

Annexure-I

Stack Monitoring Data from December 2021 to May 2022

BCPL Lepetkata

SO₂ Emission (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	20.4	38.3	29.35
Stack attached to Furnace-2		22.6	22.6	22.6
Stack attached to Furnace-3		22.4	26.6	24.5
Stack attached to Furnace-4		27.7	27.7	27.7
Stack attached to Thermal Oxidiser		18.4	22.2	20.3
GSU Regeneration Gas Heater Stack		22.2	43.7	32.95
Stack attached to HRSG1		16.8	21.8	19.3
Stack attached to HRSG2		23.6	39.1	31.35
Stack attached to UB1		20.4	33.6	27

CO Emission (mg/Nm³)

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Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Stack attached to Furnace-1	CO=100 mg/Nm ³	26.2	29.9	28.05
Stack attached to Furnace-2		28.4	28.4	28.4
Stack attached to Furnace-3		25.5	28.4	26.95
Stack attached to Furnace-4		32.1	32.1	32.1
Stack attached to Thermal Oxidiser		19.5	26.2	22.85
GSU Regeneration Gas Heater Stack		27.6	37.2	32.4
Stack attached to HRSG1		24.5	25.4	24.95
Stack attached to HRSG2		33.4	45.6	39.5
Stack attached to UB1		23.6	38.5	31.05

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 December 2021 to May 2022

BCPL GDU &CS, Duliajan

SO₂ Emission (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		ND	ND	ND



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Generator Stack				
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Nox Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack	NO _x =250 mg/Nm ³	26.6	30.3	28.45
Gas Turbine-1 Stack		23.6	29.4	26.5
Gas Turbine-2 Stack		18.3	19.4	18.85
Gas Engine Generator Stack		22.6	22.7	22.65

CO Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack	CO=100 mg/Nm ³	22.5	30.2	26.35
Gas Turbine-1 Stack		26.3	34.2	30.25
Gas Turbine-2 Stack		35.6	36.4	36
Gas Engine Generator Stack		27.4	31.6	29.5

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 December 2021 to May 2022

BCPL, Lakwa

SO₂ Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max	Average
Reboiler Stack1	SO ₂ =50	ND	ND	ND



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Gas Turbine-1 Stack	mg/Nm ³	ND	ND	ND
Regeneration Gas Heater Stack		ND	ND	ND
DG Set	SO ₂ -gm/kw-hr	0.021	0.021	0.021

NOx Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack1	NO _x =250 mg/Nm ³	13.8	19.2	16.5
Gas Turbine-1 Stack		21.3	28.6	24.95
Regeneration Gas Heater Stack		26.2	37.2	31.7
DG Set	NO _x +HC≤4.0 gm/kw-hr	0.11	0.27	0.19

CO Emission (mg/Nm³)

Stacks	Emission Standard	Observed Value		
		Min.	Max.	Average
Reboiler Stack1	CO=100 mg/Nm ³	20.4	25.5	22.95
Gas Turbine-1 Stack		36.5	39.2	37.85
Regeneration Gas Heater Stack	CO=100 mg/Nm ³	30.4	30.5	30.45
DG Set	CO≤3.5 gm/kw-hr	0.073	0.1	0.0865

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	0.038	0.092	0.065

Note: ND-Not Detectable



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Stack Monitoring Data from December 2021 to May 2022

BCPL Railway Siding:

NOx Emission (mg/Nm³)

Stack	Emission Standard	Observed Value		
		Min.	Max	Average
DG Set Stack	NOx=710 mg/Nm ³	39	205.2	122.1

CO Emission (mg/Nm³)

Stack	Emission Standard	Observed Value		
		Min.	Max	Average
DG Set Stack	CO=150 mg/Nm ³	57.9	58.6	58.25

PM Emission (mg/Nm³)

Stack	Emission Standard	Observed Value		
		Min.	Max	Average
DG Set Stack	PM=75 mg/Nm ³	41.3	43.2	42.25

NMHC as C Emission (mg/Nm³)

Stack	Emission Standard	Observed Value		
		Min.	Max	Average
DG Set Stack	NMHC as C=100 mg/Nm ³	14	16.2	15.1

Effluent after Treatment (ETP Outlet) Monitoring Data from Dec 2021 to May 2022

BCPL Lepetkata

Sl. No.	Parameters	Standard as per PCB, Assam and IS 2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.62	7.71	7.665
2.	Temperature	400C	24.2	24.4	24.3
3.	Total Suspended Solids	100 mg/l	35	38	36.5
4.	Oil & Grease	10 mg/l	<1.0	<1.0	<1.0
5.	COD (as O2)	250 mg/l	106	118	112.0



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6.	BOD (@270 C for 3 days)	50 mg/l	26	28	27.0
7.	Sulphides (as S)	2 mg/l	<1.0	<1.0	<1.0
8.	Chloride (as Cl)	1000 mg/l	418	426	422.0
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	18	19	18.5

Effluent after Treatment (ETP Outlet) Monitoring Data from Dec 2021 to May 2022

BCPL Lakwa

Sl. No.	Parameters	Standard as per PCB, Assam and IS 2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.6	7.66	7.63
2.	Temperature	400C	24.3	24.6	24.45
3.	Total Suspended Solids	100 mg/l	35	37	36
4.	Oil & Grease	10 mg/l	1.6	1.7	1.65
5.	COD (as O ₂)	250 mg/l	98	106	102
6.	BOD (at 270C for 3 days)	50 mg/l	25	26	25.5
7.	Sulphides (as S)	2 mg/l	<0.1	<0.1	<0.1
8.	Chlorides (as Cl)	1000 mg/l	488	496	492
9.	Ammonical nitrogen (as N)	50mg/l	11	12.2	11.6
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	18	17.6

Storm water Monitoring Data from Dec 2021 to May 2022

BCPL Lepetkata

Sl. No.	Parameters	Standard as per PCB, Assam and IS2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.02	7.08	7.05
2.	Temperature	400C	22.4	22.6	22.5
3.	Total Suspended Solids	100 mg/l	15	18	16.5
4.	Oil & Grease	10 mg/l	<1.0	<1.0	<1.0
5.	COD (as O ₂)	250 mg/l	20.4	27.2	23.8



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6.	BOD (@270C for 3 days)	50 mg/l	5.8	6.3	6.05
7.	Sulphides (as Cl)	2 mg/l	<0.1	<0.1	<0.1
8.	Chloride (as Cl)	1000 mg/l	27.4	30.2	28.8
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	3.8	4.2	4

Storm water Monitoring Data from Dec'2021 to May'2022

BCPL Lakwa

Sl. No.	Parameters	Standard as per PCB, Assam and IS2490 (Pt-I)	Min.	Max.	Avg.
1.	pH	6.5 – 8.5	7.02	7.08	7.05
2.	Temperature	400C	22.3	22.5	22.4
3.	Total Suspended Solids	100 mg/l	12	14	13.0
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	56	60	58.0
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	2.6	3.2	2.9

Ambient Air Quality Analysis from Dec 2021 to May 2022

BCPL Lepetkata

Parameters	Locations Name			
	At Energy Gate	At RWTP Control Room	At Sub Station-8	BHEL Site near CISF camp
PM10 (Std.-100µg/m ³)				
Min.	55.4	56.2	28.2	52.8
Max.	71.3	79.8	71.2	64.8
Avg.	60.716	61.49	60.514	58.934

(T. G. Hossain)



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PM2.5 (Std.-60 µg/m3)				
Min.	24.8	27.6	27.3	27.2
Max.	40.7	42.5	37.5	41.5
Avg.	28.85	30.472	29.584	30.232
SO2 (Std.-80 µg/m3)				
Min.	7.5	9.2	8	7.3
Max.	14.3	14.7	13	13.5
Avg.	12.344	12.754	10.252	10.908
NO2 (Std.-80 µg/m3)				
Min.	15.6	16.8	17.8	10.6
Max.	23.5	29.8	27.7	25.6
Avg.	17.558	19.956	20.112	13.732
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 2021 to May 2022

BCPL Lakwa

Parameters	At Lab Building	At Main Control Room
PM10 (Std.-100µg/m3)		
Min.	52.8	53.7
Max.	72.9	74.3
Avg.	58.748	59.648
PM2.5 (Std.-60 µg/m3)		
Min.	27.4	27.8
Max.	40.4	41.3
Avg.	30.238	31.497
SO2 (Std.-80 µg/m3)		
Min.	9.4	8.2
Max.	14.2	14.3
Avg.	11.895	11.376
NO2 (Std.-80 µg/m3)		
Min.	15.9	16.6
Max.	28.5	25.9
Avg.	19.931	18.734
CO (Std.-2 mg/m3 one hourly basis)		
Min.	<0.05	<0.05
Max.	<0.05	<0.05

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(T. 411010)



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Avg.	<0.05	<0.05
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Ambient Air Quality Analysis from Dec 2021 to May 2022

BCPL GDU & CS, Duliajan

Parameters	At Canteen Building
PM10 (Std.-100µg/m ³)	
Min.	49.8
Max.	69.4
Avg.	64.412
PM2.5 (Std.-60 µg/m ³)	
Min.	30.3
Max.	36.8
Avg.	32.916
SO ₂ (Std.-80 µg/m ³)	
Min.	8.2
Max.	12.8
Avg.	10.812
NO ₂ (Std.-80 µg/m ³)	
Min.	17.4
Max.	22.4
Avg.	20.566
CO (Std.-2 mg/m ³ one hourly basis)	
Min.	<0.05
Max.	<0.05
Avg.	<0.05

Ambient Air Quality Analysis from Dec 2021 to May 2022

BCPL Railway Siding

Parameters	At Fire Water Pump House
PM10 (Std.-100µg/m ³)	
Min.	47.5
Max.	73.4
Avg.	66.012
PM2.5 (Std.-60 µg/m ³)	
Min.	28.6
Max.	39.2
Avg.	34.895
SO ₂ (Std.-80 µg/m ³)	
Min.	9.5
Max.	13.9

(T.G.H.M)



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Avg.	12.004
NO ₂ (Std.-80 µg/m ³)	
Min.	20.6
Max.	28.3
Avg.	22.454
CO (Std.-2 mg/m ³ one hourly basis)	
Min.	<0.05
Max.	<0.05
Avg.	<0.05

Noise Monitoring Data from Dec 2021 to May 2022

BCPL - Lepetkata

Sl. No	Locations Name	Min.	Max.	Avg.
Day Time(Std.-75 db(A))				
1.	Near Energy Gate	57.6	69.1	61.72
2.	Near Substation-8	57.6	66.3	61.892
3.	Near RWTP Control Room	56.3	64.2	60.49
4.	Near BHEL Site	54.6	64.8	59.604
Night Time(Std.-70 db(A))				
1.	Near Energy Gate	49.2	60.2	54.894
2.	Near Substation-8	48.5	61.2	56.092
3.	Near RWTP Control Room	48.5	61.9	54.662
4.	Near BHEL Site	44.3	58.3	52.04

Noise Monitoring Data from Dec 2021 to May 2022

BCPL - Lakwa

Sl. No	Locations Name	Min.	Max.	Avg.
Day Time(Std.-75 db(A))				
1.	Near Main Control Room	57.3	63.5	60.840
2.	Near Lab.	55.3	63.5	59.793
Night Time(Std.-70 db(A))				
1.	Near Main Control Room	44.4	59.1	50.872
2.	Near Lab.	44.6	56.4	49.806

Noise Monitoring Data from Dec 2021 to May 2022

BCPL - Duliajan



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Sl. No	Location Name	Min.	Max.	Avg.
1.	Near Canteen Building(Day Time) (Std.-75 db(A))	54.5	63.5	58.625
2.	Near Canteen Building(Night Time) (Std.-70 db(A))	43.4	54.6	48.112

Noise Monitoring Data from Dec 2021 to May 2022

BCPL – Railway Siding

Sl. No	Location Name	Min.	Max.	Avg.
1.	Near Fire Water Pump House (Day Time)) (Std.-75 db(A))	57.7	65.4	62.125
2.	Near Fire Water Pump House (Night Time) (Std.-70 db(A))	49.6	59.4	55.383

(T. G. H. H. H.)



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

No. DRA.5/2007/

Dated Dibrugarh 29.../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 Lepethkata 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 1 Bigha of land each and the remaining 44 Nos. of TGL and Ex-TGL families were also rehabilitated at 45 Nos. Boli 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
29.4.19
(Pallav Gopal Jha, IAS)
Deputy Commissioner & Collector
Dibrugarh

Memo No. DRA.5/2007/

-A-

Dated Dibrugarh 29.../04/ 2019.

Copy to:

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

Pallav Gopal Jha
29.4.19
(Pallav Gopal Jha, IAS)
Deputy Commissioner & Collector
Dibrugarh

NY
(TGH/11)



Brahmaputra Cracker & Polymer Ltd.

Doc. No (BCPL LEP/ENV-CIV/F1/001/R0)

GREENBELT DEVELOPMENT

Rev. No 0

Rev Date

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Identification of job: Greenbelt development

Date: 19.05.2021

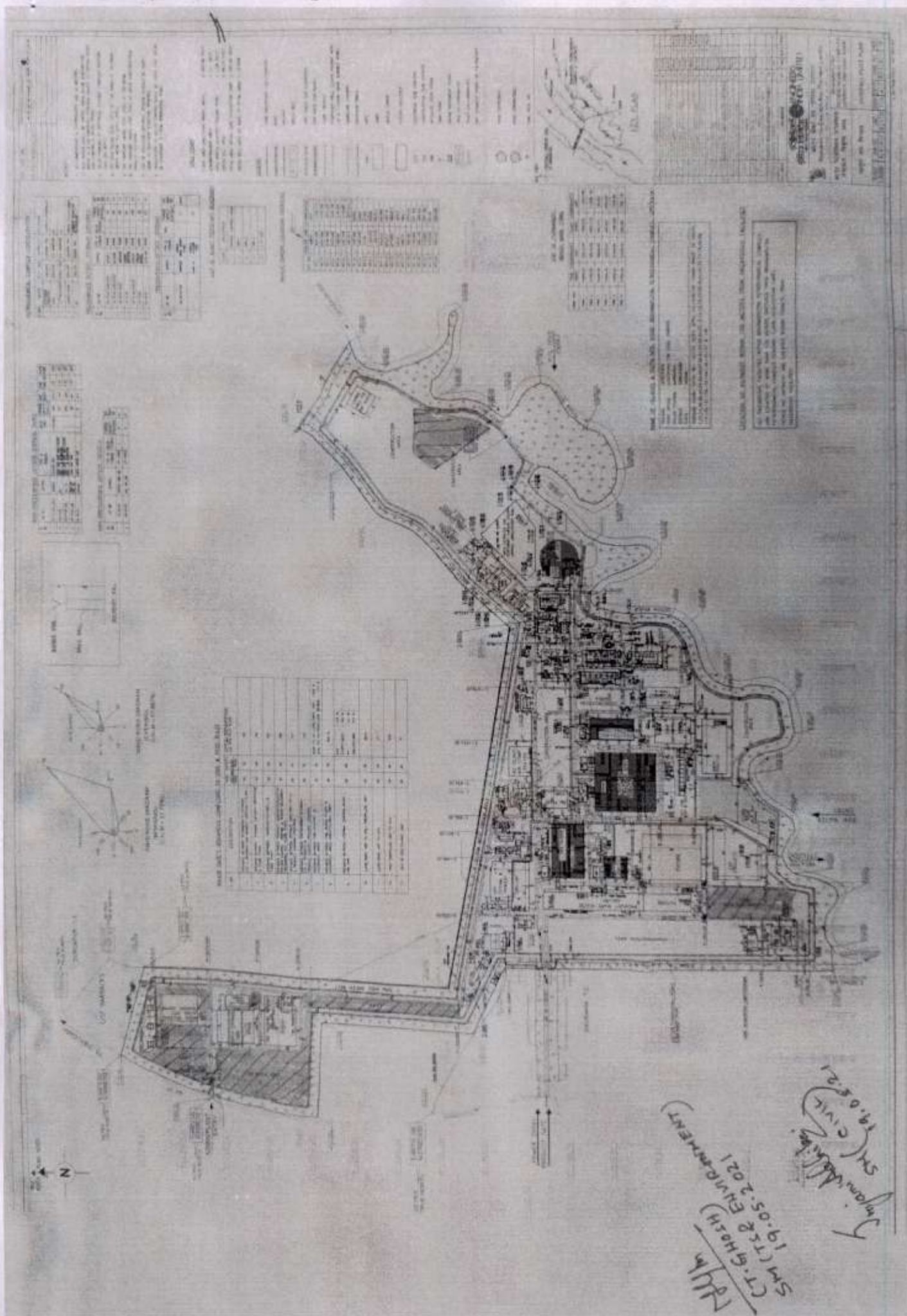
Check Points				Remark
Sl. No.	Existing greenbelt area with location (Hectares)	Newly developed greenbelt area with location (Hectares)	Total greenbelt area (Hectares)	
01	Marked in Existing plot plan 95.23 Hectares	Near Security Office / Gate House (left of main gate) 4 hectare	132.318 hectares	
02		Near orange garden and backside of admin building 5.5 hectares		
03		Near plant entrance (right) 10.188 hectares		
04		Herbal garden near central ware house 1 hectares		
05		Near MFS (long straight lawn) 5.7 hectares		
06		Near ETP area 6 hectares		
07		Near Construction area 4.7 hectares		

PROVIDE COMMENTS BELOW IF ANY

Further Development of Greenbelt development is also under progress

Signature of Site In Charge :

Signature of Site In Charge :
T. G. H. CHH (DEPT)
17/1/21
SM (CIVIL) & ENVIRONMENT DEPT



184h
CT. GHOSH
SM (19.05.2021)
SM (CIVIL)
19.05.21

BUDGET SPENT FOR EMC

Description		Rs (In cr.)
Sr. No.	<u>Capital Expenditure</u>	
1	Installation of Effluent Treatment Plant	89.8
2	Quality Control Lab for Environmental monitoring	60
3	Treated effluent pipe line from BCPL Dibrugarh to Brahmaput	37.42
4	Flare Stack	3.56
5	Sessa River Embankment works	2.36
6	Bioremediation facilities	4.02
7	Stack Analysers-ECU	2.8
8	Stack Analysers-CPP	1.2
9	Ambient air online analyser	0.77
10	Online analyzer for treated effluent	0.18
11	Data Transmission to CPCB Server of all stacks emission data	0.035
12	Greenbelt Development	0.58
	<u>Recurring Expenditure</u>	
1	Renewal of 'Consent to Operate' per financial year	0.6
2	Operation and maintenance of treated effluent disposal pipeline to Brahmaputra River	0.025
3	Public Liability Industrial Risk renewal for one year for all sites	0.057
4	Public Liability Insurance Act 1991 renewal for one year for all sites	0.006
5	Environmental parameters monitoring at BCPL, Lepetkata per year	0.26
6	Awariness programme & Events	0.05
	Total	203.7

(T. G. HOSHI)