

Ref: CPM/ENV/K-32/CF/03/07

Date: 25.11.2015

To
Scientist D
North Eastern Regional Office
Ministry of Environment & Forests, GOI
Law U-Sib, Lumbatngen, Near M T C Workshop
Shillong – 793 021

**Sub: Half Yearly Compliance Report on Environmental Stipulations.
(Period- April 2015 to September 2015)**

Sir,

Half Yearly Compliance report on Environmental Stipulations from April 2015 to September 2015 is hereby submitted enclosing the soft copy of the report for your kind perusal. The report has been also sent through email (moefner@dataone.in) and being published in the web site of HPC.

Thanking you.

Yours faithfully
For & on behalf of HPC Ltd
Cachar Paper Mill

Enclo: as above (12 pages) & one soft copy.

Cc:

- i) The Director
Ministry of Environment & Forest
Paryavaran Bhavan, CGO Complex
Lodi Road, New Delhi – 110003
- ii) The Zonal Officer
Central Pollution Control Board, N.E. Zonal Office
Near Fire Brigade, Lower Motinagar
Shillong – 793014
- iii) The Regional Executive Engineer
Assam Pollution Control Board, PWD Road
Silchar Development Authority, 1st floor
Silchar – 788 001

(D. Banerjee)
Sr. Manager (Env & Civil)

HINDUSTAN PAPER CORPORATION LTD
 CACHAR PAPER MILL, PANCHGRAM
DEPARTMENT: ENVIRONMENT

**Half yearly compliance report on environmental stipulations
 Period - April 2015 to September 2015**

Page 01 of 04

Sl no	Environmental stipulations	Present status
01.	The project authority must strictly adhere to the stipulation made by the State Pollution Control Board and the State Government. A comprehensive EIA covering 4(Four) seasons data should be submitted to this Ministry latest by Dec'92.	Comprehensive EIA Study 1996-1997 had been submitted to MOEF vide no. HPC/ENV/36-A/98/184 dtd. 09-03-1998.
02.	Expansion of the plant should not be taken up without prior approval of this Ministry.	No expansion has been taken up.
03.	The emission from various units should conform to the standards prescribed by the Government or Central / State Pollution Control Board. At no time the emission levels should be beyond the stipulated standards. In the event of failure of any Pollution Control systems adopted by the units, the respective unit should be put out of operation immediately and not be restarted until the Control System are rectified to achieve the desired efficiency.	Emission monitoring of all the four boilers operating at Cachar Paper Mill are being done and reports are sent to APCB, CPCB & MoEF in every month. Monthly average report from April 2015 to September 2015 is enclosed as Table – I.
04.	The Project Authority should not change any design of stacks without the permission of the State Pollution Control Board. They will also provide close circuit grinding Unit in all the grinding sections of the Plant.	Design of stack has not been changed. Paper manufacturing process in the Mill does not include grinding process.
05.	A minimum of 4(Four) Air Quality Monitoring Stations should be set up in the downwind direction as well as where maximum ground level concentration is anticipated. Also stack emission should be monitored by setting up Automatic Stack Monitoring Unit. Air quality & Stack emissions should be monitored regularly. The data collected should be statistically analyzed, interpreted and report submitted to the State Pollution Control Board & this Ministry once in 6(Six) months.	Ambient Air Monitoring at 4 (four) monitoring stations has been continuing since September 2006 and reports are sent to APCB, CPCB & MoEF in every month. Monthly average report from April 2015 to September 2015 is enclosed as Table- II (A) & Table- II (B). The result Data has been statistically analyzed and enclosed as Annexure - A & Annexure – A (I).

Sl no	Environmental stipulations	Present status
06.	At Nagaon fluidize bed boiler should be installed within 24(Twenty-four) months.	Not related to this mill. However, for our mill, Pre - commissioning activity of FBC Boiler has been started from 31.03.2015.
07.	At Cachar, in case gas is available gas fired boiler should be installed within 24(Twenty-four) months instead of oil fired units.	Gas is not available for installation of gas fired boiler.
08.	Regular monitoring of Hydrogen Sulphide should be done and data should be statistically analyzed.	H ₂ S monitoring is regularly being done for Recovery stack and reports are sent to APCB, CPCB & MoEF in every month. Monthly average report from April 2015 to September 2015 is enclosed as Table-III. The Data has been statistically analyzed & enclosed as Annexure - B (II).
09.	The liquid effluents generated should be treated so as to meet the prescribed standards of Central / State Pollution Control Board. The quality of liquid effluent should be monitored regularly and the data so collected should be statistically analyzed ,interpreted and report submitted to this Ministry & State Pollution Control Board once in 6(Six) months .	The quality of liquid effluent is being monitored regularly and test reports are sent to APCB, CPCB & MoEF in every month. Monthly average report from April 2015 to September 2015 is enclosed as Table - IV. The result Data has been statistically analyzed & enclosed as Annexure - B (I).
10.	Minimize, control foams in the aerated lagoons sprinkler system / fountain system should be installed within 24(Twenty-four) months.	Defoamer is used and foam generation is negligible.
11.	Action should be taken within 3(Three) years to remove the colour of the effluents before discharging.	This is also CREP requirement. IPMA was advised vide SI no. 6 of CREP to take up project with CPPRI for developing viable technology. Viable Technology is yet to be available. However the color is under control with great effort.
12.	Polishing pond should be desludged regularly.	Desludging activity of South Aeration Lagoon had been completed and the same is in operation from 12.06.2011. Proposal for desludging of North Aeration Lagoon has been sent for financial concurrence.
13.	The Mercury level in the liquid effluents should meet the standards stipulated by the State Pollution Control Board. A Mercury Removal System should be installed to care of unforeseen circumstances.	Installation of Ion Exchange Mercury Removal System, removal of mercury from Hydrogen Gas & Caustic Lye, Mercury distillation units are in operation. The Mercury level in the liquid effluents at present is BDL.

Sl no	Environmental stipulations	Present status
14.	Plan for proper disposal of solid wastes by way of value added materials should be drawn within months and submitted to this Ministry.	<p>Solid waste Disposal Plan had been submitted vide letter no. ENV/K-32/CF/09 Dtd. 21-12-2000.</p> <p>The area in the vicinity of the mill being flood prone, major solid waste like Coal Ash & lime grits are allowed to the locality for land filling of the interested parties in their own patta land preferably developing of road and demand is very high.</p> <p>To reduce the quantity of Solid Waste generation and disposal; measures taken are</p> <ul style="list-style-type: none"> a) To utilize bamboo dust as fuel, a Bamboo Dust based Gasification Plant has been Installed & Commissioned in November 2006. b) A Lime Mud Re-burning Plant: Installation activities completed in March 2008. Commissioning will be done after the production of the mill is stabilized on sustainable basis. c) A Multifuel AFBC Boiler: Pre-commissioning activity started on 31.03.2015. Fly Ash generated in Coal fired boiler shall be used as one of the fuels in AFBC Boiler.
15.	Ground water around the solid waste disposal pits should be regularly monitored for mercury contamination.	<p>Ground water is being monitored weekly and the reports are sent to APCB, CPCB & MoEF in every month.</p> <p>Monthly average report from April 2015 to September 2015 is enclosed as Table –V.</p>

Sl no	Environmental stipulations	Present status
16.	The project authority should use good quality salt to minimize sludge generation.	The mill authority procures good quality BIS grade salt by which sludge generation is minimized.
17.	<p>(a) The project authority should draw a plan to develop plantation in private lands/village community lands and implement the same by the end of 1992 so that 10 years after the environmental clearance of these projects, there will not be any drawal of raw materials from the forest land.</p> <p>(b) Till such time plantations are raised in the private / community land, raw material from forest land could be drawn only on the basis of availability as per silvicultural practice and after meeting the needs of the local people / community.</p>	<p>Plantations in private lands / village community lands during the year 2014 -2015 is being enclosed as Annexure - C.</p> <p>All care is taken while drawing raw materials from the forest land.</p>
18	A separate environmental management cell with suitably qualified personnel to carry out various functions should be set up under the control of senior executive who will report directly to head of the organization.	An Environmental management cell headed by a Senior Manager, under the control & guidance of GM (O&M) and Chief Executive of mill is carrying out all functions of Environment management system of the mill.
19	The project authority should set up a laboratory facility for collection and analysis of samples under the supervision of competent technical personnel who will directly report to the chief Executive.	Well equipped Central Laboratory of the mill is carrying out all necessary tests related to environment under the supervision of competent technical persons.
20	Adequate funds should be earmarked for environmental protection measures which should not be diverted for other purposes and year wise expenditure should be reported to this Ministry.	Funds for environmental protection measures are not diverted for other purposes. Details Environmental expenditure incurred in the year 2014-2015 is enclosed as Annexure – D.

TABLE - I
STACK EMISSION DATA
 Limit: PM 150 mg/Nm³
Monthly average values from April 2015 to September 2015

Source	CF Boiler I	CF Boiler II	CF Boiler III	Recovery Boiler
Months	PM mg/Nm ³	PM mg/Nm ³	PM mg/Nm ³	PM mg/Nm ³
April 2015	SHUT	SHUT	SHUT	SHUT
May 2015	128.5	125.3	130.5	98.6
June 2015	141.9	143.0	145.6	86.8
July 2015	SHUT	SHUT	SHUT	SHUT
August 2015	SHUT	SHUT	SHUT	SHUT
September 2015	139.2	143.5	SHUT	SHUT

TABLE – II (A)
AMBIENT AIR QUALITY DATA
Monthly average values from April 2015 to September 2015

Source	Time Office (Industrial)						
Parameter Limit Months	PM10 100 µg/m ³	PM2.5 60 µg/m ³	SO2 80 µg/m ³	NOX 80 µg/m ³	Pb 1.0 µg/m ³	NH ₃ 400 µg/m ³	CO 4.0 mg/m ³
April 2015	51.36	33.20	3.26	7.40	--	--	--
May 2015	73.22	39.62	7.51	12.01	BDL	BDL	0.052
June 2015	54.60	23.92	1.69	6.14	-	-	-
July 2015	35.76	15.77	BDL	3.36	--	--	--
August 2015	34.46	20.20	1.60	3.80	-	-	-
September 2015	68.74	31.65	8.22	15.76	-	-	-

Source	Township (Residential)						
Parameter Limit Months	PM10 100 µg/m ³	PM2.5 60 µg/m ³	SO2 80 µg/m ³	NOX 80 µg/m ³	Pb 1.0 µg/m ³	NH ₃ 400 µg/m ³	CO 4.0 mg/m ³
April 2015	41.57	22.15	BDL	3.86	--	--	--
May 2015	56.15	29.85	BDL	4.24	BDL	BDL	BDL
June 2015	47.85	19.52	BDL	5.64	-	-	-
July 2015	28.24	12.97	BDL	BDL	--	--	--
August 2015	16.84	--	BDL	BDL	-	-	-
September 2015	57.65	32.32	BDL	3.72	-	-	-

Cachar Paper Mill has no source of emission of Benzene, Nickel, Ozone, Arsenic & BaP.

TABLE – II (B)
AMBIENT AIR QUALITY DATA
Monthly average values from April 2015 to September 2015

Source	Yard No.7 at Security Point (Industrial)							At corner of Lagoon (Industrial)						
Parameter	PM10	PM 2.5	SO2	NOX	Pb	NH ₃	CO	PM10	PM 2.5	SO2	NOX	Pb	NH ₃	CO
Limit	100 µg/m ³	60 µg/m	80 µg/m ³	80 µg/m ³	1.0 µg/m ³	400 µg/m ³	4.0 mg/m ³	100 µg/m ³	60 µg/m	80 µg/m ³	80 µg/m ³	1.0 µg/m ³	400 µg/m ³	4.0 mg/m ³
Months														
Apr '15	67.05	27.07	3.17	7.55	-	-	-	65.19	27.65	4.45	9.79	-	-	-
May '15	77.34	36.27	6.65	10.60	BDL	BDL	0.035	74.39	33.85	3.96	9.19	BDL	BDL	BDL
Jun '15	59.45	24.45	2.21	8.93	-	-	-	59.13	25.82	2.59	8.72	-	-	-
July '15	41.97	16.73	0.96	5.49	-	-	-	37.37	18.77	0.55	2.21	-	-	-
Aug '15	-	-	-	-	-	-	-	31.00	16.80	BDL	BDL	-	-	-
Sept '15	-	-	-	-	-	-	-	72.72	33.82	6.12	14.85	-	-	-

Cachar Paper Mill has no source of emission of Benzene, Nickel, Ozone, Arsenic & BaP.

TABLE - III
HYDROGEN SULPHIDE DATA
Limit: 10 mg/Nm³
Monthly average values from April 2015 to September 2015

Source	Months	Hydrogen Sulphide mg/Nm ³
Soda Recovery Stack	April 2015	SHUT
--do --	May 2015	9.4
--do--	June 2015	8.2
--do--	July 2015	SHUT
--do--	August 2015	SHUT
--do--	September 2015	SHUT

TABLE - IV
TREATED EFFLUENT QUALITY DATA
 Limit: SS 100 mg/l, COD 350 mg/l, BOD 30 mg/l
Monthly average values from April 2015 to September 2015

Months	SS mg/l	COD mg/l	BOD mg/l	Mercury (Hg) mg/l
April 2015	92	305	25	BDL
May 2015	94	318	26	BDL
June 2015	87	310	25	BDL
July 2015	92	319	26	BDL
August 2015	MILL SHUT & NO DISCHARGE OF TREATED EFFLUENT.			
September 2015	88	271	26	BDL

TABLE-V
GROUND WATER QUALITY DATA
Monthly average values from April 2015 to September 2015

Parameters Months	LOCATION OF SAMPLING POINT			
	Well opposite to Adm. Building		Well near Railway station	
	p ^H	Mercury	p ^H	Mercury
April 2015	7.3	BDL	7.5	BDL
May 2015	7.7	BDL	7.7	BDL
June 2015	7.3	BDL	7.4	BDL
July 2015	7.5	BDL	7.1	BDL
August 2015	7.8	BDL	7.0	BDL
September 2015	7.7	BDL	7.6	BDL

ANNEXURE – A

STATISTICAL ANALYSIS OF AMBIENT AIR QUALITY DATA

PERIOD: 01.04.2015. TO 30.09.2015

MONITORING STATION: TIME OFFICE (INDUSTRIAL)

Sl no	Statistics	Particulate Matter (PM10)	Particulate Matter (PM2.5)	Sulphur Dioxide (SO ₂)	Oxides of Nitrogen (NO _X)	Lead	Ammonia	Carbon Monoxide
1	Arithmetic Mean (AM)	53.023	27.393	4.456	8.078	--	--	0.052
2	Geometric Mean (GM)	50.901	26.115	3.525	6.920	--	--	0.052
3	Standard Deviation (SD)	16.142	8.947	3.191	4.884	--	--	--

STATISTICAL ANALYSIS OF AMBIENT AIR QUALITY DATA

PERIOD: 01.04.2015. TO 30.09.2015

MONITORING STATION: TOWNSHIP (RESIDENTIAL)

Sl no	Statistics	Particulate Matter (PM10)	Particulate Matter (PM2.5)	Sulphur Dioxide (SO ₂)	Oxides of Nitrogen (NO _X)	Lead	Ammonia	Carbon Monoxide
1	Arithmetic Mean (AM)	41.383	23.362	--	4.365	--	--	--
2	Geometric Mean (GM)	38.107	22.215	--	4.305	--	--	--
3	Standard Deviation (SD)	16.122	7.851	--	0.878	--	--	--

ANNEXURE – A (I)

STATISTICAL ANALYSIS OF STACK EMISSION DATA

PERIOD: 01.04.2015. TO 30.09.2015

Sl no	Statistics	Particulate Matter (PM) (C.F.Boiler – 1)	Particulate Matter (PM) (C.F.Boiler – 2)	Particulate Matter (PM) (C.F.Boiler – 3)	Particulate Matter (PM) (Soda Recovery Boiler)
1	Arithmetic Mean (AM)	136.533	137.267	138.050	92.700
2	Geometric Mean (GM)	136.409	136.998	137.843	92.512
3	Standard Deviation (SD)	7.087	10.366	10.677	8.344

ANNEXURE – B (I)

STATISTICAL ANALYSIS OF TREATED EFFLUENT QUALITY DATA

PERIOD: 01.04.2015. TO 30.09.2015

Sl no	Statistics	Suspended solid (S S)	Chemical Oxygen Demand (COD)	Biological Oxygen Demand (BOD)
1	Arithmetic Mean (AM)	90.600	304.600	25.600
2	Geometric Mean (GM)	90.561	304.067	25.595
3	Standard Deviation (SD)	2.966	19.655	0.548

ANNEXURE – B (II)

STATISTICAL ANALYSIS OF HYDROGEN SULPHIDE DATA

PERIOD: 01.04.2015. TO 30.09.2015

Sl no	Statistics	HYDROGEN SULPHIDE DATA (H ₂ S)
1	Arithmetic Mean (AM)	8.800
2	Geometric Mean (GM)	8.780
3	Standard Deviation (SD)	0.849

ANNEXURE – D**ENVIRONMENTAL EXPENDITURE IN THE FINANCIAL YEAR 2014-2015.**

Sl. No	Head of Expenditure	FY 2014-2015
01	Pollution control and Environmental protection measures including statutory fees	Rs 2,77,57,738.00
02	Man Power	Rs 1,02,12,041.00
03	Social Forestry	Rs 10,34,222.00
04	Capital Investment	NIL
TOTAL		Rs 39004001.00

Sr. Manager (Env & Civil)

