



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Annexure-I

Stack Monitoring Data from Dec 2022 to May 2023

BCPL Lepetkata

SO₂Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Stack attached to Furnace-1	SO ₂ =50 mg/Nm ³	ND	ND	ND
Stack attached to Furnace-2		ND	ND	ND
Stack attached to Furnace-3		ND	ND	ND
Stack attached to Furnace-4		ND	ND	ND
Stack attached to Thermal Oxidiser		ND	ND	ND
GSU Regeneration Gas Heater Stack		ND	ND	ND
Stack attached to HRSG1		ND	ND	ND
Stack attached to HRSG2		ND	ND	ND
Stack attached to UB1		ND	ND	ND

Nox Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Stack attached to Furnace-1	NO _x =250 mg/Nm ³	18.2	21.4	19.8
Stack attached to Furnace-2		20.4	20.4	20.4
Stack attached to Furnace-3		22.6	25.4	24
Stack attached to Furnace-4		23.1	23.1	23.1
Stack attached to Thermal Oxidiser		18.6	20.4	19.5
GSU Regeneration Gas Heater Stack		23.6	26.4	25
Stack attached to HRSG1		21.2	23.6	22.4
Stack attached to HRSG2		20.6	23.4	22
Stack attached to UB1		22.6	26.9	24.75

CO Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Stack attached to Furnace-1	CO=100	23.8	25.9	24.85

BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Stack attached to Furnace-2	mg/Nm ³	26.8	26.8	26.8
Stack attached to Furnace-3		28.4	31.2	29.8
Stack attached to Furnace-4		29.0	29.0	29.0
Stack attached to Thermal Oxidiser		25.2	27.8	26.5
GSU Regeneration Gas Heater Stack		27.2	30.7	28.95
Stack attached to HRSG1		26.8	28.9	27.85
Stack attached to HRSG2		26.8	30.2	28.5
Stack attached to UB1		24.5	27.6	26.05

PM Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Stack attached to Furnace-1	PM=5 mg/Nm ³	ND	ND	ND
Stack attached to Furnace-2		ND	ND	ND
Stack attached to Furnace-3		ND	ND	ND
Stack attached to Furnace-4		ND	ND	ND
Stack attached to Thermal Oxidiser		ND	ND	ND
GSU Regeneration Gas Heater Stack		ND	ND	ND
Stack attached to HRSG1		ND	ND	ND
Stack attached to HRSG2		ND	ND	ND
Stack attached to UB1		ND	ND	ND

Stack Monitoring Data from Dec 2022 to May 2023

BCPL GDU &CS, Duliajan

SO₂Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack	SO ₂ =50 mg/Nm ³	ND	ND	ND
Gas Turbine-1 Stack		ND	ND	ND
Gas Turbine-2 Stack		ND	ND	ND
Gas Engine Generator Stack		ND	ND	ND



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Nox Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack	NO _x =250 mg/Nm ³	23.6	26.1	24.85
Gas Turbine-1 Stack		21.6	23.4	22.5
Gas Turbine-2 Stack		19.4	22.8	21.1
Gas Engine Generator Stack		20.4	22.1	21.25

CO Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack	CO=100 mg/Nm ³	28.2	31.4	29.8
Gas Turbine-1 Stack		30.2	33.6	31.9
Gas Turbine-2 Stack		34.6	37	35.8
Gas Engine Generator Stack		24.8	27.3	26.05

PM Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack	PM=5 mg/Nm ³	ND	ND	ND
Gas Turbine-1 Stack		ND	ND	ND
Gas Turbine-2 Stack		ND	ND	ND
Gas Engine Generator Stack		ND	ND	ND

Note: ND-Not Detectable

Stack Monitoring Data from Dec 2022 to May 2023

BCPL, Lakwa

SO₂ Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max	Average
Reboiler Stack1	SO ₂ =50 mg/Nm ³	ND	ND	ND
Gas Turbine-1		ND	ND	ND

BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Stack				
Regeneration Gas Heater Stack		ND	ND	ND
DG Set	SO ₂ - gm/kw-hr	0.020	0.024	0.044

NO_x Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack1	NO _x =250 mg/Nm ³	18.2	20.8	19.5
Gas Turbine-1 Stack		26.2	29.5	27.85
Regeneration Gas Heater Stack		23.2	26.1	24.65
DG Set	NO _x +HC≤4.0 gm/kw-hr	0.0027	0.023	0.01285

CO Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack1	CO=100 mg/Nm ³	24.6	26.1	25.35
Gas Turbine-1 Stack		35.4	37.9	36.65
Regeneration Gas Heater Stack	CO=100 mg/Nm ³	27.4	30.3	28.85
DG Set	CO≤3.5 gm/kw-hr	0.068	0.073	0.0705

PM Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max	Average
Reboiler Stack1	PM=5 mg/Nm ³	ND	ND	ND
Gas Turbine-1 Stack		ND	ND	ND
Regeneration Gas Heater Stack		ND	ND	ND
DG Set	PM≤0.2 gm/kw hr	0.034	0.038	0.036



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Note: ND-Not Detectable

Stack Monitoring Data from Dec 2022 to May 2023

BCPL Railway Siding:

NOx Emission (mg/Nm³)

Stack	Emission Standard	Observed Value		
		Min.	Max	Average
DG Set Stack	NOx=710 mg/Nm ³	38.2	41.4	39.8

CO Emission (mg/Nm³)

Stack	Emission Standard	Observed Value		
		Min.	Max	Average
DG Set Stack	CO=150 mg/Nm ³	54.8	58.7	56.75

PM Emission (mg/Nm³)

Stack	Emission Standard	Observed Value		
		Min.	Max	Average
DG Set Stack	PM=75 mg/Nm ³	41.6	45.1	43.35

NMHC as C Emission (mg/Nm³)

Stack	Emission Standard	Observed Value		
		Min.	Max	Average
DG Set Stack	NMHC as C=100 mg/Nm ³	13.5	15	14.25

Effluent after Treatment (ETP Outlet) Monitoring Data from Dec 2022 to May 2023

BCPL Lepetkata

Sl. No.	Parameters	Standard as per PCB, Assam and IS 2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.54	7.95	7.745
2.	Temperature	400C	24.6	25.1	24.9



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

3.	Total Suspended Solids	100 mg/l	34.0	41.0	37.5
4.	Oil & Grease	10 mg/l	<1.0	<1.0	<1.0
5.	COD (as O ₂)	250 mg/l	101	106	103.5
6.	BOD (@270 C for 3 days)	50 mg/l	25	26	25.5
7.	Sulphides (as S)	2 mg/l	<1.0	<1.0	<1.0
8.	Chloride (as Cl)	1000 mg/l	405	406	405.5
9.	Ammonical nitrogen (as N)	50mg/l	<0.1	<0.1	<0.1
10.	Phenolic Compounds (as C ₆ H ₅ OH)	5 mg/l	<0.001	<0.001	<0.001
11.	Free Ammonia (as NH ₃)	5 mg/l	<0.1	<0.1	<0.1
12.	Total Kjeldahl Nitrogen (as NH ₃)	100 mg/l	17.2	17.6	17.4

Effluent after Treatment (ETP Outlet) Monitoring Data from Dec 2022 to May 2023

BCPL Lakwa

Sl. No.	Parameters	Standard as per PCB, Assam and IS 2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.31	7.74	7.525
2.	Temperature	400C	25.0	25.7	25.4
3.	Total Suspended Solids	100 mg/l	31.0	34.0	32.5
4.	Oil & Grease	10 mg/l	1.5	1.5	1.5
5.	COD (as O ₂)	250 mg/l	88.2	96.5	92.35
6.	BOD (at 270C for 3 days)	50 mg/l	22.0	23.0	22.5
7.	Sulphides (as S)	2 mg/l	<0.1	<0.1	<0.1
8.	Chlorides (as Cl)	1000 mg/l	430	436	433
9.	Ammonical nitrogen (as N)	50mg/l	8.54	9.68	9.11
10.	Phenolic Compounds (as C ₆ H ₅ OH)	5 mg/l	<0.001	<0.001	<0.001
11.	Free Ammonia (as NH ₃)	5 mg/l	<0.1	<0.1	<0.1
12.	Total Kjeldahl Nitrogen (as NH ₃)	100 mg/l	14.8	15.1	14.95

Storm water Monitoring Data from Dec 2022 to May 2023

BCPL Lepetkata

Sl. No.	Parameters	Standard as per PCB, Assam and IS2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.16	7.48	7.32
2.	Temperature	400C	23.1	23.2	23.15





BRAHMAPUTRA CRACKER AND POLYMER LIMITED

3.	Total Suspended Solids	100 mg/l	21.0	25.0	23.0
4.	Oil & Grease	10 mg/l	<1.0	<1.0	<1.0
5.	COD (as O ₂)	250 mg/l	29.1	38.6	33.85
6.	BOD (@270C for 3 days)	50 mg/l	7	7.8	7.4
7.	Sulphides (as Cl)	2 mg/l	<0.1	<0.1	<0.1
8.	Chloride (as Cl)	1000 mg/l	35.6	36.4	36
9.	Ammonical Nitrogen (as N)	50mg/l	<0.1	<0.1	<0.1
10.	Phenolic Compounds (as C ₆ H ₅ OH)	5 mg/l	<0.001	<0.001	<0.001
11.	Free Ammonia (as NH ₃)	5 mg/l	<0.1	<0.1	<0.1
12.	Total Kjeldahl Nitrogen (as NH ₃)	100 mg/l	4.8	6.0	5.4

Storm water Monitoring Data from Dec 2022 to May 2023

BCPL Lakwa

Sl. No.	Parameters	Standard as per PCB, Assam and IS2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	6.88	7.48	7.18
2.	Temperature	400C	21.9	24.1	23
3.	Total Suspended Solids	100 mg/l	15.9	16.3	15.5
4.	Oil & Grease	10 mg/l	<1.0	<1.0	<1.0
5.	COD (as O ₂)	250 mg/l	<10	<10	<10
6.	BOD (@270C for 3 days)	50 mg/l	<1.0	<1.0	<1.0
7.	Sulphides (as Cl)	2 mg/l	<0.1	<0.1	<0.1
8.	Chloride (as Cl)	1000 mg/l	55.6	65.2	60.4
9.	Ammonical Nitrogen (as N)	50mg/l	<0.1	<0.1	<0.1
10.	Phenolic Compounds (as C ₆ H ₅ OH)	5 mg/l	<0.001	<0.001	<0.001
11.	Free Ammonia (as NH ₃)	5 mg/l	<0.1	<0.1	<0.1
12.	Total Kjeldahl Nitrogen (as NH ₃)	100 mg/l	2.2	3.8	3

Ambient Air Quality Analysis from Dec 2022 to May 2023

BCPL Lepetkata

Parameters	Locations Name			
	At Energy Gate	At RWTP Control Room	At Sub Station-8	BHEL Site near CISF camp
PM ₁₀ (Std.-100µg/m ³)				
Min.	48.2	46.3	49.2	51.4

BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Max.	67.3	66.7	67.3	67
Avg.	60.40	60.17	60.38	61.12
PM2.5 (Std.-60 µg/m3)				
Min.	18.6	19.5	20.4	22.4
Max.	30.8	29.2	30.1	31.2
Avg.	26.44	25.75	25.99	26.40
SO2 (Std.-80 µg/m3)				
Min.	10.6	11.8	8.65	10.1
Max.	26.2	17.5	17	17.4
Avg.	14.98	14.90	14.36	14.39
NO2 (Std.-80 µg/m3)				
Min.	13.2	15.3	15.9	11.1
Max.	21.5	22.6	23.6	20.8
Avg.	17.87	19.31	19.66	16.99
CO (Std.-2 mg/m3 one hourly basis)				
Min.	<0.05	<0.05	<0.05	<0.05
Max.	<0.05	<0.05	<0.05	<0.05
Avg.	<0.05	<0.05	<0.05	<0.05

Note: ND-Not Detected

Ambient Air Quality Analysis from Dec 2022 to May 2023

BCPL Lakwa

Parameters	At Lab Building	At Main Control Room
PM10 (Std.-100µg/m3)		
Min.	49.3	44.2
Max.	59.4	62.3
Avg.	54.19	54.33
PM2.5 (Std.-60 µg/m3)		
Min.	19.2	17
Max.	26.1	27.6
Avg.	22.68	22.76
SO2 (Std.-80 µg/m3)		
Min.	10.6	10.6
Max.	15.3	23.6
Avg.	12.83	14.15
NO2 (Std.-80 µg/m3)		
Min.	12.4	13.2
Max.	19.8	22.5
Avg.	16.46	18.08
CO (Std.-2 mg/m3 one hourly basis)		



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Min.	<0.05	<0.05
Max.	<0.05	<0.05
Avg.	<0.05	<0.05

Ambient Air Quality Analysis from Dec 2022 to May 2023

BCPL GDU & CS, Duliajan

Parameters	At Canteen Building
PM10 (Std.-100µg/m3)	
Min.	48.5
Max.	65.3
Avg.	55.83
PM2.5 (Std.-60 µg/m3)	
Min.	20.2
Max.	30.4
Avg.	24.36
SO2 (Std.-80 µg/m3)	
Min.	9.86
Max.	14.9
Avg.	12.99
NO2 (Std.-80 µg/m3)	
Min.	17.3
Max.	22.8
Avg.	20.53
CO (Std.-2 mg/m3 one hourly basis)	
Min.	<0.05
Max.	<0.05
Avg.	<0.05

Ambient Air Quality Analysis from Dec 2022 to May 2023

BCPL Railway Siding

Parameters	At Fire Water Pump House
PM10 (Std.-100µg/m3)	
Min.	56.2
Max.	65.3
Avg.	61.06
PM2.5 (Std.-60 µg/m3)	
Min.	23.4
Max.	29.2
Avg.	26.64
SO2 (Std.-80 µg/m3)	
Min.	12.9





BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Max.	16.8
Avg.	14.6
NO2 (Std.-80 µg/m3)	
Min.	18.6
Max.	24.1
Avg.	21.43
CO (Std.-2 mg/m3 one hourly basis)	
Min.	<0.05
Max.	<0.05
Avg.	<0.05

Noise Monitoring Data from Dec 2022 to May 2023

BCPL - Lepetkata

Sl. No	Locations Name	Min.	Max.	Avg.
Day Time(Std.-75 db(A))				
1.	Near Energy Gate	56.3	71.4	66.167
2.	Near Substation-8	57.2	69.5	66.472
3.	Near RWTP Control Room	57.2	69.5	65.536
4.	Near BHEL Site	55.6	70.1	65.560
Night Time(Std.-70 db(A))				
1.	Near Energy Gate	51.5	64.3	60.1
2.	Near Substation-8	53.4	64.6	60.85
3.	Near RWTP Control Room	52.6	63.8	59.91
4.	Near BHEL Site	46.1	64.5	58.91

Noise Monitoring Data from Dec 2022 to May 2023

BCPL - Lakwa

Sl. No	Locations Name	Min.	Max.	Avg.
Day Time(Std.-75 db(A))				
1.	Near Main Control Room	60.1	69.2	66.21
2.	Near Lab.	59.3	69.3	65.37
Night Time(Std.-70 db(A))				
1.	Near Main Control Room	50.9	64.6	57.35
2.	Near Lab.	48.7	63.2	55.35



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Noise Monitoring Data from Dec 2022 to May 2023

BCPL - Duliajan

Sl. No	Location Name	Min.	Max.	Avg.
1.	Near Canteen Building(Day Time) (Std.-75 db(A))	55.2	68.2	64.25
2.	Near Canteen Building(Night Time) (Std.-70 db(A))	45.1	59.4	53.48

Noise Monitoring Data from Dec 2022 to May 2023

BCPL – Railway Siding

Sl. No	Location Name	Min.	Max.	Avg.
1.	Near Fire Water Pump House (Day Time)) (Std.-75 db(A))	60.1	68.5	65.08
2.	Near Fire Water Pump House (Night Time) (Std.-70 db(A))	53.4	62.6	58.77

✓