

ANNEXURE - I**STACK EMISSION**
(April' 2015 to September' 2015)**Unit # I**

Parameters Measured : Suspended Particulate Matter (SPM)
Unit of Measurement : mg / NM³
Limit : 100.00

Sl.No.	Month / Year	Unit	Results
01.	April	mg / NM ³	SD
02.	May	mg / NM ³	SD
03.	June	mg / NM ³	SD
04.	July	mg / NM ³	SD
05.	August	mg / NM ³	SD
06.	September	mg / NM ³	SD
Average		mg / NM ³	SD

SD: under shut-down

ANNEXURE - II**STACK EMISSION**
(April' 2015 to September' 2015)**Unit # II**

Parameters Measured : Suspended Particulate Matter (SPM)

Unit of Measurement : mg / NM³

Limit : 100.00

Sl.No.	Month / Year	Unit	Results
01.	April	mg / NM ³	74.52
02.	May	mg / NM ³	75.65
03.	June	mg / NM ³	75.43
04.	July	mg / NM ³	74.53
05.	August	mg / NM ³	73.25
06.	September	mg / NM ³	74.85
Average		mg / NM ³	74.71

SD: under shut-down

ANNEXURE - III**STACK EMISSION**
(April' 2015 to September' 2015)**Unit # III**

Parameters Measured : Suspended Particulate Matter (SPM)

Unit of Measurement : mg / NM³

Limit : 100.00

Sl.No.	Month / Year	Unit	Results
01.	April	mg / NM ³	52.23
02.	May	mg / NM ³	65.07
03.	June	mg / NM ³	61.28
04.	July	mg / NM ³	53.70
05.	August	mg / NM ³	54.58
06.	September	mg / NM ³	53.92
Average		mg / NM ³	56.80

ANNEXURE - IV**STACK EMISSION**
(April' 2015 to September' 2015)**Unit # IV**

Parameters Measured : Suspended Particulate Matter (SPM)

Unit of Measurement : mg / NM³

Limit : 100.00

Sl.No.	Month / Year	Unit	Results
01.	April	mg / NM ³	48.95
02.	May	mg / NM ³	54.55
03.	June	mg / NM ³	49.53
04.	July	mg / NM ³	49.23
05.	August	mg / NM ³	50.30
06.	September	mg / NM ³	SD
Average		mg / NM ³	50.51

ANNEXURE - V**STACK EMISSION**
(April' 2015 to September' 2015)**Unit # V**

Parameters Measured : Suspended Particulate Matter (SPM)

Unit of Measurement : mg / NM³

Limit : 50.00

Sl.No.	Month / Year	Unit	Results
01.	April	mg / NM ³	39.65
02.	May	mg / NM ³	40.33
03.	June	mg / NM ³	43.20
04.	July	mg / NM ³	45.95
05.	August	mg / NM ³	46.10
06.	September	mg / NM ³	45.03
Average		mg / NM ³	43.38

ANNEXURE - VI**FUGITIVE EMISSIONS AT COAL HANDLING AREA**
(April' 2015 to September' 2015)

Parameters Measured : Suspended Particulate Matter (SPM)

Unit of Measurement : $\mu\text{g} / \text{m}^3$ (microgram / m^3)

Limit : 500.00

Sl. No.	Month / Year	Unit	Results
01.	April	$\mu\text{g} / \text{m}^3$	290.6
02.	May	$\mu\text{g} / \text{m}^3$	294.3
03.	June	$\mu\text{g} / \text{m}^3$	310.5
04.	July	$\mu\text{g} / \text{m}^3$	301.5
05.	August	$\mu\text{g} / \text{m}^3$	295.6
06.	September	$\mu\text{g} / \text{m}^3$	305.0
Average		$\mu\text{g} / \text{m}^3$	299.58

ANNEXURE - VII**EFFLUENT ANALYSIS**
(April' 2015 to September' 2015)**PLANT DISCHARGE:**

Sl. No	PARAMETERS	APR - 2015	MAY - 2015	JUN - 2015	JUL - 2015	AUG - 2015	SEP - 2015
1	pH	6.85	7.10	6.9	7.4	7.25	7.35
2	Total Dissolved Solids, mg/L	575.5	560.5	575.5	591.0	575.5	570.2
3	Total Suspended Solids, mg/L	32.5	30.0	36.0	42.5	44.4	41.5
4	Chloride as Cl, mg/L	25.0	27.0	28.5	34.0	31.0	26.0
5	Sulphate as SO ₄ , mg/L	21.0	24.0	26.0	27.5	27.8	24.8
6	C.O.D, mg/L	10.0	11.0	13.5	13.8	13.2	12.4
7	Total iron as Fe, mg/L	0.30	0.45	0.62	1.05	1.09	0.55
8	Sulphide as S, mg/L	0.45	0.40	0.75	0.66	0.62	0.62
9	Oils & Grease, mg/L	2.15	2.05	2.35	2.46	2.34	1.95
10	Total Chromium as Cr	ND	ND	ND	ND	ND	ND
11	Copper as Cu, mg/L	ND	ND	ND	ND	ND	ND
12	Cadmium as Cd, mg/L	ND	ND	ND	ND	ND	ND
13	Zinc as Zn, mg/L	ND	ND	ND	ND	ND	ND
14	Dissolved Phosphate as PO ₄ , mg/L	2.0	2.2	2.8	2.92	2.78	2.5
15	Free Available Chlorine, mg/L	ND	ND	ND	ND	ND	ND
16	Nickel as Ni, mg/L	ND	ND	ND	ND	ND	ND
17	Selenium as Se, mg/L	ND	ND	ND	ND	ND	ND
18	Boron as B, mg/L	ND	ND	ND	ND	ND	ND
19	Arsenic as As, mg/L	ND	ND	ND	ND	ND	ND
20	Mercury as Hg, mg/L	ND	ND	ND	ND	ND	ND
21	Lead as Pb, mg/L	ND	ND	ND	ND	ND	ND
22	Cyanides as CN, mg/L	ND	ND	ND	ND	ND	ND
23	BOD (3 day at 27 Deg. C.), mg/L	5.05	5.20	6.4	5.60	5.74	5.12
24	Fluoride as F, mg/L	0.40	0.35	0.55	0.72	0.67	0.48
25	Ammonical Nitrogen as N, mg/L	1.25	1.10	1.85	1.92	1.88	1.6

ANNEXURE - VIII**AMBIENT AIR MONITORING**
(April' 2015 to September' 2015)**PARTICULATE MATTER 10 (PM₁₀) :** **Limit : 100.00 µg / m³**

Location	APR - 2015	MAY - 2015	JUN - 2015	JUL - 2015	AUG - 2015	SEP - 2015
FHP Control Room Top	89.2	88.4	85.6	79.0	76.5	81.5
120° NNE (Near Hindalco Admn. Building)	55.2	57.4	58.7	56.2	47.9	60.3
240° SSE (Rajapada village)	43.4	45.2	47.4	46.3	47.2	48.2
360° W (Hindalco Club)	52.9	53.8	58.2	54.7	52.8	67.7
Jyoti Vihar, Burla	62.5	64.6	63.5	62.4	60.4	64.7
Ash Mound Road	95.6	97.5	97.8	94.7	95.8	95.8
Ash Mound area	93.4	92.8	94.0	91.2	91.8	97.2

SULPHUR DI-OXIDE (SO₂) : **Limit : 80.00 µg / m³**

Location	APR - 2015	MAY - 2015	JUN - 2015	JUL - 2015	AUG - 2015	SEP - 2015
FHP Control Room Top	17.2	17.6	17.0	9.8	9.6	10.5
120° NNE (Near Hindalco Admn. Building)	11.5	10.5	9.0	10.0	9.5	10.5
240° SSE (Rajapada village)	12.4	12.6	12.8	12.3	12.5	13.6
360° W (Hindalco Club)	11.0	11.8	10.5	10.5	8.5	11.5
Jyoti Vihar, Burla	11.8	11.3	11.9	11.2	11.8	12.4
Ash Mound Road	14.5	15.3	15.8	14.3	15.4	16.9
Ash Mound area	13.5	13.3	13.6	13.1	13.8	15.8

NITROGEN OXIDE (NO_x) : **Limit : 80.00 µg / m³**

Location	APR - 2015	MAY - 2015	JUN - 2015	JUL - 2015	AUG - 2015	SEP - 2015
FHP Control Room Top	14.0	14.8	14.1	7.0	6.8	8.6
120° NNE (Near Hindalco Admn. Building)	9.5	9.5	7.0	8.5	7.5	9.0
240° SSE (Rajapada village)	10.2	10.8	10.5	10.1	10.0	11.8
360° W (Hindalco Club)	10.0	9.6	8.0	8.8	6.5	10.5
Jyoti Vihar, Burla	10.2	10.0	10.2	10.5	10.2	10.8
Ash Mound Road	12.8	14.2	14.1	12.3	14.3	14.6
Ash Mound area	11.0	11.4	11.8	11.2	12.2	13.5

PARTICULATE MATTER 2.5 (PM_{2.5}) : **Limit : 60.00 µg / m³**

Location	APR - 2015	MAY - 2015	JUN - 2015	JUL - 2015	AUG - 2015	SEP - 2015
FHP Control Room Top	49.0	48.5	49.2	48.2	47.0	48.7
120° NNE (Near Hindalco Admn. Building)	33.4	34.0	34.2	34.5	28.2	35.6
240° SSE (Rajapada village)	24.3	26.4	27.0	25.3	24.8	28.2
360° W (Hindalco Club)	31.3	33.3	33.4	32.4	31.2	39.2
Jyoti Vihar, Burla	35.0	34.5	33.7	32.4	31.8	35.8
Ash Mound Road	57.4	57.2	56.4	54.2	55.4	55.8
Ash Mound area	55.2	55.7	56.8	54.8	55.8	57.7

52.7

ANNEXURE - IX**UTILISATION OF FLY ASH AND BOTTOM ASH**
(April' 2015 to September' 2015)

Sl. No	Description	Quantity
1	Quantity of fly ash generated (MT)	420876
2	Quantity of bottom ash generated (MT)	46764
	Total ash generated (MT)	467640
3	Brick Manufacturing (MT)	40522
4	Supplied to Cement Plants (MT)	185032
5	Land Filling (MT)	23406
6	Utilization in Embankment / Dyke Raising (MT)	37225
7	Utilization in other purposes (road making) (MT)	600
8	Total Ash Utilized (MT)	286785
9	% of total ash utilization	61.3 %

ANNEXURE – X**PLANTATION DETAILS**

YEAR	NO. OF SAPLINGS PLANTED	AREA COVERED (ACRE)	SPECIES PLANTED
Up to 2006 – 07	419865	250.12	
2007 – 08	33,000	12.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2008 – 09	25,200	16.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2009 – 10	31,000	10.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2010 – 11	30,000	10.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2011 – 12	25,200	10.0	Chakunda, Gambhari, Sisam, Krushna Chuda, Radha Chuda, Jammun & Neam
2012 – 13	25000	10.0	Neam, Karanja, Sisam, Krushna Chuda, Radha Chuda, Cassia Fistula, Alstonia & Kadamba
2013 – 14	30000	13.0	Neem, Karanja, Sisam, Cassia Fistula, Alstonia, Kadamba, Mango, Jamun etc
2014 – 15	12000	6.0	Neem, Karanja, Sisam, Cassia Fistula, Alstonia, Kadamba, Mango, Jamun etc
2015-16	10000	5.0	Bamboo, Sisam, Karanja, Radhachuda, Krushnachuda etc
Total (Till-date)	641265	342.12*	

* Including replenished area

ANNEXURE - XI**SULPHUR CONTENT IN THE COAL**
(April' 2015 to September' 2015)

Sl. No.	Month	Unit	Results
01.	April	%	0.46
02.	May	%	0.48
03.	June	%	0.36
04.	July	%	0.45
05.	August	%	0.49
06.	September	%	0.37
	Average	%	0.43

ANNEXURE - XII

ENVIRONMENTAL EXPENDITURE

(April, 2014 - March, 2015)

01.	Ash Disposal	:	Rs.	1910.00	Lakh
02.	Operating & Maintenance cost of ESP, Ash Handling Plant including Ash Silo & CHP DES	:	Rs.	304.12	Lakh
03.	Envt. Monitoring / Evt. Charges including Environment Management System	:	Rs.	54.45	Lakh
04.	Plantation Activities	:	Rs.	4.30	Lakh
05.	Water cess to Govt.	:	Rs.	22.02	Lakh
07.	Aesthetics	:	Rs.	27.58	Lakh
08.	Community Development	:	Rs.	104.19	Lakh
09.	TOTAL	:	Rs.	2426.66	Lakh

AMBIENT NOISE QUALITY DATA

(April' 2015 to September' 2015)

Sl. No.	Location	Category	Standard* Day / Night	Distance / Direction w.r.t Plant	Noise Level (Day/Night) in dB(A)					
					APR - 2015	MAY - 2015	JUN - 2015	JUL - 2015	AUG - 2015	SEP - 2015
1.	Riverside Colony	Residential	55/45	0.8 km / SW	49.1/38.8	49.2/38.2	48.9/38.5	48.3/39.6	48.6/39.7	49.3/38.1
2.	Tarasinghpada	Residential	55/45	0.2 km / S	48.9/40.3	49.3/40.1	49.8/40.4	49.6/39.4	49.4/40.4	50.8/42.4
3.	Christianpada	Residential	55/45	0.1 km / S	57.5/47.3	57.3/48.0	57.5/48.4	57.3/48.0	57.0/46.8	58.1/48.6
4.	Power Plant Security Gate	Industrial	75/70	Plant Site	55.6/46.2	56.1/47.2	56.1/47.4	55.3/46.8	56.2/47.6	56.9/48.6
5.	Power Colony	Residential	55/45	0.4 km / NW	48.2/38.7	48.5/39.3	49.5/39.7	49.8/39.2	50.1/40.3	50.9/40.4

* Day Time : 0600 to 2200 Hrs

* Night Time : 2200 to 0600 Hrs.