ADITYA BIRLA

GRASIM

Dated: 25.10.2021

The Advisor,
Ministry of Environment, Forest and Climate Change
Regional office, Western Region
"Kendriya Paryavaran Bhavan"
Link Road No.3, Ravishankar Nagar
Bhopal-462016 (M.P)

Subject: Half Yearly Environmental Clearance Compliance Report for period of "April-21 to Sept-21".

Dear Sir,

In view of the above subject matter, Here, we are submitting the hard copy as well as soft copy of half yearly Environmental Clearance Compliance report along with copy of EC-2018 (Amended copy) No. J-11011/320/2006-IA II (I) dtd. 31.12.2018 for the report period from "**April-21 to Sept-21".**

Hope, the same is in order.

Yours Faithfully,
(For Birla Cellulosic)

Dharmesh Patel
DH- Environment

Encl. :

1. **EC Copy**
2. **EC-2018- Amendment Compliance report (April-21 to Sept-21)**

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, Sect-10A, Gandhinagar, Gujarat 382010

Birla Cellulose

Grasim Industries Limited
Birla Cellulosic

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

Telephone: +91 2646 270001 005 270301 305
Fax: +91 2646 270010 270130
Email: bc-kharach.info@adityabirla.com

Regd. Office: 11th Floor - 3101 & 3102 OCEAN, Opposite Vadodara Central Mall, Vikram Sarabhai Marg, Vadiwadi, Vadodara - 390021, Gujarat, India
Fax: +91 7366 246331, Nagda (MP) - 456 331. Phone: (07366) 246760-66. Fax: 255198. Website: www.grasim.com

F.No. J-11011/320/2016-IA-II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(IA-II Section)

Indira Paryavaran Bhawan
Jorbagh Road, New Delhi -3

Dated: 31st December, 2018

To

M/s Birla Cellulosic
(A Unit of M/s Grasim Industries Ltd)
Birladham, Village Kharach, Tehsil Hansot
District **Bharuch** (Gujarat)

Sub: Expansion of Viscose Staple Fiber Unit and Coal based CPP at Birladham, Village Kharach, Tehsil Hansot, District Bharuch (Gujarat) by M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd) - Amendment in EC- reg.

Sir,

This refers to your proposal No. IA/GJ/IND2/59092/2016 dated 22nd March, 2018 for amendment in environmental clearance to the above project.

2. The Ministry of Environment, Forest and Climate Change has granted environmental clearance vide letter dated 22nd February, 2018 in favour of M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd) to the project for expansion of Viscose Staple Fiber Unit and Coal based CPP located at Birladham, Village Kharach, Tehsil Hansot, District Bharuch (Gujarat).

3. Now, amendment in the said environmental clearance has been sought in respect of the specific conditions at para 12 (s) relating to storage of raw materials and that at para 12(t) for power requirement to be met from non-conventional energy resources/solar power.

4. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meeting held on 27-29 August, 2018. The Committee has recommended for amendment *in specific condition 12 (s) stipulated in the* environmental clearance dated 22nd February, 2018*, to be read as under:*

'Storage of raw materials, coal etc. shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions. In case of raw materials identified as the hazardous one under the MSIHC Rules, 1989, the statutory provisions contained therein shall continue to be followed. For the remaining raw materials, storage shall not exceed 30 days at any point of time'.

5. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval to the amendment in environmental clearance dated 22nd February, 2018, **as stated in para 4 above**, with all other terms and conditions stipulated therein remain unchanged.

6. This issues with approval of the competent authority.

31/12/2018

(S. K. Srivastava)
Scientist E

Copy to: -

1. The Additional PCCF(C), MoEF&CC Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3, Ravishankar Nagar, Bhopal -16

2. The Secretary, Forests and Environment Department, Government of Gujarat, Block 14, 8th Floor, Sachivalaya, Gandhinagar (Gujarat) -10
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
4. The Member Secretary, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10A, Gandhinagar (Gujarat) - 10
5. Guard File/Monitoring File/Website/Record File

SKS
31/12/2018

(S. K. Srivastava)
Scientist E

'Expansion of Viscose Staple Fibre unit from 1,27,750 to 2,33,600 TPA
and
Coal based CPP from 25 MW to 45 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 unit from 1,27,750 to 2,33,600 TPA and Coal based CPP from 25 MW to 45 MW
Environment Clearance letter no. & Date	:	F.No.J-11011/320/2016-IA II (I) DATED 31.12.2018
Address for Correspondence	:	M/s. Birla Cellulosic (A Unit of Grasim Industries Ltd.) Birladham, Village: Kharach, Kosamba (R.S.), Tehsil: Hansot,: Bharuch (Gujrat) – 394120
Duration/Reporting period	:	April-21 to Sept-21
Proposal No.	:	IA/GJ/IND2/59092/2016

S.No.	Compliance Conditions by MoEF & CC	Action taken by Birla Cellulosic
1.	This refer to your proposal no. IA/GJ/IND2/59092/2016 dated 22nd March,2018 for amendment in environmental clearance to the above project.	○ **Noted.**
2.	The Ministry of Environment, Forest & Climate Change has granted environmental clearance vide letter dated 22nd February, 2018 in favor of M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd) to the project for expansion of viscose Staple Fibre unit & Coal based CPP located in Birladham, Village Kharach, Tehsil Hansot, District Bharuch (Gujarat).	○ **Noted.**
3.	Now, amendment in the said environmental clearance has been sought in respect of the specific conditions at para 12(s) relating to storage of raw materials and that at para 12(t) for power requirement to be met from non-conventional energy resources/solar power.	○ **Noted.**
4.	The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meeting held on 27-29 August,2018. The Committee has recommended for amendment in specific condition 12 (s) stipulated in the environmental clearance dated 22nd February,2018, to be read as under: 'Storage of raw materials, coal etc. shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions. In case of raw material identified as their hazardous one under the MSIHC Rules, 1989, the statutory provisions contained therein shall continue to be followed. For the remaining raw materials, storage shall not exceed 30 days at any point of time.'	○ **Noted & Complied.** ○ Covered Storage yards, warehouses, tanks etc have been provided for individual Raw material storage.

5.	Based on recommendation of their EAC, the Ministry of Environment, Forest & Climate Change hereby accords approval to the amendment in environmental clearance dated 22nd February, 2018, as stated in para 4 above, with all other terms and conditions stipulated therein remain unchanged.	○ **Noted & shall be abide.**
6.	This issues with approval of the competent authority.	○ **Noted.**

ADITYA BIRLA

GRASIM

Dated: 25.10.2021

The Advisor,
Ministry of Environment, Forest and Climate Change
Regional office, Western Region
"Kendriya Paryavaran Bhavan"
Link Road No.3, Ravishankar Nagar
Bhopal-462016 (M.P)

Subject: Half Yearly Environmental Clearance Compliance Report for period of "April-21 to Sept-21".

Dear Sir,

In view of above subject matter, Here, we are submitting the hard copy as well as soft copy of half yearly Environmental Clearance Compliance report along with copy of EC-2018, No. J. 11011/320/2006-IA II (I) dtd. 22.02.2018 for the report period from "**April-21 to Sept-21".**

Hope, the same is in order.

Yours Faithfully,
(For Birla Cellulosic)

Dharmesh Patel
DH- Environment

Encl. :

1. **EC Copy**
2. **EC-2018 Compliance report (April-21 to Sept-21)**

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

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

Telephone +91 2646 270001-005, 270301-305
Fax +91 2646 270010, 270130
Email bc-kharach.info@adityabirla.com

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

F.No. J-11011/320/2016-IA II (I)
Government of India
Ministry of Environment, Forest and Climate Change
(IA-II Division)

Indira Paryavaran Bhawan
Jorbagh Road, New Delhi - 3
Dated: 22nd February, 2018

To,

M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd)
Birladham, Village Kharach,
Taluka Hansot,
District **Bharuch** (Gujarat)

Sub: Expansion of Viscose Staple Fibre Unit and Coal based CPP by M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd) at Birladham, Village Kharach, Tehsil Hansot, District Bharuch (Gujarat) - Environmental Clearance - reg.

Ref.: Online proposal no. IA/GJ/IND2/59092/2016 dated 18th September, 2017

Sir,

This has reference to your online proposal no. IA/GJ/IND2/59092/2016 dated 18th September, 2017 for environmental clearance to the above project, along with the documents including Form-1, Terms of Reference (ToR), EIA/ EMP report containing the Public hearing proceedings/details.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for Environmental Clearance to the project 'Expansion of Viscose Staple Fibre Unit from 1,27,750 to 2,33,600 TPA and Coal based CPP from 25 MW to 45 MW' by M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd) in a total area of 242.81 ha, at Birladham, Village Kharach, Tehsil Hansot, District Bharuch (Gujarat). The details of existing and proposed products are as under: -

S.No.	Product /Unit	Existing Capacity	Additional Capacity	Total capacity after expansion
1.	Viscose Staple Fibre	127750 TPA	105850 TPA (Debottlenecking: 14600; New Machine: 91250)	233600 TPA
2.	Captive Power Plant	25 MW	20 MW	45 MW

The other products (intermediates/raw materials) presently manufactured include Sulphuric Acid (146000 TPA), Carbon Disulphide (21600 TPA) and Sodium Sulphate (96000 TPA). The Solvent spun cellulosic fibre unit of capacity 109500 TPA and coal based CPP of 71 MW are yet to be commissioned.

3. Existing plant area is 242.81 ha and no additional land shall be required for proposed expansion project. It is proposed to develop greenbelt in an area of 80 ha, thus covering an area of 33% of total project area. Presently, 70 ha area has been developed under greenbelt. Greenbelt planned for 10 ha in next three years. As per Form-1, there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc within 10 km from the project site. Kim river is flowing at 0.5 km in the South.

4. The estimated project cost is Rs.1800 crores (debottlenecking: Rs.12 crores & new machines: Rs.1788 crores). Total capital cost earmarked for pollution control measures is Rs.90 crores and the recurring cost (operation and maintenance) shall be about Rs.11 crores per annum. It has been proposed to allocate Rs.45 crores (debottlenecking: Rs.0.3 Crores, new machines: Rs.44.7 crores) @ 2.5% towards Enterprise Social Commitment.

5. Total fresh water requirement after the proposed expansion will be 22,286 cum/day (existing - 18600 cum/day, additional - 3686 cum/day) to be sourced through from Kim River. Narmada Water Resources Water Supply and Kalpsar Department of the State Government of Gujarat, has already made an allocation for 7 MGD of water from Kim river to meet the total water requirement.

Total effluent generation would be reduced from the present of 11580 cum/day to 11535 cum/day, which is proposed to be treated in the ETP of capacity 24000 cum/day. Treated effluent is to be discharged into Kim Estuary through 23 km long pipeline falling in CRZ area. The unit has already obtained the CRZ clearance from the Ministry vide letter dated 17th January, 2007 for the said pipeline. The domestic effluent of 1500 KLD shall be treated in the STP and then recycled for greenbelt development.

6. Total power requirement after expansion shall be 45 MW. Existing requirement of 25 MW is being met through Captive Thermal Power Plant. After expansion total requirement shall be met from Captive Thermal Power Plant.

Existing unit has 2x100 & 1x120 TPH coal fired boiler. Electrostatics Precipitators with a stack of height of 100 m will be installed for controlling the Particulate emissions (within prescribed norms) for proposed 3x100 TPH coal fired boilers respectively.

7. Details of process emissions along with the control measures are as under:

Emissions	Source	Management Measures
CS_2	VSF Plant-spinning	• CS_2 Recovery System (46.55% recovery). • Powerful Exhaust System for spinning off gases (CS_2 and H_2S) • Air dilution with adequate stack height. • Shutters for spinning machine.
	CS_2 Plant	• Oil Scrubbing system for recovery of CS_2 • Alkali Scrubber • Klaus kiln for recovery of sulphur • Dust extraction cum Ventury Scrubbing system for Furnaces.
SO_2	H_2SO_4 Plant	• Alkali scrubber
	CPP boiler	• Lime dozing in boiler • Adequate stack height (as per CPCB guidelines).
Acid Mist	H_2SO_4 Plant	• Mist eliminator
PM	CPP boiler	• ESPs
Fugitive Emission	CPP-handling & Storage	• Covered storage yard to store coal at the plant site. • Silos to store fly ash at the plant site. • Transportation of Fly ash through closed tankers / bulkers. • Dust collection system to control dust emission. • Water sprinkling to reduce dust generation. • Greenbelt / plantation done along the plant boundary to attenuate air pollution.

Emissions	Source	Management Measures
	CS_2 Plant-Sulphur handling	• Covered storage yard for storage of sulphur. • Sulphur melting in closed system

8. Details of solid/hazardous waste generation and its management are as under:

Plant Unit	Waste	Treatment / Disposal
Acid Plant	Sulphur Filter Residue	TSDF
	Spent Catalyst (V_2O_5)	
ETP	ETP Inorganic Sludge (Gypsum)	Sold to cement industries
Plant Maintenance-Different sections	Oil soaked Cotton Waste & cotton waste	TSDF
	Used Oil	Sent to Authorized Recycler
	Used Resin	Sent to TSDF for disposal
STP	STP Sludge	Used as manure in greenbelt development/ plantation
Proposed CPP	Fly Ash	Will be supplied to Brick manufacturers, Cement industries

9. The project/activity is covered under category A of item 5(d) 'Manmade fibres manufacturing Rayon' of the Schedule to the Environmental Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.

10. The ToR for the project was granted by Ministry vide letter dated 13th February, 2017 and the public hearing was conducted by the SPCB on 30th August, 2017.

11. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 31st meeting held during 23-24 November, 2017. The project proponent and their accredited consultant M/s J.M. EnviroNet Pvt Ltd, presented the EIA / EMP report as per the ToR. The Committee found the EIA / EMP report as satisfactory and complying with the ToR. The Committee has recommended the proposal for grant of environmental clearance.

12. Based on the proposal submitted by the project proponent and subsequent recommendations of the EAC (Industry-2), the Ministry of Environment, Forest and Climate change hereby accords environmental clearance to the project ***'Expansion of Viscose Staple Fibre Unit from 1,27,750 to 2,33,600 TPA and Coal based CPP from 25 MW to 45 MW'*** by M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd) in a total area of 242.81 ha, at Birladham, Village Kharach, Tehsil Hansot, District Bharuch (Gujarat), under the provisions of EIA Notification, 2006, subject to the compliance of terms and conditions as below:-

(a) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.

(b) Total fresh water requirement shall not exceed 22,286 KLD proposed to be met from Kim River water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.

(c) Total effluent discharge after treatment shall not exceed 11535 cum/day to be discharged to the Kim Estuary through 23 km long pipeline. The effluent discharge shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.

(d) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(e) National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608(E) dated 21st July, 2010 and amended from time to time shall be followed.

(f) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers (2x100 & 1x120 TPH) to control particulate emissions within permissible limits. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(g) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.

(h) Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on tank farm, and solvent transfer through pumps.

(i) Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.

(j) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.

(k) The company shall undertake waste minimization measures as below:-
   (i) Metering and control of quantities of active ingredients to minimize waste.
   (ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
   (iii) Use of automated filling to minimize spillage.
   (iv) Use of Close Feed system into batch reactors.
   (v) Venting equipment through vapour recovery system.
   (vi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(l) The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.

(m) All the commitments made regarding issues raised during the public hearing/consultation meeting held on 30th August, 2017 shall be satisfactorily implemented.

(n) At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment based on item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.

(o) The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.

(p) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.

(q) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

(r) Continuous online (24X7) monitoring system for stack emissions and the effluent, shall be installed for measurement of flow/discharge and the pollutants concentration, and the emission and effluent monitoring data to be transmitted to the CPCB and SPCB server as per the directions of CPCB in this regard.

(s) Storage of raw materials, coal etc shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions. Raw material storage should not exceed 3 days at any point of time.

(t) The energy sources for lighting purposes shall preferably be LED based. A minimum of 10-20% of the total power requirement for the industrial operations shall be met from non-conventional energy resources/solar supply

12.1 The grant of Environmental Clearance is further subject to compliance of other generic conditions as under:-

(i) The project authorities must strictly adhere to the stipulations made by the state Pollution Control Board (SPCB), State Government and/ or any other statutory authority.

(ii) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In *case* of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

(iii) The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.

(iv) The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.

(v) The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

(vi) The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.

(vii) Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.

(viii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing shall be implemented.

(ix) The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental measures shall be undertaken for overall improvement of the environment.

(x) A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

(xi) The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.

(xii) A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.

(xiii) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

(xiv) The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional offices of MoEF&CC by e-mail.

(xv) The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional office of the Ministry.

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

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

15. 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, the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

22/2/2018

(S. K. Srivastava)
Scientist E

Copy to: -

1. The Secretary, Forests & Environment department, Government of Gujarat, Sachivalaya, **Gandhinagar** (Gujarat)
2. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3, Ravishankar Nagar, **Bhopal** – 462016 (Madhya Pradesh)
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, East Arjun Nagar, **Delhi** - 32
4. The Member Secretary, Gujarat Pollution Control Board, 'Parishram', Mahavir Society, Shanala Road, **Morbi** (Gujarat)
5. Monitoring Cell, Ministry of Environment, Forest and Climate Change, **New Delhi**
6. Guard File/Monitoring File/Record File

22/2/2018

(S. K. Srivastava)
Scientist E

'Expansion of Viscose Staple Fibre unit from 1,27,750 to 2,33,600 TPA
and
Coal based CPP from 25 MW to 45 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 unit from 1,27,750 to 2,33,600 TPA and Coal based CPP from 25 MW to 45 MW
Environment Clearance letter no. & Date	:	F.No.J-11011/320/2016-IA II (I) DATED 22.02.2018
Address for Correspondence	:	M/s. Birla Cellulosic (A Unit of Grasim Industries Ltd.) Birladham, Village: Kharach, Kosamba (R.S.), Tehsil: Hansot,: Bharuch (Gujrat) – 394120
Duration/Reporting period	:	April-21 to Sept-21
Proposal No.	:	IA/GJ/IND2/59092/2016

<table>
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<tr><td>1.</td><td>This has reference to your online proposal no. IA/GJ/IND2/59092/2016 dated 18th September, 2017 for environmental clearance to the above project, along with the Documents including Form-1, Terms of Reference (ToR), EIA/EMP report containing the Public hearing proceeding/details.</td><td>o <u>Noted.</u></td></tr>
<tr><td>2.</td><td>The Ministry of Environment and Forest and Climate Change has examined the proposal for Environmental Clearance to the project 'Expansion of Viscose Staple Fibre unit from 1,27,750 to 2,33,600 TPA and Coal based CPP from 25 MW to 45 MW' by M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd) in a total area of 242.81 ha, at Birladham, Village Kharach, Tehsil Hansot, District Bharuch (Gujarat). The details of existing and proposed products are as under:
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<tr><th>S. No.</th><th>Product / Unit</th><th>Existing</th><th>Additional</th><th>Total capacity</th></tr>
<tr><td>1</td><td>Viscose Staple Fibre</td><td>127750 TPA</td><td>105850 TPA(Debottlenecking: 14600; New m/c: 91250)</td><td>233600 TPA</td></tr>
<tr><td>2</td><td>Captive Power Plant</td><td>25 MW</td><td>20 MW</td><td>45 MW</td></tr>
</table></td><td>o <u>Complied.</u>
o According to market scenario, In first phase, obtained CCA-amendment for VSF production capacity up to 1,42,350 TPA (1,27,750 Existing + 14,600 Debottlenecking) along with 25 MW CPP & 70 TPD Solvent Spun Cellulosic fibre along with 15 MW CPP having CCA order no. AWH-101226 dated: 23.05.2019 valid up to 11.04.2024.
o In second phase, 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.
o In continuation with that, 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.
o In third phase, obtained CCA amendment for VSF capacity upto 1,73,375 TPA and</td></tr>
</table>

	The other products (intermediate/ raw materials) presently manufactured include Sulphuric Acid (146000 TPA), Carbon Disulphide (21600 TPA) and Sodium Sulphate (96000 TPA). The Solvent spun cellulosic fibre unit of capacity 109500 TPA and coal based CPP of 71 MW are yet to be commissioned.	Sodium sulphate recovery max up to 1,73,375 TPA having CCA order no. AWH-115368 dated: 22.10.2021 valid up to 11.04.2024.
3.	Existing plant area is 242.81 ha. and no land shall be required for proposed expansion project. It is proposed to develop greenbelt in an area of 80 ha, thus covering an area of 33% of total project area. Presently, 70 ha area has been developed under greenbelt. Greenbelt planned for 10 ha in next three years. As per Form-1, there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc within 10 km from the project site. Kim river is flowing at 0.5 km in the South.	○ **Complied.** ○ Green belt has been developed in the campus along the boundary wall and open spaces. Totally 1,85,000 trees have been planted in the premises in such a way that density of plantation is 1000 trees per acre and green belt of 30 meters width has been developed. ○ As per the directives of DoEF, we have also planted Mangrove in 100 Ha. at Raniyo Island spending to Rs. 20.00 Lacs. ○ There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/ Elephant Reserves, Wildlife Corridors etc located within 10 km radius of site. Kim river is flowing at 0.5 km in the South.
4.	The estimated project cost is Rs. 1800 crores (debottlenecking: Rs. 12 crores & new machines: Rs. 1788 crores). Total capital cost earmarked for pollution control measures is Rs. 90 crores and the recurring cost (operation and maintenance) shall be about Rs. 11 crores per annum. It has been proposed to allocate Rs. 45 crores (debottlenecking: Rs. 0.3 crores, new machines: Rs. 44.7 crores) @2.5% towards Enterprise Social Commitment.	○ **Being complied**. ○ Unit is going for production increase quantity phase wise. ○ The funds earmarked for the environmental protection measures are being maintained and not diverted for other purpose. ○ Unit has kept separate budget to meet the capital & recurring cost for maintaining the environment -cost for all instrument, pipe line and ETP. ○ A year wise expenditure on environment safeguards is being submitted to MOEF and CC at the end of each FY along with EC compliance report each year. ○ In FY'21, 31.40 Crores spent towards Environmental protection measures. Report for same was submitted to MOEFCC dated: 20.05.2021. ○ As per total project cost; Various community development measures in and around 32 villages have been taken by the unit. A separate budget allocated for the same.

5. "Total fresh water requirement after the proposed expansion will be 22,286 cum/day (existing- 18600 cum/day, additional- 3686 cum/day) to be sourced through from Kim river. Narmada water Resources Water Supply and Kalpsar Department of the State Government of Gujarat, has already made an allocation for 7 MGD of water from Kim river to meet the total water requirement.

Total effluent generation would be reduced from the present of 11580 cum/day to 11535 cum/day, which is proposed to be treated in the ETP of capacity 24000 cum/day. Treated effluent is to be discharged into Kim Estuary through 24 km long pipeline falling in CRZ area. The unit has already obtained the CRZ clearance from the Ministry vide letter dated 17th January, 2007 for the said pipeline.

The domestic effluent of 1500 KLD shall be treated in the STP and then recycled for greenbelt development."

- **Noted & Complied.**
- An agreement with Irrigation Department has been made for water withdrawal @ 19,000 M3/day.
- A Summary of water Consumption for the reporting period is given below:

Month	Quantity (M3)
Apr-21	469350
May-21	492880
Jun-21	486480
July-21	474765
Aug-21	476098
Sept-21	458217
Total	2857790
Average (M3/Day)	15616.34

- The Half- yearly average water Consumption is 15616 M3/day, which is less than the quantity mentioned in Agreement.
- A Summary of treated effluent for the reporting period is given below:

Month	Quantity (M3)
Apr-21	294438
May-21	290609
Jun-21	259694
July-21	256612
Aug-21	279351
Sept-21	290868
Total	1671572
Average (M3/Day)	9134

- The Sewage water from the plant and township is treated in the well-established STP and recycled for green belt development.

<table>
<tr>
<td>6.</td>
<td>"Total power requirement after expansion shall be 45 MW. Existing requirement of 25 MW is being met through Captive Thermal Power Plant. After expansion total requirement shall be met from Captive Thermal Power Plant.
Existing unit has 2x100 & 1x120 TPH coal fired boiler. Electrostatics Precipitators with a stack of height of 100 m will be installed for controlling the Particulate emissions (within prescribed norms) for proposed 3x100 TPH coal fired boilers respectively."</td>
<td>o <u>Being complied.</u>
o Unit has 2x100 & 1x120 TPH coal fired boiler which are sufficient to meet power requirement of unit at present.
o Unit has installed 3 No. of ESP having three fields with boiler 1 & 2, four fields with boiler 3 having 99.9% efficiency to control particulate matter emission from flue gas.</td>
</tr>
<tr>
<td>7.</td>
<td>Details of process emissions along with the control measures are as under:
<table>
<tr><th>Emission</th><th>Source</th><th>Management Measures</th></tr>
<tr><td rowspan="2">CS_2</td><td>VSF Plant spinning</td><td>o CS2 Recovery System (46.55% recovery).
o Powerful Exhaust System for spinning off gases (CS2 and H2S).
o Air Dilution with adequate stack height.o Shutters for spinning machine.</td></tr>
<tr><td>CS_2 Plant</td><td>o Oil Scrubbing system for recovery of CS2.
o Alkali Scrubber
o Klaus kiln for recovery of sulphur
o Dust extraction cum Ventury Scrubbing system for Furnances.</td></tr>
<tr><td rowspan="2">SO_2</td><td>H_2SO_4 Plant</td><td>o Alkali Scrubber</td></tr>
<tr><td>CPP boiler</td><td>o Lime dosing in boiler
o Adequate stack height (as per CPCB guidelines).</td></tr>
<tr><td>Acid Mist</td><td>H_2SO_4 Plant</td><td>o Mist eliminator</td></tr>
<tr><td>PM</td><td>CPP boiler</td><td>o ESPs</td></tr>
<tr><td>Fugitive Emissions</td><td>CPP-Handling & Storage</td><td>o Covered storage yard to store coal at the plant site.
o Silos to store fly ash at the plant site.
o Transportation of fly ash</td></tr>
</table>
</td>
<td>o <u>Complied.</u>
o All the control measures have been adopted by the unit to control emissions.</td>
</tr>
</table>

				through closed tankers / bulkers. o Dust collection system to control dust emission. o Water sprinkling to reduce dust generation. o Greenbelt / plantation done along the plant boundary to attenuate air pollution.	
			CS_2 Plant-Sulphur handling	o Covered storage yard for storage of sulphur. o Sulphur melting in closed system.	

8. Details of solid/hazardous waste generation and its management are as under:

Details of solid/hazardous waste generation and its management are as under:			Action taken/ Actual practices by Birla Cellulosic, Kharach
Plant Unit	Waste	Treatment / Disposal	o **Complied.**
Acid Plant	Sulphur Filter Residue	TSDF	Disposed at TSDF, BEIL, Ankleshwar
	Spent Catalyst (V2O5)		
ETP	ETP Inorganic Sludge (Gypsum)	Sold to cement industries	Sold to Cement industries
Plant mnt. Different Sections	Oil soaked Cotton waste & cotton waste	TSDF	-
	Used Oil	Sent to Authorized Recycler	Sold to approved recycler as per guidelines of CC&A.
	Used Resin	Sent to TSDF for disposal	Reutilize for energy recovery in boiler as a waste to energy recovery – CCA obtained
STP	STP sludge	Used as manure in greenbelt development / plantation	Used as manure in greenbelt development / plantation
Proposed CPP	Fly Ash	Will be supplied to Brick manufacturers, Cement industries	Sold to brick manufactures & Cement industries

9.	The project/activity is covered under category A of item 5(d) 'Manmade fibres manufacturing Rayon' of the Schedule to the Environmental Impact Assessment Notification, 2006, and requires appraisal at central level by the sectoral EAC in the Ministry.	○ **Noted.**
10.	The ToR for the project was granted by Ministry vide letter dated 13th February, 2017 and the public hearing was conducted by the SPCB on 30th August, 2017.	○ **Noted.**
11.	The proposal was considered by the Expert Appraisal Committee (Industry-2) in its 31st meeting held during 23-24 November, 2017. The project proponent and their accredited consultant M/s J.M.EnviroNet Pvt Ltd, presented the EIA / EMP report as per the ToR. The Committee found the EIA / EMP report as satisfactory and complying with the ToR. The Committee has recommended the proposal for grant of environmental clearance.	○ **Noted.**
12.	Based on the proposal submitted by the project proponent and subsequent recommendations of the EAC (Industry-2), the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project ***'Expansion of Viscose Staple Fibre unit from 1,27,750 to 2,33,600 TPA and Coal based CPP from 25 MW to 45 MW'*** by M/s Birla Cellulosic (A Unit of M/s Grasim Industries Ltd) in a total area of 242.81 ha, at Birladham, Village Kharach, Tehsil Hansot, District Bharuch (Gujarat), under the provisions of EIA Notification, 2006, subject to the compliance of term and conditions as below:-	○ **Noted & shall be complied.**
(a)	Consent to Establish/operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	○ **Complied.** ○ According to market scenario, In first phase, obtained CCA-amendment for VSF production capacity up to 1,42,350 TPA (1,27,750 Existing + 14,600 Debottlenecking) along with 25 MW CPP & 70 TPD Solvent Spun Cellulosic fibre along with 15 MW CPP having CCA order

		no. AWH-101226 dated: 23.05.2019 valid up to 11.04.2024. o In second phase, 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. o In continuation with that, 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. o In third phase, 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: 22.10.2021 valid up to 11.04.2024.
(b)	Total fresh water requirement shall not exceed 22,286 KLD proposed to be met from Kim River water supply. Prior permission in this regard shall be obtained from the concerned regulatory authority.	o **Noted & Complied.** o An agreement with Irrigation Department has been made for water withdrawal @ 19,000 M3/day. o A Summary of water Consumption for the reporting period is given below: **Month** / **Quantity (M3)** **Apr-21** / **469350** **May-21** / **492880** **Jun-21** / **486480** **July-21** / **474765** **Aug-21** / **476098** **Sept-21** / **458217** **Total** / **2857790** **Average (M3/Day)** / **15616.34** o The Half- yearly average water Consumption is 15616 M3/day, which is less than the quantity mentioned in Agreement.

<table>
<tr>
<td>(c)</td>
<td>Total effluent discharge after treatment shall not exceed 11535 cum/day to be discharged to the Kim Estuary through 23 km long pipeline.

The effluent discharge shall confirm to the standards prescribed under the Environment (Protection) Rules, 1986, or as specified by the State Pollution Control Board while granting Consent under the Air/Water Act, whichever is more stringent.</td>
<td>o <u>Being complied.</u>
o A full-fledged effluent treatment plant comprising of primary treatment of neutralization, settling facility and secondary treatment with biological system based on extended aeration of activated sludge process has been installed.
o A separate underground pipeline for discharging the treated effluent in the estuary of Kim River has been installed as approved by GPCB. The pipeline passes through 8 Nos. of villages and 213 private farm lands, and we have 174 ROUs with the land owners. The disposal point was suggested by NIO, Goa.
o A Summary of treated effluent for the reporting period is given below:

<table>
<tr><th>Month</th><th>Quantity (M3)</th></tr>
<tr><td>Apr-21</td><td>294438</td></tr>
<tr><td>May-21</td><td>290609</td></tr>
<tr><td>Jun-21</td><td>259694</td></tr>
<tr><td>July-21</td><td>256612</td></tr>
<tr><td>Aug-21</td><td>279351</td></tr>
<tr><td>Sept-21</td><td>290868</td></tr>
<tr><td>Total</td><td>1671572</td></tr>
<tr><td>Average (M3/Day)</td><td>9134</td></tr>
</table>
o Unit has appointed NABL accredited laboratory M/s. Pollucon laboratories pvt. ltd. for monthly monitoring of quality of the waste water generated from the plant and township and treated in the well-established ETP and STP.
o As per the monitoring conducted by their team, the results are well within the prescribed norms as per consent condition.
o A full-fledged in-house laboratory is established to monitor the parameters round the clock. The quality of treated effluent is also monitored by NABL accredited Laboratory on monthly basis.</td>
</tr>
</table>

		o The Sewage water from the plant and township is treated in the well-established STP and recycled for green belt development.

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
Apr-21	7.62	30.2	54	148	36	4.5	60	0.71
May-21	7.84	30.1	48	152	27	5.8	50	0.84
Jun-21	7.33	30.0	31	136	29	5.0	40	0.51
July-21	7.25	30.4	56	148	32	4.3	70	0.96
Aug-21	7.34	29.9	68	138	25	5.2	60	0.62
Sept-21	7.58	29.9	53	129	26	6.4	50	0.83

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	-
Apr-21	26	18	0.60	7.42
May-21	22	17	0.80	7.24
Jun-21	25	14	0.60	7.49
July-21	23	18	0.75	7.33
Aug-21	21	14	0.60	7.41
Sept-21	19	12	0.70	7.61

(d)	Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	o **Noted & shall be complied.** o CCA-Amendment (including authorization for the Hazardous and Other Wastes) for production increase upto 1,73,375 TPA received on 22.10.2021 having GPCB consent order no. AWH-115368 valid up to 11.04.2024.

		○ Generated ETP sludge is provided to cement manufacturers as stipulated in CCA. ○ Generated Fly ash is provided to Cement manufacturers for co-processing and surrounding local Brick manufacturers as stipulated in the CCA. ○ Generated Deashing sludge & Spent catalyst is provided to BEIL, TSDF site as stipulated in CCA. ○ As per latest CCA-amendment received from GPCB, Spent resin reutilized as a waste to recover energy in CPP for Power & Steam generation.

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

Hazardous Waste Treatment and Disposal Facilities

Type of waste	Schedule No.	Quantity	Treatment	Disposal practice
ETP Sludge	34.3	2464.89 MT	De-watering on belt press & drying. Stored under Gypsum storage shed area.	Disposal at TSDF BEIL, or **Sold to Cement industries**
Spent Catalyst	17.2	0	Stored in Drums and disposal as per CCA condition	Disposed at TSDF, BEIL, Ankleshwar
Spent Resin	34.2	5.87 Kl	Stored in drums and neutralize	Reutilize for energy recovery in boiler as a waste to energy recovery as per CCA
Sulphur Deashing sludge	17.2	65.33 MT	Stored in storage rooms which is fully covered	Disposed at TSDF, BEIL, Ankleshwar
Discarded containers and Liners	33.3	3437 No.	Decontamination is done in Unit and stored in dedicated storage yard	Sold to approved recycler as per guidelines of CC&A.

HDPE Bags	33.3	23.16 MT	Collected and stored in dedicated storage yard	Sold to approved recycler as per guidelines of CC&A.
Used oil	5.1	4.53 Kl	Collected and stored in drums	Sold to approved recycler as per guidelines of CC&A.

(e)	National Emission Standards for Organic Chemicals Manufacturing Industry issued by the Ministry vide G.S.R. 608 (E) dated 21st July, 2010 and amended from time to time shall be followed.	○ **Not applicable**. ○ We are engaged in manufacturing of Viscose Staple Fiber.
(f)	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. Sulphur content should not exceed 0.5% in the coal for use in coal fired boilers (2x100 & 1x120 TPH) to control particulate emissions within permissible limits. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	○ **Complied.** ○ The mitigation measures adopted to control emissions for CS2/H2S/SO2 concentration in ambient air is given below.

S.no.	Process	Emission	tigation Measures
1.	Sulphuric Acid Plant (2 nos.)	SO_2	2 - Stage Alkali (Caustic) Scrubbers
2.	CS2 Plant	CS2/ H2S	Sulphur Recovery system
3.	Sulphur Recovery Plant	SO_2	Alkali (Caustic) Scrubber
4.	Spinning Machine (4 nos)	CS2	CS2 recovery system with water scrubber and 3-stage condensers for recovering CS2 and Exhaust system connected with stack
5.	Sodium Sulphate Recovery plant	Sodium Sulphate dust	Cyclone Separator & Water scrubber

6.	Boiler	Gaseous Emission	ESP, Dust collector and Lime dosing system	

- Unit has installed 3 nos. of continuous AAQMS system in plant premises with the consultation with GPCB officers and 3 other AAQMS system installed at down wind direction area and regularly checking the parameters of CS2, H2S, SO2, NOx, PM10 and PM2.5.
- Unit has installed lime injection systems at coal feeders to control sulphur emission from boilers (2x100 & 1x120 TPH) within permissible limits.
- Unit has installed ESP to control particulate emissions within permissible limits.
- Unit has installed Online monitoring system for SO2, NOx, and PM monitoring (the flue gas emissions from Power Plant) from the stack attached with Boiler, connected with GPCB/CPCB server & transmitting data 24*7*365.
- Unit has appointed NABL accredited laboratory M/s. Pollucon laboratories 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.

- 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**
Apr-21	**63.14**	**28.89**	**17.23**	**28.63**	**26.93**	**28.79**
May-21	**59.80**	**26.36**	**15.82**	**25.74**	**23.20**	**24.62**
Jun-21	**59.49**	**27.16**	**16.92**	**23.95**	**20.11**	**21.31**

July-21	**61.65**	**28.27**	**17.78**	**25.10**	**23.33**	**27.05**
Aug-21	**55.98**	**29.21**	**16.76**	**27.12**	**20.44**	**26.97**
Sept-21	**62.58**	**30.57**	**15.60**	**30.21**	**22.70**	**26.13**

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)**			
Parameter	**SPM**	**SO2**	**NOx**	**SPM**	**SO2**	**NOx**	**Mercury**
Unit	**mg/Nm3**	**mg/Nm3**	**mg/Nm3**	**mg/Nm3**	**mg/Nm3**	**mg/Nm3**	**mg/Nm3**
Limit	**100**	**600**	**600**	**50**	**600**	**300**	**0.03**
Apr-21	**43**	**235**	**80**	**32**	**225**	**95**	**ND**
May-21	**49**	**225**	**93**	**37**	**241**	**88**	**ND**
Jun-21	**55**	**243**	**92**	**42**	**236**	**97**	**ND**
July-21	**57**	**257**	**97**	**41**	**238**	**94**	**ND**
Aug-21	**54**	**254**	**95**	**40**	**241**	**89**	**ND**
Sept-21	**48**	**249**	**94**	**42**	**234**	**87**	**ND**

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**	
Parameter	**CS2**			**SO2**	**Acid Mist**	**SO2**	**Acid Mist**
Unit	**Kg/ToF**			**Kg/ToA**	**mg/Nm3**	**Kg/ToA**	**mg/Nm3**
Limit	**125**			**2**	**25**	**2**	**25**
Apr-21	**0.02**	**94.37**	**94.39**	**0.73**	**19.50**	**0.59**	**7.62**
May-21	**0.03**	**81.57**	**81.60**	**0.78**	**21.52**	**0.63**	**8.12**
Jun-21	**0.03**	**89.42**	**89.45**	**0.71**	**19.95**	**0.67**	**7.22**
July-21	**0.03**	**87.90**	**87.93**	**0.82**	**22.19**	**0.74**	**7.90**
Aug-21	**0.03**	**90.40**	**90.43**	**0.89**	**20.17**	**0.74**	**8.85**
Sept-21	**0.04**	**88.93**	**88.97**	**0.81**	**21.74**	**0.75**	**8.03**

(g)	Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	o **Complied.** o Process effluent/any wastewater is not allowed to mix with storm water.
(h)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be	o **Complied.**

	provided on tank farm, and solvent transfer through pumps.	○ Hazardous chemicals are stored in tanks, tank farms, drums, carboys etc. Flame arresters are provided on tank farm and solvent transfer through pumps.
(i)	Process organic residue and spent carbon, if any, shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed off to the TSDF.	○ **Complied.** ○ Viscose staple fibre is the main product. Hence, there is no organic residue and spent carbon being generated from our plant. ○ Generated ETP sludge is provided to cement manufacturers as stipulated in CCA.
(j)	The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.	○ **Being complied.**
(k)	The company shall undertake waste minimization measures as below:- i. Metering and control of quantities of active ingredients to minimize waste. ii. Reuse of by-products from the process as raw material substitutes in other processes. iii. Use of automated filling to minimize spillage. iv. Use of Close Feed system into batch reactors. v. Venting equipment through vapor recovery system. vi. Use of high pressure hoses for equipment clearing to reduce wastewater generation.	○ **Being complied.** ○ The unit has undertaken waste minimization measures and will continue exploring measures to minimize at possible extent. To minimize quantity of waste, the unit has explored techniques and implemented some operational changes. ○ Few initiatives taken for waste minimization. ✓ ETP sludge is sold to cement units for co-processing activities. ✓ Mass/volume flow meters installed for Active ingredients i.e. CS2, H2SO4, NaOH etc dosing to minimize waste. ✓ Atomization for Raw material feeding and dosing is done for minimizing of spillage and leakages. ✓ Salt recovery plant is installed. ✓ Sweeping and mopping machines have been procured for floor cleaning activities instead of floor washing to reduce the waste water generation ✓ By-products from the process are reused as raw material substitutes in other processes.

		✓ Automated filling & packing m/c are installed to minimize spillage and also closed feed system is used for the continuous process reactors. ✓ Vapor recovery systems installed to recover Raw material and water which is reused in the process. ✓ For reduction of wastewater generation, High pressure jets are used for equipment clearing. ✓ Vapor condensate water is recycled through RO to minimize waste water generation.
(l)	The green belt of 5-10 m width shall be developed in more than 33% of the total project area, mainly along the plant periphery, in downward wind direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department.	o **Being complied.** o Green belt has been developed in the campus along the boundary wall and open spaces. Totally 1,85,000 trees have been planted in the premises in such a way that density of plantation is 1000 trees per acre and green belt of 30 meters width has been developed. o As per the directives of DoEF, we have also planted Mangrove in 100 Ha. at Raniyo Island spending to Rs. 20.00 Lacs.
(m)	All the commitments made regarding issues raised during the public hearing/consultation meeting held on 30th August, 2017 shall be satisfactorily implemented.	o **Being complied.** o All the commitments made regarding issues raised during the public hearing have been implemented satisfactorily.
(n)	At least 2.5% of the total project cost shall be allocated for Enterprise Social Commitment based on item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	o **Being complied.** o Unit is going for production increase quantity phase wise and prorate basis 2.5 % of the total project cost has been allocated for Enterprise Social Commitment based on item-wise details along with time bound action plan has been prepared and submitted to the Ministry's Regional Office.
(o)	The company shall make all arrangements for control of noise from the drilling activity. Acoustic enclosure shall be provided for the DG sets along with the adequate stack height as per CPCB guidelines.	o **Complied.** o Presently, there is no D.G. Set installed for Power generation. o In case of installation of D.G. Set in future, Proper arrangements for the control of noise form drilling activity will be taken care, proper acoustic enclosures and adequate stack height will be provided.

(p)	The unit shall make the arrangements for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	○ **Complied.** ○ During manufacturing process in material handling the unit has made all the arrangements for protection of possible fire hazards and the firefighting systems are as per the norms.
(q)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	○ **Complied.** ○ Awareness programs are being conducted on health by CMO and by ABG Emergency Code Red. ○ First aid training is being arranged on periodic interval, which covers all categories of employees, workmen. ○ Medical check-up is being conducted annually for all employees and six monthly, for those employees who engaged in handling hazardous substances at work place area. ○ All the Employees are covered under Health Survey. Periodic and pre-joining medical check-up for each and every employees and Contractual worker is being done. ○ 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.
(r)	Continuous online (24x7) monitoring system for stack emissions and the effluent, shall be installed for measurement of flow/discharge and the pollutants concentration, and the emission and the effluent monitoring data to be transmitted to the CPCB and SPCB server as per the directions of CPCB in this regard.	○ **Complied.** ○ For effluent monitoring; ○ Online TOC Meter has been installed and this is connected to the GPCB online server. ○ For Stack Monitoring; ○ Online monitor is provided for SO2, NOx, and PM for monitoring the emissions from Power Plant. ○ Online stack monitoring system at CPP is provided & connected with GPCB/CPCB server. ○ Online stack monitoring systems are installed for Rayon and CS2 plant stack and SO2 analyzer installed at Acid plant stack.

(s)	Storage of raw materials, coal etc. shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions. Raw material storage should not exceed 3 days at any point of time.	○ **Complied.** ○ Covered Storage yards, warehouse, tanks etc have been provided for individual Raw material storage. ○ EC amendment has been obtained with specific condition, "Raw material storage shall not exceed 30 days at any point of time".
(t)	The energy sources for lighting purposes shall preferably be LED based. A minimum of 10-20% of the total power requirement for the industrial operations shall be met from non-conventional energy resources/solar supply.	○ **Complied.** ○ Unit has already replaced energy source as LED based for lighting purpose in plant as well as colony area. ○ Unit is purchasing RPO for Renewable energy to meet the requirement of a minimum of 10-20% of the total power requirement for the industrial operations through hybrid non- conventional energy source.
12.1	The grant of Environmental Clearance is further subject to compliance of other generic conditions as under:	-
(i)	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and/ or any other statutory authority.	○ **Complied.** ○ Unit is in compliance for the conditions and standard stipulated in consolidated consent and authorization issued by GPCB.
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forest and Climate Change. 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.	○ **Noted**. ○ No further expansion or modifications in the plant will be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.
(ii)	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forest and Climate Change. 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	○ **Noted**. ○ No further expansion or modifications in the plant will be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.

	imposed and to add additional environmental protection measures required, if any.	
(iii)	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations each is installed in upward and downward direction as well as where maximum ground level concentrations are anticipated.	o **Complied.** o Unit has installed 3 nos. of continuous AAQMS systems in plant premises with the consultation with GPCB officers and 3 other AAQMS systems installed at down wind direction area and regularly checking the parameters of CS2, H2S, SO2, NOx, PM10 and PM2.5.
(iv)	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.	o **Complied.**
(v)	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 viz. 75 dBA (day time) and 70 dBA (night time).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).	o **Being Complied.** o Quarterly monitoring the noise level in and around the plant area being conducted. o A Summary of noise level monitoring for the reporting period is given below:

NOISE LEVEL MEASURMENT

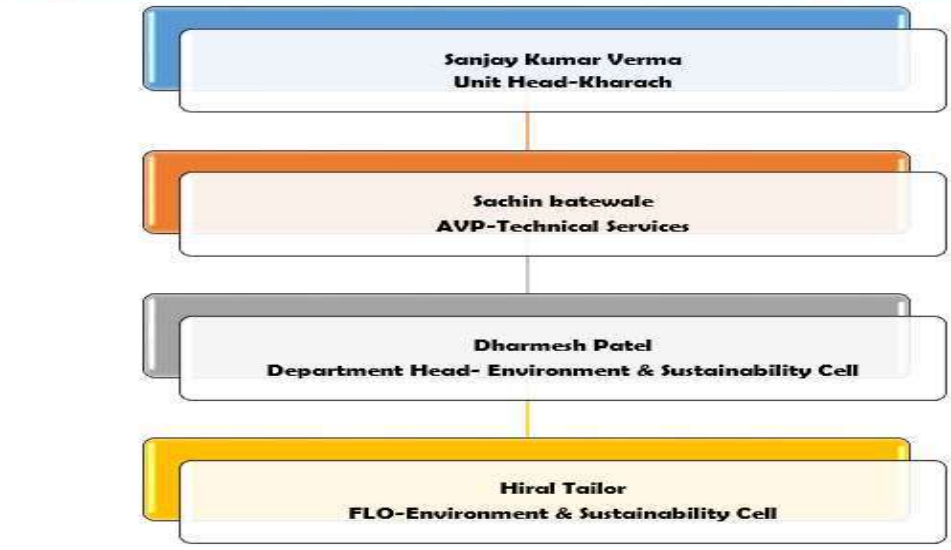
Month			Jun-21		Sep-21	
Sr. No.	Location	Department	dBA Day	dBA Night	dBA Day	dBA Night
		Limit	75	70	75	70
1	Simplex room line 1&2	Viscose	55	58	54	58
2	Simplex room line 3&4	Viscose	59	61	59	61
3	Office area Viscose and MIS	Viscose	45	52	44	52
4	Near Maturing Drum	Viscose	57	63	57	63
5	Pulper Operator	Viscose	55	60	55	60
6	Sodastation Office	Viscose	44	55	44	42
7	Sodastation Area	Viscose	55	61	55	61
8	GDP area	Viscose	63	68	64	62

9	Blower room (Top Floor)	Viscose	65	68	66	64
10	Road between Viscose and Spinning	-	42	48	48	43
11	Bailing Press area line-1	Spinning	56	62	56	62
12	Bailing Press area line-2	Spinning	32	62	62	52
13	Dryer # 1 & 2 cabin	Spinning	42	45	44	43
14	Fine Opener Line # 2	Spinning	40	63	63	51
15	Bailing Press area line-3	Spinning	58	61	58	61
16	Bailing Press area line-4	Spinning	58	61	58	61
17	Fine Opener Line # 3	Spinning	60	64	60	64
18	Fine Opener Line # 4	Spinning	59	63	64	58
19	Dryer # 3	Spinning	59	62	62	58
20	Dryer # 4	Spinning	57	62	62	57
21	Dryer # 3 & 4 cabin	Spinning	47	51	52	48
22	Aft treatment Operator Line 3&4 cabin	Spinning	49	52	49	52
23	Aft treatment Operator Line 1&2 cabin	Spinning	64	68	64	68
24	Spinning M/C-2	Spinning	59	65	59	65
25	Jet room # 3, 4	Spinning	54	59	54	59
26	Spg office line 3 & 4	Spinning	43	50	43	50
27	Spinning M/C-3	Spinning	59	63	59	63
28	Spinning M/C-4	Spinning	61	61	61	61
29	Pump House	Fire Stn.	52	57	57	52
30	Acid plant (Control room inside)	Acid Plant	40	44	40	44
31	Blower- AP-1	Acid Plant	63	68	63	68
32	Blower- AP-2	Acid Plant	64	68	64	69
33	Offices (Acid/CS2)	CS2/Acid plant	39	43	43	39
34	Ammonia Compressor # 3 area	CS2 Refinary	66	66	66	69
35	Ammonia Compressor # 1 area	CS2 Refinary	63	67	63	67
36	Near Chiller Area	CS2 Refinary	58	62	58	62
37	H2S Gas holder area	CS2 plant	49	54	49	54
38	CS2 control room	CS2 plant	40	44	40	44
39	Charcoal Feeder	CS2 plant	41	48	41	48
40	Furnace area	CS2 plant	50	53	50	53
41	Pump House	WTP	59	62	59	62
42	Operator room (Inside)	WTP	54	49	54	49
43	Operator room (Outside)	WTP	52	60	52	60
44	Office	WTP	43	43	43	43
45	Lab	WTP	42	42	42	42
46	EC enterance	EC	38	40	38	40
47	TG ground floor area (Near MCC)	EC	44	60	44	60

48	MCC room (ground floor)	EC	42	44	42	44
49	Compressor area (Khosla Crepelle)	EC	61	66	61	66
50	Between 3PA Fan 1 & 2	EC	47	52	47	52
51	Between 3FD Fan # 1 & 2	EC	52	55	52	55
52	Between 1FD/2FD Fan 1 & 2	EC	56	58	56	58
53	Between 1PA/2PA Fan 1 & 2	EC	59	63	59	63
54	Near Turbine # 1	EC	61	65	61	65
55	Near Turbine # 2	EC	63	66	63	66
56	Office Gallary	EC	47	51	47	51
57	Turbine # 3 floor (Near Generator)	EC	60	63	60	63
58	EC Control room (Outside)	EC	59	66	59	66
59	EC Control room (inside)	EC	41	45	41	45
60	Office / Conf. Room	Auxiliary	44	48	48	44
61	Drum Dryer - 8.0 mtr.	Auxiliary	60	60	60	60
62	Vibrators	Auxiliary	58	63	58	63
63	RVF / TFF - 13 mtr	Auxiliary	61	62	61	62
64	RVF / TFF - 19 mtr blower (Old)	Auxiliary	61	66	61	66
65	RVF / TFF - Operator room	Auxiliary	46	52	52	46
66	RVF / TFF - blower top floor area (Old)	Auxiliary	63	67	63	67
67	RVF / TFF - blower top floor area (New)	Auxiliary	65	68	65	69
68	Crystalization office - New plant (out)	Auxiliary	60	62	60	62
69	Crystalization office - New plant (In)	Auxiliary	50	53	50	53
70	MSFE office - Old Plant (Outside)	Auxiliary	54	59	54	59
71	MSFE office - Old Plant (Inside)	Auxiliary	48	51	48	51
72	Cooling tower # 3	Auxiliary	59	64	64	59
73	Cooling tower - New Plant - CS2 side	Auxiliary	49	53	49	53
74	Workshop Hall	Workshop	54	60	54	60
75	Office	Workshop	52	42	52	42
76	Gate 1	Boundary area	56	48	56	48
77	Gate 2	Boundary area	56	48	56	48
78	TRADC circle	Boundary area	55	52	55	52

(vi)	The Company shall harvest rainwater from the tops of the buildings and storm water drains to recharge the ground water and utilize the same for different industrial operations within the plant.	○ **<u>Being Complied.</u>** ○ Rainwater is being harvested to conserve the fresh water. In the Monsoon season, approx. 1,47,045 M3 rain water was conserved.

(vii)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	○ **Complied.** ○ Safety trainings including Chemical handling are being provided to all the employees on regular basis for safe working and to handle any emergency. Also experts are hired for training purpose. ○ Safety videos for employees and visitors have been prepared. All important safety information contains guide templates provided to educate more about safety at work place. ○ PPEs are mandatory in the plant. PPEs like safety shoes, safety goggles, dust mask, ear plug, helmet etc made available for all employees and visitors in the plant. Additionally, job specific or special category PPEs are also provided to those who work in critical area. ○ Periodic medical check-up for all the employees are being done
(viii)	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, risk mitigation measures and public hearing shall be implemented.	○ **Being complied.** ○ Unit is in compliance with the environmental protection measures and safeguards recommended in EIA / EMP / Risk Analysis Reports and in public hearing.
(ix)	The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villagers, administration and other stake holders. Also eco-developmental measures shall be undertaken for overall improvement of the environment.	○ **Being complied.** ○ Unit is going for production increase phase wise. As per total project cost, various community development measures in and around 32 villages have been taken by the unit. ○ A separate budget is being allocated for the same.
(x)	A separate Environment Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	○ **Complied.** ○ A separate environment management cell has been constituted under the leadership of Facility Head. ○ The detailed Organization chart is given below:



(xi)	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.	○ **Complied.** ○ The funds earmarked for the environmental protection measures are being maintained and not diverted for other purpose. ○ Unit has kept separate budget to meet the capital & recurring cost for maintaining the environment -cost for all instrument, pipe line and ETP. ○ A year wise expenditure on environment safeguards is being submitted to MOEF and CC at the end of each FY along with EC compliance report each year. ○ In FY'21, 31.40 Crores spent towards Environmental protection measures. Report for same was submitted to MOEFCC dated: 20.05.2021.
(xi)	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, ZilaParisad/ Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	○ **Complied.** ○ A copy of clearance letter has been submitted to District Industries Centre, District Panchayat, Collector Office, GPCB-RO & GPCB-HO.

(xiii)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF & CC, the respective Zonal office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.	○ **Complied.** ○ Every six monthly compliance report is being submitted to Regional Office of MOEF & CC, Bhopal and SPCB. ○ Compliance report for the period of Oct-20 to March-21 was submitted on 20.05.2021. ○ Last six monthly Environment clearance compliance report uploaded on company's website.
(xiv)	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to concerned State Pollution Control Board as per prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, Shall also be put on the website of the company along with the status of environmental clearance conditions and shall also be sent to the respective Regional offices of MoEF&CC by e-mail.	○ **Complied.** ○ The environmental statement for each financial year ending 31st March in Form-V is being submitted to Gujarat State Pollution Control Board as per prescribed under the Environment (Protection) Rules, 1986, as amended subsequently. ○ Unit is uploading copy of Environment statement on company's website as prescribed in EC.
(xv)	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional office of the Ministry.	○ **Complied.** ○ Advertisement has been published within 7 days from the date of issue of the clearance letter and copy forwarded to Ministry's Regional Office at Bhopal. Refer EC advertisement copy is enclosed below.

'Expansion of Viscose Staple Fibre unit from 1,27,750 to 2,33,600 TPA
and
Coal based CPP from 25 MW to 45 MW'

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

PUBLIC NOTICE
ENVIRONMENTAL CLEARANCE

It is hereby informed that the Ministry of Environment, Forests and Climate Change, IA Division, Government of India, New Delhi, has accorded Environmental Clearance for Expansion of Viscose Staple Fibre Unit & Coal based CPP at Birladham, Village Kharach, Tehsil Hansot Dist. Bharuch (Gujarat) of **M/s. Birla Cellulosic (A unit of M/s. Grasim Industries Ltd.)** vide letter No. J-11011/320/2016-IA II (I) dated 22/02/2018, **under the provision of EIA Notification dated 14th September 2006.**

Copies of Clearance letter are available with the SPCB and may also be seen at website of MoEFCC, www.envfor.nic.in

Date : 22/02/2018
Place : KHARACH

UNIT HEAD
M/S. BIRLA CELLULOSIC

- **English Advertisement**

જાહેર સૂચના
(પર્યાવરણ મંજૂરી)

આ સાથે જણાવવામાં આવે છે કે પર્યાવરણ વન અને ક્લાઇમેન્ટ ચેન્જ મંત્રાલય આઇ.એ. વિભાગ, ભારત સરકાર, નવી દિલ્હી દ્વારા **મેસર્સ બિરલા સેલ્યુલોઝીક (મેસર્સ ગ્રાસીમ ઇન્ડસ્ટ્રીસનો યુનિટ)** બિરલાધામ, ગામ: ખરચ, તાલુકા: હાસોટ, જિલ્લો: ભરૂચ (ગુજરાત) ખાતે વિસ્કોસ સ્ટેપલ ફાઇબર યુનિટ અને કોલ બેઝ સી.પી.પી. પ્લાન્ટના વિસ્તરણ માટેની પર્યાવરણીય મંજુરી તારીખ ૨૨/૦૨/૨૦૧૮ ના પત્ર ક્રમાંક J-11011/320/2016-IA II (I) દ્વારા **ઈ.આઇ.એ. નોટીફીકેશન તારીખ ૧૪ સપ્ટેમ્બર ૨૦૦૬ જોગવાઇ હેઠળ આપેલ છે.**

ઉપરોક્ત પત્રની નકલ સ્ટેટ પોલ્યુશન કંટ્રોલ બોર્ડ ઉપરાંત MoEF ની વેબસાઇટ www.envfor.nic.in ઉપર ઉપલબ્ધ છે.

તારીખ : ૨૨/૦૨/૨૦૧૮
સ્થળ : ખરચ

યુનિટ હેડ
મેસર્સ બિરલા સેલ્યુલોઝીક

- **Gujarati Advertisement**

ADITYA BIRLA

GRASIM

Dated: 18.10.2021

The Advisor,
Ministry of Environment, Forest and Climate Change
Regional office, Western Region
"Kendriya Paryavaran Bhavan"
Link Road No.3, Ravishankar Nagar
Bhopal-462016 (M.P)

Subject: Half Yearly Compliance Report of Environmental Clearance for period of "April-21 to Sept-21".

Dear Sir,

In view of above subject matter, Here, we are submitting the hard copy as well as soft 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 **"April-21 to Sept-21".**

Hope, the same is in order.

Yours Faithfully,
(For Birla Cellulosic)

Dharmesh Patel
DH- Environment

Encl. :

1. **EC Copy**
2. **EC-2007 Compliance report (April-21 to Sept-21)**

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

F. No. J-11011/130/2006- IA II (I)

Government of India
Ministry of Environment and Forests
(I.A. Division)

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

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

To,

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

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

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

Sir,

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

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_2)	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_2 condensers, CS_2 recovery system, cyclone separators, SO_2 scrubber, Sulphur recovery plant, ESP and dust collectors will be provided to control fugitive and gaseous emissions. Appropriate technology will be used to achieve the notified standards for CS_2 and H_2S. Total water requirement from River Kim will be 4.09 MGD (18,600 m^3/d). No treated effluent will be discharged anywhere into surface / subsurface drains and / or into river Kim without prior approval from the GSPCB. Treated wastewater will be recycled and reused in the process or used for green belt development or for spraying coal/ash in power plant. ETP sludge and fly ash will be provided to cement and brick manufacturers respectively. Spent catalyst, Spent resin, Sulphur de-ashing sludge will be disposed off at TSDF of M/s Bharuch Enviro Infrastructure Ltd. at Ankleshwar, Bharuch, Gujarat. Waste oil will be sold to approved recyclers.

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

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

A. SPECIFIC CONDITIONS :

i. The gaseous emissions (SO_2, NO_X, HC) and particulate matter from various process units shall conform to the standards prescribed by the concerned authorities from time to time. At no time, the emission levels shall go beyond the stipulated standards. In the event of failure of pollution control system(s) adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency.

ii. The process emissions (SO_2 and CS_2) shall be scrubbed by the caustic or wet scrubber from all the stacks. Electrostatic Precipitators (ESPs) shall be installed to control gaseous emissions. CS_2 condensers, CS_2 recovery system & cyclone separators shall be installed to control Sodium sulphate dust. SO_2 scrubber, Sulphur recovery plant shall be installed to control SO_2 emissions. Vents from scrubbers and condensers shall be periodically monitored and maintained as per the best practicable technology. The company shall monitor the CS_2 and H_2S and data submitted to the Ministry.

iii. The technology employed shall achieve standards notified by the Ministry for the Rayon Industry vide Gazette Notification No. 195 dated 16th October, 2006 regarding ambient air quality and stack emission norms for CS_2 and H_2S. A report shall be submitted every six months to the Ministry's Regional Office at Bhopal / GPCB / CPCB on the emission levels. Provision shall be made for retrofit additional equipment if necessary in future.

iv. The industry shall measure ambient air quality for CS_2 and H_2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS_2 and H_2S emissions not to exceed 100 ug/m^3 and 150 ug/m^3.

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^3/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 tome bound implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Ministry's Regional Office at Bhopal. The funds shall not be diverted for any other purposes.

B. GENERAL CONDITIONS :

i. The project authorities must strictly adhere to the stipulations made by the Gujarat State Pollution Control Board (GPCB) and the State Government.

ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess adequacy of the conditions imposed and to add additional environmental protection measures required, if any.

iii. Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the GPCB. Regular monitoring shall be carried out for relevant parameters.

iv. The project authorities must strictly comply with the rules and regulations under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000. Prior approvals of Chief Inspector of Factories, Chief Inspector of Explosives, Fire Safety Inspectorate etc. must be obtained.

v. The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2000. Authorization from the GPCB must be obtained for collection, storage, treatment and disposal of hazardous wastes.

vi. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (P) Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

vii. Occupational health surveillance programme shall be undertaken as regular exercise for all the employees, specifically for those engaged in handling hazardous substances. First aid facilities in the Occupational Health Care Centre shall be strengthened and medical records of each employee shall be maintained separately.

viii. A separate Environment Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and monitoring functions.

ix. The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.

x. The implementation of the project vis-à-vis environmental action plans shall be monitored by Ministry's Regional Office at Bhopal / GPCB / CPCB. A six monthly compliance status report should be submitted to monitoring agencies.

xi. The Project Proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the Gujarat Pollution Control Board / Committee and may also be seen at Website

of the Ministry and Forests at 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, 1991alongwith their amendments and rules.

15/11/07

(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.

15/11/07

(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 (Gujrat) – 394120

Duration/Reporting period : April-21 to Sept-21

<table>
<tr><th>S. No.</th><th>Compliance conditions by MoEF & CC</th><th>Action Taken by Birla Cellulosic</th></tr>
<tr><td>A.</td><td colspan="2">SPECIFIC CONDITIONS</td></tr>
<tr><td>1.</td><td>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.</td><td>○ <u>Noted.</u></td></tr>
<tr><td>2.</td><td>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:
<table>
<tr><td>S. N.</td><td>Products</td><td colspan="3">Capacity of the Plant</td></tr>
<tr><td></td><td></td><td>Existing</td><td>Proposed</td><td>Total</td></tr>
<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>
</table></td><td>○ <u>Noted & Complied.</u></td></tr>
</table>

	3 | Carbon-disulphide (CS2) | 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.	o The expansion project was implemented within the existing plant and no extra land was used.
3.	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.	o **Complied.** o Unit has 4 spinning machines and each spinning machines has been provided with 3 stage CS2 condensing system. o 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. o Dust collection systems are provided with cyclones to collect the charcoal dust generated by feeding of charcoal into the CS2 manufacturing process. o cyclone separators are provided for recovery of sodium sulphate in the triple effect evaporators for producing anhydrous sodium sulphate. o Cyclone separators & Water scrubbers are provided for scrubbing out of sodium sulphate dust from the salt dryer exhaust air to avoid dust emission. o Both sulphuric acid plants has 2- Stage scrubber system for scrubbing SO2 using alkaline solution. o 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. o Unit has installed 3 no. boilers, whereas, Boiler

	Total water requirement from River Kim will be 4.09 MGD (18,600 m m3/d). No treated Effluent will be discharged anywhere into surface/ subsurface drains and/or into river Kim Without prior approval from the SPCB. Treated wastewater will be recycled and reused in the Process or used for green belt development or for spraying coal/ash in power plant. ETP sludge and fly ash will be provided to cement and brick manufacturers respectively. Spent catalyst, Spent resin, Sulphur de-ashing sludge will be disposed off at TSDF of M/s Bharuch Enviro Infrastructure Ltd. at Ankleshwar, Bharuch, Gujarat. Waste oil will be sold to approve recyclers.	No. 1 & 2 was installed in 1997, These boilers are operating with three fields ESP and Boiler no. 3 was installed in 2008, this boiler is operating with four fields ESP. Through this ESP, we are meeting prescribed norms. o Unit has installed dust collectors with ash evacuation system to control dust from ash handling area. o The charcoal and coal belt conveyors are fully sealed with provision of water spray. o The exhaust gases from spinning machines are passed through 175 M height chimney, which is in line with the guidelines stipulated in the consent. o An agreement with Irrigation Department has been made for water withdrawal @ 19000 M3/day. o 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. o Treated effluent is being recycled in Belt press washing, Lime slurry making. o Generated quantity of Fly ash sold to surrounding local Brick and Cement manufacturers as stipulated in CCA. o Generated quantity of ETP sludge is being sold to cement manufactures as stipulated in CCA. o Generated quantity of Deashing sludge, Spent Catalyst is being sent to BEIL, TSDF site as stipulated in CCA. o Generated quantity of Spent resin burnt is boiler for waste to energy recovery as stipulated in CCA. o Generated quantity of used oil is being sold to authorized recyclers as stipulated in CCA.
4.	Public hearing meeting was held on 28th March, 2006. 'Consent to Establish' has been accorded by the Gujarat State Pollution Control Board (GSPCB) vide letter no. GPCB/BRCH/NOC-3241[CCA 295(4)]/10965	o **Noted.**

	dated 19th April, 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:	**Noted**
i.	The gaseous emissions (SO2, NOx, HC) and particulate matter from various process units shall confirm to the standards prescribed by the concerned authorities from time to time. 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.	o **Being complied.** o The gaseous emission (SO2, NOx) and particulate matter generates from power plant unit and CS2, H2S, SO2 & acid mist gaseous emission generates from Spinning, CS2 & Acid plant process are met to the standards prescribed by the concerned authorities from time to time. o No HC is being emitted from Birla cellulosic. o At no time, the emission levels exceed beyond the stipulated standards. o There has been no event of failure of pollution control systems in the last six months. 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. o Vents from scrubbers & condensers are monitored periodically by the in-house laboratory (internal laboratory). o Unit has appointed NABL accredited third party laboratory for monthly monitoring of Stack concentration as well as ambient air quality. o As per the monitoring conducted by thrird party Lab, the results are well within the prescribed norms as per consent condition.

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)			
Parameter	SPM	SO2	NOx	SPM	SO2	NOx	Mercury
Unit	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3
Limit	100	600	600	50	600	300	0.03
Apr-21	43	235	80	32	225	95	ND
May-21	49	225	93	37	241	88	ND
Jun-21	55	243	92	42	236	97	ND
July-21	57	257	97	41	238	94	ND
Aug-21	54	254	95	40	241	89	ND
Sept-21	48	249	94	42	234	87	ND

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	
Parameter	CS2			SO2	Acid Mist	SO2	Acid Mist
Unit	Kg/ToF			Kg/ToA	mg/Nm3	Kg/ToA	mg/Nm3
Limit	125			2	25	2	25
Apr-21	0.02	94.37	94.39	0.73	19.50	0.59	7.62
May-21	0.03	81.57	81.60	0.78	21.52	0.63	8.12
Jun-21	0.03	89.42	89.45	0.71	19.95	0.67	7.22
July-21	0.03	87.90	87.93	0.82	22.19	0.74	7.90
Aug-21	0.03	90.40	90.43	0.89	20.17	0.74	8.85
Sept-21	0.04	88.93	88.97	0.81	21.74	0.75	8.03

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

S.no.	Process	Emission	Mitigation Measures
1.	Sulphuric Acid Plant (2	SO_2	2 - Stage Alkali (Caustic)

	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.	
iii.	The technology employed shall achieve standards notified by the Ministry for the Rayon Industry vide Gazette Notification No. 195 dated 16th October,2006 regarding ambient air quality and stack emission norms for CS2 and H2S. A report shall be submitted every six months to the Ministry's Regional Office at Bhopal / GPCB / CPCB on the emission levels. Provision shall be made for retrofit additional equipment if necessary in future.	○ **Complied.** ○ 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. ○ Every six monthly compliance report is being submitted to Regional Office of MOEF & CC, Bhopal. Last report for the

	nos.)		**Scrubber**
2.	**CS2 Plant**	**CS2/ H2S**	**Sulphur Recovery system**
3.	**Sulphur Recovery Plant**	**SO_2**	**Alkali (Caustic) Scrubber**
4.	**Spinning Machine (4 nos)**	**CS2**	**CS2 recovery system having a water scrubber and 3-stage condensers for recovering CS2 and Exhaust system connected with stack**
5.	**Sodium Sulphate Recovery plant**	**Sodium Sulphate dust**	**Cyclone Separator & Water scrubber**
6.	**Boiler**	**Gaseous Emission**	**ESP & Lime dosing system**

		period of Oct-20 to March-21 was submitted on 20.05.2021.
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/m3 and 150 µg/m^3.	o **Being complied.** o Unit has installed 3 nos. of AAQMS system in plant premises in consultation with GPCB officers and 3 other AAQMS system installed at down wind direction area, which is regularly checking the parameters of CS2, H2S, SO2, NOx, PM10 and PM2.5.

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

Location	Average of AAQMS Station 1, 2 & 3					
Parameter	**PM10**	**PM2.5**	**SO2**	**NOx**	**H2S**	**CS2**
Unit	**µg/m3**	**µg/m3**	**µg/m3**	**µg/m3**	**µg/m3**	**µg/m3**
Limit	**100**	**60**	**80**	**80**	**150**	**100**
Apr-21	**63.14**	**28.89**	**17.23**	**28.63**	**26.93**	**28.79**
May-21	**59.80**	**26.36**	**15.82**	**25.74**	**23.20**	**24.62**
Jun-21	**59.49**	**27.16**	**16.92**	**23.95**	**20.11**	**21.31**
July-21	**61.65**	**28.27**	**17.78**	**25.10**	**23.33**	**27.05**
Aug-21	**55.98**	**29.21**	**16.76**	**27.12**	**20.44**	**26.97**
Sept-21	**62.58**	**30.57**	**15.60**	**30.21**	**22.70**	**26.13**

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.	o **Being complied.** o Regularly monitoring of fugitive emission of CS2, H2S and SO2 in work zone environment is being done by an in house laboratory. o A Summary of Work area air quality for the reporting period is given below:

Area	**CS_2 (ppm)**	**H_2S (ppm)**	**SO_2 (ppm)**
Std. (As per GFR)	**10**	**10**	**2**
Refinery-CS2 Area	**Min: 1.3 Max: 2 Ave: 1.7**	**Min: 1.3 Max: 2.4 Ave: 1.8**	**Min: 00 Max: 00 Ave: 00**
Furnace-CS2 Area	**Min: 1.2 Max: 1.9 Ave: 1.7**	**Min: 1.5 Max: 2.1 Ave: 1.7**	**Min: 00 Max: 00 Ave: 00**

Rayon plant	**Min: 1.2** **Max: 2.6** **Ave: 1.7**	**Min: 1.3** **Max: 2.1** **Ave: 1.7**	**Min: 00** **Max: 00** **Ave: 00**
Spin Bath-Auxillary area	**Min: 1.1** **Max: 2.1** **Ave: 1.7**	**Min: 1.5** **Max: 2.4** **Ave:1.8**	**Min: 00** **Max: 00** **Ave: 00**
MSFE-Auxillary area	**Min: 1.2** **Max: 1.9** **Ave: 1.7**	**Min: 1.5** **Max: 1.9** **Ave: 1.7**	**Min: 00** **Max: 00** **Ave: 00**
Anhydra-tion & Crystaliza tion Auxillary	**Min: 1.5** **Max: 2.2** **Ave: 1.7**	**Min: 1.5** **Max: 2.1** **Ave: 1.7**	**Min: 00** **Max: 00** **Ave: 00**
Acid plant	**Min: 1.2** **Max: 2.4** **Ave: 1.7**	**Min: 1.5** **Max: 2.3** **Ave: 1.7**	**Min: 00** **Max: 00** **Ave: 00**
Xanthator-Viscose area	**Min: 1.3** **Max: 2.3** **Ave: 1.7**	**Min: 1.6** **Max: 2.2** **Ave: .1.8**	**Min: 00** **Max: 00** **Ave: 00**
Ripening-Viscose area	**Min: 1.4** **Max: 2.4** **Ave: 1.7**	**Min: 1.4** **Max: 2.3** **Ave: 1.7**	**Min: 00** **Max: 00** **Ave: 00**
Washing-Viscose area	**Min: 1.2** **Max: 1.9** **Ave: 1.7**	**Min: 1.5** **Max: 2.1** **Ave: 1.7**	**Min: 00** **Max: 00** **Ave: 00**

- Fugitive emissions in the work zone environment are being controlled by exploring techniques like Motorized shutter & suction hoods on spinning machines & cutters, shutters for stretch roller & gear box and perfect sealing of all the openings in various tanks of spin bath.
- Provision of fresh air by induced draft fans

		is in place at the spinning machines for ease of working. 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. o Dust collection systems are provided to collect the charcoal dust generated by feeding of charcoal into the CS2 manufacturing process. o The charcoal and coal belt conveyors are fully sealed with provision of water spray. o Cyclone separators & Water scrubbers are provided for scrubbing out of sodium sulphate dust from the salt dryer exhaust air to avoid dust emission.
vi.	Total water requirement from River Kim shall not exceed 4.09 MGD (18,600 m3/d) as per the 'Permission' accorded by the Govt. of Gujarat. The wastewater shall be treated in the ETP through primary, secondary and tertiary treatment and disposed off in the pipeline of M/s Bharuch 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. 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 waste water 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	o **<u>Noted & Complied.</u>** o An agreement with Irrigation Department has been made for water withdrawal @ 19000 M3/day. o A Summary of water Consumption for the reporting period is given below: **Month** / **Quantity (M3)** **Apr-21** 469350 **May-21** 492880 **Jun-21** 486480 **July-21** 474765 **Aug-21** 476098 **Sept-21** 458217 **Total** 2857790 **Average (M3/Day)** 15616.34 o The Half- yearly average water Consumption is 15616 M3/day, which is less than the quantity mentioned in Agreement. o A full-fledged effluent treatment plant comprising of primary treatment of neutralization, settling facility and

	development.	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. o A full-fledged in-house laboratory is established to monitor the parameters round the clock. o 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. o A separate 24 KM long underground pipeline for discharging the treated effluent in the estuary of Kim River as approved by GPCB. The disposal point was suggested by NIO, Goa in 2007. o There was a typographical error regarding the disposal of effluent from using the pipeline of Bharuch Enviro Infrastructure Ltd. (BEIL) in the letter issued by MoEFCC. We requested MoEFCC for correction vides our letter dated 9th April 2007. o The Sewage water from the plant and township is treated in the well-established STP and recycled for green belt development.

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
Apr-21	7.62	30.2	54	148	36	4.5	60	0.71
May-21	7.84	30.1	48	152	27	5.8	50	0.84
Jun-21	7.33	30.0	31	136	29	5.0	40	0.51
July-21	7.25	30.4	56	148	32	4.3	70	0.96

Aug-21	**7.34**	**29.9**	**68**	**138**	**25**	**5.2**	**60**	**0.62**
Sept-21	**7.58**	**29.9**	**53**	**129**	**26**	**6.4**	**50**	**0.83**

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**	**-**
Apr-21	**26**	**18**	**0.60**	**7.42**
May-21	**22**	**17**	**0.80**	**7.24**
Jun-21	**25**	**14**	**0.60**	**7.49**
July-21	**23**	**18**	**0.75**	**7.33**
Aug-21	**21**	**14**	**0.60**	**7.41**
Sept-21	**19**	**12**	**0.70**	**7.61**

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 **<u>Being complied.</u>** o All the wastes are segregated according to its composition and stored separately for treatment/disposal. 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 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 A Summary of hazardous waste treatment and disposal facilities for the reporting period is given below:

Hazardous Waste Treatment and Disposal Facilities				
Type of waste	**Schedule No.**	**Quantity**	**Treatment**	**Disposal practice**
ETP Sludge	34.3	2464.89 MT	De-watering on belt press & drying. Stored under Gypsum storage shed area.	Disposal at TSDF BEIL, or **Sold to Cement industries**

Spent Catalyst	17.2	0	Stored in Drums and disposal as per CCA condition	Disposed at TSDF, BEIL, Ankleshwar
Spent Resin	34.2	5.87 Kl	Stored in drums and neutralize	Reutilize for energy recovery in boiler as a waste to energy recovery as per CCA
Sulphur Deashing sludge	17.2	65.33 MT	Stored in storage rooms which is fully covered	Disposed at TSDF, BEIL, Ankleshwar
Discarded containers and Liners	33.3	3437 No.	Decontamination is done at user point in Unit and stored in dedicated storage yard	Sold to approved recycler as per guidelines of CC&A.
HDPE Bags	33.3	23.16 MT	Collected and stored in dedicated storage yard	Sold to approved recycler as per guidelines of CC&A.
Used oil	5.1	4.53 Kl	Collected and stored in drums	Sold to approved 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 pert he CPCB guideline.	○ **Complied.** ○ Green belt has been developed in the campus along the boundary wall and open spaces (80 ha). Totally 1,85,000 trees have been planted in the premises in such a way that density of plantation is 1000 trees per acre and green belt of 30 meters width is developed. ○ As per the directives of DoEF, Mangroves have been planted in 100 Ha. At Raniyo Island spending to Rs. 20.00 Lacs.
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.	○ **Being complied.** ○ Rainwater is being harvested to conserve the fresh water. In the Monsoon season 147045 M3 was conserved. ○ Unit is regularly submitting Monsoon action plan to GPCB every year.
x.	The project proponent shall comply with the environmental protection measures and	○ **Complied**. ○ We are complying with all the

	Safeguards recommended in EIA / EMP / Risk Analysis reports as well as the recommendations of the public hearing panel.	environmental protection measures and safeguards recommended in EIA / EMP / Risk Analysis Reports.
xi.	The Company shall undertake eco-development measures including community welfare measures in the project area for the overall improvement of the environment. The eco-development plan shall be submitted to the GPCB within three months of receipt of this letter for approval.	o **Complied.** o Various Eco development measures in and around 32 villages have been undertaken. Our main focus has been in following 4 areas: o Education: ✓ Pre School Education ✓ School Development work ✓ Education Support Project ✓ Vocational & Technical Education Project ✓ School Infrastructure o Health Care: ✓ Preventive Health Care ✓ Curative Health Care ✓ Reproductive and Child Health ✓ Health Support Program ✓ Health Infrastructure ✓ Blood donation camp o Infrastructure Development: ✓ Roads/Culverts/Bridges/Bus Stands ✓ Community Halls ✓ Other Community Assets works ✓ RO plant installation. o Social activities: ✓ Institutional building & strengthening ✓ Awareness programs ✓ Social Events ✓ Promotion of heritage/culture/Sports ✓ Disaster Relief Programs. o 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.
xii.	As mentioned in EIA/EMP, Rs.20.56 Crores and Rs.6.27 Crores earmarked towards the	o **Being complied.** o As committed in the EIA / EMP, unit has

	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 & 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.	installed following key equipment for pollution control historically. ✓ ESP with three field for boiler # 1 & 2 ✓ ESP with four field for boiler # 3 ✓ Online emission monitoring station for Boilers ✓ Sump zone # 3, Belt press # 4 (incl. mono belt press) ✓ Primary clarifier # 2 ✓ Secondary clarifier # 2 ✓ Biological reactor # 2 ✓ Online effluent monitoring station with ETP Plant (TOC meter) # 1 ✓ Both Acid plant stack height was increased from 40 to 75 M. ✓ Gypsum shed was constructed. ✓ Deashing sludge yard was constructed. o A time bound implementation schedule for implementing all the conditions stipulated has been submitted to the Ministry's Regional Office at Bhopal. o The funds earmarked for the environmental protection measures are being maintained and not diverted for other purpose. o A year wise expenditure on environment safeguards is being submitted to MOEF and CC at the end of each FY along with EC compliance report of each year. o In FY'21, 31.40 Crores spent towards Environmental protection measures. Report for same was submitted to MOEFCC dated: 20.05.2021.
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.	o **Complied.** o All stipulations made by GPCB in various consent and authorizations are strictly complied.
ii.	No further expansion or modifications in the plant shall be carried out without prior	o **Noted.** o No further expansion or modifications in the

	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.	plant will be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.
iii.	Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the GPCB. Regular monitoring shall be carried out for relevant parameters.	○ **Complied.** ○ There are 3 locations for influent quality monitoring stations and 1 location for effluent quality monitoring station finalized in consultation with the GPCB. ○ Influent quality monitoring stations are located at Grit Chamber, Primary Outlet and Secondary outlet and effluent quality monitoring station which is located at Final Outlet. ○ Results are enclosed in reply of point no. vi.
iv.	The project authorities must strictly comply with the rules and regulations under the manufacture, storage and import of Hazardous chemicals Rules, 2000. Prior approvals of Chief Inspector of Factories, Chief Inspector of Explosives, Fire Safety Inspectorate etc. must be obtained.	○ **Being complied.** ○ Approval for chlorine storage of 10 ton has been obtained from PESO on 26th September-2018 and valid up to 30-Sep-2023. ○ Unit has valid factory license #6059 and registration# 165/17114/1997 dated 15-oct-2016 and valid up to 31-Dec-2021.
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.	○ **Being complied.** ○ CCA-Amendment (including authorization for the Hazardous and Other Wastes) for production increase upto 1,73,375 TPA received on 22.10.2021 having GPCB consent order no. AWH-115368 valid up to 11.04.2024. ○ Hazardous waste Rules is fully complying as per the consent stipulated norms.
vi	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	○ Regular monitoring the noise level in and around the plant area is being conducted. ○ A Summary of noise level monitoring for the reporting period is given below:

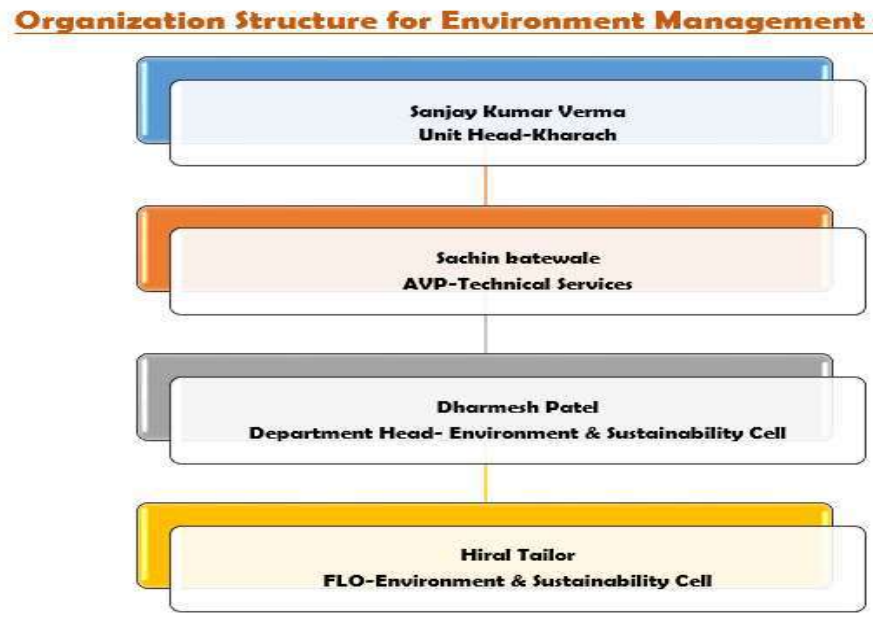
	etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment(P) Rules,1989 viz.75 dBA (day time) and 70 dBA (night time)	

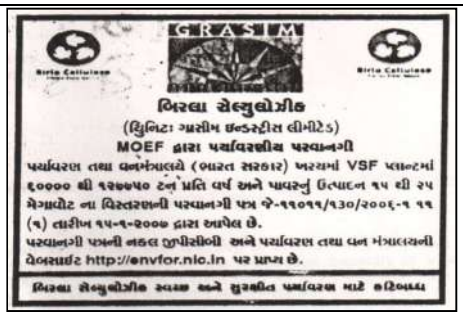
NOISE LEVEL MEASURMENT						
Month			**Jun-21**		**Sep-21**	
Sr. No.	**Location**	**Department**	**dBA Day**	**dBA Night**	**dBA Day**	**dBA Night**
		Limit	**75**	**70**	**75**	**70**
1	Simplex room line 1&2	Viscose	55	58	54	58
2	Simplex room line 3&4	Viscose	59	61	59	61
3	Office area Viscose and MIS	Viscose	45	52	44	52
4	Near Maturing Drum	Viscose	57	63	57	63
5	Pulper Operator	Viscose	55	60	55	60
6	Sodastation Office	Viscose	44	55	44	42
7	Sodastation Area	Viscose	55	61	55	61
8	GDP area	Viscose	63	68	64	62
9	Blower room (Top Floor)	Viscose	65	68	66	64
10	Road between Viscose and Spinning	-	42	48	48	43
11	Bailing Press area line-1	Spinning	56	62	56	62
12	Bailing Press area line-2	Spinning	32	62	62	52
13	Dryer # 1 & 2 cabin	Spinning	42	45	44	43
14	Fine Opener Line # 2	Spinning	40	63	63	51
15	Bailing Press area line-3	Spinning	58	61	58	61
16	Bailing Press area line-4	Spinning	58	61	58	61
17	Fine Opener Line # 3	Spinning	60	64	60	64
18	Fine Opener Line # 4	Spinning	59	63	64	58
19	Dryer # 3	Spinning	59	62	62	58
20	Dryer # 4	Spinning	57	62	62	57
21	Dryer # 3 & 4 cabin	Spinning	47	51	52	48
22	Aft treatment Operator Line 3&4 cabin	Spinning	49	52	49	52
23	Aft treatment Operator Line 1&2 cabin	Spinning	64	68	64	68
24	Spinning M/C-2	Spinning	59	65	59	65
25	Jet room # 3, 4	Spinning	54	59	54	59
26	Spg office line 3 & 4	Spinning	43	50	43	50

27	Spinning M/C-3	Spinning	59	63	59	63
28	Spinning M/C-4	Spinning	61	61	61	61
29	Pump House	Fire Stn.	52	57	57	52
30	Acid plant (Control room inside)	Acid Plant	40	44	40	44
31	Blower- AP-1	Acid Plant	63	68	63	68
32	Blower- AP-2	Acid Plant	64	68	64	69
33	Offices (Acid/CS2)	CS2/Acid plant	39	43	43	39
34	Ammonia Compressor # 3 area	CS2 Refinary	66	66	66	69
35	Ammonia Compressor # 1 area	CS2 Refinary	63	67	63	67
36	Near Chiller Area	CS2 Refinary	58	62	58	62
37	H2S Gas holder area	CS2 plant	49	54	49	54
38	CS2 control room	CS2 plant	40	44	40	44
39	Charcoal Feeder	CS2 plant	41	48	41	48
40	Furnace area	CS2 plant	50	53	50	53
41	Pump House	WTP	59	62	59	62
42	Operator room (Inside)	WTP	54	49	54	49
43	Operator room (Outside)	WTP	52	60	52	60
44	Office	WTP	43	43	43	43
45	Lab	WTP	42	42	42	42
46	EC enterance	EC	38	40	38	40
47	TG ground floor area (Near MCC)	EC	44	60	44	60
48	MCC room (ground floor)	EC	42	44	42	44
49	Compressor area (Khosla Crepelle)	EC	61	66	61	66
50	Between 3PA Fan 1 & 2	EC	47	52	47	52
51	Between 3FD Fan # 1 & 2	EC	52	55	52	55
52	Between 1FD/2FD Fan 1 & 2	EC	56	58	56	58
53	Between 1PA/2PA Fan 1 & 2	EC	59	63	59	63
54	Near Turbine # 1	EC	61	65	61	65
55	Near Turbine # 2	EC	63	66	63	66
56	Office Gallary	EC	47	51	47	51
57	Turbine # 3 floor (Near Generator)	EC	60	63	60	63
58	EC Control room (Outside)	EC	59	66	59	66
59	EC Control room (inside)	EC	41	45	41	45
60	Office / Conf. Room	Auxiliary	44	48	48	44
61	Drum Dryer - 8.0 mtr.	Auxiliary	60	60	60	60

62	Vibrators	Auxiliary	58	63	58	63
63	RVF / TFF - 13 mtr	Auxiliary	61	62	61	62
64	RVF / TFF - 19 mtr blower (Old)	Auxiliary	61	66	61	66
65	RVF / TFF - Operator room	Auxiliary	46	52	52	46
66	RVF / TFF - blower top floor area (Old)	Auxiliary	63	67	63	67
67	RVF / TFF - blower top floor area (New)	Auxiliary	65	68	65	69
68	Crystalization office - New plant (out)	Auxiliary	60	62	60	62
69	Crystalization office - New plant (In)	Auxiliary	50	53	50	53
70	MSFE office - Old Plant (Outside)	Auxiliary	54	59	54	59
71	MSFE office - Old Plant (Inside)	Auxiliary	48	51	48	51
72	Cooling tower # 3	Auxiliary	59	64	64	59
73	Cooling tower - New Plant - CS2 side	Auxiliary	49	53	49	53
74	Workshop Hall	Workshop	54	60	54	60
75	Office	Workshop	52	42	52	42
76	Gate 1	Boundary area	56	48	56	48
77	Gate 2	Boundary area	56	48	56	48
78	TRADC circle	Boundary area	55	52	55	52

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.	o Awareness programs are being conducted on health by CMO and by ABG Emergency Code Red. o First aid training is being arranged on periodic interval, which covers all categories of employees, workmen. 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. 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.

		○ 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.
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.	○ **Complied.** ○ A separate environment management cell has been constituted under the leadership of Facility Head. ○ The detailed Organization chart is given below:
		
ix.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.	○ **Complied**. ○ We are complying with all the environmental protection measures and safeguards recommended in EIA / EMP Reports.
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.	○ **Complied.** ○ All identified environmental action plans of project implementation is being complied and submitted to respective government agency as Ministry's Regional Office at Bhopal/ GPCB, every six monthly to Regional Office of MOEF & CC, Bhopal.

		o Compliance report for the period of Oct-20 to March-21 was submitted on 20.05.2021.
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 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.	o **Complied.** o Environment Clearance was issued on 15.01.2007 and advertisement was published in Gujarati & English language newspaper on date: 17.01.2007. o Newspaper advertisement copy submitted to GPCB / Committee and same has been enclosed below.
	 GRASIM Birla Cellulose BIRLA CELLULOSIC : KHARACH (A Unit of Grasim Industries Ltd.) Environment Clearance by MoEF Vide letter no. J-11011/130/2006-IA II (I) dated 15-1-2007 which was received on 18-1-2007, the Ministry of Environment & Forest (Govt. of India) has given the Environmental clearance for Expansion in the capacity of VSF plant from 60,000 to 1,27,750 TPA & CPP from 15 to 25 MW. Copies of Clearance letter are available with GPCB & may also be seen at web site of the Ministry of Environment & Forest. http:\envfor.nic.in Birla Cellulosic stands for clean & green Environment	 GRASIM Birla Cellulose બિરલા સેલ્યુલોઝીક (યુનિટ: ગ્રસીમ ઇન્ડસ્ટ્રીસ લીમીટેડ) MOEF દ્વારા પર્યાવરણીય પરવાનગી પર્યાવરણ તથા વનમંત્રાલયે (ભારત સરકાર) ખરચમાં VSF પ્લાન્ટમાં ૬૦૦૦૦ થી ૧૨૭૭૫૦ ટન પ્રતિ વર્ષ અને પાવરનું ઉત્પાદન ૧૫ થી ૨૫ મેગાવોટ ના વિસ્તરણની પરવાનગી પત્ર જે-૧૧૦૧૧/૧૩૦/૨૦૦૬-૧ ૧૧ (૧) તારીખ ૧૫-૧-૨૦૦૭ દ્વારા આપેલ છે. પરવાનગી પત્રની નકલ જીપીસીબી અને પર્યાવરણ તથા વન મંત્રાલયની વેબસાઈટ http://envfor.nic.in પર પ્રાપ્ય છે. બિરલા સેલ્યુલોઝીક સ્વચ્છ અને સુરક્ષીત પર્યાવરણ માટે કટિબધ્ધ
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.	o **Complied.**
6.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	o **Noted.**
7.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company will implement these conditions in a time bound manner.	o **Noted.**

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

ADITYA BIRLA

GRASIM

Dated: 02.11.2021

The Advisor,
Ministry of Environment, Forest and Climate Change
Regional office, Western Region
"Kendriya Paryavaran Bhavan"
Link Road No.3, Ravishankar Nagar
Bhopal-462016 (M.P)

Subject: Half Yearly Compliance Report of Environmental Clearance for period of "April-21 to Sept-21"

Dear Sir,

In view of above subject matter, we are submitting the hard copy as well as soft 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 "**April-21 to Sept-21".**

Hope, the same is in order.

Yours Faithfully,
(For Birla Cellulosic)

Dharmesh Patel
DH- Environment

Encl. :

1. **EC Copy**
2. **EC-1997 Compliance report (April-21 to Sept-21)**

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

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

Telephone +91 2646 270001-005, 270301-305
Fax +91 2646 270010, 270130
Email bc-kharach.info@adityabirla.com

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

No.J.11012/85/95-IA II(I)

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 CS2/H2S rich stream before commissioning the plant. The feasiblity of incinerating the entire stream containing CS2 and H2S instead of segregating and burning only CS2 and H2S stream should also be explored and report submitted to the

Ministry within a period of 1 year for review. The emission of H2S should not exceed 10 mg/Nm 3.

iv. Gaseous and particulate emissions (H2S, SO2, CS2, NOx 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 H2S, SPM, SO2, CS2, NOx 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. CS2 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 emisions should be controlled, regularly monitored and data recorded. Sensors for detection of CS2 and H2S 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 normalacy.

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, BOD3 , 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 survelliance 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.

(Dr. R. Warrier)
Joint Director

Copy to:-

1. Secretary, Ministry of Industry, Udyog Bhavan, New Delhi.
2. Chairman,Gujarat State Pollution Control Board, Old Assembaly 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.

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.

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8. Guard File

9. Record File.

10. Monitoring File

(Dr.R.Warrier)
Joint 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	:	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	:	April-21 to Sept-21

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.	o **Noted.**
2.	The Ministry of Environment and Forests hereby accords environmental clearance subject to the strict compliance of the terms and conditions mentioned below:	o **Noted & shall be complied.**
i.	The project authorities must strictly adhere to the stipulations made by the state pollution control board and the state Government.	o **Complied.** o All stipulations made by GPCB in various consent and authorizations are strictly complied.
ii.	No further expansion or modification in the plant should be carried out without prior approval of this ministry.	o **Noted.** o No further expansion or modifications in the plant will be carried out without prior approval of the Ministry of Environment, Forest and Climate Change.
iii.	The industry should set up a pilot plant and standardize the technology for	o **Complied.** o The industry installed the pilot plant and

S. No	Conditions	Compliance Status
	incineration of CS_2/H_2S rich stream before commissioning the plant. The feasibility of incinerating the entire stream containing CS_2/H_2S instead of segregating and burning only CS_2/H_2S stream should also be explored and report submitted to the ministry within a period of 1 year for review. The emission of H_2S should not exceed 10 mg/Nm^3.	standardize the technology for incineration of CS_2/H_2S rich stream and recover the sulphur before commissioning the plant. o Sulphur recovery plant has been provided to recover Sulphur from CS2/H2S rich stream coming from CS2 plant. o Presently there are 4 spinning machines and each of the spinning machines has been provided with a 3 stage CS_2 condensing system for CS_2 recovery. The CS2 recovery system comprising recovery through steam injection and a water scrubber for condensing the steam. The vapors from the scrubber are passed through the CS_2 condensing system. o The emission concentration of $CS2/H_2S$ is being maintained as per GPCB Norms.
iv.	Gaseous and particulate emission (H_2S, SO_2, CS_2, NO_x 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.	o **<u>Being complied.</u>** o Unit has appointed NABL accredited third party laboratory for monthly monitoring of Stack concentration as well as ambient air quality. o As per the monitoring conducted by the third party Lab team, results are well within the prescribed norms as per consent condition. o Multiple gas sensors and alarm systems Inter-linking with the pollution control Equipments/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.

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)

S. No	Conditions			Compliance Status			
Parameter	SPM	SO2	NOx	SPM	SO2	NOx	Mercury
Unit	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3	mg/Nm3
Limit	100	600	600	50	600	300	0.03
Apr-21	43	235	80	32	225	95	ND
May-21	49	225	93	37	241	88	ND
Jun-21	55	243	92	42	236	97	ND
July-21	57	257	97	41	238	94	ND
Aug-21	54	254	95	40	241	89	ND
Sept-21	48	249	94	42	234	87	ND

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	
Parameter	CS2			SO2	Acid Mist	SO2	Acid Mist
Unit	Kg/ToF			Kg/ToA	mg/Nm3	Kg/ToA	mg/Nm3
Limit	125			2	25	2	25
Apr-21	0.02	94.37	94.39	0.73	19.50	0.59	7.62
May-21	0.03	81.57	81.60	0.78	21.52	0.63	8.12
Jun-21	0.03	89.42	89.45	0.71	19.95	0.67	7.22
July-21	0.03	87.90	87.93	0.82	22.19	0.74	7.90
Aug-21	0.03	90.40	90.43	0.89	20.17	0.74	8.85
Sept-21	0.04	88.93	88.97	0.81	21.74	0.75	8.03

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	o **<u>Being complied.</u>** o Unit has installed 3 nos. of Continuous ambient air quality monitoring stations in consultation with GPCB. o Unit has also installed 3 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

S. No	Conditions	Compliance Status
	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 months and the state pollution control board once in three months.	condition. o Stack Emissions are regularly monitored and the continuous emission monitoring system has been installed at the stacks.

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**
Limit	**100**	**60**	**80**	**80**	**150**	**100**
Apr-21	**63.14**	**28.89**	**17.23**	**28.63**	**26.93**	**28.79**
May-21	**59.80**	**26.36**	**15.82**	**25.74**	**23.20**	**24.62**
Jun-21	**59.49**	**27.16**	**16.92**	**23.95**	**20.11**	**21.31**
July-21	**61.65**	**28.27**	**17.78**	**25.10**	**23.33**	**27.05**
Aug-21	**55.98**	**29.21**	**16.76**	**27.12**	**20.44**	**26.97**
Sept-21	**62.58**	**30.57**	**15.60**	**30.21**	**22.70**	**26.13**

vi.	Work area air quality should meet the standards prescribed by the competent authorities / OSHA. CS_2 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 housekeeping should be practiced to improve the work area air quality.	o **<u>Being complied.</u>** o Work zone environment for emission of CS2, H2S and SO2 is being regularly monitored by our Laboratory twice in a week. o A Summary of Work area air quality for the reporting period is given below:

Area	CS_2 (ppm)	H_2S (ppm)	SO_2 (ppm)
Std. (As per GFR)	**10**	**10**	**2**
Refinery-CS2 Area	Min: 1.3 Max: 2 Ave: 1.7	Min: 1.3 Max: 2.4 Ave: 1.8	Min: 00 Max: 00 Ave: 00
Furnace-CS2 Area	Min: 1.2 Max: 1.9	Min: 1.5 Max: 2.1	Min: 00 Max: 00

S. No	Conditions	Compliance Status

	Ave: 1.7	Ave: 1.7	Ave: 00
Rayon plant	Min: 1.2 Max: 2.6 Ave: 1.7	Min: 1.3 Max: 2.1 Ave: 1.7	Min: 00 Max: 00 Ave: 00
Spin Bath-Auxillary area	Min: 1.1 Max: 2.1 Ave: 1.7	Min: 1.5 Max: 2.4 Ave:1.8	Min: 00 Max: 00 Ave: 00
MSFE-Auxillary area	Min: 1.2 Max: 1.9 Ave: 1.7	Min: 1.5 Max: 1.9 Ave: 1.7	Min: 00 Max: 00 Ave: 00
Anhydra-tion & Crystalization Auxillary	Min: 1.5 Max: 2.2 Ave: 1.7	Min: 1.5 Max: 2.1 Ave: 1.7	Min: 00 Max: 00 Ave: 00
Acid plant	Min: 1.2 Max: 2.4 Ave: 1.7	Min: 1.5 Max: 2.3 Ave: 1.7	Min: 00 Max: 00 Ave: 00
Xanthator-Viscose area	Min: 1.3 Max: 2.3 Ave: 1.7	Min: 1.6 Max: 2.2 Ave: .1.8	Min: 00 Max: 00 Ave: 00
Ripening-Viscose area	Min: 1.4 Max: 2.4 Ave: 1.7	Min: 1.4 Max: 2.3 Ave: 1.7	Min: 00 Max: 00 Ave: 00
Washing-Viscose area	Min: 1.2 Max: 1.9 Ave: 1.7	Min: 1.5 Max: 2.1 Ave: 1.7	Min: 00 Max: 00 Ave: 00

o Fugitive emissions in the work zone environment are being controlled by exploring techniques like Motorized shutter & suction hoods on spinning machines & cutters, shutters for stretch roller &

S. No	Conditions	Compliance Status
		gear box and perfect sealing of all the openings in various tanks of spin bath. o Provision of fresh air by induced draft fans is in place at the spinning machines for ease of working. 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.
vii.	Fugitive emissions should be controlled, regularly monitored and data recorded. Sensors for detection of CS_2 and H_2S and chlorine should be provided at appropriate places in the complex in consultation with the state pollution control board.	o **Being complied.** o Fugitive emissions are being controlled & regularly monitored. o Presently there are 5 No. of Chlorine sensor installed at Chlorine area. o 9 No. of CS2 sensors and 10 No. of H2S sensors installed at spinning machine area. o 12 No. of SO2 sensors, 5 No. of CS2 sensors, 17 No. of H2S sensors, 4 No. of Ammonia sensor installed at CS2/Acid/WTP Plant. o 3 No. of CS2 sensors, installed at Viscose Plant.
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.	o **Being complied.** 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. o As per the monitoring conducted by the lab 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
Apr-21	7.62	30.2	54	148	36	4.5	60	0.71

S. No	Conditions				Compliance Status			
May-21	**7.84**	**30.1**	**48**	**152**	**27**	**5.8**	**50**	**0.84**
Jun-21	**7.33**	**30.0**	**31**	**136**	**29**	**5.0**	**40**	**0.51**
July-21	**7.25**	**30.4**	**56**	**148**	**32**	**4.3**	**70**	**0.96**
Aug-21	**7.34**	**29.9**	**68**	**138**	**25**	**5.2**	**60**	**0.62**
Sept-21	**7.58**	**29.9**	**53**	**129**	**26**	**6.4**	**50**	**0.83**

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**	**-**
Apr-21	**26**	**18**	**0.60**	**7.42**
May-21	**22**	**17**	**0.80**	**7.24**
Jun-21	**25**	**14**	**0.60**	**7.49**
July-21	**23**	**18**	**0.75**	**7.33**
Aug-21	**21**	**14**	**0.60**	**7.41**
Sept-21	**19**	**12**	**0.70**	**7.61**

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 **Complied.** 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 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. The monitored data along with statistical analysis and interpretation in the form of a report should be submitted to this ministry	o **Complied.** 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. Regular monitoring is being carried out for pH, SS, BOD, COD, Zn & color by the internal laboratory on daily basis and NABL accredited Laboratory on monthly basis.

S. No	Conditions	Compliance Status
	once in six month and the SPCB once in three months.	o Results are enclosed in reply of point no. viii.
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.	o **Complied.** o In FY'07, Unit has appointed NIO to carry out Pre-marine impact assessment study. o NIO, Mumbai has carried out Post Monitoring study in FY'19. 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.
xii.	The hazardous wastes should be handled as per Hazardous waste (management & Handling) Rules, 1989 of the Environment (Protection) Act, 1986.	o **Complied.** 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.
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.	o **Complied.** o Approval for chlorine storage has been taken for 10 tons on 26.09.2018 and valid up to 30-Sep-2023. o Also, valid factory license #6059 and registration# 165/17114/1997 dated 15-oct-2016 and valid up to 31-Dec-2021 has been obtained. 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.
xiv.	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	o **Complied.** o Awareness programs are being conducted on health by CMO and by ABG Emergency Code Red. o First aid training is being arranged on periodic interval, which covers all categories of

S. No	Conditions	Compliance Status
	disulphide exposure should be monitored closely and adequate measures should be taken for their treatment and recovery.	employees, workmen. 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. 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. 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.
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.	o **Complied.** o Green belt has been developed within the plant premises, along the boundary wall and open spaces. o Presently, ~1,85,000 trees have been planted in the premises covering the density as 1000 trees per acre. 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.
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.	o **Complied.** 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.
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	o **Complied.** o A separate environment management cell has been constituted under the leadership of Facility Head.

S. No	Conditions	Compliance Status
	will report directly to the Head of the organization.	
	Organization Structure for Environment Management Cell 	
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.	o **Complied.** o The funds earmarked for the environmental protection measures are being maintained and not diverted for other purpose. o A year wise expenditure on environment safeguards is being submitted to MOEFCC at the end of each FY along with EC report. o In FY'21, 31.40 Crores spent towards Environmental protection measures. Report for same was submitted to MOEFCC dated: 20.05.2021.
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.	o **Noted.**

S. No	Conditions	Compliance Status
4.	The ministry may revoke or suspend the clearance if implementation of any of the above condition is not satisfactory.	o **Noted.**
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 **Noted.**
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.	o **Complied.**