



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Annexure-I

Stack Monitoring Data from June'2020 to November'2020

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 Oxidizer		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 attached to UB2		ND	ND	ND

NO_x Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Stack attached to Furnace-1	NO _x = 350 mg/Nm ³	31.5	33.4	32.45
Stack attached to Furnace-2		ND	ND	ND
Stack attached to Furnace-3		22.7	28.2	25.45
Stack attached to Furnace-4		28.2	32.4	30.3
Stack attached to Thermal Oxidizer		19.3	21.4	20.35
Stack attached to HRSG1		22.7	29.5	26.1
Stack attached to HRSG2		24.6	26.4	25.5
Stack attached to UB1		ND	ND	ND
Stack attached to UB2		32.2	37.4	34.8



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CO Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Stack attached to Furnace-1	CO=150 mg/Nm ³	27.8	30.2	29
Stack attached to Furnace-2		ND	ND	ND
Stack attached to Furnace-3		28.2	31.4	29.8
Stack attached to Furnace-4		34.4	39.6	37
Stack attached to Thermal Oxidizer		26.5	28.2	27.35
Stack attached to HRSG1		19.4	26.5	22.95
Stack attached to HRSG2		27.1	31.8	29.45
Stack attached to UB1		ND	ND	ND
Stack attached to UB2		25.3	29.2	27.25

PM Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Stack attached to Furnace-1	PM= 10 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 Oxidizer		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 attached to UB2		ND	ND	ND

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BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Stack Monitoring Data from June'2020 to November'2020

BCPL GDU & CS Duliajan

SO₂Emission (mg/Nm³)

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

NO_x Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value
		Average
Reboiler Stack	NO _x = 350 mg/Nm ³	21.05
Gas Turbine-1 Stack		23.6
Gas Turbine-2 Stack		26
Gas Engine Generator Stack		20.85

CO Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value
		Average
Reboiler Stack	CO = 150 mg/Nm ³	25.8
Gas Turbine-1 Stack		34.25
Gas Turbine-2 Stack		35.9
Gas Engine Generator Stack		26.35



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

PM Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value
		Average
Reboiler Stack	PM = 10 mg/Nm ³	ND
Gas Turbine-1 Stack		ND
Gas Turbine-2 Stack		ND
Gas Engine Generator Stack		ND

Stack Monitoring Data from June'2020 to November'2020

BCPL Lakwa

SO₂Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value
		Average
Reboiler Stack1	SO ₂ = 50 mg/Nm ³	ND
Gas Turbine-Stack		ND
DG Set		0.028

NO_x Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value
		Average
Reboiler Stack1	NO _x = 350 mg/Nm ³	25.35
Gas Turbine Stack		26.6
DG Set	NO _x + HC ≤ 4.0 gm/kw-hr	0.135

CO Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value
		Average
Reboiler Stack1	CO = 150 mg/Nm ³	31
Gas Turbine Stack		31.25
DG Set	CO ≤ 3.5 gm/kw-hr	0.046

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BRAHMAPUTRA CRACKER AND POLYMER LIMITED

PM Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value
		Average
Reboiler Stack1	PM=10 mg/Nm ³	ND
Gas Turbine Stack		ND
DG Set	PM ≤ 0.2 gm/kw-hr	0.038

Stack Monitoring Data from June'2020 to November'2020

BCPL Railway Siding

NOx Emission (mg/Nm³)

Stack	Emission Standard	Observed Value
		Average
DG Set Stack	NOx = 710 mg/Nm ³	226.85

CO Emission (mg/Nm³)

Stack	Emission Standard	Observed Value
		Average
DG Set Stack	CO = 150 mg/Nm ³	72.8

PM Emission (mg/Nm³)

Stack	Emission Standard	Observed Value
		Average
DG Set Stack	PM=75 mg/Nm ³	50.5

NMHC as C Emission (mg/Nm³)

Stack	Emission Standard	Observed Value
		Average
DG Set Stack	NMHC as C = 100 mg/Nm ³	20.1

12/11/20
(T. Ghosh)



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Effluent after Treatment (ETP Outlet) Monitoring Data from June'2020 to November'2020

BCPL Lepetkata

Sl. No.	Parameters	Standard as per PCB, Assam and IS 2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.76	7.82	7.79
2.	Temperature	40°C	20.4	21.5	21.0
3.	Total Suspended Solids	100 mg/l	24.6	27.5	26.1
4.	Oil & Grease	10 mg/l	BDL(DL=2)	BDL(DL=2)	BDL(DL=2)
5.	COD (as O ₂)	250 mg/l	119	127	123
6.	BOD (@27° C for 3 days)	50 mg/l	22	24	23
7.	Sulphides (as S)	2 mg/l	BDL(DL=0.1)	BDL(DL=0.1)	BDL(DL=0.1)
8.	Chloride (as Cl)	1000 mg/l	195	238	216.5
9.	Ammonical nitrogen (as N)	50mg/l	6.6	8.4	7.5
10.	Phenolic Compounds (as C ₆ H ₅ OH)	5 mg/l	BDL(DL=0.1)	BDL(DL=0.1)	BDL(DL=0.1)
11.	Free Ammonia (as NH ₃)	5 mg/l	<1	<1	<1
12.	Total Kjeldahl Nitrogen (as NH ₃)	100 mg/l	12.3	13.4	12.85

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(T. G. Hossain)



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Effluent after Treatment (ETP Outlet) Monitoring Data from June'2020 to November'2020

BCPL Lakwa

Sl. No.	Parameters	Standard as per PCB, Assam and IS 2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.67	7.78	7.725
2.	Temperature	40°C	21.2	21.3	21.25
3.	Total Suspended Solids	100 mg/l	26.4	31.5	28.95
4.	Oil & Grease	10 mg/l	BDL(DL=2)	BDL(DL=2)	BDL(DL=2)
5.	COD (as O ₂)	250 mg/l	117	129	123
6.	BOD (at 27°C for 3 days)	50 mg/l	22.5	24	23.25
7.	Sulphides (as S)	2 mg/l	BDL(DL=0.1)	BDL(DL=0.1)	BDL(DL=0.1)
8.	Chlorides (as Cl)	1000 mg/l	214	276	245
9.	Ammonical nitrogen (as N)	50mg/l	5.4	9.4	7.4
10.	Phenolic Compounds (as C ₆ H ₅ OH)	5 mg/l	BDL(DL=0.1)	BDL(DL=0.1)	BDL(DL=0.1)
11.	Free Ammonia (as NH ₃)	5 mg/l	<1	<1	<1
12.	Total Kjeldahl Nitrogen (as NH ₃)	100 mg/l	17.4	19.5	18.45



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Storm water Monitoring Data from June'2020 to November'2020

BCPL Lepetkata

Sl. No.	Parameters	Standard as per PCB, Assam and IS2490 (Pt-I)	Observed Value (Avg)
1.	pH	6.5 – 8.5	7.01
2.	Temperature	40°C	20
3.	Total Suspended Solids	100 mg/l	14.45
4.	Oil & Grease	10 mg/l	BDL(DL=2)
5.	COD (as O ₂)	250 mg/l	14.85
6.	BOD (@27°C for 3 days)	50 mg/l	2.45
7.	Sulphides (as S)	2 mg/l	BDL(DL=0.1)
8.	Chlorides (as Cl)	1000 mg/l	63
9.	Ammonical nitrogen (as N)	50mg/l	<1.0
10.	Phenolic Compounds (as C ₆ H ₅ OH)	5 mg/l	BDL(DL=0.1)
11.	Free Ammonia (as NH ₃)	5 mg/l	<1.0
12.	Total Kjeldahl Nitrogen (as NH ₃)	100 mg/l	6.15

(T. Ghosh)



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Storm water Monitoring Data from June'2020 to November'2020

BCPL Lakwa

Sl. No.	Parameters	Standard as per PCB, Assam and IS2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	6.76	6.85	6.805
2.	Temperature	40°C	19.7	21.5	20.6
3.	Total Suspended Solids	100 mg/l	7.4	9.3	8.4
4.	Oil & Grease	10 mg/l	BDL(DL=2)	BDL(DL=2)	BDL(DL=2)
5.	COD (as O ₂)	250 mg/l	7.6	8.4	8.0
6.	BOD (@27°C for 3 days)	50 mg/l	<2	<2	<2
7.	Sulphides (as Cl)	2 mg/l	BDL(DL=0.1)	BDL(DL=0.1)	BDL(DL=0.1)
8.	Chloride (as Cl)	1000 mg/l	44	61	52.5
9.	Ammonical Nitrogen (as N)	50mg/l	<1	<1	<1
10.	Phenolic Compounds (as C ₆ H ₅ OH)	5 mg/l	BDL(DL=0.1)	BDL(DL=0.1)	BDL(DL=0.1)
11.	Free Ammonia (as NH ₃)	5 mg/l	<1	<1	<1
12.	Total Kjeldahl Nitrogen (as NH ₃)	100 mg/l	2.6	4.2	3.4



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Ambient Air Quality Analysis from June'2020 to November'2020

BCPL Lepetkata

Parameters	Locations Name			
	Near Energy Gate	At RWTP Control Room	At Sub Station-8	BHEL Site near CISF camp
PM₁₀ (Std.-100µg/m³)				
Min.	46.1	47.2	45.3	42.8
Max.	66.4	63.4	62.5	63.2
Avg.	56.33	55.38	54.21	52.59
PM_{2.5} (Std.-60 µg/m³)				
Min.	26.5	28.2	25.4	24.5
Max.	42.6	44.5	39.3	43.5
Avg.	35.11	35.08	32.96	32.09
SO₂ (Std.-80 µg/m³)				
Min.	8.2	8.2	8.2	8.4
Max.	13.1	15.2	14.6	12.9
Avg.	10.38	11.14	10.64	10.54
NO₂ (Std.-80 µg/m³)				
Min.	14.5	16.5	16.3	16.4
Max.	25.3	27.3	24.2	24.5
Avg.	20.12	21.53	20.42	20.39
CO (Std.-4 mg/m³ one hourly basis)				
Min.	BDL	BDL	BDL	BDL
Max.	BDL	BDL	BDL	BDL
Avg.	BDL	BDL	BDL	BDL

Ambient Air Quality Analysis from June'2020 to November'2020

BCPL Lakwa

Parameters	At Lab Building	At Main Control Room
PM₁₀ (Std.-100µg/m³)		
Min.	47.5	48.7
Max.	64.5	62.4
Avg.	55.91	56.68
PM_{2.5} (Std.-60 µg/m³)		
Min.	27.2	27.4
Max.	46.2	47.5
Avg.	35.49	34.84
SO₂ (Std.-80 µg/m³)		
Min.	8.3	8.5

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(T. 9 H001)



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Max.	14.5	16.2
Avg.	10.99	11.29
NO ₂ (Std.-80 µg/m ³)		
Min.	17.2	17.2
Max.	29.4	31.5
Avg.	22.23	22.17
CO (Std.-4 mg/m ³ one hourly basis)		
Min.	BDL	BDL
Max.	BDL	BDL
Avg.	BDL	BDL

Ambient Air Quality Analysis from June'2020 to November'2020

BCPL GDU & CS Duliajan

Parameters	At Canteen Building
PM ₁₀ (Std.-100µg/m ³)	
Min.	31.6
Max.	64.2
Avg.	47.16
PM _{2.5} (Std.-60 µg/m ³)	
Min.	30.1
Max.	49.2
Avg.	45.24
SO ₂ (Std.-80 µg/m ³)	
Min.	8.7
Max.	13.8
Avg.	10.73
NO ₂ (Std.-80 µg/m ³)	
Min.	17.2
Max.	27.7
Avg.	21.18
CO (Std.-4 mg/m ³ one hourly basis)	
Min.	BDL
Max.	BDL
Avg.	BDL



BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Ambient Air Quality Analysis from June'2020 to November'2020

BCPL Railway Siding

Parameters	At Fire Water Pump House
PM ₁₀ (Std.-100µg/m ³)	
Min.	49.2
Max.	65.7
Avg.	58.46
PM _{2.5} (Std.-60 µg/m ³)	
Min.	30.2
Max.	44.3
Avg.	36.12
SO ₂ (Std.-80 µg/m ³)	
Min.	7.8
Max.	13.8
Avg.	10.59
NO ₂ (Std.-80 µg/m ³)	
Min.	14.5
Max.	28.1
Avg.	22.28
CO (Std.-4 mg/m ³ one hourly basis)	
Min.	BDL
Max.	BDL
Avg.	BDL

Noise Monitoring Data from June'2020 to November'2020

BCPL - Lepetkata

Sl. No	Locations Name	Min.	Max.	Avg.
Day Time(Std.-75 db(A))				
1.	Near Energy Gate	52.2	65.5	58
2.	Near Substation-8	51.9	63.4	57.72
3.	Near RWTP Control Room	52.8	63.9	59.65
4.	Near BHEL Site	52.1	63.8	59.25
Night Time(Std.-70 db(A))				
1.	Near Energy Gate	46.5	52.5	49.9
2.	Near Substation-8	42.8	53.6	49.39
3.	Near RWTP Control Room	45.6	56.3	49.47
4.	Near BHEL Site	44.5	55.3	49.55

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BRAHMAPUTRA CRACKER AND POLYMER LIMITED

Noise Monitoring Data from June'2020 to November'2020

BCPL - Lakwa

Sl. No	Locations Name	Min.	Max.	Avg.
Day Time(Std.-75 db(A))				
1.	Near Main Control Room	55.2	65.3	61.01
2.	Near Lab.	50.2	63.3	58.50
Night Time(Std.-70 db(A))				
1.	Near Main Control Room	44.9	53.5	50.36
2.	Near Lab.	45.2	52.8	48.98

Noise Monitoring Data from June'2020 to November'2020

BCPL - Duliajan

Sl. No	Location Name	Min.	Max.	Avg.
1.	Near Canteen Building(Day Time) (Std.-75 db(A))	59.3	65.5	62.46
2.	Near Canteen Building(Night Time) (Std.-70 db(A))	49.5	56.7	52.24

Noise Monitoring Data from June'2020 to November'2020

BCPL – Railway Siding

Sl. No	Location Name	Min.	Max.	Avg.
1.	Near Fire Water Pump House (Day Time)) (Std.-75 db(A))	54.2	63.6	60.02
2.	Near Fire Water Pump House (Night Time) (Std.-70 db(A))	44.9	52.2	49.05

Note:

1. ND – Not detectable
2. BLD- Below Detection Limit.

HYB
(T. G. H. S. S.)



GOVERNMENT OF ASSAM
OFFICE OF THE DEPUTY COMMISSIONER ::DIBRUGARH DISTRICT
(LAND ACQUISITION BRANCH)

No. DRA.5/2007/

Dated Dibrugarh 24/04/2019.

Certificate of Completion of Rehabilitation

This is to certify that 22 Nos. of Sonowal Kachari families and 44 Nos. TGL and Ex-TGL families, totaling 66 Nos. were affected during the acquisition of land for setting up of the Gas Cracker Project (Brahmaputra Cracker and Polymer Limited) at Lepetkata under Dibrugarh West Revenue Circle and among 66 affected families, 22 Nos. of Sonowal Kachari families were rehabilitated at VGR Dag No.23 situated at Dulia-Gaon by providing them 1Bigha of land each and the remaining 44 Nos. of TGL and Ex-TGL families were also rehabilitated at 45 Nos. Bolai FS Grant (B) by providing them 1 Bigha of land each.

This certificate is based on the report of Circle Officer, Dibrugarh West Revenue Circle.

Pallav Gopal Jha
23.4.19
(Pallav Gopal Jha, IAS)
Deputy Commissioner & Collector,
Dibrugarh.

Memo No. DRA.5/2007/

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Dated Dibrugarh 24/04/2019.

Copy to :

1. Circle Officer, Dibrugarh West Revenue Circle, Dibrugarh.
2. Chief Manager (HR), BCPL, Lepetkata, 786006 for information and necessary action.

Pallav Gopal Jha
23.4.19
(Pallav Gopal Jha, IAS)
Deputy Commissioner & Collector,
Dibrugarh.

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(T. G. Hossain)