RESULTS

Pipe Plant (GPCB ID:18036)

Name of company : JINDAL SAW LIMITED.
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 11255_1/2/3/7

Sr. No.	Particulars	Unit	S - 8	S - 9	S - 15	S - 20	S - 22	S - 23
01	Date of Sampling	---	15/12/2015	10/12/2015	10/12/2015	Not In Operation During The Visit	15/12/2015	17/12/2015
02	Time of sampling	Hr.	10.15	9.45	11.00		11.30	10.30
03	**Stack Attached to**	---	**Common stack Mg Converter-I&II**	**Zn Coating - I**	**Zn Coating - II**	**Zn Coating - III**	**Mg Converter - III**	**Zn Coating - IV & V**
04	Air Pollution Control Measures	---	Bag Filter	Cyclone Seprater & Bag Filter	Cyclone Seprater & Bag Filter	Cyclone Separator & Bag Filter	Bag Filter	Cyclone Separator & Bag Filter
05	Stack Height	Meter	30	30	30	30	30	30
06	Stack Diameter	Meter	0.5	0.6	0.6	0.6	0.5	0.9
07	Stack Temperature	°C	45	47	45	---	57	40
08	Ambient Temperature	°C	27	26	27	---	28	28
09	Average Velocity of Flue Gases	m/sec	26.7	14.8	15.3	---	11.8	5.2
10	Isokinetic flow rate for P.M. Sampling	LPM	12	26	27	---	23	27
11	Gaseous Sampling Flow Rate	LPM	2.0	---	---	---	2.0	---
12	**Permissible limits for PM**	**mg/Nm3**	**150**	**20 (Zn)**	**20 (Zn)**	**20 (Zn)**	**150**	**20 (Zn)**
13	Measured Concentration of PM	mg/Nm3	37	13 (Zn)	17 (Zn)	---	25	09 (Zn)
14	**Permissible limits for SO2**	**mg/Nm3**	**40**	**NA**	**NA**	**NA**	**40**	**NA**
15	Measured Concentration of SO2	mg/Nm3	ND	---	---	---	ND	---
16	**Permissible limits for Nox**	**mg/Nm3**	**25**	**NA**	**NA**	**NA**	**25**	**NA**
17	Measured Concentration of Nox	mg/Nm3	3.2	---	---	---	2.8	---

Note : Minimum Detectable Limit of SO2 & Nox is 0.1 and 0.01 ppm respectively.
Instrument Used : Stack Monitoring Kit - Ecotech make - ESS 100
Calibration due on 25/09/2016

N.A=Not Applicable

Royal Environment Auditing & Consultancy Service

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Ref. No. : 717/12/2015-16

Date: 03/01/2016

NATIONAL AMBIENT AIR QUALITY MONITORING REPORT

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	**Location of Ambient**	----	**Main Gate (S)**	**Sinter Plant - 1 (NNW)**	**Nr. Workshop Spiral - II (W)**
02.	Date of sampling	----	21/12/2015	21/12/2015	21/12/2015
03.	Time of sampling	-----	8.30	8.45	9.05
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	-----	N	N	N
06.	Average Wind Speed	Km/Hr.	1.9	1.9	1.9
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	**Permissible limits for PM 10***	**µg/m3**	**100**	**100**	**100**
10.	Measured Concentration of PM 10	µg/m3	44	48	38
11.	**Permissible limits for PM 2.5***	**µg/m3**	**60**	**60**	**60**
12.	Measured Concentration of PM 2.5	µg/m3	15	22	13
13.	**Permissible limits for SO_2***	**µg/m3**	**80**	**80**	**80**
14.	Measured Concentration of SO_2	µg/m3	3.3	4.5	2.1
15.	**Permissible limits for NO_2***	**µg/m3**	**80**	**80**	**80**
16.	Measured Concentration of NO_2	µg/m3	17.5	15.2	14.1
17.	**Permissible limit for CO ****	**µg/m3**	**2000**	**2000**	**2000**
18	Measured Concentration of CO	µg/m3	BDL	BDL	BDL

Instrument used : (1) 3 Nos. RDS (APM - 217 BL). (2) 3 Nos. of Gaseous Sampler (AAS 109) (3) 3 Nos. PM 2.5 Sampler (AAS 127)

All Calibration due on : 25/05/2016

BDL= Below Detectable Limit

*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 718/12/2015-16

Date: 03/01/2016

NATIONAL AMBIENT AIR QUALITY MONITORING REPORT

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	**Location of Ambient**	----	**Main Gate (S)**	**Sinter Plant - 1 (NNW)**	**Nr. Workshop Spiral - II (W)**
02.	Date of sampling	----	25/12/2015	25/12/2015	25/12/2015
03.	Time of sampling	-----	8.40	8.55	9.15
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	-----	E	E	E
06.	Average Wind Speed	Km/Hr.	4.9	4.9	4.9
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	**Permissible limits for PM 10***	**µg/m3**	**100**	**100**	**100**
10.	Measured Concentration of PM 10	µg/m3	41	46	35
11.	**Permissible limits for PM 2.5***	**µg/m3**	**60**	**60**	**60**
12.	Measured Concentration of PM 2.5	µg/m3	19	23	16
13.	**Permissible limits for SO_2***	**µg/m3**	**80**	**80**	**80**
14.	Measured Concentration of SO_2	µg/m3	2.9	4.2	2.6
15.	**Permissible limits for NO_2***	**µg/m3**	**80**	**80**	**80**
16.	Measured Concentration of NO_2	µg/m3	16.3	15.4	12.5
17.	**Permissible limit for CO ****	**µg/m3**	**2000**	**2000**	**2000**
18.	Measured Concentration of CO	µg/m3	BDL	BDL	BDL

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. of Gaseous Sampler (AAS 109) (3) 3 Nos. PM 2.5 Sampler (AAS 127)

All Calibration due on : 25/05/2016

BDL= Below Detectable Limit

*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 718(A)/12/2015-16

Date: 03/01/2016

NATIONAL AMBIENT AIR QUALITY MONITORING REPORT

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23

Sr. No.	Particulars	Unit	NAAQMS - 1	NAAQMS - 2	NAAQMS - 3
01.	**Location of Ambient**	**----**	**Main Gate (S)**	**Sinter Plant - 1 (NNW)**	**Nr. Workshop Spiral - II (W)**
02.	Date of sampling	----	29/12/2015	29/12/2015	29/12/2015
03.	Time of sampling	-----	8.20	8.35	9.00
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	-----	NNE	NNE	NNE
06.	Average Wind Speed	Km/Hr.	1.5	1.5	1.5
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	**Permissible limits for PM 10***	**µg/m3**	**100**	**100**	**100**
10	Measured Concentration of PM 10	µg/m3	30	43	24
11.	**Permissible limits for PM 2.5***	**µg/m3**	**60**	**60**	**60**
12.	Measured Concentration of PM 2.5	µg/m3	17	22	14
13.	**Permissible limits for SO_2***	**µg/m3**	**80**	**80**	**80**
14	Measured Concentration of SO_2	µg/m3	4.3	3.7	2.3
15.	**Permissible limits for NO_2***	**µg/m3**	**80**	**80**	**80**
16	Measured Concentration of NO_2	µg/m3	15.4	13.6	11.7
17.	**Permissible limit for CO ** **	**µg/m3**	**2000**	**2000**	**2000**
18.	Measured Concentration of CO	µg/m3	B.D.L.	B.D.L.	B.D.L.

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. of Gaseous Sampler (AAS 109), (3) 3 Nos. PM 2.5 Sampler (AAS 127)

A.I. Calibration due on 25/05/2016 B.D.L= Below Detectable Limit

*Permissible Limits are as per NAAQ Standard 16th November 2009

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Ref. No. : 719/12/2015-16

Date: 03/01/2016

AMBIENT AIR QUALITY MONITORING REPORT

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23

Sr.No.	Particulars	Unit	AAQM - 1 (S)	AAQM - 2 (SSW)	AAQM - 3 (WSW)	AAQM - 4 (NW)
01.	**Location of Ambient**	----	**Old Colony (Nr. Environment Laboratory)**	**Nr. Rain Water Harvesting**	**LPG Yard (Nr. Water Reservoir)**	**Between Sinter - 2 & Spiral - 2**
02.	Date of sampling	----	13/12/2015	13/12/2015	14/12/2015	14/12/2015
03.	Time of sampling	-----	8.05	8.20	8.10	8.35
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	-----	NNE	NNE	NNE	NNE
06.	Average Wind Speed	Km/Hr.	3.6	3.6	5.5	5.5
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2	0.2
09.	**Permissible limits for PM 10***	**µg/m3**	**100**	**100**	**100**	**100**
10.	Measured Concentration of PM 10	µg/m3	33	43	39	36
11.	**Permissible limits for PM 2.5***	**µg/m3**	**60**	**60**	**60**	**60**
12.	Measured Concentration of PM 2.5	µg/m3	15	19	21	13
13.	**Permissible limits for SO_2***	**µg/m3**	**80**	**80**	**80**	**80**
14.	Measured Concentration of SO_2	µg/m3	1.8	2.6	3.5	2.8
15.	**Permissible limits for NO_2***	**µg/m3**	**80**	**80**	**80**	**80**
16.	Measured Concentration of NO_2	µg/m3	6.9	11.5	10.6	9.5
17.	**Permissible limit for CO ****	**µg/m3**	**2000**	**2000**	**2000**	**2000**
18	Measured Concentration of CO	µg/m3	BDL	BDL	BDL	BDL

Instrument used : (1) Ecotech make 3 Nos. RDS (APM - 217 B_). (2) 3 Nos. Gaseous Sampling Kit (APM 109). & 3 Nos. PM 2.5 Sampler (AAS 127)

All Calibration due on : 25/05/2016

BDL= Below Detectable Limit

*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. : 720/12/2015-16

Date: 03/01/2016

AMBIENT AIR QUALITY MONITORING REPORT

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23

Sr. No.	Particulars	Unit	AAQM - 5 (NE)	AAQM - 6 (SE)	AAQM - 7 (ESE)	AAQM - 8 (E)
01.	**Location of Ambient**	----	**Labour Colony**	**New Colony (Shopping Centre)**	**VIP Guest House**	**Weigh bridge**
02.	Date of sampling	----	15/12/2015	15/12/2015	16/12/2015	16/12/2015
03.	Time of sampling	-----	8.15	8.40	8.25	8.45
04.	Duration of Sampling	Min.	1440.00	1440.00	1440.00	1440.00
05.	Dominant Wind Direction (From)	-----	NNE	NNE	NNE	NNE
06.	Average Wind Speed	Km/Hr.	3.6	3.6	0.5	0.5
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2	0.2
09.	**Permissible limits for PM 10***	**µg/m3**	**100**	**100**	**100**	**100**
10.	Measured Concentration of PM 10	µg/m3	46	30	40	48
11.	**Permissible limits for PM 2.5***	**µg/m3**	**60**	**60**	**60**	**60**
12.	Measured Concentration of PM 2.5	µg/m3	23	20	18	24
13.	**Permissible limits for SO_2***	**µg/m3**	**80**	**80**	**80**	**80**
14.	Measured Concentration of SO_2	µg/m3	4.1	2.2	3.1	4.9
15.	**Permissible limits for NO_2***	**µg/m3**	**80**	**80**	**80**	**80**
16.	Measured Concentration of NO_2	µg/m3	10.7	9.1	12.6	14.7
17.	**Permissible limit for CO ** **	**µg/m3**	**2000**	**2000**	**2000**	**2000**
18.	Measured Concentration of CO	µg/m3	BDL	BDL	BDL	BDL

Instrument used : (1) Ecotech make 3 Nos. RDS (APM - 217 BL). (2) 3 Nos. Gaseous Sampling Kit (APM 109). & 3 Nos. PM 2.5 Sampler (AAS 127)

All Calibration due on 25/05/2016

BDL= Below Detectable Limit

*Permissible Limits are as per NAAQ Standard 16th November 2009.

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Ref. No. :721/12/2015-16

Date: 03/01/2016

FUGITIVE EMISSION MONITORING REPORT

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23/22

Sr. No.	Particulars	Unit	A - 1	A - 2	A - 3
01.	**Location of Ambient**	----	**RMH Junction House**	**RMH Stock House**	**Sinter RMH Yard**
02.	Date of sampling	----	08/12/2015	08/12/2015	09/12/2015
03.	Time of sampling	-----	8.15	8.30	8.00
04.	Duration of Sampling	Hr.	8.00	8.00	8.00
05.	Dominant Wind Direction (From)	-----	E	E	NNE
06.	Average Wind Speed	Km/Hr.	1.3	1.3	2.5
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	**Permissible limits for PM 10***	**µg/m3**	**3000**	**3000**	**3000**
10.	Measured Concentration of PM 10	µg/m3	1328	1211	1154
11.	**Permissible limits for SO2***	**µg/m3**	**150**	**150**	**150**
12.	Measured Concentration of SO2	µg/m3	12.7	11.9	13.8
13.	**Permissible limits for NO2***	**µg/m3**	**120**	**120**	**120**
14.	Measured Concentration of NO2	µg/m3	25.6	26.3	24.7
15.	**Permissible limit for CO ****	µg/m3	**2000**	**2000**	**2000**
16.	Measured Concentration of CO	µg/m3	BDL	BDL	BDL
17.	**Permissible limit for Pb***	µg/m3	**2**	**2**	**2**
18.	Measured Concentration of Pb	µg/m3	ND	ND	ND

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. Gaseous Sampler (APM 109)
All Calibration due on : 25/05/2016

BDL= Below Detectable Limit
ND= Not Detectable

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Ref. No. :722/12/2015-16

Date: 03/01/2016

FUGITIVE EMISSION MONITORING REPORT

Name of company : JINDAL SAW LIMITED
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Test Method : As per IS Standards - 5182_Part - 2/6/10/23/22

Sr. No.	Particulars	Unit	A - 4	A - 5	A - 6
01.	**Location of Ambient**	----	**Sinter 2 Ground Hopper**	**DISP "CCM" Area**	**BF CAST HOUSE**
02.	Date of sampling	----	09/12/2015	10/12/2015	10/12/2015
03.	Time of sampling	-----	8.20	8.10	8.25
04.	Duration of Sampling	Hr.	8.00	8.00	8.00
05.	Dominant Wind Direction (From)	-----	NNE	NW	NW
06.	Average Wind Speed	Km/Hr.	2.50	4.3	4.3
07.	Average flow rate during sampling	m3/Hr.	1.0	1.0	1.0
08.	Average flow rate for Gas sampling	LPM	0.2	0.2	0.2
09.	**Permissible limits for PM 10***	**µg/m3**	**3000**	**3000**	**3000**
10.	Measured Concentration of PM 10	µg/m3	764	512	992
11.	**Permissible limits for SO2***	**µg/m3**	**150**	**150**	**150**
12.	Measured Concentration of SO2	µg/m3	10.5	14.6	11.2
13.	**Permissible limits for NO2***	**µg/m3**	**120**	**120**	**120**
14.	Measured Concentration of NO2	µg/m3	21.8	29.1	27.2
15.	**Permissible limit for CO ****	**µg/m3**	**2000**	**2000**	**2000**
16.	Measured Concentration of CO	µg/m3	BDL	BDL	BDL
17.	**Permissible limit for Pb***	**µg/m3**	**2**	**2**	**2**
18.	Measured Concentration of Pb	µg/m3	ND	ND	ND

Instrument used : (1) 3 Nos. RDS (APM - 217 BL), (2) 3 Nos. Gaseous Sampler (APM 109)
All Calibration due on : 25/05/2016

BDL= Below Detectable Limit
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Ref. No. : 748/12/2015-16

Date: 03/01/2016

AMBIENT NOISE LEVEL MEASUREMENT

Name of company : JINDAL SAW LIMITED,
Village: Samaghogha,
Tal. : Mundra, Dist. Kutch

Date of sampling : 06th December, 2015

Sr. No.	Location of Sampling	Value in dB(A) Day Time			Value in dB(A) Night Time		
		Min.	Max.	Leq	Min.	Max.	Leq
01.	Admin. Building	42.6	50.3	43.6	37.7	43.5	39.5
02.	Old Colony	36.7	41.4	38.3	33.5	39.2	34.4
03.	Nr. LPG Yard	52.1	60.1	53.7	48.8	54.7	50.2
04.	New Colony (School)	37.5	43.9	39.2	34.3	38.8	35.2
05.	Nr. SDP-2	56.8	64.3	57.7	53.4	59.1	55.3
06.	Nr. Coating Plant	54.3	63.4	58.6	51.1	61.3	54.6
07.	Nr. Gate No. 2	54.8	62.7	55.1	49.4	57.2	50.9
08.	Nr. Sinter Plant-1	60.5	65.2	61.2	53.7	59.4	55.4
09.	Nr. Sinter Plant-2	57.6	66.3	59.8	54.8	60.7	56.3
10	Nr. Blast Furnace-1	56.5	60.1	57.3	51.7	58.5	53.2
11	Nr. Blast Furnace-2	55.6	61.2	56.5	45.2	51.1	48.7
12	Nr. Main Gate (Security Office)	43.5	52.4	45.7	39.1	44.8	41.2

Instruments used : Sound level meter, Model : SL - 4030 (Lutron Make)

Range : A - 30 to 80 dB, B-50 to 100 dB,C-80 to 130 dB.

Recalibration is due on : 25/09/2016

Royal Environment Auditing & Consultancy Service

Analyst