JINDAL STEEL & POWER

No. JSPL/ANGUL/EMD/16-17/63

Dt – 26th Sept, 2016

To,
The Member Secretary
State Pollution Control Board, Odisha
A/118, Nilakanthanagar, Unit-VIII
Bhubaneswar – 751012

Subject: Annual Environment Statement of M/s Jindal Steel & Power Ltd, Angul for the period April'15 to March'16

Dear Sir,

As per the provision of the Environmental Protection Act 1986, kindly find herewith the Annual Environmental Statement of M/s Jindal Steel & Power Ltd., Angul for the period April'15 to March'16.

This is for your kind reference and necessary action please.

Thanking You.

Yours Faithfully

For Jindal Steel & Power Ltd,

(Alok Sahu)
GM – EMD

Attachment: Environmental Statement of Integrated Steel & Power Plant

Copy to: Central Pollution Control Board, Kolkata

Received 01/10/16

NO. 01 OCT 2016 S.P.C.B. BHUBANESWAR

Jindal Steel & Power Ltd.
Angul Office Chhendipada Road, SH – 63, PO:- Jindal Nagar, Angul-759 111, Odisha
T +91 6761 264191-95, F +96761 264141-44, W www.jindalsteelpower.com
Registered Office O. P. Jindal Marg. Hisar. 125 005. Harvana

ANNUAL ENVIRONMENTAL STATEMENT

FOR THE YEAR 2015 – 2016

JINDAL STEEL & POWER LIMITED, ANGUL ODISHA

PART – A

I. Name & Address of the Owner/ Occupier of the industry operation or process : Mr. D.K. Saraogi
Executive Director (Incharge & Location Head)
Chendipada Road, SH – 63
PO Jindal Nagar
Angul – 759111, Odisha

II. Industry Category Primary (SIC Code) : 3312: Steel works & Blast furnace (including coke oven) & rolling mills
Secondary (SIC Code) 4911: Electric Power Generation

III. Production Capacity :

Sl. No.	Name of the unit	Name of the product	Installed capacity / year	Production in year 2014 - 2015	Production in year 2015 - 2016
1	6 X 135 MW Power Plant	Electrical Energy	6480 MU	1865.434 MU	2379.84 MU
2	1.2 MTPA Plate Mill	MS plate	1.2 Million Tonnes	395300.21 T	396204 T
3	7000 TPM Beam Welding Plant	MS Beam	84000 Tonnes (7000 TPM)	37571.82 T	49278 T
4	1.5 MTPA SMS	Steel	1.5 Million Tonnes	483314.61 T	938166 T
5	1.8 MTPA DRI	DRI	1.8 Million Tonnes	418988.63 T	911642 T
6	3 x 180 TPH Process Boiler	Steam	2.88 Million Tonnes (360 TPH)	1558135 T	1822343 T
7	2 x 500 TPD Lime & Dolo Plant	Calcined Lime & Dolomite	0.33 Million Tonnes (1000 TPD)	70817 T	114475 T
8	6.5 MTPA Coal Washery	Clean Coal & Middling Coal	6.5 Million Tonnes	1059727 T	1192181 T
9	2 x 1200 TPD Oxygen Plant	Gaseous & Liquid Oxygen	0.792 Million Tonnes (2400 TPD)	403474 T	374537 T
10	Coal gasification Plant	Syn Gas	1800 x 10^6 Nm3	369886920 Nm^3	768720830 Nm^3
11	1.17 MTPA Fly Ash Brick Plant	Fly ash products (Bricks/ Pavers/ Kerbstones)	1.17 Million Tonnes	49149 T	64380 T
12	Expanded Polystyrene Unit	EPS Blocks	90,000 m^3/annum	10353.6 m^3	4800 m^3
13	Schnell Panel Making Unit	Schnell Panel	5,40,000 m^2/annum	92944 m^2	43687 m^2
14	Light Weight Aggregate Making Plant	Light Weight Aggregate	0.25 Million Tonnes	NA	30869 T

IV. Year of Establishment : 2011 – 2014
(Commissioning dates of various units are given below)

V. Commissioning Details:

S.No.	Name of the unit		Plant Capacity as per CTE	Installed Capacity	Date of commissioning
1	Power Plant	Unit-I	135 MW	135 MW	13.05.2011
2		Unit-II	135 MW	135 MW	16.01.2012
3		Unit-III	135 MW	135 MW	08.06.2012
4		Unit-IV	135 MW	135 MW	29.09.2012
5		Unit-V	135 MW	135 MW	23.08.2013
6		Unit-VI	135 MW	135 MW	29.08.2013
7	Beam welding		20000 TPM	7000 TPM	22.12.2011
8	Plate Mill		6 MTPA	1.2 MTPA	12.12.2011
9	Coal Washery		6.5 MTPA	6.5MTPA	22.01.2013
10	Fly Ash brick plant (HESS)		1.17 MTPA	1.17 MTPA	07.08.2012
11	Lime & Dolo Plant		3000 TPD	1000 TPD	07.12.2013
12	SMS		6.0 MTPA	1.5 MTPA	07.08.2013
13	Oxygen plant		7,200 TPD	2400 TPD	12.10.2013
14	Process Boiler-1		180 TPH	180 TPH	14.08.2013
15	Process Boiler-2		180 TPH	180 TPH	27.11.2013
16	Process Boiler-3		180 TPH	180 TPH	20.04.2015
17	DRI plant		4.0 MTPA	1.8 MTPA	09.07.2014
18	Coal Gasification plant		4000 x 10^6 Nm^3/Annum	2,25,000 Nm^3/hr	27.05.2014
19	Schnell Making Unit		5,40,000 m^2/Annum	5,40,000 m^2/Annum	22.11.2013
20	Expanded Polystyrene (EPS) Unit		90,000 m^3/ Annum	90,000 m^3/ Annum	22.11.2013
21	Light Weight Aggregate Making Plant		0.25 MTPA	0.25 MTPA	05.03.2015

VI. Date of last Environmental Statement submitted : 29/9/2015

PART – B –
Water & Raw Material Consumption

Water Consumption:

(1) Water consumption m^3 per years (Power Plant)

	2014 - 2015	**2015 - 2016**
Process { KL}	1467800	1831182
Cooling {KL }	4091586	5192775
Domestic {KL }	24482	34703

(2) Water consumption m^3 per years (Plate Mill)

	2014 - 2015	**2015 - 2016**
Process { KL}	108231	80304
Cooling {KL }	230557	226213
Domestic {KL }	4548	2687

(3) Water consumption m^3 per years (Beam Welding Plant)

	2014 - 2015	**2015 - 2016**
Process { KL}	NIL	NIL
Cooling {KL }	NIL	NIL
Domestic {KL }	Included in plate mill domestic consumption	Included in plate mill domestic consumption

(4) Water consumption m3 per years (Steel Melting Shop)

	2014 - 2015	**2015 - 2016**
Process { KL}	NIL	NIL
Cooling {KL }	455938	667426
Domestic {KL }	7711	8296

(5) Water consumption m3 per years (DRI)

	2014 - 2015	**2015 - 2016**
Process { KL}	125010	342069
Cooling {KL }	198120	507205
Domestic {KL }	948	1916

(6) Water consumption m3 per years (Process Boiler)

	2014 - 2015	**2015 - 2016**
Process { KL}	35046	28451
Cooling {KL }	1883299	1772859
Domestic {KL }	Included in Power Plant domestic consumption	Included in Power Plant domestic consumption

(7) Water consumption m^3 per years (Lime & Dolo Plant)

	2014 - 2015	**2015 - 2016**
Process { KL}	NIL	NIL
Cooling {KL }	NIL	NIL
Domestic {KL }	Included in SMS domestic consumption	Included in SMS domestic consumption

(8) Water consumption m^3 per years (Coal Washery)

	2014 - 2015	**2015 - 2016**
Process { KL}	NIL	NIL
Cooling {KL }	60369	79135
Domestic {KL }	203	210

(9) Water consumption m^3 per years (Oxygen Plant)

	2014 - 2015	**2015 - 2016**
Process { KL}	6657	17118
Cooling {KL }	688478	365965
Domestic {KL }	NIL	NIL

(10) Water consumption m^3 per years (Coal Gasification Plant)

	2014-2015	**2015 – 2016**
Process { KL}	278263	1752618
Cooling {KL }	1180319	1220858
Domestic {KL }	18249	74041

(11) Water consumption m^3 per years (Fly Ash Brick Plant)

	2014 - 2015	**2015 - 2016**
Process { KL}	NIL	NIL
Cooling {KL }	3278	2136
Domestic {KL }	NIL	NIL

(12) Water consumption m^3 per years (EPS Unit)

	2014-2015	**2015-2016**
Process { KL}	NIL	NIL
Cooling {KL }	NIL	NIL
Domestic {KL }	NIL	NIL

(13) Water consumption m^3 per years (Schnell Panel Making Unit)

	2014 – 2015	**2015 – 2016**
Process { KL}	NIL	NIL
Cooling {KL }	NIL	NIL
Domestic {KL }	NIL	NIL

(14) Water consumption m^3 per years (Light Weight Aggregate Making Unit)

	2014 – 2015	**2015 – 2016**
Process { KL}	NIL	NIL
Cooling {KL }	NIL	13591
Domestic {KL }	NIL	NIL

Name of the product in Power Plant	**Process water consumption per unit of product**	
	During current financial year 2014 – 2015	During current financial year 2015 – 2016
Electrical Energy	2980 KL/MU	2951 KL/MU

Name of the product in Plate Mill	**Process water consumption per unit of product**	
	During current financial year 2014 – 2015	During current financial year 2015 – 2016
MS plate	0.86 KL/T	0.77 KL/T

Name of the product in Beam welding plant	**Process water consumption per unit of product**	
	During financial year 2014 – 2015	During current financial year 2015 – 2016
MS Beam	NIL	NIL

Name of the product in Steel Melting Shop	**Process water consumption per unit of product**	
	During current financial year 2014 – 2015	During current financial year 2015 – 2016
Steel	0.94 KL/T	0.71 KL/T

Name of the product in DRI	**Process water consumption per unit of product**	
	During current financial year 2014 – 2015	During current financial year 2015 – 2016
DRI	0.77 KL/T	0.93 KL/T

Name of the product in Process Boiler	**Process water consumption per unit of product**	
	During current financial year 2014 – 2015	During current financial year 2015 – 2016
Steam	1.23 KL/T	0.99 KL/T

Name of the product in Lime & Dolo Plant	**Process water consumption per unit of product**	
	During financial year 2014 – 2015	During current financial year 2015 – 2016
Calcined Lime & Dolomite	NIL	NIL

Name of the product in Coal Washery	**Process water consumption per unit of product**	
	During current financial year 2014 – 2015	During current financial year 2015 – 2016
Clean & Middling Coal	0.06 KL/T	0.07 KL/T

Name of the product in Oxygen Plant	**Process water consumption per unit of product**	
	During current financial year 2014 – 2015	During current financial year 2015 – 2016
Gaseous & Liquid Oxygen	1.72 KL/T	1.02 KL/T

Name of the product in Coal Gasification Unit	**Process water consumption per unit of product**	
	During current financial year 2014-2015	During current financial year 2015-2016
Syn Gas	0.004 KL/Nm^3	0.004 KL/Nm^3

Name of the product in Fly Ash Brick Plant	**Process water consumption per unit of product**	
	During current financial year 2014 – 2015	During current financial year 2015 – 2016
Fly Ash Products	0.07 KL/T	0.03 KL/T

Name of the product in EPS Unit	**Process water consumption per unit of product**	
	During financial year 2014 – 2015	During current financial year 2015 – 2016
EPS Blocks	NIL	NIL

Name of the product in Schnell Panel Making Unit	**Process water consumption per unit of product**	
	During financial year 2014 – 2015	During current financial year 2015 – 2016
Schnell Panel	NIL	NIL

Name of the product in Light Weight Aggregate Making Unit	**Process water consumption per unit of product**	
	During financial year 2014 – 2015	During current financial year 2015 – 2016
Light Weight Aggregate	NIL	0.44 KL/T

Raw Material consumption:

1) Power Plant:

Name of Raw Material	Name of Product	Consumption of Raw Material per unit of output	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Coal	Electricity	856.61 T/MU	866.32 T/MU
LDO		0.34 KL/MU	0.009 KL/MU
Gasification oil		0.47 T/MU	0.68 T/MU

2) Plate Mill:

Name of Raw Material	Name of Product	Consumption of Raw Material per unit of output	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Slab	MS Plate	1.11 T/T	1.11 T/T
LDO		0.0005 KL/T	NIL
Syn Gas		80.57 Nm3/T	99.1 Nm^3/T
Gasification Oil		0.01 T/T	0.001 T/T

3) Beam welding plant:

Name of Raw Material	Name of Product	Consumption of Raw Material per unit of output	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Steel	MS Beam	1.1 T/T	1.16 T/T

4) Steel Melting Shop:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
DRI	Steel	0.79 T/T	1.08 T/T
Pig Iron		0.10 T/T	0.03 T/T
Scrap		0.11 T/T	0.08 T/T
Skull		0.01T/T	0.02 T/T
Lime		0.10 T/T	0.07 T/T
Dolomite		0.05 T/T	0.05 T/T
Electricity		0.95 MW/T	0.78 MW/T
Electrode		0.003 T/T	0.003 T/T

5) DRI :

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
	DRI	During financial year 2014 – 2015	During current financial year 2015 – 2016
Syn gas		745.2 Nm^3/T	715.88 Nm^3/T
Liquid Nitrogen		98.5 Nm^3/T	61.08 Nm^3/T
Steam		0.87 T/T	0.78 T/T
Oxygen		22.2 Nm^3/T	25.05 Nm^3/T
Iron ore pellets		1.77 T/T	1.39 T/T
Propane		0.30 T/T	0.0003 T/T
Lime		0.003 T/T	0.1 T/T

6) Process Boiler:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Coal	Steam	0.36 T/T	0.32 T/T
LDO		0.0001 KL/T	NIL
Gasification Oil		0.0001 T/T	0.0001 T/T

7) Lime & Dolo Plant:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Limestone	Calcined Lime & Dolo	2.7 T/T	2.5 T/T
Dolomite		NIL	2.25 T/T
LDO		0.02 KL/T	0.0008 KL/T
Syn Gas		126.09 Nm^3/T	194.49 Nm^3/T

8) Coal Washery:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Raw Coal	Clean Coal & Middling Coal	1 T/T	1 T/T

9) Oxygen Plant:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Electricity	Gaseous & Liquid Oxygen	0.63 MW/T	0.6 MW/T

10) Fly Ash Brick Plant:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Ash	Fly Ash Products	0.06 T/T	0.04 T/T
Water		0.07 KL/T	0.03 L/T

11) Coal Gasification Unit:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Coal	Syn Gas	0.002 T/Nm^3	0.001 T/Nm^3
Steam		0.002 T/Nm^3	0.01 Nm^3

12) Expanded Polystyrene Unit:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Polystyrene Grain	EPS Blocks	0.016 T/m^3	0.014 T/m^3
Steam		0.38 T/m^3	0.43 T/m^3
Electricity		1.28 kwh/m^3	2.2 kwh/m^3

13) Schnell Panel Making Unit:

Name of Raw Material	**Name of Product**	**Consumption of Raw Material per unit of output**	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
EPS Block	Schnell Panel	0.1 m^3/m^2	0.07 m^3/m^2
GI Wire		0.004 T/m^2	0.004 T/m^2
Electricity		0.33 kwh/m^2	0.56 kwh/m^2

14) Light Weight Aggregate Making Unit:

Name of Raw Material	Name of Product	Consumption of Raw Material per unit of output	
		During financial year 2014 – 2015	During current financial year 2015 – 2016
Electrical Power	Light Weight Aggregate	NA	206 kWH/T
Producer gas		NA	135 Nm3/T
Fly ash		NA	1.35 T/T

PART – C

Pollution discharged to environment (Power Plant)

Pollutants	Quantity of pollutants discharged	Concentration of Pollutants discharged	% of variation from prescribed standards with reasons.
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 309 kg/day SO2 : 10755 kg/day NOx : 1125 kg/day	 PM: 23 mg/Nm3 SO2 : 805 mg/Nm3 NOx : 83 mg/Nm3	Within prescribed limit

Pollution discharged to environment (Plate Mill)

Pollutants	Quantity of pollutants discharged (kg/day)	Concentration of Pollutants discharged	% of variation from prescribed standards with reasons.
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 32 kg/day SO2 : 3 kg/day NOx : 252 kg/day	 PM: 12 mg/Nm3 SO2 : 1 mg/Nm3 NOx : 99 mg/Nm3	Within prescribed limit

Pollution discharged to environment (Beam welding plant)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	NA	NA	NA
Air (Stack emission)	NA	NA	NA

Pollution discharged to environment (Steel Melting Shop)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 364 kg/day SO2 : 24 kg/day NOx : 24 kg/day	 PM: 15 mg/Nm3 SO2 : 1 mg/Nm3 NOx : 1 mg/Nm3	Within prescribed limit

Pollution discharged to environment (DRI)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 10 kg/day SO2 : 7 kg/day NOx : 5 kg/day	 PM: 7 mg/Nm3 SO2 : 5 mg/Nm3 NOx : 4 mg/Nm3	Within prescribed limit

Pollution discharged to environment (Process Boiler)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 88 kg/day SO2 : 39938 kg/day NOx : 1141 kg/day	 PM: 18 mg/Nm3 SO2 : 821 mg/Nm3 NOx : 244 mg/Nm3	Within prescribed limit

Pollution discharged to environment (Lime & Dolo Plant)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 12 kg/day SO2 : 16 kg/day NOx : 13 kg/day	 PM: 14 mg/Nm3 SO2 : 15 mg/Nm3 NOx : 13 mg/Nm3	Within prescribed limit

Pollution discharged to environment (Coal Washery)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 2 kg/day SO2 : NA NOx : NA	 PM: 17 mg/Nm3 SO2 : NA NOx : NA	Within prescribed limit

Pollution discharged to environment (Oxygen Plant)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission)	NA	NA	NA

Pollution discharged to environment (Coal Gasification Unit)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 7 kg/day SO2 : NA NOx : NA	 PM: 5 mg/Nm3 SO2 : NA NOx : NA	 Within prescribed limit

Pollution discharged to environment (Fly Ash Brick Plant)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission)	NA	NA	NA

Pollution discharged to environment (EPS Unit)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission)	NA	NA	NA

Pollution discharged to environment (Schnell Making Unit)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission)	NA	NA	NA

Pollution discharged to environment (Schnell Making Unit)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission)	NA	NA	NA

Pollution discharged to environment (Light Weight Aggregate Making Unit)

Pollutants	**Quantity of pollutants discharged (kg/day)**	**Concentration of Pollutants discharged**	**% of variation from prescribed standards with reasons.**
Water	Zero discharge	NA	NA
Air (Stack emission) SPM SO_2 NO_X	 PM: 169 kg/day SO2 : 16 kg/day NOx : 3 kg/day	 PM: 95 mg/Nm3 SO2 : 53 mg/Nm3 NOx : 5 mg/Nm3	 Within prescribed limit

PART – D

Hazardous Waste (combined for Power Plant, Plate Mill, Beam welding plant, SMS,DRI Process Boiler, Lime & Dolo Plant, Coal Washery, Oxygen Plant & CGP)	**Total Qty.**	
	2014-15	**2015-16**
a) From Process	33 KL used oil 60 kg oily cotton 10 T sludge	39.88 KL used oil 110 kg oily cotton 431.38 T sludge
b) From Pollution Control Facility	NIL	NIL

PART – E

Solid Wastes:

1) **Power Plant**

Solid Waste (Bottom ash & Fly ash)	**Total Quantity**	
	2014 – 2015	**2015 – 2016**
a) From process (Bottom ash)	144681 T	217623 T
b) From pollution control facility (Fly ash)	501074 T	635781 T
c) Quantity recycled or reused within the unit (used in civil work & brick plant)	561227 T	499059 T

2) **Plate Mill**

Solid Waste	**Total Quantity**	
	2014 – 2015	**2015 – 2016**
a) Mill Scales	6885 T	4917 T
b) Scrap (end cut)	36086 T	37046 T

3) Beam welding Plant

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
Scrap	3833 T	7981 T

4) Steel Melting Shop

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
a) Dust Generation	9049.5 T	18240 T
b) Slag Generation	150076 T	219898 T

5) DRI

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
a) Sludge	49407 T	74902 T
b) DRI dust	2719 T	3696 T

6) Process Boiler

Solid Waste (Bottom ash & Fly ash)	Total Quantity	
	2014 – 2015	2015 – 2016
a) From process (Bottom ash)	46365 T	48430 T
b) From pollution control facility (Fly ash)	174144 T	193719 T
c) Quantity recycled or reused within the unit (used in civil work & brick plant)	159490 T	82088 T

7) Lime & Dolo Plant

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
a) Under size raw material	NIL	80568 T
b) Under size product	NIL	14077 T

8) Coal Washery

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
NA	NA	NA

9) Oxygen Plant

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
NA	NA	NA

10) Coal Gasification Plant

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
a) Ash	226242 T	298126 T
b) Quantity recycled or reused within the unit (used in civil work & road making)	219114 T	291538 T

11) Fly Ash Brick Plant

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
NA	NA	NA

12) EPS Unit)

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
Reject Material	0.9 T	0.16 T

13) Schnell Panel Making Unit

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
Reject Material	0.768 T	0.216 T

14) Light Weight Aggregate Making Unit

Solid Waste	Total Quantity	
	2014 – 2015	2015 – 2016
Reject Material	NA	9216 T

Part – F

Please specify the characterization (in terms of composition and quantum of Hazardous as well as Solid Waste and indicate disposal practice adopted for both these categories of wastes)

S. No.	Name of HW / Solid Waste	Qty.	Type / Nature	Mode of Disposal
1.	Used / Spent Oil	39.88 KL	Inflammable	Disposed through registered recyclers
2.	Oily cotton	110 kg	Inflammable	Burnt in boiler
3	Sludge	431.38 Ton	ETP sludge	Disposed to Common Hazardous Waste Disposal Site at Jajpur developed by M/s Ramky

PART – G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production

1. Waste water generated from Power Plant is being treated in ETP and reused in ash slurry making, dust suppression and green belt irrigation.

2. Waste water generated from Coal Gasification Plant is being treated in Bio-ETP & TETP and reused in cooling tower make up water.

3. Fly ash being used in brick making and light weight aggregate as well as other civil works.

4. Waste water generated in Plate Mill ETP is recycled in the process.

5. Oxygen Plant cooling tower blow down water is being used for irrigation of green belts.

PART - H

Additional measures / investment proposal for environment protection including abatement of pollution

1. About 2.78 lac trees have been planted in and around the plant premises so far.

2. Mill scales that are generated from Plate Mill are being sent to JSPL's Raigarh unit for use in sinter plant as a raw material.

3. Scarp generated from Beam Welding Plant & Plate Mill is being reused in Steel melting Shop.

4. ETP sludge from Coal Gasification Plant stored in container and sent to Common Hazardous Waste Disposal Site at Jajpur developed by M/s Ramky.

PART – I

Any other particulars in respect of environmental protection and abetment of pollution

1. Online emission monitoring systems have been installed in all stacks and real time data is being sent to SPCB & CPCB.

2. Online effluent monitoring systems have been installed in outlet of Power Plant, CGP & DRI ETP and real time data is being sent to SPCB & CPCB.

3. Four stations for Continues Ambient Air Monitoring stations have been commissioned and real time data is being sent to SPCB & CPCB.