

REGISTERED

Ref.No.HPC/NPM/ENV/51/2017/

Date : August' 23, 2017

To,
Ms. S. Quazi, Scientist 'D',
Ministry of Environment & Forest, Regional Office,
Law- U- Sib, Lumbatngen,
Near M.T.C. Workshop,
Shillong – 793 021

**Sub: Implementation of Environmental Safeguard as per Environmental Clearances.
(Status as on 1st June 2017)**

Ref. : EC No. G.O. No. J-11011/294/2008-IA-II (I) dated September 30, 2008.

Sir,

In inviting reference to the aforesaid subject, we are enclosing herewith the environmental safeguard reports (Stipulations and present status), on the 'Environmental Clearance', issued to Nagaon Paper Mill (NPM), for your kind perusal. This status report is being sent to your office in the month of June and December every year. (Mill shut since 12-03-2017)

A soft copy of the report is also sent to your Mail ID apart from uploading in our official web site.

Thanking you.

Yours faithfully,
For & on behalf of NPM, HPCL

Dy. General Manager (Engg./Env./EMCC)

Enclo :

1. Status on Stipulations of EC
2. Reports of Effluent, Ground water, Stack, Ambient Air and Fugitive emission, etc.
3. CREP status.

Copy to :

Manager (IT), NPM : Kindly arrange to Uploading the same at HPC Website through CHQ.

**ENVIRONMENTAL CLEARNCE TO NAGAON PAPER MILL FOR MODERNIZATION
AND TECHNOLOGICAL UPGRADATION (MTUP)**

(G.O. No. J-11011/294/2008-IA-II(I) dated September 30, 2008)

STIPULATIONS AND PRESENT STATUS AS ON 1ST June, 2017

(Status report is sent to MoEF, Shillong in December and June every year)

Sl. No.	Stipulations	Proposed Action	Present Status
A	SPECIFIC CONDITIONS :		
(i)	The project authority shall install adequate air pollution control equipment with the boilers to achieve the particulate emission below 100 mg/NM ³ , NCG collection and incineration system along with blow heat recovery system shall be included in the proposed scheme for control of the gaseous emissions from pulp mill and soda recovery sections.	The coal fired boilers have multi cyclone separators and Recovery boiler is equipped with ESP, The AFBC boiler, which is under commissioning, is also equipped with ESP. It is proposed that once the AFBC boiler is commissioned, the coal will be screened and screened coal will be burnt in CF boilers and fines in AFBC. The particulate matter will be within 100 mg/NM ³ NCG collections and burning in Lime mud re-burning plant is already proposed. Blow heat recovery system is already in place.	The coal fired boilers have multi cyclone separators and Recovery boiler is equipped with ESP. The AFBC boiler was commissioned on 31-12-2008, which is equipped with ESP. All the multi-cyclone separators overhauled again in annual shut in April 2010. As proposed the screened coal is being fed in CF boilers. Present PM values are within 150 mg/NM ³ (Annexure – I). Order placed for installation and commissioning of ESP for one Coal fired Boiler. Further procurement action of ESP for other Coal fired Boilers will be initiated based on the performance of the ESP for which we have already placed order. NCG collection and burning in lime mud re-burning plant is already proposed. Being continuous digester, the blow down heat recovery system is not included in the process.
(ii)	The company shall install the Oxygen de lignifications plant in the Pulp Mill to reduce chlorine demand and to achieve AOX level below 1 kg/Tone of Paper.	It is proposed to implement ECF bleaching with change in bleaching sequence. Consultant has been engaged for implementation of (Modernization and Technological Up-gradation Plant) MTUP projects including switching over to membrane cell technology by November 2010. Once these activities are over, the AOX value will be below 1 kg/MT of paper.	It is proposed to implement ECF bleaching with change in bleaching sequence. Consultant has been engaged for implementation of MTUP projects including switching over to membrane cell technology. Site engineer from Consultant DCPL already at site. Work order for installation of Membrane Cell already placed on 04-06-2010 on Ms Nuberg Engineering, Noida. Presently it is kept on abeyance due to acute financial crunch..Present value of AOX is below 1kg/MT of paper.

Sl. No.	Stipulations	Proposed Action	Present Status
(iii)	The process emissions and particulate matter from various units shall conform to the standards prescribed by the concerned authorities from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired efficiency has been achieved.	Process emissions are within prescribed limits. Particulate matters in stack emissions also are regularly monitored and are within limits. Moreover, the CF boilers are equipped with multi-cyclone separators and Recovery boiler is with ESP. The new AFBC boiler, which is under commissioning is also equipped with ESP. All mill's organic wastes is proposed to be burnt in this boiler.	Process emissions are within prescribed limits. Particulate matters in stack emissions also are regularly monitored and are within limits, as proposed the screened coal is being fed in CF boilers. Order placed for installation and commissioning of ESP for one Coal fired Boiler. Further procurement action of ESP for other Coal fired Boilers will be initiated based on the performance of the ESP for which we have already placed order Present PM value is within 150 mg/NM ³ . AFBC boiler was commissioned and in operation. It is also equipped with ESP.
(iv)	Ambient Air Quality Monitoring Stations shall be set up in the down wind direction as well as where maximum ground level concentration of SPM, RSPM, SO ₂ , NO _x , are anticipated in consultation with the Assam Pollution Control Board.	Total four numbers of ambient air monitoring Stations are there both inside the factory and in residential areas. However, change of positions of stations shall be initiated in consultation with APCB official.	We have engaged Ms. EIA Project, Guwahati University, for monitoring and analysis of ambient air quality on annual contract basis. All parameters are within limits (Annexure – II). We have approached APCB for their help in re fixing the position of stations as directed, vide our letter No. HPC/NPM/ENV/49/2014/01/78 dated 01-04-2014. When contacted, the SPCB opined that the samplers are already in right position and no change is required right now.
(v)	Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits imposed by Assam PCB for control of fugitive emission.	Fugitive emissions shall be regularly monitored inside the factory premises.	Fugitive emissions are regularly being monitored inside the factory premises. (Annexure – III)
(vi)	Water requirement shall not exceed 36000 KLD and shall be met from existing supply from river. The Industry shall ensure that the treated effluent from the unit is within the norms stipulated under the EPA rules or SPCB whichever is more stringent. In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are re certified to achieve the desired efficiency.	The existing water consumption for 1,00,000 Tones per year paper production are approx. 36000 KLD. The treated effluent parameters are within norms and taking all possible measures to maintain. In case of any deviation or disturbances action shall be taken immediately.	The existing water consumption for 1,00,000 tones per annum paper production is approx. 36000 KLD. The treated effluent parameters are within norms and taking all possible measures to maintain. As an alternative method of treatment, we have been using polymer in ETP to maintain norms. Consultancy services for monitoring and recommendations for further improvement of performances in ETP, was given to CPPRI, Saharanpur, and IIT Delhi, vide W.O. No. HPC/NPM/ENV/49/2008/4062 dated 04-11-08 and No. HPC/NPM/ ENV/49/2008/477 dated 27-10-08 respectively. Reports submitted revealed encouraging results of treated effluent.

Sl. No.	Stipulations	Proposed Action	Present Status
(vii)	Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the State Pollution Control Board and regular monitoring shall be carried out for all relevant parameters to maintain the effluent treatment efficiency. The report shall be submitted to Ministry's Regional Office at Shillong, CPCB and SPCB.	Samples of effluents are collected round the clock before and after treatment. Samples are collected as directed by the APCB, covering treated effluent disposal route and reports are sent every month. The report shall be submitted to Ministry's Regional Office at Shillong, CPCB and SPCB.	Samples of effluents are collected round the clock before and after treatment. (Annexure –IV) . Samples are also collected, covering treated effluent disposal route including ground waters and reports are sent every month to APCB. We have been sending these reports to CPCB, Shillong also. Last report sent on 13-12-2016.
(viii)	In order to achieve reduction in colour, tertiary treatment systems like activated carbon filter, Multimedia filter etc. shall be explored and also the options for increasing the re-use / recycling of treated effluent, shall be explored and detailed plan shall be submitted to the Ministry and its Regional Office at Shillong within three months from date of issue of this letter.	Colour of treated effluent appears to be less. However, a detail programme shall be made as suggested.	Colour of treated effluent appears to be less. To reduce COD, BOD and Colour, we have been dosing polymer as well as PAC etc. In ETP. Positive impact is noticed.
(ix)	One water quality monitoring station at 100 m downstream of the confluence of the treated effluent discharge point in the nearest water body shall be started in consultation with the Assam Pollution Control Board.	At present as suggested by the APCB, a monitoring station at 2 km downstream as per consent condition is maintained. However, as desired, a monitoring station at 100 m downstream shall also be started in consultation with APCB	Water quality in treated effluent disposal route including down stream of river at 100 m are regularly checked and results are sent to APCB and CPCB every month. Last report sent on 13-12-2016
(x)	The company shall obtain fresh permission for drawl of water from the Competent Authority and copy of the permission letter shall be submitted to Ministry's Regional Office at Shillong within 3 months from date of issue of this letter.	A fresh application for drawl of water shall be submitted to APCB as directed.	Initially an application for 49000KLD drawl of water was submitted to APCB vide our letter NO. HPC/NPM/ENV/02A/208/515/4369 dated 22-11-08. As per documents submitted to MoEF, Delhi, we may require 49000 KLD of water for implementation of MTUP. In this context, we also requested for this requirement to the Joint Director, MoEF, New Delhi, vide our letter No. HPC/NPM/ENV/51/2008/516/4384 dated 25-1-08. In the meantime we wrote to obtain fresh permission to the Chief Engineer, Water Resource Deptt.. Govt. of Assam, vide our letter No. HPC/NPM/ENV/51/2008/731/259 dated 14-03-09 and again 1 st reminder on 29-05-09, 2 nd reminder on 10-10-09 and 3 rd reminder on 30-11-09 apart from personal contact in the office of the Dy. Chief Engineer. It is under process. Presently MTUP projects are kept on abeyance due to acute financial crunch.

Sl. No.	Stipulations	Proposed Action	Present Status
(xi)	The project Authorities shall explore the possibilities of Utilization of the dumped lime sludge and mud in cement plants etc.	Possibilities of utilization shall be explored accordingly	Because of huge demand of the material by local SSI units, etc., for their end use in agricultural purposes, cement units, we allow lifting of the material in a systematic manner to local SSI unit, un-employed youths.
(xii)	The fly ash generated from the power plant shall be disposed of the accordance with the provisions of the Fly ash Notification 2003.	It will be disposed as directed in the notification.	Fly ash is allowed to lift by Cement and brick manufacturers' as per their requirement.
(xiii)	The project authority shall dispose of hazardous waste as per the provision of Hazardous wastes (Management and Handling) Rules 2003.	Hazardous waste shall be handled as per hazardous wastes (Management and Handling) Rules 2003.	Hazardous waste, brine sludge, is handled as per rule. (Presently the Chlor Akali plant is stopped W.E.F 31.03.2016 as per the guidelines of CPCB.
(xiv)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Qualified doctors shall do occupational health surveillance of the employees on a regular basis in our Occupational Health Center (OHC).	Occupational health and safety surveillance of the employees are regularly done as PME schedule in OHC located inside the plant. NPM is a certified OHSAS 19001 company and these aspects are also subjected to surveillance audit.
(xv)	The Company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.	Fire fighting arrangements shall be maintained as directed.	NPM has its own fire fighting wing with three numbers fire tenders, under AIFS and directly reporting to Chief Safety Officer. The fire tenders are also sent outside the premises in the district on emergency calls.
(xvi)	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the pulp and paper sector shall be strictly implemented.	CREP conditions shall be strictly implemented.	About 80 – 85% of the conditions are already implemented except few capital schemes, which are under implementation. (Annexure –V)
B	GENERAL CONDITIONS		
i)	The project authorities shall strictly adhere to the stipulations of the SPCB /State Government or any Statutory body.	The stipulations of the statutory bodies shall be strictly adhered to	The conditions/stipulations imposed through consents are strictly maintained and reports are sent to APCB as well as to CPCB.
ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required if any.	No expansion or modification of plants shall be carried out without prior approval. In case such situation arises, fresh application for permission shall be made as directed.	Once the schemes under MTUP are implemented no other expansion or modification of plants is proposed at present.

Sl. No.	Stipulations	Proposed Action	Present Status
iii)	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals rules, 1989 as amended. Authorization from the SPCB shall be obtained for collection, treatment, storage and disposal of hazardous wastes.	NPM shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals rules, 1989 as amended.	The present authorization is valid up to December 2015. Fresh application was submitted on 10-11-2015, then again a new application was sent on 21.09.2016 Authorization is waited.
iv)	For control of process emissions, stacks of appropriate height as per the Central Pollution Control Board guidelines shall be provided. The scrubbed water shall be sent to ETP for further treatment.	Stack heights are as per CPCB guidelines.	Stack heights are as per CPCB guidelines. The ESP provided in Recovery Boiler is equipped with high voltage electrode so water is not in use for scrubbing.
v)	The Company shall undertake following waste minimization measures : <ul style="list-style-type: none"> • Metering of quantities of active ingredients to minimize waste. • Reuse of by-products from the process as raw materials or as raw material substitutes in other process. • Maximizing recoveries. • Use of automate material transfer system to minimize spillage. • Use of “Closed Feed” system into batch reactors. 	Metering system in flow of water/liquid or quantity of raw materials, chemicals used, wastes generated are already in existence. Recycling of wastes shall be the prime aim to minimize wastes generation.	<ul style="list-style-type: none"> • Chemicals/raw materials used in process are passed through metering systems. • Liquid wastes or solids are used in the processes itself as raw materials to other processes, like waste water is used in bamboo handling system, chips washing system, pulp dilution system, etc. solid wastes like coal ash and fly ash are used as per direction in notification in Sept 1999. Bamboo dust is being sold to outside parties. • Since spent liquor after digestion of bamboo contains alkali, NPM has its Recovery plant to recover chemicals. • All kinds of automated material transfer system are in place to minimize spillage. • All modern methods are adopted to maintain the closed feed systems.
vi)	The project authorities shall comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) rules, 2003. Authorization from the State Pollution Control Board shall be obtained for collections/treatment/storage/disposal of hazardous wastes.	NPM shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous chemicals rules, 1989 as amended.	The present authorization is valid up to December 2015. Application for renewal of Authorization already sent vide letter No. HPC/NPM/ENV/02(B)/2015-16/1055 dated 10-11-2015 , then again a new application was submitted on 21.09.2016.

Sl. No.	Stipulations	Proposed Action	Present Status
vii)	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The Ambient noise levels shall conform to the standards prescribed under environment (Protection) act, 1986 rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).	Noise level shall be maintained within limits by providing all control measures. Ambient noise shall be monitored as directed by APCB.	Noise level, under work place monitoring in different working zones are regularly monitored as per Factories Rule and OHSAS systems. They are within limits. Ambient noise in different places inside and outside factory premises are regularly monitored and monitoring results are sent to APCB as well as to CPCB. Last report sent on 13-12-2016. All parameters are well within the limits.
viii)	A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the environmental Management and monitoring functions.	Complied with. A separate Cell with qualified Officers, and number of workers headed by a DGM is functioning well.	A separate Environmental Cell is working with qualified Officers and number of workers headed by DGM, having a full-fledge laboratory facility merged with Central Laboratory.
ix)	Adequate financial provision shall be made in the budget of the project for implementation of the above suggested environmental safeguards. Fund so earmarked shall not be diverted for any other purposes.	Complied with. For maintenance of CREP conditions an amount of about Rs. 161 Cr. Has been earmarked. Funds so earmarked are not diverted for any other purposes. Many conditions already complied and some are under implementation.	Apart from CREP, a huge amount has already been spent in up-gradation /modification of systems and processes on environmental safeguard point of view. Lagoon was de-sludged at a cost of about Rs. 35 lakhs in 2007-08. Contract on beel system cleaning is being regularly given to local youths. Several crores earmarked and utilized in implementing number of Environmental Management Programme (EMP) as per EMS (ISO 14001 certification). A CREP status is enclosed as Annexure –V.
x)	The project authorities shall provide rainwater harvesting system and ground water recharge.	A trial programme will be initiated by March 2009.	NPM draws water from a nearby perennial river, which has the maximum flow round the year. However, as directed, we approached Central Ground Water Board, vide our letter No. HPC/NPM/ENV/51/2009/726/258 dated 12-03-2009 and again on 20-04-09 apart from personal visit to their office. The authority has advised to explore the possibility to engage other agency through net search. Accordingly, we approached M/s Enviro Arch, Mumbai on 06 th Nov 2009, Ms Eureka Forbes on 06 th Nov 2009 and Times Foundation, Mumbai. Only Enviro Arch responded to our request and we requested to send budgetary offer but till date no reply received. Again on 03 rd April 2010 we sent a mail to Environmental Research and Evaluation Center, Guwahati, but till date no response. We are now proposing to device a simple method in house to recharge groundwater from rainwater harvesting in a small area. Proposal already put up to the management for approval.

Sl. No.	Stipulations	Proposed Action	Present Status
xi)	The implementation of the project vis-a vis environmental action plans shall be monitored by Ministry's Regional Office / SPCB / CPCB. A six monthly compliance status report shall be submitted to monitoring agencies.	A six monthly compliance status report shall be submitted to monitoring agencies. It is regularly monitored by APCB.	The statutory authorities regularly monitor it. Six monthly compliance reports are sent to monitoring agencies as on 1 st December and 1 st June every year.
xii)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Ministry's Regional Office.	Shall be published in local dailies as directed.	
xiii)	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	Shall be complied.	Date of final approval of the project : 29-03-2006. Date of start of the project : July 2008 Date of final implementation : (under review)

Dy. General Manager (Engg./Env./EMCC)

STACK MONITORING REPORT:

Month	Boiler No.	Particulate Matters (PM)	H ₂ S
Norms : Max.		150 mg / NM³	10 mg / NM³
December, 2016	I	Shut	-
	II	100	-
	III	112	-
	Recovery	98	7.2
	AFBC	Shut	-
	January, 2017	I	Shut
II		Shut	-
III		Shut	-
Recovery		Shut	-
AFBC		Shut	-
February, 2017		I	98
	II	96	-
	III	98	-
	Recovery	98	7.8
	AFBC	Shut	-
	March, 2017	I	Shut
II		Shut	-
III		Shut	-
Recovery		Shut	-
AFBC		Shut	-
April, 2017		I	Shut
	II	Shut	-
	III	Shut	-
	Recovery	Shut	-
	AFBC	Shut	-
	May, 2017	I	Shut
II		Shut	-
III		Shut	-
Recovery		Shut	-
AFBC		Shut	-

* Mill under shut since 12-03-2017

Manager (Pulp)
Environment wing

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AVERAGE AMBIENT AIR QUALITY MONITORING REPORT:

Month	Station	PM _{2.5} /PM ₁₀ µgm/M ³	SO ₂ µgm/M ³	NO _x µgm/M ³	CO µgm/M ³
Residential (R) : Norms : Max.		60/100	80	80	2.0
Industrial (I) : Norms : Max.					
December' 2016	Inside Mill (ETP)	--	5.7	13.8	0.51
	Township (Elect. Office)	--	4.4	5.0	0.36
	NIS Barrack	--	5.7	12.1	0.56
	NPM Guest House.	--	5.0	5.6	0.35
January, 2017	Inside Mill (ETP)	42.2 / 62.6	5.8	10.4	0.55
	Township (Elect. Office)	--	4.2	6.8	0.35
	NIS Barrack	--	6.2	11.5	0.54
	NPM Guest House.	38.9 / 62.9	3.8	7.0	0.38
February, 2017	Inside Mill (ETP)	--	5.7	9.1	0.56
	Township (Elect. Office)	--	4.3	4.5	0.35
	NIS Barrack	--	5.0	10.0	0.57
	NPM Guest House.	--	4.3	5.9	0.33
March, 2017	Inside Mill (ETP)	--	6.5	10.8	0.50
	Township (Elect. Office)	--	4.1	5.4	0.37
	NIS Barrack	--	5.6	9.5	0.51
	NPM Guest House.	--	3.1	4.4	0.27
April, 2017	Inside Mill (ETP)	30.5 / 47.8	3.0	4.7	0.27
	Township (Elect. Office)	--	2.7	4.0	0.22
	NIS Barrack	--	3.0	4.3	0.21
	NPM Guest House.	31.2 / 57.0	2.4	3.9	0.25
May, 2017	Inside Mill (ETP)	--	2.9	4.8	0.40
	Township (Elect. Office)	--	2.5	3.3	0.31
	NIS Barrack	--	2.6	4.7	0.26
	NPM Guest House.	--	1.9	3.0	0.35

AMBIENT AIR QUALITY MONITORING REPORTS AS PER NEW NOTIFICATION OF October 2016.

Month	Station	PM _{2.5}	PM ₁₀	Other parameters like ammonia, lead, CO, Ozone, Benzopyrine, Benzene, Nickel and Arsenic
Norms	-	60 µgm/M³	100 µgm/M³	mgm/M³ & µgm/M³
January, 2017	NPM ETP	42.2	62.6	NH ₃ – BDL, CO - 0.55, O ₃ -45.2, Pb – 0.31, BaP – BDL, C ₆ H ₆ – BDL, Ni – 0.12, As - BDL
January, 2017	Guest House	38.9	62.9	NH ₃ – BDL, CO - 0.38, O ₃ -28.9, Pb – 0.22, BaP – BDL, C ₆ H ₆ – BDL, Ni – 0.29, As - BDL
				-

Manager (Pulp)
Environment wing

HINDUSTAN PAPER CORPORATION LIMITED
NAGAON PAPER MILL : KAGAJNAGAR

Sub : Work Zone monitoring for RSPM for the month of February' 2017

(Lab. report No. NPM/CLB/50/2016-17 dated 02-03-2017)

Department	Date of Monitoring	Process stage/Location	Max Limit in $\mu\text{gm}/\text{M}^3$ (24 Hrs.)	Actual in $\mu\text{gm}/\text{M}^3$
Pulp	12-02-2017	Screening of Chips	100	94
	12-02-2017	Conveying of chips to silo	100	92
Paper Machine	13-02-2017	Talc. Slurry Preparation & Pumping	100	98
	13-02-2017	SSP unloading & feeding to Conveyer	100	98
	14-02-2017	Suction Roll Drilling	100	82
	14-02-2017	Rewinder Operation - I	100	96
	15-02-2017	Rewinder Operation - II	100	98
	15-02-2017	Core Cutting	100	94
Soda Recovery	16-02-2017	Lime unloading at Godown	100	98
	16-02-2017	Lime feeding through crusher	100	98
	16-02-2017	Lime feeding	100	99
C&C	17-02-2017	Running of Vehicles in C&C area	100	86
Utility	19-02-2017	CHP Operation	100	98
	19-02-2017	Loading of fly-ash in trucks from silo	100	84
	19-02-2017	Coal Yard	100	96
Distribution	20-02-2017	Cutting & stitching of Reels * Bundles	100	90
Finishing House	20-02-2017	Movement of vehicles on the road near Finishing House	100	96
	20-02-2017	Inside Finishing House near Cutter m/c	100	96

Norms of Respirable suspended particulate matter is as per National Ambient Air Quality standards (NAAQS) schedule-VII

STACK MONITORING :

Department	Date	Location	Max. Limit in mg/M^3 PM / SO_2 / NO_x / H_2S	Actual Conc. In mg/M^3 PM / H_2S
Utility	21-02-2017	Stack No. 01	100 / - / - / - / -	98 / - / - / - / -
	22-02-2017	Stack No. 02	100 / - / - / - / -	96 / - / - / - / -
	23-02-2017	Stack No. 03	100 / - / - / - / -	98 / - / - / - / -
		AFBC Stack	100 / - / - / - / -	SHUT
Soda Recovery	24-02-2017	Rec. Stack	100 / - / - / 8.0	98 / - / - / 7.8

Manager (Pulp)
Environment wing

AVERAGE TREATED EFFLUENT QUALITY PARAMETERS :

Month	pH	SS, mg/L	COD, mg/L	BOD, mg/L	Hg, mg/L
Standards, Max.	6-5 to 8-5	100	350	30	0.01
December' 2016	8.1	81	297	24	Nil
January' 2017	7.8	67	245	26	Nil
February' 2017	7.8	59	242	26	Nil
March, 2017	7.3	52	268	27	Nil
April'2017	-	-	-	-	-
May'2017	-	-	-	-	-

AVERAGE GROUND WATER QUALITY PARAMETERS:

Month	Source / Village	pH	Turbidity NTU	TH mg/L	Fe mg/L	Cl mg/L	Hg Mg/L
Dec' 2016	Tegheria Vill	7.0	6.2	180	0.78	190	BDL
	Nakhola LP School	7.0	6.8	210	0.72	130	BDL
	Ghunucha	7.8	7.6	260	0.82	210	BDL
	Karkat Basti	7.4	6.2	240	0.84	145	BDL
Jan' 2017	Tegheria Vill	7.1	6.4	220	0.90	210	BDL
	Nakhola LP School	7.5	6.4	180	0.82	160	BDL
	Ghunucha	7.4	6.7	210	0.94	130	BDL
	Karkat Basti	7.0	7.0	240	0.98	180	BDL
Feb' 2017	Tegheria Vill	8.0	4.5	210	0.90	160	BDL
	Nakhola LP School	7.9	3.8	220	0.88	140	BDL
	Ghunusha	7.8	5.0	250	0.96	138	BDL
	Karkat Basti	7.7	6.4	270	0.96	160	BDL
Mar' 2017	Tegheria Vill	7.6	5.5	250	0.88	150	BDL
	Nakhola LP School	7.6	5.0	150	0.94	120	BDL
	Karkat Basti	7.5	4.1	200	0.98	140	BDL
	Ghunucha	7.8	6.1	240	0.92	120	BDL
Apr' 2017	Tegheria Vill	-	-	-	-	-	BDL
	Nakhola LP School	-	-	-	-	-	BDL
	Ghunusha	-	-	-	-	-	BDL
	Karkat Basti	-	-	-	-	-	BDL
May' 2017	Tegheria Vill	-	-	-	-	-	BDL
	Nakhola LP School	-	-	-	-	-	BDL
	Karkat Basti	-	-	-	-	-	BDL
	Ghnucha	-	-	-	-	-	BDL

* Mill under shut since 12-03-2017

Manager (Pulp)
Environment wing

CPCB norms with target date	Action proposed	Compliance status	Approx. cost Rs. in Lakh
Pulp & Paper Plant			
1.To bring down AOX in paper plant effluent to 1.5 Kg/MT up to Feb 2008 and 1.0 Kg/MT from 1 st March 2008. (vide the Gazette of India extra ordinary, Mo E F, under EP Act 1986, 3 rd amendment rules ,2005, w. e. f 30.08.2005)	i) Procurement of AOX analyzer for continuous monitoring.	AOX analyzer installed & Commissioned on 13.03.2004	18.0
	ii) Re-circulation of bleach filtrates for pulp dilution & spray.	Part of the filtrate from bleach washer has been re circulated for washer spray & pulp dilution.	
	iii) Introduction of modified bleaching sequence (ECF bleaching: D- E _p -D-E-D) will eliminate the use of elemental chlorine & hypo which will enable controlling AOX level within 1.0 Kg/MT iv) New chlorine dioxide plant	DPR and DER report received from consultant M/S Sand well. It is kept in abeyance for the time being for acute financial crunch.	5765.0
			5541.0
2. Installation of Lime Kiln within 4 years	To install and commission by October 2007.	Commissioned on 28.11.2008. LMRP out sourced and re- commissioned on 10-07-2015. Again stopped W.E.F 25-11-2015 due to financial constraints.	1800.0
3. Wastewater discharge to be brought down to 140 M ³ /MT paper within 2 yr. 120 m ³ /MT paper in the next 3 years	i) Conversion of wet ash handling system to dry ash-handling system to reduce use of fresh water.	<i>Conversion completed</i> Fresh water consumption has been reduced by 90 M ³ /hr.	40.0
	ii) a) Reuse of decollators seal pit water in paper machine. b) Use of excess filtrate in vacuum pump sealing.	<i>By reusing of decollators seal pit water to paper machine,</i> Water saved is 60 M ³ /hr Commissioned on 11.08.2003. Water saved is 30 M ³ /hr	2.0
	iii) Re-circulation of vacuum pump sealing water by installing cooling Tower with high efficiency separator. iv) Replacement of reciprocating compressor by centrifugal compressor will save 30 M ³ /hr besides saving in power.	Separators commissioned. Cooling tower charged with vacuum flume water. Compressor commissioned on 13/04/2005. * Mill shut since 13th March 2017.	175.0 154.0
	v) Implementation of new bleaching sequence with the provision for 100 % re-circulation of filtrate which will save another 400 M ³ /hr fresh water	Taken up with Modernization and Technological Up gradation Plan (MTUP) Wastewater discharge was: 171 M ³ / MT of paper for 2016– 17 up to 31 st March 2017	Included in Sl.No.1(iii & iii)
4. Installation of incinerator to control odor within 4 years.	Provision for burning non-condensable gases in the limekiln is incorporated in the technical specification.	<i>It is planned to connect NCG from digester to gas line from Bamboo Dust gasification plant to kiln. .</i>	Included in Lime kiln, Sl.No.2
5. Use of treated effluent for irrigation	Nearby villages have been using treated effluent for Rabi crops during entire period from November to March every year. To ascertain the impact on soil and crop a study is proposed on agricultural activities.	<i>A study on the surrounding areas of disposal route was carried out by a group of scientists under M/S .Neoland Technologies, Guwahati. Another study by CPPRI, Saharanpur completed in March 2009, covering ETP and beel area including ground water, soil, etc.</i>	6.5
6. To introduce color removal programme by the mill within 2 years.	Implementation will be taken up based on the result of de-colorization project taken up by IPMA.	IPMA requested CPPRI for necessary study and guidance. Report yet to be received. In the meantime, the colour is found to be subsided by addition of polymer in ETP. The colour shall be minimum or even negligible once the ongoing MTUP projects like ECF, ODL systems in bleaching plant are implemented. Tender for the projects floated on 30.03.2009. Presently it is kept in abeyance due to acute financial crunch.	-
Chlor- alkali plant			
1. Complete recycling of mercury bearing effluent	All mercury bearing effluent through Hg removal plant to newly constructed Hypo	<i>Complied with</i>	40.0

by December,2003	sludge pit to be taken in operation by April, 2003.		
2. Installation of continuous Hg analyzer by June, 2003.	Presently monitoring is being carried out in Lab on regular basis. Procurement action for on line analyzer taken.	<i>Complied with</i>	5.0
3. Treatment of cell room ventilation gas limit for mercury not to exceed 1 gm/T of product by December, 2005	Mercury detector cum analyzer procurement action taken for close monitoring	<i>Complied with</i> <i>It is being determined by using portable detector.</i>	5.0
4. De-mercerization of caustic soda and limit for mercury in caustic soda at 0.1 gm/T of product by December, 2004	Commissioning of caustic cooler in annual shut. If mercury content remains high, caustic filter, based on activated carbon adsorption, along with caustic lye pump will be installed in consultation with alkali manufacturer association	<i>Caustic lye filter based on Activated Carbon adsorption commissioned in Sept 2006.</i>	24.0
5. Reduction of mercury in H ₂ gas at 0.5 gm/T by December, 04	To reduce Hg content in H ₂ gas, it is to be cooled below 5 ⁰ C to avoid carry over along with installation of H ₂ gas Democratization unit.	<i>Complied with</i>	28.5
6. Installation of common full-fledged salt washery unit at source by Dec,03	Using good quality of salt of equivalent to BIS grade common salt. Vendors to be informed to supply washed salt.	<i>Complied with</i>	-
7. Capping of existing pit completed disposal sites by June, 2004	Capping will be done as and when required.	<i>Complied with</i>	20.0
8. Installation of mercury distillation unit by June, 2003	Hg distillation unit will be installed as soon as it is received at site.	<i>Complied with</i>	9.5
9. Brine sludge treatment and water leach able mercury content in brine mud at< 0.1 mg/l before disposal in secured landfill	Brine sludge is treated in rotary vacuum drum filter to get maximum recovery of water leach able mercury content in brine sludge before disposal. For better reduction of Water leach able Hg., a new Vacuum drum filter of improved design is under procurement.& proposed for dosing of sodium sulphide/lime for treatment and stabilization of mercury in brine sludge before disposal .	<i>Complied with</i> <i>New Drum filter commissioned. Brine sludge water leach able Hg content before disposal to secured landfill is found below 0.1 mg/l after stabilization .and treatment with sodium sulphide.</i>	25.0
10. Reduction of mercury consumption at < 50 gm/T of product by Dec, 2005	To get the target value, action plans already initiated to procure Caustic filter, additional chiller along with demercurization unit of hydrogen and mercury distillation unit.	<i>Achieved mercury consumption level of less than 50 g/MT of product. (Present achieved value of mercury consumption is below 50 g/MT of product).</i>	-
11. Total mercury release to environment at < 2.0 gm/T of product by Dec, 2005	To achieve the Hg emission level, action plans already initiated to procure Caustic filter, additional chiller along with demercurization unit of hydrogen product, mercury distillation unit as well as close monitoring of cell room gas on regular basis.	<i>Compliance status as mentioned in Sl.No. 5 & 8.</i> <i>By taking various measures as mentioned above, the target value of mercury release has already achieved c < 2.0 gm/T of product.</i>	-
12 The mercury cell plants will switch over to membrane cell technology in a time bound manner	With proposed modification of bleaching sequence to ECF, <i>elemental Cl₂& hypo requirement will be eliminated</i> Chlor-alkali plant will be downsized	<i>W.O. placed on Ms Nuberg Engineering Ltd, Noida on 22.07.2010 for installation & commissioning of Membrane Cell in Caustic & Chlorine plant.. Civil job for site</i>	3500.0

for which action plan will be prepared by respective plants within 6 months	accordingly and change over to membrane cell technology is planned.	<i>clearance is in progress. An EoI published in Assam Tribune on 10.10.2013 for outsource. One party Hindustan Chlor-alkali participated. Preliminary discussions held 28.11.2013. Party was asked to submit details of the proposal. Production of Caustic & Chlorine was stopped W.E.F. 31.03.2016 as per guidelines of CPCB.</i>	
13. To submit action plan covering the pollution and safety aspects for chlorine handling to prevent any accident/ release of chlorine.	Pollution & Safety aspects are identified and evaluated as per requirement of all management certifications.	This subject is covered under the following management certifications: ISO 9001: 2008 ISO 14001: 2004 OHSAS 18001: 2007	-

Total Rs. 17152.00

Dy. General Manager (Engg./Env./EMCC)