

## ENVIRONMENTAL QUALITY PARAMETERS (APRIL-2012 TO SEPTEMBER-2012)

### STACK EMISSION

#### FUME TREATMENT PLANT (DRY SCRUBBERS)

Location of sampling	Unit	Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
<b>FTP I - Stack I</b>							
Particulate Matter	mg/Nm <sup>3</sup>	8.26	9.24	8.78	8.91	8.30	11.68
Total Fluoride	Kg/t. Al.	0.21	0.23	0.24	0.22	0.21	0.23
<b>FTP - I - Stack II</b>							
Particulate Matter	mg/Nm <sup>3</sup>	10.75	9.09	9.37	9.62	7.82	8.37
Total Fluoride	Kg/t. Al.	0.23	0.22	0.23	0.21	0.20	0.19
<b>FTP - II - Stack - III</b>							
Particulate Matter	mg/Nm <sup>3</sup>	13.39	11.92	13.67	10.57	9.35	9.49
Total Fluoride	Kg/t. Al.	0.25	0.24	0.25	0.24	0.22	0.21
<b>FTP - III- Stack - IV</b>							
Particulate Matter	mg/Nm <sup>3</sup>	11.03	8.55	10.76	8.70	8.06	8.93
Total Fluoride	Kg/t. Al.	0.22	0.20	0.22	0.20	0.19	0.20

### STACK EMISSION

Particulate Matter :

Unit : mg/Nm<sup>3</sup>

Location of sampling	Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
<b>CAST HOUSE - I :</b>						
Stack-5 (Furnace -A)	61.50	58.80	58.70	59.10	58.70	58.70
Stack-6 (Furnace -B)	58.90	57.90	59.20	58.80	59.30	57.30
Stack-7 (Furnace -C)	Shut down	Shut down	Shut down	Shut down	Shut down	Shut down
<b>CAST HOUSE - II</b>						
Stack - 8 (Furnace-1&2)	29.60	61.20	60.30	61.50	59.90	57.60
<b>CAST HOUSE - III</b>						
Stack - 9 (Furnace-A&B)	62.80	63.40	59.80	60.20	62.40	59.60

### FUGITIVE EMISSION

Total Fluoride :

Unit : Kg/t. Al.

Location of sampling	Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
PR-I, Section XII	0.36	0.35	0.35	0.36	0.35	Shut Down
PR-II, Section IV	0.32	0.34	0.33	0.32	0.34	0.33
PR-IV, Section VIII	0.35	0.33	0.32	0.34	0.32	0.34
PR-VI,RS End	0.34	0.33	0.35	0.34	0.36	0.36
PR -VIII,RS End	0.33	0.36	0.34	0.35	0.34	0.35
PR- IX ,RS End	0.33	0.35	0.33	0.35	0.33	0.32
PR -X , RS End	0.35	0.34	0.36	0.36	0.35	0.36

**AMBIENT AIR SAMPLING****PARTICULATE MATTER (PM<sub>10</sub>):**  
ug/Nm<sup>3</sup>

Unit :

Location of sampling	Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
Pump House Near Adm. Building	55.50	57.83	57.15	54.71	49.63	54.39
R/S Cooling Tower MCC Room	57.73	55.50	73.65	65.67	61.08	58.65
R&D Building	58.16	55.66	53.73	41.17	48.06	44.78
Near caster Security Kiosk	56.88	56.38	77.75	67.52	65.97	62.84
Near New Security watch tower	57.20	60.79	56.78	50.90	52.23	53.61
Project office near Old Rectifier	56.13	57.86	56.24	53.83	54.63	55.66
Hindalco club	55.69	39.81	41.46	36.94	37.33	38.84

**PARTICULATE MATTER (PM<sub>2.5</sub>):**  
ug/Nm<sup>3</sup>

Unit :

Location of sampling	Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
Pump House Near Adm. Building	33.84	35.13	34.36	32.33	29.51	32.95
R/S Cooling Tower MCC Room	35.31	49.20	44.41	39.13	36.22	35.40
R&D Building	34.97	33.53	32.29	23.77	28.44	27.03
Near caster Security Kiosk	34.16	33.11	46.60	39.94	39.13	37.63
Near New Security watch tower	34.32	35.97	33.96	30.17	31.03	32.43
Project office near Old Rectifier	33.78	34.66	33.74	31.99	32.81	33.65
Hindalco club	33.43	24.17	24.80	21.72	22.26	23.50

**SULPHUR DI-OXIDE (SO<sub>2</sub>) :**Unit : ug/Nm<sup>3</sup>

Location of sampling	Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
Pump House Near Adm. Building	8.83	8.84	10.69	9.67	9.48	9.19
R/S Cooling Tower MCC Room	8.50	8.78	11.13	9.94	9.44	9.13
R&D Building	8.50	8.61	10.44	9.17	9.00	8.88
Near caster Security Kiosk	8.83	9.67	10.75	9.78	9.28	10.00
Near New Security watch tower	8.61	11.26	10.94	9.78	8.94	9.25
Project office near Old Rectifier	8.72	11.17	10.81	9.33	8.06	9.00
Hindalco club	8.50	9.83	10.00	9.00	8.83	8.63

**NITROGEN OXIDE (NO<sub>x</sub>) :**Unit : ug/Nm<sup>3</sup>

Location of sampling	Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
Pump House Near Adm. Building	6.39	7.22	9.56	8.06	7.28	6.56
R/S Cooling Tower MCC Room	6.22	7.28	10.25	7.72	6.83	6.50
R&D Building	5.67	7.11	9.63	6.39	6.67	5.94
Near caster Security Kiosk	6.17	7.56	10.00	6.28	6.72	6.94
Near New Security watch tower	5.94	9.22	9.88	6.61	6.22	6.25
Project office near Old Rectifier	5.72	9.83	7.50	6.39	5.94	6.31
Hindalco club	5.78	8.89	9.50	7.06	6.67	5.94

**Note :** CO, Hydro-Carbon (HC) and Lead in all seven locations found <1000 ug/Nm<sup>3</sup>, Not Detectable (ND) and Not Detectable (ND) respectively.

**FORAGE FLUORIDE :**

**Unit : ppm**

Sl. No.	Location	Data					
		Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
1	0.5 km NE	32.25	32.45	33.00	32.25	32.00	31.10
2	1.0 km NE	22.50	21.95	21.00	20.75	20.00	20.60
3	2.0 km NE	19.50	19.15	19.50	18.25	18.50	17.90
4	3.0 km NE	17.00	17.45	17.00	17.25	17.00	17.85
5	0.5 km SE	34.50	34.95	35.00	35.25	34.50	34.60
6	1.0 km SE	31.00	31.45	31.50	32.25	32.50	32.60
7	2.0 km SE	21.00	21.15	21.50	22.25	23.00	23.60
8	3.0 km SE	15.50	15.25	15.00	16.75	16.50	17.95
9	5.0 km SE	8.00	7.70	8.00	7.75	7.50	8.20
10	0.5 km NW	24.00	23.20	23.50	23.25	23.50	22.60
11	1.0 km NW	20.00	19.85	20.00	20.75	20.00	19.20
12	0.5 km SW	34.50	34.45	34.50	34.75	35.50	35.10

**GROUND WATER ANALYSIS :** Parameter : F-

**Unit : mg/l**

Location of sampling	Apr'12	May '12	June'12	July '12	Aug '12	Sep '12
Sludge pit test well (E)	0.43	0.42	0.41	0.42	0.43	0.44
Sludge pit test well(W)	0.46	0.44	0.46	0.45	0.46	0.48
Sludge pit test well (N)	0.45	0.43	0.45	0.43	0.42	0.45
Sludge pit test well (S)	0.44	0.46	0.48	0.47	0.45	0.50
Open well near sludge pit	0.40	0.39	0.38	0.39	0.38	0.40
Tube well near sludge pit	0.35	0.32	0.33	0.32	0.31	0.32

**AMBIENT NOISE QUALITY DATA :**

**Unit : dB(A) Leq**

Sl.	Location	Category	Standard* Day / Night	Distance / Direction wrt Plant	Day Time; dB(A) Leq	Night Time; dB(A) Leq
1.	Plant Gate	Industrial	75/70	Plant Site	56.25	48.53
2.	Hindalco Colony	Residential	55/45	0.6 km / SW	49.50	42.25
3.	Tarasingpara	Residential	55/45	0.5 km / S	54.73	47.35
4.	Christianpara	Residential	55/45	0.7 km / S	58.18	49.85
5.	Alind Colony	Residential	55/45	1.3 km / NE	48.40	41.13

\* Day Time : 0600 to 2200 Hrs

\* Night Time : 2200 to 0600 Hrs