



Dated: 01.05.2023

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 "Oct-22 to March-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 "**Oct-22 to March-23**".

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 (Oct-22 to March-23)**

CC To:

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



**Birla Cellulose**  
Fibres from nature

Grasim Industries Limited  
Unit - Birla Cellulosic

Works Birladham, Kharach Kosamba R.S.  
Dist. Bharuch (Gujarat) - 394 120 INDIA  
CIN - L17124MP1947PLC000410

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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 15<sup>th</sup> 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 14<sup>th</sup> 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 4<sup>th</sup> May, 2006 and 14<sup>th</sup> June, 2006.

2.0 The Ministry of Environment and Forests has examined your application. It is noted that 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		
		Existing	Proposed	Total
1.	Viscose Staple Fibre (Main product)	60,000 TPA	67,750	1,27,750
2.	Sodium Sulphate (By product)	38,400 TPA	57,600	96,000
3.	Carbon-disulphide (CS <sub>2</sub> )	10,320 TPA	-	-
4.	Sulphuric acid	66,000 TPA	-	-
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<sub>2</sub> condensers, CS<sub>2</sub> recovery system, cyclone separators, SO<sub>2</sub> 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<sub>2</sub> and H<sub>2</sub>S. Total water requirement from River Kim will be 4.09 MGD (18,600 m<sup>3</sup>/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 28<sup>th</sup> 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 19<sup>th</sup> 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 14<sup>th</sup> September, 2006 subject to strict compliance of the following specific and general conditions:

**A. SPECIFIC CONDITIONS :**

- i. The gaseous emissions (SO<sub>2</sub>, NO<sub>x</sub>, 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<sub>2</sub> and CS<sub>2</sub>) shall be scrubbed by the caustic or wet scrubber from all the stacks. Electrostatic Precipitators (ESPs) shall be installed to control gaseous emissions. CS<sub>2</sub> condensers, CS<sub>2</sub> recovery system & cyclone separators shall be installed to control Sodium sulphate dust. SO<sub>2</sub> scrubber, Sulphur recovery plant shall be installed to control SO<sub>2</sub> emissions. Vents from scrubbers and condensers shall be periodically monitored and maintained as per the best practicable technology. The company shall monitor the CS<sub>2</sub> and H<sub>2</sub>S 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 16<sup>th</sup> October, 2006 regarding ambient air quality and stack emission norms for CS<sub>2</sub> and H<sub>2</sub>S. 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<sub>2</sub> and H<sub>2</sub>S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS<sub>2</sub> and H<sub>2</sub>S emissions not to exceed 100 ug/m<sup>3</sup> and 150 ug/m<sup>3</sup>.
- 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 m<sup>3</sup>/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 eco-development 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 time 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 <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.

- 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.

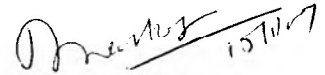
8.0. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments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



**(Dr. P.B. Rastogi)**  
**Additional Director**

Copy to :

1. The Secretary, Department of environment and forests, Govt. of Gujarat, Gandhi Nagar, Gujarat.
2. 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.



**(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 Ltd.)  
Birladham, Village: Kharach, Kosamba (R.S.),  
Tehsil: Hansot, Bharuch (Gujarat) – 394120

**Duration/Reporting period** : Oct-22 to March-23

S. No.	Compliance conditions by MoEF & CC	Action Taken by Birla Cellulosic																									
<b>A.</b>	<b>SPECIFIC CONDITIONS</b>																										
1.	This has reference to your letter no. En/60-17/G/1702 dated 14th March,2006 wherein you have submitted an 'Application' along with project Documents including EIA/EMP report, Questionnaire, Risk assessment and Disaster Management plan etc. seeking environmental clearance under the EIA Notification, 1944 and subsequent clarifications / additional information furnished vide your letters dated 4th May, 2006 and 14th June'2006.	o <b>Noted.</b>																									
2.	<p>The Ministry of Environment and Forests has examined your application. It is noted that 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:</p> <table border="1"> <thead> <tr> <th>S.N.</th> <th>Products</th> <th colspan="3">Capacity of the Plant</th> </tr> <tr> <td></td> <td></td> <th>Existing</th> <th>Proposed</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Viscose Staple Fibre (Main Product)</td> <td>60,000 TPA</td> <td>67,750</td> <td>1,27,750</td> </tr> <tr> <td>2</td> <td>Sodium Sulphate (By Product)</td> <td>38,400 TPA</td> <td>57,600</td> <td>96,000</td> </tr> <tr> <td>3</td> <td>Carbon-disulphide (CS2)</td> <td>10,320 TPA</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	S.N.	Products	Capacity of the Plant					Existing	Proposed	Total	1	Viscose Staple Fibre (Main Product)	60,000 TPA	67,750	1,27,750	2	Sodium Sulphate (By Product)	38,400 TPA	57,600	96,000	3	Carbon-disulphide (CS2)	10,320 TPA	-	-	<p>o <b>Noted</b></p> <ul style="list-style-type: none"> <li>o 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.</li> <li>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.</li> <li>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 having CCA order no. AWH-101226 dated: 23.05.2019 valid up to 11.04.2024.</li> <li>o In second phase, unit has obtained CCA amendment for VSF production capacity up to 1,56,950 TPA having CCA order no. AWH-104181 dated: 29.11.2019 valid up to 11.04.2024.</li> <li>o In continuation with that, unit has obtained CCA amendment for Sodium Sulphate recovery max. up to 1,56,950 TPA having CCA order no. AWH-111124 dated: 19.03.2021 valid up to 11.04.2024.</li> <li>o In third phase, unit has obtained CCA amendment for VSF capacity upto 1,73,375 TPA and Sodium sulphate recovery max up to 1,73,375 TPA having CCA order no. AWH-115368 dated: 30.10.2021</li> </ul>
S.N.	Products	Capacity of the Plant																									
		Existing	Proposed	Total																							
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**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**

	4	Sulphuric Acid	66,000 TPA	-	-	<p>valid up to 11.04.2024.</p> <ul style="list-style-type: none"> <li>○ Unit has obtained CTE-amendment for installation of D.G. Set &amp; EDTA/CAP System, along with increase quantity of production at TRADC on 17.11.2022.</li> <li>○ Unit has obtained one-time-authorization (Temporary permission) for disposal of Deashing sludge disposal @ 150 MT to M/s. BEIL-Ankleshwar beyond permissible quantity in CCA. This permission was valid upto 31.03.2023.</li> <li>○ The expansion project was implemented within the existing plant and no extra land was used.</li> </ul>
	5	Thermal Power Plant	15 MW	10 MW	25 MW	
<p>The existing plant is located in 242.81 ha. and no land will be required for the expansion project.</p>						
3.	<p>CS2 condensers, CS2 recovery system, Cyclone separators, SO2 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 CS2 and H2S.</p>					<ul style="list-style-type: none"> <li>○ <b>Complied.</b></li> <li>○ Unit has 4 spinning machines and each spinning machines has been provided with 3 stage CS2 condensing system.</li> <li>○ For recovering of CS2, there's CS2 recovery system installed which comprising of 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.</li> <li>○ Dust collection systems are provided with cyclones to collect the charcoal dust generated by feeding of charcoal into the CS2 manufacturing process.</li> <li>○ Cyclone separators are provided for recovery of sodium sulphate in the triple effect evaporators for producing anhydrous sodium sulphate.</li> <li>○ Cyclone separators &amp; Water scrubbers are provided for scrubbing out of sodium sulphate dust from the salt dryer exhaust air to avoid dust emission.</li> <li>○ Both sulphuric acid plants has 2- Stage scrubber system for scrubbing SO2 using alkaline solution.</li> <li>○ 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.</li> <li>○ Unit has installed 3 no. boilers, whereas, Boiler No. 1 &amp; 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.</li> <li>○ Unit has installed dust collectors with ash</li> </ul>

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**Compliance of Environmental Clearance Conditions by**

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

	<p>Total water requirement from River Kim will be 4.09 MGD (18,600 m3/d).</p> <p>No treated Effluent will be discharged anywhere into surface/ subsurface drains and/or into river Kim Without prior approval from the SPCB.</p> <p>Treated wastewater will be recycled and reused in the Process or used for green belt development or for spraying coal/ash in power plant.</p> <p>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.</p>	<p>evacuation system to control dust from ash handling area.</p> <ul style="list-style-type: none"> <li>○ The charcoal and coal belt conveyors are fully sealed with provision of water spray.</li> <li>○ The exhaust gases from spinning machines are passed through 175 M height chimney, which is in line with the guidelines stipulated in the consent.</li> <li>○ To control pollution beyond permissible limit, A project of EDTA scrubbing technology for recovering Sulphur from H2S gas and CAP system for CS2 recovery are under construction &amp; erecting phase. The project is expected to be completed by August-23. After commissioning of both EDTA &amp; CAP, the odor will be reduced further &amp; CS2 recovery will be increase. Both the systems jointly are capable to reduce emission load ~33% from existing load.</li> <li>○ An agreement with Irrigation Department has been made for water withdrawal @ 19000 M3/day.</li> <li>○ Unit has constructed a separate 24 KM long underground pipeline for discharging the treated effluent in the estuary of Kim River as approved by GPCB. This disposal point was suggested by NIO, Goa is 2007.</li> <li>○ Treated effluent is being recycled in Belt press washing, Lime slurry making.</li> <li>○ Generated quantity of Fly ash sold to surrounding local Brick and Cement manufacturers as stipulated in CCA.</li> <li>○ Generated quantity of ETP sludge is being sold to cement manufactures as stipulated in CCA.</li> <li>○ Generated quantity of Deashing sludge, Spent Catalyst is being sent to BEIL, TSDF site as stipulated in CCA.</li> <li>○ Generated quantity of Spent resin burnt is boiler for waste to energy recovery as stipulated in CCA.</li> <li>○ Generated quantity of used oil is being sold to authorized recyclers as stipulated in CCA.</li> </ul>
<p>4.</p>	<p>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,</p>	<ul style="list-style-type: none"> <li>○ <b><u>Noted.</u></b></li> </ul>

**Expansion of Viscose Staple Fibre (VSF) from 60,000 TPA to 1,27,750 TPA**

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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**

	2006. Total cost of the project is Rs. 414.77 Crores.	
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:	<b><u>Noted.</u></b>
i.	<p>The gaseous emissions (SO<sub>2</sub>, NO<sub>x</sub>, HC) and particulate matter from various process units shall conform to the standards prescribed by the concerned authorities from time to time.</p> <p>At no time, the emission levels shall go beyond the stipulated standards.</p> <p>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.</p>	<p>o <b><u>Being complied.</u></b></p> <p>o The gaseous emission (SO<sub>2</sub>, NO<sub>x</sub>) and particulate matter generates from power plant unit and CS<sub>2</sub>, H<sub>2</sub>S, SO<sub>2</sub> &amp; acid mist gaseous emission generates from Spinning, CS<sub>2</sub> &amp; Acid plant process are met to the standards prescribed by the concerned authorities from time to time.</p> <p>o No HC is being emitted from Birla cellulosic.</p> <p>o At no time, the emission levels exceed beyond the stipulated standards.</p> <p>o There has been no event of failure of pollution control systems in the last six months.</p> <p>o Moreover, Multiple gas sensors and alarm systems Inter-linking with the pollution control equipment /units provided so that early indication of malfunctioning can be detected and control measures can be taken accordingly. In case of any event of completely failure of pollution control equipment, the respective unit(s) is stopped.</p> <p>o Vents from scrubbers &amp; condensers are monitored periodically by the in-house laboratory (internal laboratory).</p> <p>o Unit has appointed NABL accredited third party laboratory for monthly monitoring of Stack concentration as well as ambient air quality.</p> <p>o As per the monitoring conducted by third party Lab, the results are well within the prescribed norms as per consent condition.</p>

o A Summary for Flue gas emission from stack for the reporting period is given below:

Location	Boiler-1 & 2 (76 m)			Boiler-3 (86 m)			
	SPM	SO <sub>2</sub>	NO <sub>x</sub>	SPM	SO <sub>2</sub>	NO <sub>x</sub>	Mercury
Unit	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
Limit	100	600	600	50	600	300	0.03
Oct-22	54	258	95	43	251	85	---



**Expansion of Viscose Staple Fibre (VSF) from 60,000 TPA to 1,27,750 TPA**

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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**

<b>Nov-22</b>	<b>55</b>	<b>259</b>	<b>96</b>	<b>44</b>	<b>249</b>	<b>85</b>	<b>---</b>
<b>Dec-22</b>	<b>53</b>	<b>254</b>	<b>98</b>	<b>45</b>	<b>246</b>	<b>86</b>	<b>---</b>
<b>Jan-23</b>	<b>55</b>	<b>258</b>	<b>95</b>	<b>45</b>	<b>250</b>	<b>83</b>	<b>---</b>
<b>Feb-23</b>	<b>56</b>	<b>253</b>	<b>97</b>	<b>42</b>	<b>248</b>	<b>86</b>	<b>---</b>
<b>Mar-23</b>	<b>61</b>	<b>256</b>	<b>97</b>	<b>Boiler was not in operation.</b>			

o A Summary for process gas emission from stack for the reporting period is given below:

Location	CS2 Plant + Spinning		Total	Acid plant I		Acid plant II	
	CS2	H2S		SO2	Acid Mist	SO2	Acid Mist
Unit	Kg/ToF			Kg/ToA	mg/Nm3	Kg/ToA	mg/Nm3
Limit	125			2	25	2	25
<b>Oct-22</b>	<b>84.68</b>	<b>19.04</b>	<b>103.72</b>	<b>0.84</b>	<b>15.83</b>	<b>0.72</b>	<b>7.98</b>
<b>Nov-22</b>	<b>86.51</b>	<b>20.54</b>	<b>107.05</b>	<b>0.78</b>	<b>11.92</b>	<b>0.76</b>	<b>6.12</b>
<b>Dec-22</b>	<b>85.18</b>	<b>19.42</b>	<b>104.60</b>	<b>0.83</b>	<b>14.08</b>	<b>0.72</b>	<b>7.05</b>
<b>Jan-23</b>	<b>83.58</b>	<b>20.92</b>	<b>104.50</b>	<b>0.85</b>	<b>12.73</b>	<b>0.75</b>	<b>7.52</b>
<b>Feb-23</b>	<b>85.27</b>	<b>18.86</b>	<b>104.13</b>	<b>0.82</b>	<b>13.96</b>	<b>0.78</b>	<b>8.05</b>
<b>Mar-23</b>	<b>84.79</b>	<b>16.24</b>	<b>101.03</b>	<b>0.84</b>	<b>13.96</b>	<b>0.76</b>	<b>7.95</b>

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.

o **Complied.**

o The mitigation measures adopted to control emissions for CS2/H2S concentration in ambient air is given below.

Process	Emission	Mitigation Measures
<b>Sulphuric Acid Plant(2 nos.)</b>	<b>SO<sub>2</sub></b>	<b>2 - Stage Alkali (Caustic) Scrubber</b>
<b>CS2 Plant</b>	<b>CS2/H2S</b>	<b>Sulphur Recovery system</b>
<b>Sulphur Recovery Plant</b>	<b>SO<sub>2</sub></b>	<b>Alkali (Caustic) Scrubber</b>
<b>Spinning Machine (4 nos)</b>	<b>CS2</b>	<b>CS2 recovery system having a water scrubber and 3-stage condensers for recovering CS2 and Exhaust system</b>

**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**

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			connected with stack
		<b>Sodium Sulphate Recovery plant</b>	<b>Sodium Sulphate dust</b> <b>Cyclone Separator &amp; Water scrubber</b>
		<b>Boiler</b>	<b>Gaseous Emission</b> <b>ESP &amp; Lime dosing system</b>
iii.	The technology employed shall achieve standards notified by the Ministry for the Rayon Industry vide Gazette Notification No. 195 dated 16 <sup>th</sup> 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.	<ul style="list-style-type: none"> <li>o Complied.</li> <li>o The technology employed has already achieved standards notified by the Ministry for the Rayon Industry vide Gazette Notification No. 798, part-II – Sec. 3(i) dated 9th November,2018 regarding Environmental Standard for Man-Made fibre industry.</li> <li>o Every six monthly compliance report is being submitted to GPCB &amp; MOEFCC office. Six monthly Compliance report for the period of April-22 to Sept-22 was submitted in hard/soft copy in Nov-22.</li> <li>o As an additional system/technology, A project of EDTA scrubbing technology for recovering Sulphur from H2S gas and CAP system for CS2 recovery are under construction &amp; erecting phase. The project is expected to be completed by August-2023. After commissioning of both EDTA &amp; CAP, the odor will be reduced further &amp; CS2 recovery will be increase. Both the systems jointly are capable to reduce emission load ~33% from existing load.</li> </ul>	
iv.	The industry shall measure ambient air 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 µg/m <sup>3</sup> and 150 µg/m <sup>3</sup> .	<ul style="list-style-type: none"> <li>o <b><u>Being complied.</u></b></li> <li>o Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB.</li> <li>o Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises.</li> <li>o Unit has appointed NABL accredited laboratory for monthly monitoring of Stack concentration as well as ambient air quality, as per the</li> </ul>	

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	<p>monitoring conducted by their team, The results are well within the prescribed norms as per consent condition.</p> <ul style="list-style-type: none"> <li>○ Such parameters i.e Ozone, Lead, CO, Benzene, BAP, Arsenic, Nickel, Ammonia are not a part of process as well as not being generating. Analysis of same is being conducted on periodic basis.</li> </ul>
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○ A Summary for Ambient Air quality for the reporting period is given below:

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
Oct-22	52.40	32.70	16.99	24.39	29.12	33.19
Nov-22	51.80	32.94	16.55	24.99	28.68	32.62
Dec-22	51.92	33.39	17.44	24.08	29.18	32.37
Jan-23	54.39	36.31	16.95	24.60	28.35	33.69
Feb-23	52.53	35.01	15.82	25.29	27.49	31.93
Mar-23	54.69	36.35	16.95	24.75	27.75	32.47

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

Location	Ambient air Quality					
Parameter	Ozone	Lead	CO	Benzene	BAP	Arsenic
Unit	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
Limit (8 hr avg.)	100	0.5	2	5	1	6
Nov-22	20.07	ND	0.70	ND	ND	ND
Feb-23	18.37	ND	0.71	ND	ND	ND

v.	<p>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.</p> <p>Action shall be taken to reduce the fugitive emissions in the work zone environment as far as possible.</p>	<ul style="list-style-type: none"> <li>○ <b><u>Being complied.</u></b></li> <li>○ Regularly monitoring of fugitive emission of CS2, H2S and SO2 in work zone environment is being done by an in house laboratory and work area monitoring reports are regularly submitting to concerned govt. authority.</li> <li>○ Fugitive emissions in the work zone environment are being controlled by exploring techniques like Motorized shutter &amp; suction hoods on spinning machines &amp; cutters, shutters for stretch roller &amp; gear box and perfect sealing of all the openings in various tanks of spin bath.</li> <li>○ Provision of fresh air by induced draft fans is in place at the spinning machines for ease of working.</li> <li>○ Online gas detectors installed in the work zone</li> </ul>
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	<p>Dust collectors shall be provided at transfer points to control fugitive emissions.</p>	<p>around the spinning machines. Motorized shutters and completely closed after treatment machine with suction duct are there to control fugitive emission.</p> <ul style="list-style-type: none"><li>○ Dust collection systems are provided to collect the charcoal dust generated by feeding of charcoal into the CS2 manufacturing process.</li><li>○ The charcoal and coal belt conveyors are fully sealed with provision of water spray.</li><li>○ Cyclone separators &amp; Water scrubbers are provided for scrubbing out of sodium sulphate dust from the salt dryer exhaust air to avoid dust emission.</li></ul>																
vi.	<p>Total water requirement from River Kim shall not exceed 4.09 MGD (18,600 m<sup>3</sup>/d) as per the 'Permission' accorded by the Govt. of Gujarat.</p> <p>The wastewater shall be treated in the ETP through primary, secondary and tertiary treatment and disposed off in the pipeline of M/s Bharuch Enviro. Aqua Infrastructure Ltd. (BEAIL). Approval of the Gujarat Pollution Control Board shall be obtained for alteration in the routing of pipeline for disposal of effluent.</p>	<ul style="list-style-type: none"><li>○ <b><u>Noted &amp; Complied.</u></b></li><li>○ An agreement with Irrigation Department has been made for water withdrawal @ 19000 M<sup>3</sup>/day.</li><li>○ A Summary of water Consumption for the reporting period is given below:</li></ul> <table border="1" data-bbox="899 991 1357 1381"><thead><tr><th>Month</th><th>Quantity (M<sup>3</sup>/Month)</th></tr></thead><tbody><tr><td>Oct-22</td><td>374558</td></tr><tr><td>Nov-22</td><td>339073</td></tr><tr><td>Dec-22</td><td>329315</td></tr><tr><td>Jan-23</td><td>332025</td></tr><tr><td>Feb-23</td><td>305595</td></tr><tr><td>Mar-23</td><td>352824</td></tr><tr><td>Total</td><td>2033390</td></tr></tbody></table> <ul style="list-style-type: none"><li>○ The Half- yearly average water Consumption is 11172 M<sup>3</sup>/day, which is less than the quantity mentioned in Agreement.</li><li>○ A full-fledged effluent treatment plant comprising of primary treatment of neutralization, settling facility and secondary treatment of biological system based on extended aeration activated sludge process has been installed. The waste water from the plant is treated in this well-established ETP.</li><li>○ A separate 24 KM long underground pipeline for discharging the treated effluent in the</li></ul>	Month	Quantity (M <sup>3</sup> /Month)	Oct-22	374558	Nov-22	339073	Dec-22	329315	Jan-23	332025	Feb-23	305595	Mar-23	352824	Total	2033390
Month	Quantity (M <sup>3</sup> /Month)																	
Oct-22	374558																	
Nov-22	339073																	
Dec-22	329315																	
Jan-23	332025																	
Feb-23	305595																	
Mar-23	352824																	
Total	2033390																	

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<p>The quality of the treated effluent shall conform to the standards prescribed by GPCB / EPA Rules.</p> <p>Efforts shall be made to recycle and reuse the treated waste water in the process or used for irrigation, agricultural and horticultural purposes at the site.</p> <p>Treated effluent from captive power plant (CPP) shall be used for spraying coal/ash in power plant itself.</p> <p>No treated effluent shall be discharged anywhere into surface/ subsurface drains and / or into river Kim without prior approval from the GPCB.</p> <p>Domestic wastewater shall be treated in STP and used for green belt development.</p>	<p>estuary of Kim River as approved by GPCB. The disposal point was suggested by NIO, Goa in 2007.</p> <ul style="list-style-type: none"><li>○ 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 vide our letter dated 9th April 2007.</li><li>○ A full-fledged in-house laboratory is established to monitor the parameters round the clock.</li><li>○ 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.</li><li>○ Under Water conservation program, Unit is being recycled &amp; reuse the treated waste water in the process &amp; reduce fresh water consumption and increase recycling of treated water, by adopting various initiative measures.</li><li>○ Treated effluent from captive power plant (CPP) is being used for spraying coal/ash in power plant itself.</li><li>○ No treated effluent is being discharged anywhere into surface/ subsurface drains and / or into river Kim without prior approval from the GPCB.</li><li>○ The Sewage water from the plant and township is treated in the well-established STP and recycled for green belt development.</li></ul>
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o A Summary of treated effluent for the reporting period is given below:

Parameter	pH	Temp.	S.S.	COD	BOD	Amm. N	Color	Zinc
Unit	-	°C	mg/l	mg/l	mg/l	mg/l	Co-pt u.	mg/l
<b>Limit</b>	<b>6.5-8.5</b>	<b>40</b>	<b>100</b>	<b>250</b>	<b>100</b>	<b>50</b>	<b>100</b>	<b>10</b>
Oct-22	7.6	30.2	43	127	25	4.1	35	0.83
Nov-22	7.1	32.2	36	134	32	3.9	40	0.43
Dec-22	7.3	31.9	49	129	28	3.1	50	0.58
Jan-23	7.4	29.9	31	136	24	5.1	40	0.79
Feb-23	7.4	30.0	47	126	34	7.2	30	0.57
Mar-23	7.3	31.6	49	122	26	6.6	40	0.77

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

Parameter	TSS	BOD	Residual Free Chlorine	pH
Unit	mg/Lit.	mg/Lit.	mg/Lit.	-
<b>Limit</b>	<b>&lt;30</b>	<b>&lt;20</b>	<b>Min 0.5</b>	<b>-</b>
Oct-22	24	15	0.80	7.63
Nov-22	28	19	0.80	7.39
Dec-22	27	12	1.00	7.59
Jan-23	16	18	0.80	7.68
Feb-23	25	16	0.90	7.52
Mar-23	19	12	0.80	7.25

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 of at TSDF of M/s Bharuch Enviro Infrastructure Ltd. (BEIL), 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/ pre-processors.

o **Being complied.**

o All the wastes are segregated according to its composition and stored separately for treatment/disposal.

o Generated deashing sludge & Spent catalyst is disposed to BEIL, TSDF site as stipulated in CCA.

o As per latest CTO-amendment received from GPCB, Spent resin reutilized as a waste to recover energy in CPP for Power & Steam generation.

o Generated ETP sludge is provided to cement manufacturers as stipulated in CCA.

o Generated Fly ash is provided to surrounding local Brick and Cement manufacturers for Co-processing as stipulated in the CCA.

o Used oil is being sent to authorised recyclers.

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

<b>Hazardous Waste Treatment and Disposal Facilities</b>				
Type of waste	Schedule No.	Quantity	Treatment	Disposal practice
ETP Sludge	35.3	3655.32 MT	De-watering on belt press & drying. Stored under Gypsum storage shed area.	Disposal at TSDF BEIL, or <b>Sold to Cement industries</b>



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Spent Catalyst	17.2	1.46 MT	Stored in Drums and disposal as per CCA condition	Disposed at TSDF, BEIL, Ankleshwar
Spent Resin	35.2	-	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	466.5 MT	Stored in storage rooms which is fully covered	Disposed at TSDF, BEIL, Ankleshwar
Discarded containers and Liners	33.3	2636 No.	Decontamination is done at user point in Unit and stored in dedicated storage yard	Sold to authorised recycler as per guidelines of CC&A.
HDPE Bags	33.3	25.71 MT	Collected and stored in dedicated storage yard	Sold to authorised recycler as per guidelines of CC&A.
Used oil	5.1	6.38 MT	Collected and stored in drums	Sold to authorised recycler as per guidelines of CC&A.

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 guideline.	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o Adequate Green belt has been developed in the campus along the boundary wall and open spaces.</li> <li>o Native plant species has been selected in consultation with DFO and as per the directives of DoEF, Mangroves have been planted in 100 Ha. at Raniyo Island.</li> </ul>
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.	<ul style="list-style-type: none"> <li>o <b><u>Being complied.</u></b></li> <li>o Rainwater is being harvested to conserve the fresh water. In the Monsoon season, approx. 197634 M3 rain water was conserved &amp; utilized within plant premises along with hard water.</li> <li>o Currently, we are not recharging ground water.</li> <li>o Unit is regularly submitting Monsoon action plan to GPCB every year.</li> </ul>
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.	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o We are complying with environmental protection measures &amp; safeguards recommended in EIA / EMP / Risk Analysis Reports.</li> </ul>
xi.	The Company shall undertake eco-development	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> </ul>

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	<p>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.</p>	<ul style="list-style-type: none"> <li>○ Various Eco development measures in and around 32 villages have been undertaken. Our main focus has been in following 4 areas:</li> <li>○ Education: <ul style="list-style-type: none"> <li>✓ Pre School Education</li> <li>✓ School Development work</li> <li>✓ Education Support Project</li> <li>✓ Vocational &amp; Technical Education Project</li> <li>✓ School Infrastructure</li> </ul> </li> <li>○ Health Care: <ul style="list-style-type: none"> <li>✓ Preventive Health Care</li> <li>✓ Curative Health Care</li> <li>✓ Reproductive and Child Health</li> <li>✓ Health Support Program</li> <li>✓ Health Infrastructure</li> <li>✓ Blood donation camp</li> <li>✓ Nutrition kit distribution to TB patient</li> </ul> </li> <li>○ Infrastructure Development: <ul style="list-style-type: none"> <li>✓ Roads/Culverts/Bridges/Bus Stands</li> <li>✓ Community Halls</li> <li>✓ Other Community Assets works</li> <li>✓ RO plant installation.</li> </ul> </li> <li>○ Social activities: <ul style="list-style-type: none"> <li>✓ Institutional building &amp; strengthening</li> <li>✓ Awareness programs</li> <li>✓ Social Events</li> <li>✓ Promotion of heritage/culture/Sports</li> <li>✓ Disaster Relief Programs.</li> </ul> </li> <li>○ Unit has developed green belt area in and around plant premises, and obtained certificate from DFO and same is submitted to GPCB from the receipt of this order.</li> </ul>
<p>xii.</p>	<p>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 condition stipulated by the Ministry of Environment &amp; Forests as well as the State Government. A time bound implementation schedule for implementing all the conditions stipulated herein shall be submitted to the</p>	<ul style="list-style-type: none"> <li>○ <b><u>Being complied.</u></b></li> <li>○ As committed in the EIA / EMP, unit has installed following key equipment for pollution control historically. <ul style="list-style-type: none"> <li>▪ ESP with three field for boiler # 1 &amp; 2</li> <li>▪ ESP with four field for boiler # 3</li> <li>▪ OCEMS for Boilers</li> <li>▪ Bar screen # 2</li> <li>▪ Sump zone # 3</li> </ul> </li> </ul>

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	<p>Ministry's Regional Office at Bhopal. The funds shall not be diverted for any other purposes.</p>	<ul style="list-style-type: none"> <li>▪ Primary clarifier # 2</li> <li>▪ Secondary clarifier # 2</li> <li>▪ Biological reactor # 2</li> <li>▪ Belt press # 4 (incl. mono belt press)</li> <li>▪ OCEMS with ETP Plant # 1</li> <li>▪ OCEMS with Power Plant # 2</li> <li>▪ Adequate stack with APCM.</li> <li>▪ Gypsum shed was constructed.</li> <li>▪ Deashing sludge yard was constructed.</li> </ul> <p>○ A time bound implementation schedule for implementing all the conditions stipulated has been submitted to the Ministry's Regional Office at Bhopal.</p> <p>○ A year wise expenditure on environment safeguards &amp; towards Enterprise Social commitment is being submitted to MOEF and CC at the end of each FY along with EC compliance report. In FY'23, 175.45 Crores spent towards Environmental protection measures, which is incl. costing towards enterprise social commitment.</p>
<p><b>GENERAL CONDITIONS</b></p>		
<p>i.</p>	<p>The project authorities must strictly adhere to the stipulations made by the Gujarat State Pollution Control Board (GPCB) and the State Government.</p>	<p>○ <b><u>Complied.</u></b></p> <p>○ All stipulations made by GPCB in various consent and authorizations are strictly complied.</p>
<p>ii.</p>	<p>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.</p>	<p>○ <b><u>Noted.</u></b></p> <p>○ No further expansion or modifications in the plant will be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.</p>
<p>iii.</p>	<p>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.</p>	<p>○ <b><u>Complied.</u></b></p> <p>○ There are 3 locations for influent quality monitoring points and 1 location for effluent quality monitoring station finalized in consultation with the GPCB.</p> <p>○ Influent quality monitoring points are located at</p>

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

		<p>Grit Chamber, Primary Outlet and Secondary outlet and effluent quality monitoring station which is located at Final Outlet.</p> <p>o Results are enclosed in reply of point no. vi.</p>
iv.	<p>The project authorities must strictly comply with the rules and regulations under the manufacture, storage and import of Hazardous chemicals Rules, 2000.</p> <p>Prior approvals of Chief Inspector of Factories, Chief Inspector of Explosives, Fire Safety Inspectorate etc. must be obtained.</p>	<p>o <b><u>Being complied.</u></b></p> <p>o Approval for chlorine storage has been taken on 26.09.2018 and valid up to 30.09.2023.</p> <p>o Approval for possession and sales of Sulphuric acid has been taken on 27.02.2018 and valid up to 27.02.2023. Renewal application for same is submitted to SDM office on 25.01.2023 &amp; expected to be received approval soon.</p> <p>o Approval for Ammonia, DA gas storage has been taken on 17.03.2022 and valid up to 30.09.2027.</p> <p>o Unit has obtained factory license #6059 and registration# 165/17114/1997 dated 06.07.2021 which is valid up to 31.12.2026.</p> <p>o Handling, manufacturing, storage and transportation of hazardous chemicals is being carried out in accordance with the Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended time to time.</p>
v	<p>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.</p>	<p>o <b><u>Being complied.</u></b></p> <p>o CCA-Amendment (including authorization for the Hazardous and Other Wastes) for production increase upto 1,73,375 TPA received on 30.10.2021 having GPCB consent order no. AWH-115368 valid up to 11.04.2024.</p> <p>o Hazardous waste Rules is fully complying as per the consent stipulated norms.</p>
vi	<p>The overall noise levels in and around the plant area shall be kept well within the standard (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation.</p> <p>The ambient noise levels shall conform to the standards prescribed under Environment(P) Rules,1989 viz.75 dBA (day time) and 70 dBA (night time)</p>	<p>o Regular monitoring the noise level in and around the plant area is being conducted.</p>

**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**

SR. No.	LOCATION	NOISE LEVEL [dB (A)]			
		Dec-22		March-23	
		Day	Night	Day	Night
1	Office- Workshop	53	46	53	46
2	Gate 1	56	48	54	49
3	Gate 2	57	50	56	51
4	TRADC circle	50	48	50	49
5	Shopping Centre	51	39	50	40
6	D-Block	49	41	48	41
7	School	44	39	45	41
8	Hospital	43	38	43	38

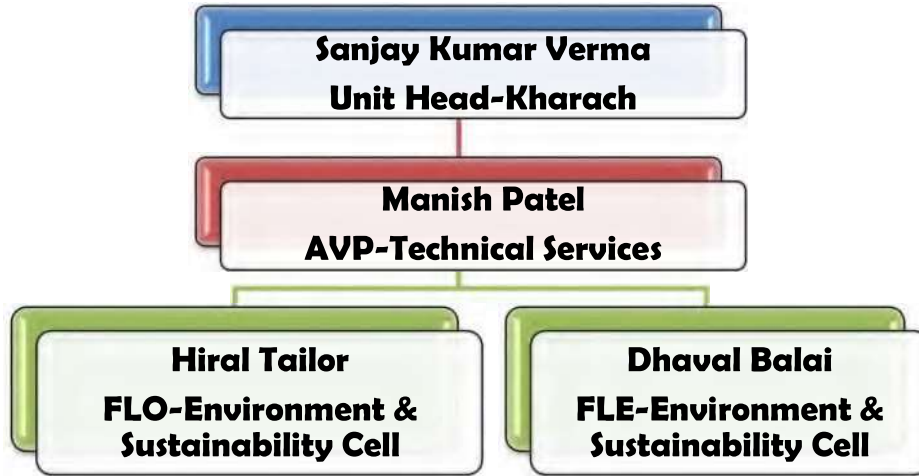
vii	Occupational health surveillance program shall be undertaken as regular exercise for all the employees, specifically for those engaged in handling hazardous substances. First aid facilities in the Occupational Health Care Centre shall be strengthened and medical records of each employee shall be maintained separately.	<ul style="list-style-type: none"> <li>o Awareness programs are being conducted on health by CMO and by ABG Emergency Code Red.</li> <li>o First aid training is being arranged on periodic interval, which covers all categories of employees, workmen.</li> <li>o 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.</li> <li>o All the Employees are covered under Health Survey. Periodic and pre-joining medical check-up for each and every employees and Contractual worker is being done.</li> <li>o Medical records of employees and contract workers are maintained online and individual person can access his record as read only from any computer in the Unit.</li> </ul>
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.	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o A separate environment management cell has been constituted under the leadership of Facility Head.</li> <li>o The detailed Organization chart is given below:</li> </ul>

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


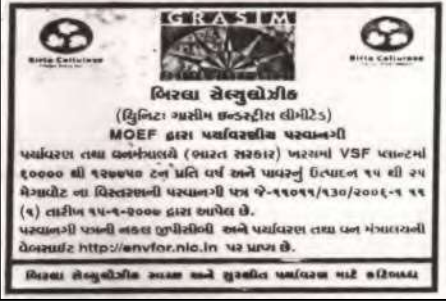


ix.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.	<ul style="list-style-type: none"><li>o <b>Complied.</b></li><li>o We are complying with all the environmental protection measures and safeguards recommended in EIA / EMP Reports.</li></ul>
x.	The implementation of the project vis-a-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.	<ul style="list-style-type: none"><li>o <b>Complied.</b></li><li>o All identified environmental action plans of project implementation is being complied and submitted to respective government agency (Ministry's Regional Office at Bhopal/ GPCB).</li><li>o Six monthly Compliance report for the period of April-22 to Sept-22 was submitted in hard/soft copy in Nov-22.</li></ul>
xi.	The project proponent should advertise in atleast 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 <a href="http://envfor.nic.in">http://envfor.nic.in</a> . 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.	<ul style="list-style-type: none"><li>o <b>Complied.</b></li><li>o Environment Clearance was issued on 15.01.2007 and advertisement was published in Gujarati &amp; English language newspaper on date: 17.01.2007.</li><li>o Newspaper advertisement copy submitted to GPCB / Committee and same has been enclosed below.</li></ul>



**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**

	
<p>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.</p>	<p>o <b><u>Complied.</u></b></p>
<p>6. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.</p>	<p>o <b><u>Noted.</u></b></p>
<p>7. The Ministry reserves the right to stipulate additional conditions if found necessary. The company will implement these conditions in a time bound manner.</p>	<p>o <b><u>Noted.</u></b></p>
<p>8. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention &amp; 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.</p>	<p>o <b><u>Complied.</u></b></p>



Dated: 28.04.2023

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 "Oct-22 to March-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-1997, No. J. 11012/85/95-IA II (I) dtd. 16.01.1997 for the report period from "Oct-22 to March-23".  
Hope, the same is in order.

Yours Faithfully,  
(For Birla Cellulosic)

Manish Patel  
LH- Technical Services

Encl. :

1. EC Copy
2. EC-1997 Compliance report (Oct-22 to March-23)

CC To:

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



**Birla Cellulose**  
Fibres from nature

GOVT. OF INDIA  
MINISTRY OF ENVIRONMENT & FOREST  
PARYAVARAN BHAWAN, CGO COMPLEX  
LODHI ROAD, NEW DELHI-110003.

TELE : 4363964.

Dated 16.1.97

To,

The Chairman & Managing Director,  
Birla Cellulosic (Grasim Industries Ltd.)  
4th Floor, UCO Bank Building,  
Parliament Street,  
New Delhi-110001

Subject:- Viscose Staple Fibre Plant at Bharuch Environmental Clearance.

Sir,

This has reference to letter dated 1st August, 1995, 27th March, 1996 and 30th September, 1996 regarding your application for setting up a 60,000 TPA capacity Viscose Staple Fibre Plant and 15 MW coal based CPP at Bharuch District, Gujarat. The Ministry of Environment and Forests has carefully examined your application. It is observed that no forest land or rehabilitation is involved. The plant is based on imported pulp.

2. The Ministry of Environment and Forests hereby accords environmental clearance subject to the strict compliance of the terms and conditions mentioned below:-

- i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- ii. No further expansion or modifications in the plant should be carried out without prior approval of this Ministry.
- iii. The industry should set up a pilot plant and standardize the technology for incineration of CS<sub>2</sub>/H<sub>2</sub>S rich stream before commissioning the plant. The feasibility of incinerating the entire stream containing CS<sub>2</sub> and H<sub>2</sub>S instead of segregating and burning only CS<sub>2</sub> and H<sub>2</sub>S stream should also be explored and report submitted to the



Ministry within a period of 1 year for review. The emission of H<sub>2</sub>S should not exceed 10 mg/Nm<sup>3</sup>.

- iv. Gaseous and particulate emissions (H<sub>2</sub>S, SO<sub>2</sub>, CS<sub>2</sub>, NO<sub>x</sub> and SPM) from the various process units should conform to the standards prescribed by the concerned authorities from time to time. At no time, the emissions level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be put out of operation immediately and should not be restarted until the control measures are rectified to achieve the desired efficiency.
- v. Six air quality monitoring stations should be set up in the down wind direction as well as where maximum ground level concentrations of H<sub>2</sub>S, SPM, SO<sub>2</sub>, CS<sub>2</sub>, NO<sub>x</sub> are anticipated in consultation with the State Pollution Control Board. The air quality monitoring stations should be selected on the basis of modelling exercise to represent short term ground level concentrations, sensitive targets etc.  
  
Stack emissions should be monitored regularly by setting stack monitoring devices in consultation with the State Pollution Control Board.  
  
Data on stack emissions and ambient air quality including work zone should be submitted to this Ministry once in six months and the State Pollution Control Board once in three months along with the statistical analysis.
- vi. Work area air quality should meet the standards prescribed by the competent authorities/OSHA. CS<sub>2</sub> level should be less than 100 ppm in the work zone. Leakages from the ducts should be rectified, meshing windows should be sealed and better house keeping should be practiced to improve the work area air quality.
- vii. Fugitive emissions should be controlled, regularly monitored and data recorded. Sensors for detection of CS<sub>2</sub> and H<sub>2</sub>S and chlorine should be provided at appropriate places in the complex in consultation with the State Pollution Control Board.
- viii. Liquid effluents coming out of the plant and the township should comply with the norms stipulated by the competent authorities from time to time. Recycling and reuse of the treated waste water should be maximised to the extent possible.
- ix. Guard ponds of sufficient holding capacity should be provided to cope up with the effluent discharge during the process disturbances. The contributing units should be immediately shut down and should not be restarted without bringing the system back to normalcy.



- x. Adequate number of effluent quality monitoring stations should be set up in consultation with the State Pollution Control Board. Regular monitoring should be carried out for PH, S, BOD<sub>3</sub>, COD, Zn and colour. The monitored data along with statistical analysis and interpretation in the form of a report should be submitted to this Ministry once in six months and the SPCB once in three months.
- xi. Marine Impact Assessment Study report should be submitted to the Ministry for review. Recommendations made by NIO in the Marine Impact Study should be strictly adhered to the Marine outfall point for discharge of treated effluent should also have the approval of SPCB.
- xii. The hazardous wastes should be handled as per Hazardous Waste (Management & Handling) Rules, 1989 of the Environment (Protection) Act, 1986.
- xiii. Handling, manufacturing, storage and transportation of hazardous chemicals should be carried out in accordance with the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994.

The approval of the Chief Inspector of Explosives should also be obtained.

- xiv. Medical surveillance and occupational health programme should be taken up on regular basis and record of the health status of the workers should be maintained. The worker's who may contract occupational diseases particularly due to carbon disulphide exposure should be monitored closely and adequate measures should be taken for their treatment and recovery.
- xv. A Green belt of adequate width and density (2000-2600 trees/ha) should be raised all around the factory complex and the township. Preferably native plant species should be selected for this purpose in consultation with the local DFO.
- xvi. The project authorities must set up adequate facilities for collection and analysis of samples under the supervision of competent technical personnel who will directly report to the Chief Executive.
- xvii. A separate Environmental Management Cell with suitably qualified people to carry out various functions should be set up under the control of Senior Executive, who will report directly to the Head of the organisation.
- xviii. The funds earmarked for the environmental protection measures should be kept in a separate account and should not be diverted for other purpose and year-wise expenditure



should be reported to this Ministry.

3. This Ministry or any competent authority may stipulate any further condition(s) after review of the monitoring reports. The above conditions will be monitored by the Regional Office of this Ministry located at Bhopal/CPCB/GSPCB.

4. The Ministry may revoke or suspend the clearance if implementation of any of the above condition is not satisfactory.

5. Any other condition(s) or alteration in the existing conditions will be fully implemented by the project authorities within the specified time frame.

6. The above conditions will be implemented under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and the Public (Liability) Act, 1991 along with their amendments.

*Warrier*  
(Dr. R. Warrier)  
Joint Director

Copy to:-

1. Secretary, Ministry of Industry, Udyog Bhavan, New Delhi.
2. Chairman, Gujarat State Pollution Control Board, Old Assembly Bldg, 2nd Floor, Sector 10-A, Gandhinagar.
3. Chairman Central Pollution Control Board, Parivesh Bhavan, East Arjun Nagar, Delhi.
4. Secretary, State-Deptt. of Env. Govt. of Gujarat Sachivalaya, Block No. 5, 6th Floor, Gandhinagar.
5. Chief Conservator of Forests, Regional office, 3/240, Arear Colony, Bhopal.
6. Adviser (H), EI Section, Ministry of Environment & Forest, New Delhi.
7. Additional Director (Monitoring Cell), Ministry of Environment and Forests, Paryavaran Bhavan, New Delhi.



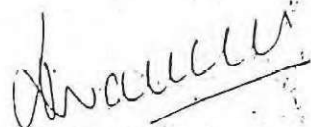
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(Dr. R. Warriar)  
Joint Director

Copy to:-

1. Secretary, Ministry of Industry, Udyog Bhavan, New Delhi.
2. Chairman, Gujarat State Pollution Control Board, Old Assembly Bldg, 2nd Floor, Sector 10-A, Gandhinagar.
3. Chairman Central Pollution Control Board, Parivesh Bhavan, East Arjun Nagar, Delhi.
4. Secretary, State Deptt. of Env. Govt. of Gujarat Sachivalaya, Block No. 5, 6th Floor, Gandhinagar.
5. Chief Conservator of Forests, Regional office, 3/240. Arear Colony, Bhopal.
6. Adviser (H), EI Section, Ministry of Environment & Forest, New Delhi.
7. Additional Director (Monitoring Cell), Ministry of Environment and Forests, Paryavaran Bhavan, New Delhi.

8. Guard File
9. Record File.
10. Monitoring File

(Dr.R.Warrier)  
Joint Director

## Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

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

**Name of Project** : Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

**EC letter no. & Date** : J-11012/85/95-IA II(I) dated 16-01-1997

**Address for Correspondence** : M/s. Birla Cellulosic (A Unit of Grasim Industries Ltd.)  
Birladham, Village: Kharach, Kosamba (R.S.),  
Tehsil: Hansot, District: Bharuch (Gujrat) – 394120

**Duration/Reporting period** : Oct-22 to March-23

S. No	Conditions	Compliance Status
1.	This has reference to letter dated 1st August, 1995, 27th March, 1996 and 30th September, 1996 regarding your application for setting up a 60,000 TPA capacity viscose staple fibre plant and 15 MW coal based CPP at Bharuch District, Gujarat. The Ministry of Environment and forests has carefully examined your application. It is observed that no forest land or rehabilitation is involved. The plant is based on Imported Pulp.	<ul style="list-style-type: none"> <li>○ <b>Noted</b></li> <li>○ Unit has obtained EC for VSF production capacity up to 1,27,750 TPA along with 25 MW CPP on 15.01.2007.</li> <li>○ 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.</li> <li>○ 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.</li> <li>○ 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 &amp; 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.</li> <li>○ In second phase, unit has obtained CCA amendment for VSF production capacity up to 1,56,950 TPA having CCA order no. AWH-104181 dated: 29.11.2019 valid up to 11.04.2024.</li> <li>○ In continuation with that, unit has obtained CCA amendment for Sodium Sulphate recovery max. up to 1,56,950 TPA having CCA order no. AWH-111124 dated:</li> </ul>

## Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

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

S. No	Conditions	Compliance Status
		<p>19.03.2021 valid up to 11.04.2024.</p> <ul style="list-style-type: none"> <li>○ In third phase, unit has obtained CCA amendment for VSF capacity upto 1,73,375 TPA and Sodium sulphate recovery max up to 1,73,375 TPA having CCA order no. AWH-115368 dated: 30.10.2021 valid up to 11.04.2024.</li> <li>○ <b>Unit has obtained CTE-amendment for installation of D.G. Set &amp; EDTA/CAP System, along with increase quantity of production at TRADC on 17.11.2022.</b></li> <li>○ <b>Unit has obtained one-time-authorization (Temporary permission) for disposal of Deashing sludge disposal @ 150 MT to M/s. BEIL-Ankleshwar beyond permissible quantity in CCA. This permission was valid upto 31.03.2023.</b></li> <li>○ The expansion project was implemented within the existing plant and no extra land was used.</li> </ul>
2.	The Ministry of Environment and Forests hereby accords environmental clearance subject to the strict compliance of the terms and conditions mentioned below:	<ul style="list-style-type: none"> <li>○ <b><u>Noted &amp; shall be complied.</u></b></li> </ul>
i.	The project authorities must strictly here to the stipulations made by the state pollution control board and the state Government.	<ul style="list-style-type: none"> <li>○ <b><u>Complied.</u></b></li> <li>○ All stipulations made by GPCB in various consent and authorizations are strictly complied.</li> </ul>
ii.	No further expansion or modification in the plant should be carried out without prior approval of this ministry.	<ul style="list-style-type: none"> <li>○ <b><u>Noted.</u></b></li> <li>○ No further expansion or modifications in the plant will be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.</li> </ul>

## Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

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

S. No	Conditions	Compliance Status
iii.	The industry should set up a pilot plant and standardize the technology for incineration of CS <sub>2</sub> /H <sub>2</sub> S rich stream before commissioning the plant. The feasibility of incinerating the entire stream containing CS <sub>2</sub> /H <sub>2</sub> S instead of segregating and burning only CS <sub>2</sub> /H <sub>2</sub> S stream should also be explored and report submitted to the ministry within a period of 1 year for review. The emission of H <sub>2</sub> S should not exceed 10 mg/Nm <sup>3</sup> .	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o The industry installed the pilot plant and standardize the technology for incineration of CS<sub>2</sub>/H<sub>2</sub>S rich stream and recover the sulphur before commissioning the plant. Report for the same was submitted to concern statutory authority in given time duration.</li> <li>o Sulphur recovery plant has been provided to recover Sulphur from CS<sub>2</sub>/H<sub>2</sub>S rich stream coming from CS<sub>2</sub> plant.</li> <li>o The emission concentration of CS<sub>2</sub>/H<sub>2</sub>S is being maintained as per GPCB Norms.</li> </ul>
iv.	Gaseous and particulate emission (H <sub>2</sub> S, SO <sub>2</sub> , CS <sub>2</sub> , NO <sub>x</sub> and PM) from the various process units should conform to the standards prescribed by the concerned authorities from time to time. At no time, the emission level should go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the units, the respective unit should be put out of operation immediately and should not be restarted until the control measures are rectified to achieve the desired efficiency.	<ul style="list-style-type: none"> <li>o <b><u>Being complied.</u></b></li> <li>o Unit has appointed NABL accredited third party laboratory for monthly monitoring of Stack concentration. As per the monitoring conducted by the third party Lab team, results are well within the prescribed norms as per consent condition.</li> <li>o Multiple gas sensors and alarm systems Inter-linking with the pollution control Equipment/units have been provided so that early indication of malfunctioning can be detected and control measures can be taken accordingly. In case of any event of completely failure of pollution control equipment, the respective unit(s) is stopped.</li> </ul>

o A Summary for Flue gas emission from stack for the reporting period is given below:

Location	Boiler-1 & 2 (76 m)			Boiler-3 (86 m)			
	SPM	SO <sub>2</sub>	NO <sub>x</sub>	SPM	SO <sub>2</sub>	NO <sub>x</sub>	Mercury
Unit	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>	mg/Nm <sup>3</sup>
Limit	100	600	600	50	600	300	0.03
Oct-22	54	258	95	43	251	85	---



## Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

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

S. No	Conditions			Compliance Status			
Nov-22	55	259	96	44	249	85	---
Dec-22	53	254	98	45	246	86	---
Jan-23	55	258	95	45	250	83	---
Feb-23	56	253	97	42	248	86	---
Mar-23	61	256	97	<b>Boiler was not in operation.</b>			

o A Summary for process gas emission from stack for the reporting period is given below:

Location	CS2 Plant + Spinning		Total	Acid plant I		Acid plant II	
	CS2	H2S		SO2	Acid Mist	SO2	Acid Mist
Unit	Kg/ToF			Kg/ToA	mg/Nm3	Kg/ToA	mg/Nm3
Limit	125			2	25	2	25
Oct-22	84.68	19.04	103.72	0.84	15.83	0.72	7.98
Nov-22	86.51	20.54	107.05	0.78	11.92	0.76	6.12
Dec-22	85.18	19.42	104.60	0.83	14.08	0.72	7.05
Jan-23	83.58	20.92	104.50	0.85	12.73	0.75	7.52
Feb-23	85.27	18.86	104.13	0.82	13.96	0.78	8.05
Mar-23	84.79	16.24	101.03	0.84	13.96	0.76	7.95

v.

Six air quality monitoring stations should be set up in the downwind directions as well as where maximum ground level concentrations of H2S, SPM, SO2, CS2, NOx are anticipated in consultation with the state pollution control board. The air quality monitoring stations exercise to represent short term ground level concentrations, sensitive targets etc.

Stack emission should be monitored regularly by setting stack monitoring devices in consultation with the state pollution control board.

Data on stack emission and ambient air quality including work zone should be submitted to this ministry once in six

o **Being complied.**

o Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB.

o Unit has also installed 4 nos. of offline Ambient air quality monitoring stations within premises.

o 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.

o **Such parameters i.e Ozone, Lead, CO, Benzene, BAP, Arsenic, Nickel, Ammonia are not a part of process as well as not being generating. Analysis of same is being**

## Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

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

S. No	Conditions	Compliance Status
	months and the state pollution control board once in three months.	<p><b>conducted on periodic basis.</b></p> <ul style="list-style-type: none"> <li>o Stack Emissions are regularly monitored and the continuous emission monitoring system has been installed at the stacks.</li> <li>o Stack emission data along with ambient air quality report including work zone data is being submitted to ministry &amp; SPCB every six month along with EC compliance report.</li> </ul>

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

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
<b>Limit</b>	<b>100</b>	<b>60</b>	<b>80</b>	<b>80</b>	<b>150</b>	<b>100</b>
<b>Oct-22</b>	<b>52.40</b>	<b>32.70</b>	<b>16.99</b>	<b>24.39</b>	<b>29.12</b>	<b>33.19</b>
<b>Nov-22</b>	<b>51.80</b>	<b>32.94</b>	<b>16.55</b>	<b>24.99</b>	<b>28.68</b>	<b>32.62</b>
<b>Dec-22</b>	<b>51.92</b>	<b>33.39</b>	<b>17.44</b>	<b>24.08</b>	<b>29.18</b>	<b>32.37</b>
<b>Jan-23</b>	<b>54.39</b>	<b>36.31</b>	<b>16.95</b>	<b>24.60</b>	<b>28.35</b>	<b>33.69</b>
<b>Feb-23</b>	<b>52.53</b>	<b>35.01</b>	<b>15.82</b>	<b>25.29</b>	<b>27.49</b>	<b>31.93</b>
<b>Mar-23</b>	<b>54.69</b>	<b>36.35</b>	<b>16.95</b>	<b>24.75</b>	<b>27.75</b>	<b>32.47</b>

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
Unit	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
<b>Limit (8 hr avg.)</b>	<b>100</b>	<b>0.5</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>6</b>
<b>Nov-22</b>	<b>20.07</b>	<b>ND</b>	<b>0.70</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>
<b>Feb-23</b>	<b>18.37</b>	<b>ND</b>	<b>0.71</b>	<b>ND</b>	<b>ND</b>	<b>ND</b>

vi.	<p>Work area air quality should meet the standards prescribed by the competent authorities / OSHA. CS<sub>2</sub> level should be less than 100 ppm in the work zone. Leakages from the ducts should be rectified, meshing windows should be</p>	<p>o <b><u>Being complied.</u></b></p> <ul style="list-style-type: none"> <li>o Work zone environment for emission of CS<sub>2</sub>, H<sub>2</sub>S and SO<sub>2</sub> is being regularly monitored by our Laboratory twice in a week.</li> <li>o Work area monitoring reports are regularly submitting to concerned govt. authority.</li> </ul>
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## Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

Compliance of Environmental Clearance Conditions by  
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S. No	Conditions	Compliance Status
	sealed and better housekeeping should be practiced to improve the work area air quality.	<ul style="list-style-type: none"> <li>o Fugitive emissions in the work zone environment are being controlled by exploring techniques like Motorized shutter &amp; suction hoods on spinning machines &amp; cutters, shutters for stretch roller &amp; gear box and perfect sealing of all the openings in various tanks of spin bath.</li> <li>o Provision of fresh air by induced draft fans is in place at the spinning machines for ease of working.</li> <li>o Online gas detectors installed in the work zone around the spinning machines. Motorized shutters and completely closed after treatment machine with suction duct are there to control fugitive emission.</li> </ul>
vii.	Fugitive emissions should be controlled, regularly monitored and data recorded. Sensors for detection of CS <sub>2</sub> and H <sub>2</sub> S and chlorine should be provided at appropriate places in the complex in consultation with the state pollution control board.	<ul style="list-style-type: none"> <li>o <b><u>Being complied.</u></b></li> <li>o Fugitive emissions are being controlled &amp; regularly monitored.</li> <li>o Presently there are 5 No. of Chlorine sensor installed at Chlorine area.</li> <li>o 9 No. of CS<sub>2</sub> sensors and 10 No. of H<sub>2</sub>S sensors installed at spinning machine area.</li> <li>o 12 No. of SO<sub>2</sub> sensors, 5 No. of CS<sub>2</sub> sensors, 17 No. of H<sub>2</sub>S sensors, 4 No. of Ammonia sensor installed at CS<sub>2</sub>/Acid/WTP Plant.</li> <li>o 3 No. of CS<sub>2</sub> sensors, installed at Viscose Plant.</li> </ul>
viii.	Liquid effluents coming out of the plant and the township should comply with the norms stipulated by the competent authorities from time to time.	<ul style="list-style-type: none"> <li>o <b><u>Being complied.</u></b></li> <li>o Unit has appointed NABL accredited third party laboratory for monitoring of waste water from the plant and township treated in the well-established ETP and STP.</li> <li>o As per the monitoring conducted by the lab</li> </ul>

## Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

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

S. No	Conditions	Compliance Status
		team, results are well within the prescribed norms as per consent condition.

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

Parameter	pH	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
Oct-22	7.6	30.2	43	127	25	4.1	35	0.83
Nov-22	7.1	32.2	36	134	32	3.9	40	0.43
Dec-22	7.3	31.9	49	129	28	3.1	50	0.58
Jan-23	7.4	29.9	31	136	24	5.1	40	0.79
Feb-23	7.4	30.0	47	126	34	7.2	30	0.57
Mar-23	7.3	31.6	49	122	26	6.6	40	0.77

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

Parameter	TSS	BOD	Residual Free Chlorine	pH
Unit	mg/Lit.	mg/Lit.	mg/Lit.	-
Limit	<30	<20	Min 0.5	-
Oct-22	24	15	0.80	7.63
Nov-22	28	19	0.80	7.39
Dec-22	27	12	1.00	7.59
Jan-23	16	18	0.80	7.68
Feb-23	25	16	0.90	7.52
Mar-23	19	12	0.80	7.25

ix.	Guard ponds of sufficient holding capacity should be provided to cope up with the effluent discharge during the process disturbances. The contributing units should be immediately shut down and should not be restarted without bringing the system back to normally.	o <b><u>Complied.</u></b> o Unit has constructed guard pond with sufficient holding capacity for effluent storage to cope up with the effluent discharge pipeline maintenance if any.
x.	Adequate number of effluent quality	o <b><u>Complied.</u></b>

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

S. No	Conditions	Compliance Status
	<p>monitoring stations should be set up in consultation with the state pollution control board. Regular monitoring should be carried out for pH, SS, BOD, COD, Zn and color.</p> <p>The monitored data along with statistical analysis and interpretation in the form of a report should be submitted to this ministry once in six month and the SPCB once in three months.</p>	<ul style="list-style-type: none"> <li>o Adequate number of effluent quality monitoring stations i.e. Online TOC Analyser, Online pH Analyser etc are set up in consultation with the Gujrat pollution control board.</li> <li>o Regular monitoring is being carried out for pH, SS, BOD, COD, Zn &amp; color by the internal laboratory on daily basis and NABL accredited Laboratory on monthly basis.</li> <li>o Results are enclosed in reply of point no. viii.</li> <li>o Waste Water quality monitoring data is being submitted to ministry &amp; SPCB every six month along with EC compliance report.</li> </ul>
xi.	<p>Marine Impact Assessment study report should be submitted to the ministry for review. Recommendations made by NIO in the Marine impact study should be strictly adhered to the Marine outfall point for discharge of treated effluent should also have the Approval of SPCB.</p>	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o In FY'07, Unit has appointed NIO to carry out Pre-marine impact assessment study.</li> <li>o NIO, Mumbai has carried out Post Monitoring study in FY'19.</li> <li>o <b>Recently, unit has conducted pre-monsoon &amp; post monsoon study with NABL accredited Laboratory in FY'23.</b></li> <li>o Recommendations made by NIO in the Marine impact study have been strictly adhered to the Marine outfall point for discharge of treated effluent approved by GPCB.</li> </ul>
xii.	<p>The hazardous wastes should be handled as per Hazardous waste (management &amp; Handling) Rules, 1989 of the Environment (Protection) Act, 1986.</p>	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o Unit has segregated Hazardous/solid waste according to its characteristics and stored separately for treatment and disposal in safe manner as per Waste handling and disposal Rules.</li> </ul>

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

S. No	Conditions	Compliance Status
xiii.	<p>Handling, manufacturing, storage and transportation of hazardous chemicals should be carried out in accordance with the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October, 1994. The approval of the chief Inspector of Explosives should also be obtained.</p>	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o Approval for chlorine storage has been taken on 26.09.2018 and valid up to 30.09.2023.</li> <li>o <b>Approval for possession and sales of Sulphuric acid has been taken on 27.02.2018 and valid up to 27.02.2023. Renewal application for same is submitted to SDM office on 25.01.2023 &amp; expected to be received approval soon.</b></li> <li>o Approval for Ammonia, DA gas storage has been taken on 17.03.2022 and valid up to 30.09.2027.</li> <li>o Unit has obtained factory license #6059 and registration# 165/17114/1997 dated 06.07.2021 which is valid up to 31.12.2026.</li> <li>o Handling, manufacturing, storage and transportation of hazardous chemicals is being carried out in accordance with the Manufacture, Storage and Import of Hazardous Chemicals Rules 1989 as amended time to time.</li> </ul>
xiv.	<p>Medical surveillance and occupational health program should be taken up on regular basis and record of the health status of the workers should be maintained. The workers who may contract occupational diseases particularly due to carbon disulphide exposure should be monitored closely and adequate measures should be taken for their treatment and recovery.</p>	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o Awareness programs are being conducted on health by CMO and by ABG Emergency Code Red.</li> <li>o First aid training is being arranged on periodic interval, which covers all categories of employees, workmen.</li> <li>o 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.</li> </ul>

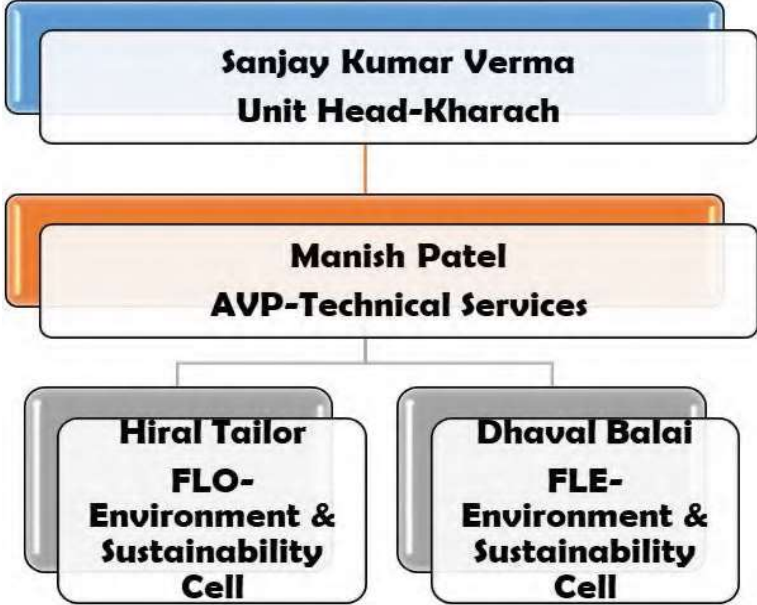
## Setting up of Viscose Staple fibre plant (60,000 TPA) and 15 MW coal based TPP

Compliance of Environmental Clearance Conditions by  
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S. No	Conditions	Compliance Status
		<ul style="list-style-type: none"> <li>o All the Employees are covered under Health Survey. Periodic and pre-joining medical check-up for each and every employees and Contractual worker is being done.</li> <li>o Medical records of employees and contract workers are maintained online and individual person can access his record as read only from any computer in the Unit.</li> </ul>
xv.	A green belt of adequate width and density (2000-2600 trees/ha.) should be raised all around the factory complex and the township. Preferably native plant species should be selected for this purpose in consultation with the local DFO.	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o Green belt has been developed in the campus along the boundary wall and open spaces.</li> <li>o Native plant species has been selected in consultation with DFO and as per the directives of DoEF, Mangroves have been planted in 100 Ha. at Raniyo Island.</li> </ul>
xvi.	The project authorities must set up adequate facilities for collection and analysis of samples under the supervision of competent technical personnel who will directly report to the chief executive.	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o Adequate facilities have been developed for the collection and analysis of samples under the supervision of competent technical personnel who directly reports to the chief executive at the plant.</li> </ul>
xvii.	A separate Environmental Management Cell with suitably qualified people to carry out various functions should be set up under the control of senior executive, who will report directly to the Head of the organization.	<ul style="list-style-type: none"> <li>o <b><u>Complied.</u></b></li> <li>o A separate environment management cell has been constituted under the leadership of Facility Head.</li> </ul>

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S. No	Conditions	Compliance Status
	 <pre> graph TD     SKV[Sanjay Kumar Verma Unit Head-Kharach] --- MP[Manish Patel AVP-Technical Services]     MP --- HT[Hiral Tailor FLO-Environment &amp; Sustainability Cell]     MP --- DB[Dhaval Balai FLE-Environment &amp; Sustainability Cell]           </pre>	
xviii.	The funds earmarked for the environmental protection measures should be kept in a separate account and should not be diverted for other purpose and year – wise expenditure should be reported to this ministry.	<ul style="list-style-type: none"> <li>○ <b>Complied.</b></li> <li>○ The funds earmarked for the environmental protection measures are being maintained and not diverted for other purpose.</li> <li>○ A year wise expenditure on environment safeguards &amp; towards Enterprise Social commitment is being submitted to MOEF&amp;CC at the end of each FY along with EC compliance report. In FY'23, 175.45 Crores spent towards Environmental protection measures, which is incl. costing towards enterprise social commitment.</li> <li>○ Unit has taken various improvement measures to control pollution, which is beyond permissible limit, as mentioned below:               <ul style="list-style-type: none"> <li>○ A project of EDTA scrubbing technology for recovering Sulphur from H2S gas and CAP system for CS2 recovery are under</li> </ul> </li> </ul>

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S. No	Conditions	Compliance Status
		<p>construction &amp; erecting phase. The project is expected to be completed by August-2023. After commissioning of both EDTA &amp; CAP, the odor will be reduced further &amp; CS2 recovery will be increase. Both the systems jointly are capable to reduce emission load ~33% from existing load.</p> <ul style="list-style-type: none"> <li>○ Unit has commissioned an additional 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.</li> <li>○ Unit has taken a Pilot trail for recovery of Zinc from process effluent (First wash effluent stream of spinning dept. having rich zinc concentration) by two stage chemical precipitation process. During pilot trail installation identified &amp; resolved all types of technical gaps and moving towards Commercial installation for the project, by commercial implementation of this project Zinc concentration in effluent discharge will be reduced, which facilitated to achieve EUBAT norms. The project is expected to be completed &amp; stabilized by June-2023.</li> </ul>
3.	This ministry of any competent authority may stipulate any further condition(s) after review of the monitoring reports. The above conditions will be monitored by the regional office of this ministry located at Bhopal/CPCB/GPCB.	○ <b><u>Noted.</u></b>



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and 15 MW coal based TPP**

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S. No	Conditions	Compliance Status
4.	The ministry may revoke/suspend clearance if implementation of any of the above condition is not satisfactory.	o <b><u>Noted.</u></b>
5.	Any other condition(s) or alternation in the existing conditions will be fully implemented by the project authorities within the specified time frame.	o <b><u>Noted.</u></b>
6.	The above conditions will be implemented under the provisions of the water Act, 1974, the Air act, 1981, Environment) Act, 1986 and the public (Liability) Act, 1991 along with their amendments.	o <b><u>Complied.</u></b>