

Dated: 15.10.2023

ID: 14989 Birla Cellulosic- Kharach

To,

Mr. Yogesh Kumar (IRO), Ministry of Environment, Forest and Climate Change Aaranya Bhavan, Gandhingar.

Subject: Half Yearly Compliance Report of Environmental Clearance for period of "April-23 to Sept-23".

Respected Sir,

In view of above subject matter, Here, we are submitting soft copy/hard copy of half yearly Environmental Clearance Compliance report along with copy of EC-2007, No.J-11011/130/2006-IA II (I) Dtd: 15.01.2007 for the report period from "<u>April-23 to Sept-23"</u>.

Hope, the same is in order.

Yours Faithfully, (For Birla Cellulosic)

Manish Patel LH- Technical Services

Encl. :

- 1. EC Copy
- 2. EC-2007 Compliance report (April-23 to Sept-23)

CC To:

- 1. GPCB Regional office Gujarat pollution control board, Plot No. 1501, GIDC, Ankleshwar
- <u>GPCB Head office</u> Gujarat pollution control board, Paryavaran Bhavan, CHH Road, Sector 10A, Gandhinagar, Gujarat 382010
- 3. MOEFCC office Ministry of Environment, Forest & Climate Change, New Delhi.



Grasim Industries Limited Unit - Birla Cellulosic Works : Birladham, Kharach Kosamba R.S. Dist. Bharuch (Gujarat) - 394 120 INDIA CIN : L17124MP1947PLC000410
 Telephone
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 Email
 bc-kharach.info@adityabirla.com

Liaison Office : 11th Floor - 1101 & 1102 OCEAN, Opposite Vadodara Central Mall, Vikram Sarabhai Marg, Vadiwadi, Vadodara - 390023, Gujarat - India Regd. Office : P.O. Birlagram, Nagda(MP) - 456 331. Phone : (07366) 246760-66, Fax : 255198, Website : www.grasim.com

F. No. J-11011/130/2006- IA II (I) **Government of India Ministry of Environment and Forests** (I.A. Division)

Paryavaran Bhawan CGO Complex, Lodhi Road New Delhi - 110 003

> E-mail : pb.rastogi@nic.in Talefax : 011-24367668 Dated 15th January, 2007

To.

Shri S.V. Kulkarni **Executive President** M/s Birla Cellulose (A unit of Grasim Industries Ltd.) Birladham, Kharach Kosamba R.S. - 394 120 Bharuch, Gujarat

Fax No.: 02646-270010 / 270310, 0265-2339626.

Sub: Expansion of Viscose Staple Fibre (VSF) from 60,000 TPA to 1,27,750 TPA and Captive Power Plant (CPP) from 15 MW to 25 MW at Kharach, Hansot, Bharuch, Gujarat by M/s Birla Cellulose Ltd. (A unit of Grasim Industry Ltd.) -Environmental clearance reg.

Sir.

This has reference to your letter no. En/60-17/G/1702 dated 14th March, 2006 wherein you have submitted an 'Application' alongwith project documents including EIA/EMP report, Questionnaire, Risk assessment and Disaster Management Plan etc. seeking environmental clearance under the EIA Notification, 1994 and subsequent clarifications / additional information furnished vide your letters dated 4th May, 2006 and 14th June, 2006.

The Ministry of Environment and Forests has examined your application. It is noted that 2.0 proposal is for the expansion of existing Viscose Staple Fibre (VSF) from 60,000 TPA to 1,27,750 TPA and Captive Power Plant (CPP) from 15 MW to 25 MW at Kharach, Hansot, Bharuch, Gujarat as per details given below :

S.N.	Product (s)	Capacity of the plant				
3. N.	, .oudot (0)	Existing	Proposed	Total		
1	Viscose Staple Fibre (Main product)	60,000 TPA	67,750	1,27,750		
1.	Sodium Sulphate (By product)	38,400 TPA	57,600	96,000		
2.	Carbon-disulphide (CS ₂)	10,320 TPA	_	-		
3.	Sulphuric acid	66,000 TPA	-	-		
4. 5.	Thermal Power Plant	15 MW	10 MW	25 MW		

The existing plant is located in 242.81 ha. and no land will be required for the expansion project.

3.0 CS_2 condensers, CS_2 recovery system, cyclone separators, SO_2 scrubber, Sulphur recovery plant, ESP and dust collectors will be provided to control fugitive and gaseous emissions. Appropriate technology will be used to achieve the notified standards for CS_2 and H_2S . Total water requirement from River Kim will be 4.09 MGD (18,600 m³/d). No treated effluent will be discharged anywhere into surface / subsurface drains and / or into river Kim without prior approval from the GSPCB. Treated wastewater will be recycled and reused in the process or used for green belt development or for spraying coal/ash in power plant. ETP sludge and fly ash will be provided to cement and brick manufacturers respectively. Spent catalyst, Spent resin, Sulphur de-ashing sludge will be disposed off at TSDF of M/s Bharuch Enviro Infrastructure Ltd. at Ankleshwar, Bharuch, Gujarat. Waste oil will be sold to approved recyclers.

4.0 Public hearing meeting was held on 28th March, 2006. 'Consent to Establish' has been accorded by the Gujarat State Pollution Control Board (GSPCB) vide letter no. GPCB/BRCH/ NOC-3241[CCA-295(4)]/10965 dated 19th April, 2006. Total cost of the project is Rs. 414.77 Crores.

5.0. The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September, 2006 subject to strict compliance of the following specific and general conditions:

A. SPECIFIC CONDITIONS :

- i. The gaseous emissions (SO₂, NO_x, HC) and particulate matter from various process 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 respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.
- ii. The process emissions $(SO_2 \text{ and } CS_2)$ shall be scrubbed by the caustic or wet scrubber from all the stacks. Electrostatic Precipitators (ESPs) shall be installed to control gaseous emissions. CS_2 condensers, CS_2 recovery system & cyclone separators shall be installed to control Sodium sulphate dust. SO_2 scrubber, Sulphur recovery plant shall be installed to control SO_2 emissions. Vents from scrubbers and condensers shall be periodically monitored and maintained as per the best practicable technology. The company shall monitor the CS_2 and H_2S and data submitted to the Ministry.
- iii. The technology employed shall achieve standards notified by the Ministry for the Rayon Industry vide Gazette Notification No. 195 dated 16th October, 2006 regarding ambient air quality and stack emission norms for CS₂ and H₂S. A report shall be submitted every six months to the Ministry's Regional Office at Bhopal / GPCB / CPCB on the emission levels. Provision shall be made for retrofit additional equipment if necessary in future.
- iv. The industry shall measure ambient air quality for CS_2 and H_2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS_2 and H_2S emissions not to exceed 100 ug/m³ and 150 ug/m³.
- v. Fugitive emissions in the work zone environment shall be periodically monitored with instruments of proper range and emissions shall conform to the standards prescribed by the GPCB. Action shall be taken to reduce the fugitive emissions in the work zone

environment as far as possible. Dust collectors shall be provided at transfer points to control fugitive emissions.

- vi. Total water requirement from River Kim shall not exceed 4.09 MGD (18,600 m³/d) as per the 'Permission' accorded by the Govt. of Gujarat. The wastewater shall be treated in the ETP through primary, secondary and tertiary treatment and disposed off in the pipeline of M/s Bharuch Environ Acqua Infrastructure Ltd. (BEAIL). Approval of the Gujarat Pollution Control Board shall be obtained for alteration in the routing of pipeline for disposal of effluent. The quality of the treated effluent shall conform to the standards prescribed by GPCB / EPA Rules. Efforts shall be made to recycle and reuse the treated wastewater in the process or used for irrigation, agricultural and horticultural purposes at the site. Treated effluent from captive power plant (CPP) shall be used for spraying coal/ash in power plant itself. No treated effluent shall be discharged anywhere into surface / subsurface drains and / or into river Kim without prior approval from the GPCB. Domestic wastewater shall be treated in STP and used for green belt development.
- vii. The solid waste shall be segregated according to its calorific content and stored separately for treatment and disposal. Spent catalyst, Spent resin, Sulphur de-ashing sludge shall be disposed off at TSDF of M/s Bharuch Enviro Infrastructure Ltd. (BEAIL), Ankleshwar, Gujarat. ETP sludge shall be provided to cement manufacturers and properly disposed off and fly ash shall be provided to brick manufacturers. Used / waste oil shall be sold to authorized recyclers / reprocessors.
- viii. Green belt of adequate width and density shall be developed in 70 ha out of the total 243 ha project area to mitigate the effect of fugitive emissions all round the plant. The development of green belt along the boundary wall, open space and avenue roads shall be provided in consultation with the local DFO as per the CPCB guidelines.
- ix. Rainwater shall be harvested to conserve the fresh water and recharge the ground water and an action plan shall be submitted to the Ministry.
- x. The project proponent shall comply with the environmental protection measures and safeguards recommended in EIA / EMP / Risk Analysis reports as well as the recommendations of the public hearing panel.
- xi. The Company shall undertake eco-development measures including community welfare measures in the project area for the overall improvement of the environment. The ecodevelopment plan shall be submitted to the GPCB within three months of receipt of this letter for approval.
- xii. As mentioned in EIA/EMP, Rs. 20.56 Crores and Rs. 6.27 Crores earmarked towards the capital cost and recurring cost/annum respectively for the environmental pollution control measures shall be used exclusively to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government. A tome bound implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Ministry's Regional Office at Bhopal. The funds shall not be diverted for any other purposes.

B. GENERAL CONDITIONS :

- i. The project authorities must strictly adhere to the stipulations made by the Gujarat State Pollution Control Board (GPCB) and the State Government.
- 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 adequacy of the conditions imposed and to add additional environmental protection measures required, if any.
- iii. Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the GPCB. Regular monitoring shall be carried out for relevant parameters.
- iv. The project authorities must strictly comply with the rules and regulations under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000. Prior approvals of Chief Inspector of Factories, Chief Inspector of Explosives, Fire Safety Inspectorate etc. must be obtained.
- v. The project authorities must strictly 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, 2000. Authorization from the GPCB must be obtained for collection, storage, treatment and disposal of hazardous wastes.
- vi. 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 the Environment (P) Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- vii. Occupational health surveillance programme shall be undertaken as regular exercise for all the employees, specifically for those engaged in handling hazardous substances. First aid facilities in the Occupational Health Care Centre shall be strengthened and medical records of each employee shall be maintained separately.
- viii. A separate Environment Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and monitoring functions.
- ix. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
- x. The implementation of the project vis-à-vis environmental action plans shall be monitored by Ministry's Regional Office at Bhopal / GPCB / CPCB. A six monthly compliance status report should be submitted to monitoring agencies.
- xi. The Project Proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the Gujarat Pollution Control Board / Committee and may also be seen at Website

of the Ministry and Forests at <u>http://envfor.nic.in.</u> The advertisement shall be made within 7 days from the date of issue of the clearance letter and a copy of the same shall be forwarded to the Ministry's Regional Office at Bhopal.

xii. 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 land development work.

6.0. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

7.0. The Ministry reserves the right to stipulate additional conditions if found necessary. The company will implement these conditions in a time bound manner.

8.0. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991alongwith their amendments and rules.

Am 10-1 1511107

(Dr. P.B. Rastogi) Additional Director

Copy to :

- 1. The Secretary, Department of environment and forests, Govt. of Gujarat, Gandhi Nagar, Gujarat.
- The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office (West), Link Road No. 3, E - 5, Arera Colony, Bhopal - 462 016, M. P.
- 3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi 110 032.
- 4. The Chairman Gujarat Pollution Control Board, Paryavaran Bhawan, Sector 10-A, Gandhi Nagar 382 010, Gujarat.
- 5. JS (CCI-I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
- 6. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
- 7. Guard File.
- 8. Monitoring File.
- 9. Record File.

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(Dr. P.B. Rastogi) Additional Director

Expansion of Viscose Staple Fibre (VSF) from 60,000 TPA to 1,27,750 TPA & Captive Power Plant (CPP) from 15 MW to 25 MW

Compliance of Environmental Clearance Conditions by
M/s. Birla Cellulosic (A unit of Grasim Ind. Ltd.) at Kharach, Hansot, Bharuch, Gujarat

Name of Project	: Expansion of Viscose Staple Fibre (VSF) from 60,000 TPA to 1,27,750 TPA & Captive Power Plant (CPP)
EC letter no. & Date	: F.No.J-11011/130/2006-IA II (I) Dtd: 15.01.2007
Address for Correspondence	: M/s. Birla Cellulosic (A Unit of Grasim Industries L
Duration/Reporting period	 Birladham, Village: Kharach, Kosamba (R.S.), Tehsil: Hansot, Bharuch (Gujarat) – 394120 April-23 to Sept-23

S. No	Compliance con	ditions by MoEF & CC	Action Taken by Birla Cellulosic
А.	SPECIFIC CON	NDITIONS	
1.	17/G/1702 dated you have submit with project Doc report, Question Disaster Manage environmental cl Notification, 194 clarifications / ac furnished vide yo 2006 and 14th Ju		○ <u>Noted.</u>
2.	examined your a proposal is for th Viscose staple Fi to 1,27,750 TPA (CPP) from 15 M	Environment and Forests has pplication. It is noted that e Expansion of existing bre (VSF) from 60,000 TPA and captive Power plant IW to 25 MW at Kharach, , Gujarat as per details given	 <u>Noted</u> Unit has obtained EC for VSF production capacity up to 1,27,750 TPA along with 25 MW CPP on 15.01.2007. Unit has obtained EC for VSF production capacity up to 2,33,600 TPA along with 45 MW CPP on 22.02.2018, which was amended on 31.12.2018. Unit has obtained EC to CTE for VSF
	S.N. Products S.N. Products 1 Viscose Staple Fibre (Main Product) 2 Sodium Sulphate (By	Capacity of the Plant Existing Proposed Total 60,000 67,750 1,27,750 TPA 38,400 57,600 96,000 TPA 57,600 96,000 100	 o Unit has obtained EC to CTE for VSF production capacity up to 2,33,600 TPA along with 45 MW CPP on 06.09.2019. o In first phase, unit has obtained CCA-amendment for VSF production capacity up to 1,42,350 TPA (1,27,750 Existing + 14,600 Debottlenecking) along with 25 MW CPP & 70 TPD Solvent Spun Cellulosic fibre along with 15 MW CPP having CCA order no. AWH-101226 dated: 23.05.2019 valid up to 11.04.2024. o In second phase, unit has obtained CCA

Page 1

Captive Power Plant (CPP) from 15 MW to 25 MW

·		•				1			
		Product)				amendment for VSF production capacity up			
						to 1,56,950 TPA having CCA order no.			
	3	Carbon-	10,320	-	-	AWH-104181 dated: 29.11.2019 valid up to			
		disulphide	TPA			11.04.2024.			
		(CS2)				\circ In continuation with that, unit has obtained			
	4	Sulphuric	66,000	-	-	CCA amendment for Sodium Sulphate			
		Acid	TPA			recovery max. up to 1,56,950 TPA having			
	5	Thermal	15	10	25	CCA order no. AWH-111124 dated:			
	Ũ	Power	MW	MW	MW	19.03.2021 valid up to 11.04.2024.			
		Plant			1.1	o In third phase, unit has obtained CCA			
	The e	existing plant	is located	1 in 242.8	R1 ha.	amendment for VSF capacity upto 1, 73, 375			
		o land will b			51 ma.	TPA and Sodium sulphate recovery max up to			
		nsion project.		1 101 the		1,73, 375 TPA having CCA order no. AWH-			
	enpu	ision project.				115368 Dated: 30.10.2021 valid up to			
						11.04.2024.			
						• Unit has obtained CTE-amendment for			
						installation of D.G. Set & EDTA/CAP			
						System, along with increase quantity of			
						production at TRADC on 17.11.2022.			
						o Recently, Unit has obtained CCA-			
						Amendment for installation of D.G. Set			
						TRADC, Installation of zinc recovery system			
						& EDTA/CAP settle up on 11.09.2023.			
						• The expansion project was implemented			
						within the existing plant and no extra land was			
		1 .	200			used.			
3.		condensers, C		• •		○ <u>Complied.</u>			
		one separator				• Unit has 4 spinning machines and each			
		very plant, E				spinning machines has been provided with 3			
		ovided to cor				stage CS2 condensing system.			
		sions. Approj	-			• For recovering of CS2, there's CS2 recovery			
		to achieve the	e notified	standard	ls for	system installed which comprising of			
	CS2 :	and H2S.				recovery trough with steam injection and a			
						water scrubber for condensing the steam. The			
						vapors from the scrubber are passed through			
						the CS2 condensing system.			
						• Dust collection systems are provided with			
						cyclones to collect the charcoal dust			
						generated by feeding of charcoal into the			
						CS2 manufacturing process.			
						• Cyclone separators are provided for recovery			
						of sodium sulphate in the triple effect			
						evaporators for producing anhydrous sodium sulphate.			
						sulphate			

Captive Power Plant (CPP) from 15 MW to 25 MW

Total water requirement from River Kim will be 4.09 MGD (18,600 m3/d).	 Cyclone separators & Water scrubbers are provided for scrubbing out of sodium sulphate dust from the salt dryer exhaust air to avoid dust emission. Both sulphuric acid plants has 2- Stage scrubber system for scrubbing SO2 using alkaline solution. Unit has installed Klaus process based sulphur recovery plant to recover sulphur from the exhaust gases of CS2 Plant. After the Klaus process, the gases are passed through a caustic scrubber and meeting the prescribed emission norms. The recovered sulphur is reused back in the process. Unit has installed 3 no. boilers, whereas, Boiler No. 1 & 2 are operating with three fields ESP and Boiler no. 3 is operating with four fields ESP. Through this ESP, we are meeting prescribed norms. Unit has installed dust collectors with ash evacuation system to control dust from ash handling area. The charcoal and coal belt conveyors are fully sealed with provision of water spray. The exhaust gases from spinning machines are passed through 175 M height chimney, which is in line with the guidelines stipulated in the consent. A project of EDTA scrubbing technology for recovering Sulphur from H2S gas and CAP system for CS2 recovery are under stabilization phase. After successfully completion of both EDTA & CAP, CS2 recovery will be increase. An agreement with Irrigation Department has been made for water withdrawal @ 19000 M3/day. Unit has constructed a separate 24 KM long underground pipeline for discharging the
	-
No treated Effluent will be discharged anywhere into surface/ subsurface drains	
and/or into river Kim Without prior approval	treated effluent in the estuary of Kim River as approved by GPCB. This disposal point
from the SPCB.	was suggested by NIO, Goa is 2007.
	• Treated effluent is being recycled in Belt

Captive Power Plant (CPP) from 15 MW to 25 MW

	Treated wastewater will be recycled and reused in the Process or used for green belt development or for spraying coal/ash in power plant. ETP sludge and fly ash will be provided to cement and brick manufacturers respectively. Spent catalyst, Spent resin, Sulphur de-ashing sludge will be disposed off at TSDF of M/s Bharuch Enviro Infrastructure Ltd. at Ankleshwar, Bharuch, Gujarat. Waste oil will be sold to approve recyclers.	 press washing, Lime slurry making. Generated quantity of Fly ash sold to surrounding local Brick and Cement manufacturers as stipulated in CCA. Generated quantity of ETP sludge is being sold to cement manufactures as stipulated in CCA. Generated quantity of Deashing sludge, Spent Catalyst is being sent to BEIL, TSDF site as stipulated in CCA. Generated quantity of Spent resin burnt is boiler for waste to energy recovery as stipulated in CCA. Generated quantity of used oil is being sold to authorized recyclers as stipulated in CCA.
4.	Public hearing meeting was held on 28th March, 2006. 'Consent to Establish' has been accorded by the Gujarat State Pollution Control Board (GSPCB) vide letter no. GPCB/BRCH/NOC-3241[CCA 295(4)]/10965 dated 19th April, 2006. Total cost of the project is Rs. 414.77 Crores.	○ <u>Noted.</u>
5.	The Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated 14th September, 2006 subject to strict compliance of the following specific and general conditions:	○ <u>Noted.</u>
i.	The gaseous emissions (SO2, NOx, HC) and particulate matter from various process units shall confirm to the standards prescribed by the concerned authorities from time to time.	 Being complied. The gaseous emission (SO2, NOx) and particulate matter generates from power plant unit and CS2, H2S, SO2 & acid mist gaseous emission generates from Spinning, CS2 & Acid plant process are met 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	 No HC is being emitted from Birla cellulosic. At no time, the emission levels exceed

Captive Power Plant (CPP) from 15 MW to 25 MW

Compliance of Environmental Clearance Conditions by M/s. Birla Cellulosic (A unit of Grasim Ind. Ltd.) at Kharach, Hansot, Bharuch, Gujarat

•	adopted by		-		beyond the stipulated standards.				
unit sha	ll not be re	started unti	1 the contr	01	• There has been no event of failure of				
measure	s are rectifie	ed to achiev	e the desire	.u .	pollution control systems in the last six				
efficienc	ey.			month			1 1		
	•						rs and alarm		
							the pollution		
							vided so that		
							oning can be can be taken		
							y event of		
							ition control		
				-	•	-	s) is stopped.		
							ondensers are		
							the in-house		
					ory (internal				
							credited third		
							nonitoring of		
					Stack concentration as well as ambient air				
				quality	7.				
					• As per the monitoring conducted by third				
					party Lab, the results are well within the				
				prescr	ibed norms a	s ner consen	t condition		
o A Summary							it condition.		
	for Flue gas	emission fro	om stack for		g period is giv				
Location	Boi	ler-1 & 2 (7	76 m)	the reporting	g period is giv				
	_				g period is giv	ven below:	Mercury		
Location Parameter Unit	Boi SPM mg/Nm3	ler-1 & 2 (7 SO2 mg/Nm3	76 m) NOx mg/Nm3	the reporting SPM mg/Nm3	g period is giv Boiler- SO2 mg/Nm3	ven below: 3 (86 m) NOx mg/Nm3	Mercury mg/Nm3		
Location Parameter	Boi SPM mg/Nm3 100	ler-1 & 2 (7 SO2 mg/Nm3 600	76 m) NOx mg/Nm3 600	the reporting SPM mg/Nm3 50	g period is giv Boiler- SO2 mg/Nm3 600	ven below: 3 (86 m) NOx mg/Nm3 300	Mercury mg/Nm3 0.03		
Location Parameter Unit	Boi SPM mg/Nm3 100 58.48	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10	76 m) NOx mg/Nm3 600 85.56	the reporting SPM mg/Nm3 50 42.73	g period is giv Boiler- SO2 mg/Nm3 600 237	ven below: 3 (86 m) NOx mg/Nm3 300 82.61	Mercury mg/Nm3 0.03 ND		
Location Parameter Unit Limit Apr-23 May-23	Boi SPM mg/Nm3 100 58.48 60.54	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47	76 m) NOx mg/Nm3 600 85.56 90.01	the reporting SPM mg/Nm3 50 42.73 43.62	g period is giv Boiler- SO2 mg/Nm3 600 237 241	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01	Mercury mg/Nm3 0.03 ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23	Boi SPM mg/Nm3 100 58.48 60.54 56.80	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00	76 m) NOx mg/Nm3 600 85.56 90.01 89.50	the reporting SPM mg/Nm3 50 42.73 43.62 46.20	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10	Mercury mg/Nm3 0.03 ND ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jul-23	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44	Mercury mg/Nm3 0.03 ND ND ND ND ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jul-23 Aug-23	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11	Mercury mg/Nm3 0.03 ND ND ND ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68	Mercury mg/Nm3 0.03 ND ND ND ND ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23 o A Summary f	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68	Mercury mg/Nm3 0.03 ND ND ND ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92 or process gate	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24 rom stack fo	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248 g period is gi	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68 ven below:	Mercury mg/Nm3 0.03 ND ND ND ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23 o A Summary f	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92 or process ga CS2 Plant CS2	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00 s emission fi + Spinning H2S	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24 rom stack fo	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73 r the reporting	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248 g period is gi	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68 ven below:	Mercury mg/Nm3 0.03 ND ND ND ND ND ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23 o A Summary f Location Parameter Unit	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92 or process ga CS2 Plant CS2	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00 s emission fi + Spinning H2S ToF	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24 rom stack fo	spm mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73 r the reporting Acid p	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248 g period is giv Jant I	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68 ven below: Acid p SO2 Kg/ToA	Mercury mg/Nm3 0.03 ND ND ND ND ND ND ND		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23 o A Summary f Location Parameter	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92 or process ga CS2 Plant CS2 Kg/	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00 s emission fi + Spinning H2S ToF 125	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24 rom stack fo Total	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73 r the reporting SO2 Kg/ToA 2	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248 g period is giv lant I Acid Mist mg/Nm3 25	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68 ven below: Acid p SO2 Kg/ToA 2	Mercury mg/Nm3 0.03 ND ND ND ND ND ND ND ND ND ND Slant II Acid Mist mg/Nm3 25		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23 o A Summary f Location Parameter Unit	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92 or process ga CS2 Plant CS2	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00 s emission fi + Spinning H2S ToF	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24 rom stack fo	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73 r the reporting SO2 Kg/ToA	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248 g period is giv lant I Acid Mist mg/Nm3	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68 ven below: Acid p SO2 Kg/ToA 2 Plant wa	Mercury mg/Nm3 0.03 ND ND ND ND ND ND ND ND ND ND ND Second Second Secon		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23 o A Summary f Location Parameter Unit Limit Apr-23	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92 for process ga CS2 Plant CS2 Kg/ 90.40	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00 s emission fi + Spinning H2S ToF 125 17.54	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24 rom stack for Total 107.94	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73 r the reporting SO2 Kg/ToA 2 0.86	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248 g period is gir lant I Acid Mist mg/Nm3 25 11.04	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68 ven below: Acid p SO2 Kg/ToA 2 Plant wa Overh	Mercury mg/Nm3 0.03 ND ND ND ND ND ND ND ND ND ND Second second s		
Location Parameter Unit Limit Apr-23 May-23 Jun-23 Jun-23 Jul-23 Aug-23 Sep-23 o A Summary f Location Parameter Unit Limit	Boi SPM mg/Nm3 100 58.48 60.54 56.80 54.68 57.43 55.92 or process gat CS2 Plant CS2 Kg/	ler-1 & 2 (7 SO2 mg/Nm3 600 254.10 251.47 256.00 253.00 249.34 254.00 s emission fi + Spinning H2S ToF 125	76 m) NOx mg/Nm3 600 85.56 90.01 89.50 87.50 84.83 88.24 rom stack fo Total	the reporting SPM mg/Nm3 50 42.73 43.62 46.20 44.67 42.83 45.73 r the reporting SO2 Kg/ToA 2	g period is giv Boiler- SO2 mg/Nm3 600 237 241 251 247 243 243 248 g period is giv lant I Acid Mist mg/Nm3 25	ven below: 3 (86 m) NOx mg/Nm3 300 82.61 85.01 84.10 83.44 80.11 82.68 ven below: Acid p SO2 Kg/ToA 2 Plant wa	Mercury mg/Nm3 0.03 ND ND ND ND ND ND ND ND ND ND ND Second Second Secon		

Jun-23

Jul-23

87.33

80.68

20.20

11.65

107.53

92.33

0.86

0.84

10.10

10.17

Page 5

6.90

6.74

0.74

0.72

Captive Power Plant (CPP) from 15 MW to 25 MW

Compliance of Environmental Clearance Conditions by

M/s. Birla Cellulosic (A unit of Grasim Ind. Ltd.) at Kharach, Hansot, Bharuch, Gujarat

Aug-23	90.58	8.84	99.42	0.80	11.29	0.76	7.34
Sep-23	86.07	10.18	96.25	0.83	12.06	0.79	7.92

ii. The process emissions (SO2 and CS2) shall be scrubbed by the caustic or wet scrubber from all the stacks. Electrostatic Precipitators (ESPs) shall be installed to control gaseous emissions. CS2 condensers, CS2 recovery system & cyclone separators shall be installed to control Sodium sulphate dust. SO2 scrubber, Sulphur recovery plant shall be installed to control SO2 emissions. Vents from scrubbers and condensers shall be periodically monitored and maintained as per the best practicable technology. The company shall monitor the CS2 and H2S and data submitted to the Ministry.

○ Complied.

[•] The mitigation measures adopted to control emissions for CS2/H2S concentration in process as well as ambient air is given below.

below. Process	Emission	Mitigation
1100055	Linission	Measures
C	50	
Sulphuric	SO ₂	2 - Stage Alkali
Acid		(Caustic)
Plant(2		Scrubber
nos.)		
CS2 Plant	CS2/	Sulphur
	H2S	Recovery
		system
Sulphur	SO ₂	Alkali
Recovery		(Caustic)
Plant		Scrubber
Spinning	CS2	CS2 recovery
Machine		system having
(4 nos)		a water
		scrubber, 3-
		stage
		condensers for
		recovering CS2
		Exhaust
		system ,
		EDTA/CAP
C 1'	C. P	system
Sodium	Sodium	Cyclone
Sulphate	Sulphate	Separator &
Recovery	dust	Water
plant		scrubber
Boiler	Gaseous	ESP &
	Emission	Lime dosing
		system

Captive Power Plant (CPP) from 15 MW to 25 MW

		~ !! !
iii.	The technology employed shall achieve	○ Complied.
	standards notified by the Ministry for the	• The technology employed has already
	Rayon Industry vide Gazette Notification No.	achieved standards notified by the Ministry
	195 dated 16 th October,2006 regarding	for the Rayon Industry vide Gazette
	ambient air quality and stack emission norms	Notification No. 798, part-II – Sec. 3(i)
	for CS2 and H2S. A report shall be submitted	dated 9th November,2018 regarding
	every six months to the Ministry's Regional	Environmental Standard for Man-Made
	Office at Bhopal / GPCB / CPCB on the	fibre industry.
	emission levels. Provision shall be made for	o Every six monthly compliance report is
	retrofit additional equipment if necessary in	being submitted to GPCB & MOEFCC
	future.	office. Six monthly Compliance report for
		the period of Oct-22 to March-23 was
		submitted in hard/soft copy in May-23.
		• Presently, A project of EDTA scrubbing
		technology for recovering Sulphur from
		H2S gas and CAP system for CS2 recovery
		are under stabilization phase. After
		successfully completion of both EDTA &
		CAP, CS2 recovery will be increase.
		,
iv.	The industry shall measure ambient air	○ Being complied.
iv.	The industry shall measure ambient air quality for CS2 and H2S at the 3 ambient air	○ <u>Being complied.</u> ○ Unit has installed 3 nos. of Continuous
iv.	quality for CS2 and H2S at the 3 ambient air	• Unit has installed 3 nos. of Continuous
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in	• Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2	• Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB.
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises.
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited laboratory for monthly monitoring of Stack
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited laboratory for monthly monitoring of Stack concentration as well as ambient air quality,
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited laboratory for monthly monitoring of Stack concentration as well as ambient air quality, as per the monitoring conducted by their
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iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited laboratory for monthly monitoring of Stack concentration as well as ambient air quality, as per the monitoring conducted by their team, The results are well within the prescribed norms as per consent condition.
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited laboratory for monthly monitoring of Stack concentration as well as ambient air quality, as per the monitoring conducted by their team, The results are well within the prescribed norms as per consent condition. Such parameters i.e Ozone, Lead, CO,
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited laboratory for monthly monitoring of Stack concentration as well as ambient air quality, as per the monitoring conducted by their team, The results are well within the prescribed norms as per consent condition. Such parameters i.e Ozone, Lead, CO, Benzene, BAP, Arsenic, Nickel, Ammonia
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited laboratory for monthly monitoring of Stack concentration as well as ambient air quality, as per the monitoring conducted by their team, The results are well within the prescribed norms as per consent condition. Such parameters i.e Ozone, Lead, CO, Benzene, BAP, Arsenic, Nickel, Ammonia are not a part of process as well as not
iv.	quality for CS2 and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not to exceed 100 μ g/m3	 Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises. Unit has appointed NABL accredited laboratory for monthly monitoring of Stack concentration as well as ambient air quality, as per the monitoring conducted by their team, The results are well within the prescribed norms as per consent condition. Such parameters i.e Ozone, Lead, CO, Benzene, BAP, Arsenic, Nickel, Ammonia

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Captive Power Plant (CPP) from 15 MW to 25 MW

Compliance of Environmental Clearance Conditions by M/s. Birla Cellulosic (A unit of Grasim Ind. Ltd.) at Kharach, Hansot, Bharuch, Gujarat

Location	Ambient air Quality							
Parameter	PM10	PM2.5	SO2	NOx	H2S	CS2		
Unit	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3	μg/m3		
Limit	100	60	80	80	150	100		
Apr-23	53.10	34.71	15.79	24.11	27.20	31.28		
May-23	53.84	35.39	15.87	24.67	27.99	32.32		
Jun-23	60.72	36.36	12.92	23.52	24.95	27.79		
Jul-23	57.08	33.64	14.65	25.68	22.18	28.41		
Aug-23	52.20	33.75	15.90	23.26	23.49	29.74		
Sep-23	50.37	33.47	18.19	27.56	21.63	18.26		

o A Summary for Ambient Air quality for the reporting period is given below:

o A Summary for Ambient Air quality for the reporting period is given below:

Location		Ambient air Quality						
Parameter	Ozone	Lead	CO	Benzene	BAP	Arsenic	Nickel	Ammonia
Unit	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	μg/m3	µg/m3
Limit (8 hr	100	0.5	2	5	1	6	20	100
avg.)								
June-23	19.67	ND	0.83	ND	ND	ND	ND	9.57
Sept-23	11.37	ND	0.87	ND	ND	ND	ND	7.80

v.	Fugitive emissions in the work zone	○ Being complied.
	environment shall be periodically monitored	o Regularly monitoring of fugitive emission
	with instruments of proper range and	of CS2, H2S and SO2 in work zone
	emissions shall conform to the standards	environment is being done by an in house
	prescribed by the GPCB.	laboratory and work area monitoring
		reports are regularly submitting to
		concerned govt. authority.
	Action shall be taken to reduce the fugitive	\circ Fugitive emissions in the work zone
	emissions in the work zone environment as	environment are being controlled by
	far as possible.	exploring techniques like Motorized shutter
		& suction hoods on spinning machines &
		cutters, shutters for stretch roller & gear
		box and perfect sealing of all the openings
		in various tanks of spin bath.
		\circ Provision of fresh air by induced draft fans
		is in place at the spinning machines for ease
		of working.
		\circ Online gas detectors installed in the work
		zone around the spinning machines.

Captive Power Plant (CPP) from 15 MW to 25 MW

	through primary, secondary and tertiary treatment and disposed off in the pipeline of	-	ed effluent treatment plar of primary treatment o , settling facility an
	The wastewater shall be treated in the ETP	less than t Agreement.	
		Average (M3/Day)	12612
		Total	2308045
		Sept-23	402851
		Aug-23	415014
		July-23	409288
		June-23	355965
		May-23	366587
		April-23	358340
		Month	Quantity (M3/Month)
vi.	Total water requirement from River Kim shall not exceed 4.09 MGD (18,600 m3/d) as per the 'Permission' accorded by the Govt. of Gujarat.	has been ma 19000 M3/day oA Summary o	it with Irrigation Department ade for water withdrawal @
	Dust collectors shall be provided at transfer points to control fugitive emissions.	after treatmen are there to co o Dust collecti collect the feeding of manufacturing o The charcoal fully sealed w o Cyclone sepa provided for	g process. and coal belt conveyors ar ith provision of water spray. rators & Water scrubbers ar scrubbing out of sodiur from the salt dryer exhaust at

Captive Power Plant (CPP) from 15 MW to 25 MW

M/s Bharuch Enviro. Aqua Infrastructure	secondary treatment of biological system
Ltd. (BEAIL). Approval of the Gujarat	based on extended aeration activated sludge
Pollution Control Board shall be obtained for	process has been installed. The wastewater
alteration in the routing of pipeline for	from the plant is treated in this well-
disposal of effluent.	established ETP.
<u>I</u>	• A separate 24 KM long underground
	pipeline for discharging the treated effluent
	in the estuary of Kim River as approved by
	GPCB. The disposal point was suggested
	by NIO, Goa in 2007.
	\circ There was a typographical error regarding
	the disposal of effluent from using the
	pipeline of Bharuch Enviro Infrastructure
	Ltd. (BEIL) in the letter issued by
	MoEFCC. We requested MoEFCC for
	correction vides our letter dated 9th April
	2007.
The quality of the treated effluent shall	$\circ A$ full-fledged in-house laboratory is
confirm to the standards prescribed by GPCB	established to monitor the parameters round
/ EPA Rules.	the clock.
	• Unit has appointed NABL accredited third
	party laboratory for monthly monitoring of
	waste water from the plant and township is/
	treated in the well-established ETP and
	STP, as per the monitoring conducted by
	their team, the results are well within the
	prescribed norms as per consent condition.
	Month-wise summary for quality of the
	treated effluent is given in below table.
	\circ Under Water conservation program, Unit is
Efforts shall be made to recycle and reuse the	being recycled & reuse the treated waste
treated waste water in the process or used for	water in the process & reduce fresh water
irrigation, agricultural and horticultural	consumption and increase recycling of
purposes at the site.	treated water, by adopting various initiative
Treated effluent from captive power plant	measures.
(CPP) shall be used for spraying coal/ash in	• Treated effluent from captive power plant (CPP) is being used for spraying coal/ash in
power plant itself.	power plant itself.
No treated effluent shall be discharged	\circ No treated effluent is being discharged
anywhere into surface/ subsurface drains and	anywhere into surface/ subsurface drains

Captive Power Plant (CPP) from 15 MW to 25 MW

Compliance of Environmental Clearance Conditions by M/s. Birla Cellulosic (A unit of Grasim Ind. Ltd.) at Kharach, Hansot, Bharuch, Gujarat

/ or into river Kim without prior approval	and / or into river Kim without prior
from the GPCB.	approval from the GPCB.
Domestic wastewater shall be treated in STF	• The Sewage water from the plant and
and used for green belt development.	township is treated in the well-established
una abea foi green cere ae reispinenta	STP and recycled for green belt
	development.

o A Summary of treated effluent for the reporting period is given below:

Parameter	pН	Temp.	S.S.	COD	BOD	Amm. N	Color	Zinc
Unit	-	°C	mg/l	mg/l	mg/l	mg/l	Co-pt u.	mg/l
Limit	6.5-8.5	40	100	250	100	50	100	10
Apr-23	7.56	34.8	47	126	28	5.40	50	0.54
May-23	7.41	36.9	46	142	38	3.90	60	0.36
Jun-23	7.56	32.1	38	118	27	4.3	40	0.48
Jul-23	7.4	31.9	37	134	24	6.2	60	0.57
Aug-23	7.38	29.8	35	121	28	4.1	50	0.38
Sep-23	7.2	33.4	47	122	26	5.3	45	0.56

o A Summary of treated Domestic sewage for the reporting period is given below:

Parameter	TSS	BOD	Residual Free Chlorine	pН
Unit	mg/Lit.	mg/Lit.	mg/Lit.	-
Limit	<30	<20	Min 0.5	-
Apr-23	26	16	0.60	7.31
May-23	21	18	0.80	7.59
Jun-23	19	18	0.70	7.65
Jul-23	24	17	0.80	7.29
Aug-23	21	15	0.70	7.12
Sep-23	19	14	0.82	7.29

The solid waste shall be segregated according o Being complied. vii. • All the wastes are segregated according to its to its calorific content and stored separately composition and stored separately for for treatment and disposal. treatment/disposal. Spent catalyst, Spent resin, Sulphur de-ashing • Generated deashing sludge & Spent catalyst is sludge shall be disposed of at TSDF of M/s disposed to BEIL, TSDF site as stipulated in Bharuch Enviro Infrastructure Ltd. (BEIL), CCA. Ankleshwar, Gujarat. o As per latest CCA-amendment received from GPCB, Spent resin reutilized as a waste to recover energy in CPP for Power & Steam ETP sludge shall be provided to cement generation. manufacturers and properly disposed off and o Generated ETP sludge is provided to cement fly ash shall be provided to brick manufacturers as stipulated in CCA. manufacturers. Used/ waste oil shall be sold • Generated Fly ash is provided to surrounding

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Captive Power Plant (CPP) from 15 MW to 25 MW

Compliance of Environmental Clearance Conditions by M/s. Birla Cellulosic (A unit of Grasim Ind. Ltd.) at Kharach, Hansot, Bharuch, Gujarat

to authorized recyclers/ pre-processors.	local Brick and Cement manufacturers for Co-
	processing as stipulated in the CCA.
	◦ Used oil is being sent to authorised
	recyclers.

• A Summary of hazardous waste treatment and disposal facilities for the reporting period is given below:

	Hazardous Waste Treatment and Disposal Facilities						
Type of waste Schedule No. Quantity			Treatment	Disposal practice			
ETP Sludge	35.3	4100.69	De-watering on belt press & drying. Stored under Gypsum storage shed area.	or Sold to Cement			
Spent Catalyst	17.2	4.59	Stored in Drums and disposal as per CCA condition	Disposed at TSDF, BEIL, Ankleshwar			
Spent Resin	35.2	6	Stored in drums and neutralize	Reutilize for energy recovery in boiler as a waste to energy recovery as per CCA			
Sulphur Deashing sludge	17.1	170.05	Stored in storage rooms which is fully covered	Disposed at TSDF, BEIL, Ankleshwar			
Discarded containers and Liners	33.3	2609 (39.01)	Decontamination is done at user point in Unit and stored in dedicated storage yard				
HDPE Bags	33.3	33.13	Collected and stored in dedicated storage yard	Sold to authorised recycler as per guidelines of CC&A.			
Used oil	5.1	5.07	Collected and stored in drums	Sold to authorised recycler as per guidelines of CC&A.			

viii.	Green belt of adequate width and density	○ <u>Complied.</u>
	shall be developed in 70 ha out of the total	○Adequate Green belt has been developed in
	243 ha project area to mitigate the effect of	the campus along the boundary wall and
	fugitive emissions all round the plant.	open spaces.
	The development of green belt along the	oNative plant species has been selected in
	boundary wall, open space and avenue roads	consultation with DFO and as per the
	shall be provided in consultation with the	directives of DoEF, Mangroves have been

Page 12

Captive Power Plant (CPP) from 15 MW to 25 MW

	local DFO as pert he CPCB guideline.	planted in 100 Ha. at Raniyo Island.
ix.	Rainwater shall be harvested to conserve the	○ Being complied.
1X.	fresh water and recharge the ground water and an action plan shall be submitted to the Ministry.	 Rainwater is being harvested to conserve the fresh water. In the Monsoon season, approx. 408804 M3 rainwater was conserved & utilized within plant premises along with hard water. Currently, we are not recharging ground water. Unit is regularly submitting Monsoon action plan to GPCB every year.
Х.	The project proponent shall comply with the environmental protection measures and Safeguards recommended in EIA / EMP / Risk Analysis reports as well as the recommendations of the public hearing panel.	 <u>Complied</u>. We are complying with environmental protection measures & safeguards recommended in EIA / EMP / Risk Analysis Reports.
xi.	The Company shall undertake eco- development measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan shall be submitted to the GPCB within three months of receipt of this letter for approval.	 ○ Complied. ○ Various Eco development measures in and around 32 villages have been undertaken. Our main focus has been in following 4 areas: ○ Education: ✓ Pre School Education ✓ School Development work ✓ Education Support Project ✓ Vocational & Technical Education Project ✓ School Infrastructure ○ Health Care: ✓ Preventive Health Care ✓ Curative Health Care ✓ Reproductive and Child Health ✓ Health Support Program ✓ Health Infrastructure ✓ Blood donation camp ✓ Nutrition kit distribution to TB patient

Captive Power Plant (CPP) from 15 MW to 25 MW

		○ Infrastructure Development:
		✓ Roads/Culverts/Bridges/Bus Stands
		✓ Community Halls
		✓ Other Community Assets works
		✓ RO plant installation.
		• Social activities:
		✓ Institutional building & strengthening
		✓ Awareness programs
		✓ Social Events
		 Promotion of heritage/culture/Sports
		 ✓ Disaster Relief Programs.
		• Unit has developed green belt area in and
		around plant premises, and obtained certificate from DFO and same is submitted
	As montioned in ELA/EMD De 20.56 Change	to GPCB from the receipt of this order.
xii.	As mentioned in EIA/EMP, Rs.20.56 Crores	• <u>Complied.</u>
	and Rs.6.27 Crores earmarked towards the	• The funds earmarked for the
	capital cost and recurring cost/annum	environmental protection measures are
	respectively for the environmental pollution	being maintained and not diverted for
	control measures shall be used exclusively to	other purpose.
	implement the condition stipulated by the	• A year wise expenditure on environment
	Ministry of Environment & Forests as well as	safeguards & towards Enterprise Social
	the State Government. A time bound	commitment is being submitted to
	implementation schedule for implementing	MOEF&CC at the end of each FY along
	all the conditions stipulated herein shall be	with EC compliance report. Expenses for
	submitted to the Ministry's Regional Office at	FY-24 will be submitted in next EC
	Bhopal. The funds shall not be diverted for	compliance report.
	any other purposes.	o Unit has taken various improvement
		measures to control pollution, which is
		beyond permissible limit, as mentioned
		below:
		• A project of EDTA scrubbing
		technology for recovering Sulphur from H2S gas and CAP system for CS2
		from H2S gas and CAP system for CS2 recovery are under stabilization phase.
		After successfully completion of both
		EDTA & CAP, CS2 recovery will be
		increase.
		o Unit has commissioned an additional

& Captive Power Plant (CPP) from 15 MW to 25 MW

Compliance of Environmental Clearance Conditions by M/s. Birla Cellulosic (A unit of Grasim Ind. Ltd.) at Kharach, Hansot, Bharuch, Gujarat

GEN	ERAL CONDITIONS	 Biological reactor having 15400 m3 capacity, higher efficient jet aerators to meet EUBAT (European best available technology) norms for COD, which is stringent than consented norms. To treat rich concentrated zinc stream, zinc recovery project is under stabilization phase.
i.	The project authorities must strictly adhere to the stipulations made by the Gujarat State Pollution Control Board (GPCB) and the State Government.	 <u>Complied.</u> All stipulations made by GPCB in various consent and authorizations are strictly complied.
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 adequacy of the conditions imposed and to add additional environmental protection measures required, if any.	 <u>Noted.</u> No further expansion or modifications in the plant will be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.
iii.	Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the GPCB. Regular monitoring shall be carried out for relevant parameters.	 <u>Complied.</u> There are 3 locations for influent quality monitoring points and 1 location for effluent quality monitoring station finalized in consultation with the GPCB. Influent quality monitoring points are located at Grit Chamber, Primary Outlet and Secondary outlet and effluent quality monitoring station which is located at Final Outlet. Results are enclosed in reply of point no. vi.
iv.	The project authorities must strictly comply with the rules and regulations under the manufacture, storage and import of Hazardous chemicals Rules, 2000. Prior approvals of Chief Inspector of	 <u>Being complied.</u> Approval for chlorine storage has been taken on 26.09.2018 and valid up to 30.09.2023. Approval for possession and sales of Sulphuric acid has been taken on

Page 15

Captive Power Plant (CPP) from 15 MW to 25 MW

Compliance of Environmental Clearance Conditions by M/s. Birla Cellulosic (A unit of Grasim Ind. Ltd.) at Kharach, Hansot, Bharuch, Gujarat

	Factories, Chief Inspector of	of Explosives, Fi	re 27.02.20	18 and valid up	to 27.02.2028.	
	Safety Inspectorate etc. mus	-	 Approval 	en on 17.03.202	DA gas storage ha 2 and valid up t	
				obtained factory on# 165/171 21, which is	license #6059 an 14/1997 date valid up t	
			being ca Manufac Hazardou	ation of hazard rried out in acc ture, Storage	ng, storage an lous chemicals is cordance with th and Import of Rules 1989 a	
v	The project authorities mu	st strictly comp				
vi	with the rules and regulation handling and disposal of har accordance with the H (Management and Handlin Authorization from the obtained for collection, se and disposal of hazardous w The overall noise levels in plant area shall be kept standard (85 dBA) by provin measures including acoustion enclosures etc. on all se	azardous wastes azardous waste ng) Rules 200 GPCB must b storage, treatme vastes. n and around th well within th ding noise contr c hoods, silencer	in for the H production received consent of 11.04.202 nt o Hazardou as per the ne o Regular around the ol s,	Hazardous and on increase up on 11.09.202 order no. AWH- 24. us waste Rules i e consent stipulat	noise level in an	
	generation.					
	The ambient noise levels sh	all conform to th	e			
	standards prescribed under	. ,				
	Rules,1989 viz.75 dBA (day	y time) and 70				
	dBA (night time)					
0 A si	ummary for noise level moni	toring for the rep	<u> </u>	0]	
SR	. LOCATION	June		NOISE LEVEL [dB (A)] 3 Sept-23		
No		Day	-25 Night	Day	Night	
1	Office- Workshop	54	42	54	42	
2	Gate 1	56	48	56	48	
3	Gate 2	57	50	57	50	
H						

50

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TRADC circle

Page 16

48

Expansion of V	iscose Staple Fibre/	e (VSF) from 60,000	TPA to 1,27,750 TPA
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Captive Power Plant (CPP) from 15 MW to 25 MW

5	Shopping Centre	49	41	48	40
6	D-Block	47	42	47	41
7	School	46	37	45	39
8	Hospital	43	38	43	38

Vii	Occupational health surveillance program shall be undertaken as regular exercise for all the employees, specifically for those engaged in handling hazardous substances. First aid facilities in the Occupational Health Care Centre shall be strengthened and medical records of each employee shall be maintained separately.	 Being complied. Awareness programs are being conduct on health by CMO and by ABG Emergency Code Red. First aid training is being arranged on periodic interval, which covers all categories of employees, workmen. Medical check-up is being conducted annually for all employees and six monthly, for those employees who engaged in handling hazardous substances at work place area. All the Employees are covers under Health Survey. Periodic and pre-joining medical check-up for each & every employees and
viii	A separate Environment Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and monitoring functions.	 check-up for each & every employees and Contractual worker is being done. Medical records of employees and contract workers are maintains online and individual person can access his record as read only from any computer in the Unit. O Complied. A separate environment management cell has been constituted under the leadership of Facility Head. The detailed Organization chart is given below:
	Sanjay Kum Unit Head Manish AVP-Technic	nar Verma -Kharach n Patel
	Hiral Tailor AM-Environment & Sustainability Cell	Dhaval Balai FLE – Environment & Sustainability Cell Page 17

Captive Power Plant (CPP) from 15 MW to 25 MW

ix.	The project proponent shall also comply with	○ <u>Complied</u> .
	all the environmental protection measures	\circ We are complying with all the
	and safeguards recommended in the	environmental protection measures and
	EIA/EMP report.	safeguards recommended in EIA / EMP
		Reports.
Х.	Ministry's Regional Office at Bhopal / GPCB	○ <u>Complied.</u>
	/ CPCB shall monitor the implementation of	• All identified environmental action plans of
	the project vis-a-vis environmental action	project implementation is being complied
	plans. A six monthly compliance status report	and submitted to respective government
	should be submitted to monitoring agencies.	agency
		(Ministry's Regional Office at Bhopal/
		GPCB).
		OSix monthly Compliance report for the
		period of Oct-22 to March-23 was
		submitted in hard/soft copy in May-23.
xi.	The project proponent should advertise in	○ <u>Complied.</u>
	atleast two local newspapers widely	• Environment Clearance was issued on
	circulated in the region around the project,	15.01.2007 and advertisement was
	one of which shall be in the vernacular	published in Gujarati & English language
	language of the locality concerned informing	newspaper on date: 17.01.2007.
	that the project has been accorded	o Newspaper advertisement copy submitted
	environmental clearance by the Ministry and	to GPCB / Committee and same has been
	copies of the clearance letter are available	enclosed below.
	with the Gujarat Pollution Control Board/	
	Committee and may also be seen at Website	
	of the Ministry and Forests at	
	http://envfor.nic.in. The advertisement shall	
	be made within 7 days from the date of issue	
	of the clearance letter and a copy of the same	
	shall be Forwarded to the Ministry's Regional	
	Office at Bhopal.	

	Expansion of Viscose Staple Fibre (VSF &		
	· · · · ·	from 15 MW to 25 MW	
	Compliance of Environmenta		
	M/s. Birla Cellulosic (A unit of Grasim Ind. Lt	d.) at Knarach, Hansot, Bharuch, Gujarat	
	Konstant and the series of the	ભાગમાં ગામ	
xii.	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 land development work.	○ <u>Complied.</u>	
6.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	o <u>Noted.</u>	
7.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company will implement these conditions in a time bound manner.	o <u>Noted.</u>	
8.	The above conditions will be enforced, inter- alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability insurance Act, 1991 along with their amendments and rules.	o <u>Complied.</u>	