ADITYA BIRLA

GRASIM

Date: 03.06.2021

To,

The Director,

Ministry of Environment, Forests& Climate Change
Regional Office,
Kendriya Sadana , 4th Floor , E&F Wings ,
7th Main Road , II Block, Koramangala,
Bangalore-560034

Sir,

Sub.: Submission of Half-Yearly Compliance Report for the period October'2020 to March'2021 by M/s. Grasim Industries Ltd. Kumarapatnam, Ranebennur, Haveri, Karnataka .

Ref.: 1. **EC Letter No.:** -J-11011/371/2006-IA.II(I) **dated** 08.11.2007 & amended on 30.12.2013.
2. **EC Letter** No.: -J-11011/371/2006-IA.II(I) **dated** 13.08.2019

This has reference to above subject and EC Letter No. cited above, we hereby submit the Half Yearly Compliance Report for the period from **October'2020 to March'2021** of Conditions stipulated in Environment Clearance letter issued by MoEF, New Delhi for Expansion of Viscose Staple Fibre from 51,100 TPA to 87,600 TPA & Captive Power Plant from 10 MW to 20 MW with reference to the **EC Letter No.:** -J-11011/371/2006-IA.II(I) dated 08.11.2007 & amended on 30.12.2013.

Expansion of Viscose Staple Fibre plant from 87,600 TPA to 1,75,200 TPA , pulp plant from 74,400 TPA to 1,48,800 TPA , Captive Power Plant from 20 MW to 50MW and setting up Excel Fibre Plant of capacity 36,500 TPA with reference to the **EC Letter No.:** -J-11011/371/2006-IA.II(I) **dated** 13.08.2019 at Kumarapatnam, Ranebennur, Haveri, Karnataka by M/s Grasim Industries Ltd.

We hope you will find our reply in order

Thanking you with regards,

Yours Faithfully,
M/s. Grasim Industries Ltd.

Ajay Kumar

Ajay Kumar Gupta
Sr.President & Unit Head

Enc.: Half Yearly Compliance Report (October'2020 to March'2021)

Birla Cellulose
Fibres from Nature

Grasim Industries Limited
Unit : Harihar Polyfibers & Grasilene Division
Kumarapatnam 581123, Dist. Haveri , Karnataka.
T : [illegible] | F : [illegible]
W : www.grasim.com | E : grasimharihar@adityabirla.com | CIN : L17124MP1947PLC000410
Regd. Office : P.O. Birlagram, Nagda 456 331 (M.P.)

i

Half-Yearly Compliance

REPORT

EC Letter No.: -11011/371/2006-IA.II(I)

dated 08.11.2007 & amended on 30.12.2013

Ministry of Environment, Forest and Climate Change New Delhi

Period of compliance :- October 2020 - March 2021

FOR

Expansion of

Viscose Staple Fibre (51,100 TPA to 87,600 TPA) &

Captive Power Plant (10 MW to 20 MW)

By

M/s. Grasim Industries Ltd.

At

Kumarapatnam, Ranebennur,
Haveri, Karnataka

Prepared & Submitted by

M/s. Grasim Industries Ltd.

Kumarapatnam, District – Haveri – 581122 Karnataka

Tel: 08192-242880/83

Email: grasimsanhara@adityabirla.com

CONTENT LIST

CONTENT LIST

EC LETTER NO. J-11011/371/2006-IA.II(I) DATED 08.11.2007

25.2.2011

F. No. J-11011/371/2006- IA II (I)

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

Fax. No: 080 25537184
Total No. of pages : 5
Kind Attn. Smt. Susarala Sathya

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

E-mail : pb.rastogi@nic.in
Telefax : 011: 2436 7668
Dated 8th November, 2007

Regards
Umesh Duggani, Grasim Harihar

To,

Grasim Industries Ltd.
Grasilence Division
Kumarapatnam - 581123, Haveri
Karnataka

E-mail : grsmhari@sancharnet.in ;
Fax No. : 08373 – 242875/ 242465

Subject : Expansion of Viscose Staple Fibre (51,100 TPA to 87,600 TPA) and Captive Power Plant (10 MW to 20 MW) at Kumarapatnam, Randennur, Haveri, Karnataka by M/s Grasim Industries Limited. - Environmental clearance reg.

Sir,

This has reference to your letter no. GRD/Sr.EP/EIA/2006 dated 18th October, 2006 wherein you have submitted filled 'Form-1', 'Pre-feasibility Report' and EIA/EMP as per EIA Notification dated 14th September, 2006 and subsequent clarifications / additional information furnished vide your letters dated 14th August, 2007, 23rd August, 2007 and 22nd October, 2007.

2.0 Ministry has examined the proposal and it is noted that the proposal involves expansion of Viscose Staple Fibre (VSF) to enhance the capacity from 51,100 to 87,600 TPA and Captive Power Plant from 10 MW to 20 MW at Grasilene Division, Kumarapatnam, Randennur, Haveri, Karnataka. The proposed expansion activities will be carried out in 2 ha out of total 41 ha available in the existing plant premises. Details of the products being manufactured in the existing plant and to be manufactured during expansion will be as follows :

S. N.	Particulars	Unit	Capacity		
			Existing	Proposed	Total
1	Viscose Staple Fibre	TPA	51,100	36,500	87,600
2	Sulphuric Acid	TPA	38,610	36,500	75,110
3	CS_2 (Carbon Di – Sulphide)	TPA	8,380	5,985	14,365
4	Byproduct – Anhydrous Sodium Sulphate	TPA	36,485	32,720	69,205
5	Power	MW	10	10	20

3.0 The VSF manufacturing process adopted by M/s Grasim Industries Ltd. will be environment friendly due to elimination of Zinc from the process resulting into elimination of hazardous solid waste generation and Zinc free effluent. Total water requirement from Tungbhadra river after expansion will be 18,670 m^3/day (7,640 m^3/day for expansion). The effluent generation from the expansion plant will be 61.2 m^3/Ton of product as against 150

received for PA
& open a new file.
Documents were received earlier.
7/1/08

89 for exd Overall 8H

m^3/Ton prescribed for Man Made Fibre Industry under E (P) Act. Sodium Sulphate recovery from the expansion plant will be 89 %. Total cost of the project is Rs. 276.00 Crores. Rs. 45.00 Crores and Rs. 4.50 Crores are earmarked towards capital cost and recurring cost/annum for pollution control measures.

4.0 Public hearing/consultation meeting was held on 9th August, 2007.

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 process emissions in the form of SO_2 from the acid plant shall be scrubbed by the caustic or wet scrubber. Electrostatic Precipitators (ESPs) shall be provided to to power plant boiler to control particulate matter. Double Conversion Double Absorption (DCDA) system in H_2SO_4 production area, 3-stage condensing system for recovery of CS_2, Klaus kiln Sulphur recovery system to recover Sulphur from CS_2 plant gases etc. shall be provided. Vents from scrubbers and condensers shall be periodically monitored and maintained as per the best practicable technology.

ii. 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. Further efforts shall be made to bring down CS_2 levels. CS_2 storage tanks shall be provided with water dyke and sprinkling arrangements. The company shall monitor CS_2 and H_2S regularly and data on the emission levels shall be submitted to the Ministry and its Regional Office at Bangalore, KPCB and CPCB. Provision shall be made for retrofitting additional equipment if necessary in future.

iii. 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 KPCB to ensure CS_2 and H_2S not to exceed 100 ug/m^3 and 150 ug/m^3 respectively.

iv. Total water requirement from River Tungbhadra after expansion shall not exceed 18,670 m^3/day. Prior permission for the drawl of 18,670 m^3/day water from Tungbhadra river shall be obtained from the concerned Department. The quantity of wastewater shall not exceed 61.2 m^3/Ton of product as proposed for the expansion plant. Sodium sulphate recovery shall be increased from 71.4 % to 89 % in the proposed expansion. All the wastewater shall be treated in effluent treatment plant (ETP) having primary and secondary treatment facilities and treated wastewater shall be discharged into river only after meeting the standards prescribed by the KPCB or under E(P)A whichever are more stringent.

v. The fly ash from power plant boilers shall be utilized as per Fly ash notification, 1999 and subsequently amended in 2003.

vi. The solid waste shall be segregated according to its calorific content and stored separately for treatment and disposal. De-ashed charcoal churi, dried ETP sludge shall be mixed with coal and used as fuel in boilers. Used / waste oil shall be provided to registered recyclers/reprocessors.

vii. Green belt of adequate width and density shall be developed in 14 ha out of total 41 ha project area to mitigate the effect of fugitive emissions all a 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.

viii. 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.

B. GENERAL CONDITIONS :

i. The project authorities must strictly adhere to the stipulations made by the Karnataka Pollution Control Board (KPCB) 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. The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission levels shall go beyond the prescribed standards. Continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds the limit.

iv. At least three ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO_2 and NO_x are anticipated in consultation with the KPCB. Data on ambient air quality and stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bangalore / KPCB and CPCB once in six months.

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

vii. Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended form time to time. The treated wastewater shall be discharged into river only after meeting the standards prescribed by the KPCB or under E(P)A whichever are more stringent.

viii. 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.

ix. 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 KPCB must be obtained for collection, storage, treatment and disposal of hazardous wastes.

x. 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).

xi. Rainwater shall be harvested to conserve the fresh water and recharge the ground water and an action plan shall be submitted to the Ministry.

xii. All the measures regarding occupational health surveillance of the workers shall be undertaken and regular medical examination of all the employees shall be ensured as per the Factories Act and records maintained, 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.

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

xiv. All the recommendations of the Charter on the Corporate Responsibility for the Environmental Protection (CREP) for the Fibre plants shall be implemented.

xv. The company must undertake socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc. for the overall improvement of the environment.

xvi. As proposed in EIA/EMP, Rs. 45.00 Crores and Rs. 4.50 Crores earmarked towards capital cost and recurring cost/annum for pollution control measures shall be used exclusively to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government. A time bound implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Ministry's Regional Office at Bangalore. The funds shall not be diverted for any other purposes.

xvii. The Regional Office of this Ministry at Bangalore / CPCB / KPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.

xviii. 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 KPCB / Committee and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bangalore.

xix. 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 commencing the land development work.

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

6.0. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

7.0. The above conditions shall 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, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public (Insurance) Liability Act, 1991 along with their amendments and rules.

(Dr. P. B. Rastogi)
Additional Director

Copy to : -

1. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi -110032.
2. The Chairman, Karnataka State Pollution Control Board, Parisar Bhavan, No. 49, 4th & 5th Floor, Church Street, Bangalore – 560 001, Karnataka.
3. The Chief Conservator of Forests (Central), Regional Office (SZ), Kendriya Sadan, IVth Floor, E&F Wing, 17th Main Road, Koramangala, Bangalore-560034, Karnataka.
4. The Secretary, Department of Environment & Forests, Government of Karnataka, Bangalore, Karnataka.
5. Monitoring Cell, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi- 110003.
6. Guard file.
7. Monitoring file.
8. Record file.

8/1/07

(Dr. P. B. Rastogi)
Additional Director

AMENDED EC LETTER NO.

J-11011/371/2006IA.II(I)

DATED 30.12.2013

Original Cleance from MoEF for having amended EC for Zn use. Date: 30.12.13

File. No. J-11011/371/2006- 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 : tchand2003@yahoo.co.uk
Telefax : 011: 2436 0108
Dated 30th December, 2013

To,

The Executive President
M/s Grasim Industries Ltd.
Grasilence Division,
Kumarapatnam-581123, Haveri,
Karnataka.

E-mail : grasimharihar@adityabirla.com; Fax No.: 08373-242875.

Subject: Expansion of Viscose Staple Fibre (VSF) Capacity from 51,100 to 87600 TPA and CPP from 10 MW to 20 MW at Grasilene Division, Kumarapatnam, Karnataka by M/s Grasim Industries Ltd. - regarding amendment of specific condition in the Environment Clearance.

Ref. : (i) Ministry's letter no. J-11011/371/2006-IA II (I) dated 8th November, 2007.
(ii) Your letter no. nil dated 12th February, 2013.

Sir,

Kindly refer to your letters dated 12th February, 2013 and 6th June, 2013, wherein you have requested for amendment in environmental clearance for using zinc or alum in Viscos Staple Fibre (VSF) process as a retardant for regeneration of fibre in the same spin bath solution.

2.0 The proposal was considered by the Reconstituted Expert Appraisal Committee (Industry) in its 11th meeting held during 26th-27th August, 2013. The Committee recommended the proposal for amendment in environmental clearance for uses of Zinc or Alum in the process.

3.0 The Ministry accepts the recommendation of the Expert Appraisal Committee (Industry) for amendment in the existing environmental clearance subject to compliance of following additional specific conditions:

(i) Zinc bearing effluent shall be segregated from the Industrial effluent and treated in ETP. Treated effluent shall conform to the standards prescribed for the effluent discharge. Necessary permission may be obtained from the KSPCB.

(ii) Treated effluent shall be passed through guard pond. Online continuous monitoring system viz. pH meter, TOC analyzer and flow meter as well as monitoring facility for relevant pollutants (i.e. Zinc) shall be installed to monitor the treated water quality.

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

Contd.....2/-

(iv) As proposed, Zinc bearing sludge shall be sent to the Cement plant.

4.0 All other conditions will remain unchanged.

5.0 You are requested to keep this letter with the Environmental Clearance accorded vide letter No. J-11011/371/2006-IA II (I) dated 8th November, 2007.

6.0 In future, in case of change in the scope of the project, the company shall obtain fresh environmental clearance.

7.0 This issues with the prior approval of the Competent Authority.

(Dr. (Ms.) T. Chandni)
Director

Copy to :-

1. The Secretary, Department of Environment & Ecology, Govt. of Karnataka, Room No. 708, Gate 2, Multi Storied Building, Dr. AmbedkarVeedhi, Bangalore - 560 001secyenv-fee@karnataka.gov.in
2. The Chief Conservator of Forests, Regional Office (Southern Zone, Bangalore)KendriyaSadan, 4th Floor, E&F Wing, II Block Koramangala, Banglore-560034.
3. The Chairman, Central Pollution Control Board PariveshBhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Karnataka State Pollution Control Board, #49, ParisaraBhavana, Church Street, Bangalore-01 (Karnataka).
5. Monitoring Cell, Ministry of Environment and Forests, ParyavaranBhavan, *CGO* Complex, New Delhi.
6. Guard File/Monitoring File/Record File.

(Dr. (Ms.) T. Chandni)
Director

EC LETTER NO.
IA-J-11011/371/2006-IA II(I)
DATED 13.08.2019

F.No. IA-J-11011/371/2006- 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: 13th August, 2019

To

M/s Grasim Industries Ltd
Village Kumarapatnam
District Haveri - 581123 (Karnataka)

Sub: Expansion of Fibre Plant, Pulp Plant, Captive Power Plant and setting up Excel Fibre Plant at Village Kumarapatnam, Taluka Ranebennuru, District Haveri (Karnataka) by M/s Grasim Industries Ltd - Environmental Clearance - reg.

Sir,

This has reference to your proposal No. IA/KA/IND2/82389/2006 dated 13th November 2018, on the subject matter.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion of Fibre Plant from 87,600 to 1,75,200 TPA, Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up Excel Fibre Plant of capacity 36500 TPA by M/s Grasim Industries Ltd in an area of 431.36 ha at Village Kumarapatnam, Taluka Ranebennuru, District Haveri (Karnataka).

3. The details of products are as under:

S. No	Product / Unit	Capacity		
		Existing	Additional	Total
Main Products				
1	Viscose Staple Fibre	87,600 TPA	87,600TPA (Debottlenecking:7,300 TPA & new installations: 80,300 TPA)	1,75,200 TPA
2	Pulp	74,400 TPA	74,400 TPA	1,48,800 TPA
3	Captive Power Plant	20 MW	30 MW	50 MW
4	Excel Fibre (Solvent Spun Cellulosic Fibre)	---	36,500 TPA	36,500 TPA
Associated Products (not requiring EC)				
5	Sulphuric Acid	75,110 TPA	75,110 TPA	1,50,220 TPA
6	Carbon-Disulphide	14,365 TPA	14,365 TPA	28,730 TPA
7	Recovery Boiler	10 MW	10 MW	20 MW
By-Product				
8	Anhydrous Sodium Sulphate	69,205 TPA	69,205 TPA	1,38,410 TPA

4. Existing land area is 431.36 ha (4313600 sqm). No additional land will be required for the proposed expansion. Industry will develop greenbelt in an area 960000 sqm covering 33% of total project area. The estimated project cost is Rs. 2550 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 600 Crores and the recurring cost (O&M) will be about Rs. 6 crores per annum. The project will lead to employment for 1003 persons directly and 860 indirectly after expansion.

5. The Ranebennur Black Buck Sanctuary is located at a distance of 4.5 km(N-NW) from the project site. The eco-sensitive zone of the sanctuary has been notified vide Ministry's Notification No.SO 2147 (E) dated 6th July, 2017. The distance of the project site from the notified ESZ is 4 km. Tungabhadra flows at a distance of 200 m from the project site.

6. Total fresh water requirement is estimated to be 97,200 cum/day which will be reduced to 87,480 KLD cum/day, proposed to be met from Tungabhadra River.

Effluent of 72,468 cum/day generated from the Industrial operations shall be treated in the existing ETPs by enhancing their capacities, and the treated effluent will be discharged to Tunghbadra river.

Existing unit has three Coal/Petcoke fired boilers 260 TPH capacity. To cater to the proposed expansion, one more Coal/Petcoke fired boiler of 300 TPH capacity and recovery boiler will be installed, which would be equipped with ESP and adequate stack height to control particulate emissions within the statutory limits.

7. The project/activity is covered under category A of item 5(d) 'Manmade fibres manufacturing', 1(d) 'Thermal Power Plants' and 5(i) 'Pulp & paper industry' of the schedule to the EIA Notification, 2006 and requires appraisal/approval at central level in the Ministry.

8. Terms of reference (ToR) for the project was granted on 26th May, 2017. Public hearing was conducted by the State Pollution Control Board on 17th April, 2018.

9. The proposal was considered by the Expert Appraisal Committee (Industry-2) in its meetings held during 29-31 January, 2019 and 26-28 February, 2019 in the Ministry, wherein the project proponent and their accredited consultant presented the EIA/EMP report as per the ToR. The Committee found the EIA/EMP report complying with the ToR and recommended the project for grant of environmental clearance.

10. Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate change hereby accords environmental clearance to the project for **Expansion of Fibre Plant from 87,600 to 1,75,200 TPA, Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up Excel Fibre Plant of capacity 36500 TPA by M/s Grasim Industries Ltd** at Village Kumarapatnam, Taluka Ranebennuru, District Haveri (Karnataka), under the provisions of the EIA Notification, 2006, subject to the compliance of terms and conditions as under:-

(i) Environmental clearance shall be subject to obtaining prior clearance from the wildlife angle including clearance from the Standing Committee of the National Board for Wildlife, as applicable.

(ii) 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.

(iii) The treated effluent of 72468 cum/day shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, for discharge into the Tunghbadra river. Necessary permission for discharge shall be obtained from the concerned regulatory authority.

(iv) 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.

(v) To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.

(vi) Solvent management, if any, shall be carried out as follows:

(a) Reactor shall be connected to chilled brine condenser system.
(b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.
(c) The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 98% recovery.
(d) Solvents shall be stored in a separate space specified with all safety measures.
(e) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.
(f) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.

(vii) Total fresh water requirement shall not exceed 87,480 cum/day proposed to be met from Tungabhadra river. Prior permission in this regard shall be obtained from the concerned regulatory authority.

(viii) Rain water harvesting structures shall be provided to reduce dependency of fresh surface water for industrial purposes. In any case, no ground water shall be used for the plant.

(ix) The storm water from the premises shall be collected and discharged through a separate conveyance system.

(x) 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.

(xi) 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.

(xii) 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.

(xiii) The company shall undertake waste minimization measures as below:-

(a) Metering and control of quantities of active ingredients to minimize waste.

(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
(c) Use of automated filling to minimize spillage.
(d) Use of Close Feed system into batch reactors.
(e) Venting equipment through vapour recovery system.
(f) Use of high pressure hoses for equipment clearing to reduce wastewater generation.

(xiv) The green belt of at least 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.

(xv) At least 1.5% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.

(xvi) For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.

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

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

(xix) Storage of raw materials shall be either in silos or covered areas to prevent dust pollution and other fugitive emissions.

(xx) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxi) The energy sources for lighting purposes shall preferably be LED based.

(xxii) Transportation of raw materials/products should be carefully performed using GPS enabled vehicles.

10.1 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 the Environment (Protection) Act, 1986 and the Rules made thereunder.

(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. CER 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.

11. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

12. The above conditions will be enforced, *inter alia* under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention &. Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

SKS
13/8/2019

(S. K. Srivastava)
Scientist E

Copy to: -

1. The Deputy DGF (C), MoEF&CC Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, Koramangala II Block, Bangalore - 34
2. The Secretary, Department of Forest, Environment & Ecology, Government of Karnataka, Room No. 708, Gate 2, Multi Storey Building, Dr. Ambedkar Veedhi, Bangalore - 1
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex East Arjun Nagar, Delhi - 32
4. The Member Secretary, Karnataka State Pollution Control Board, Parisara Bhavan, #49, 4th & 5th Floor, Church Street, Bangalore -1
5. Guard File/Monitoring File/Website/Record File

SKS
13/8/2019

(S. K. Srivastava)
Scientist E

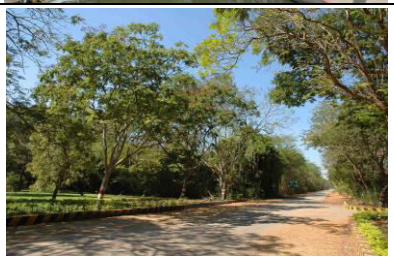
POINT-WISE REPLY OF CONDITION STIPULATED IN ENVIRONMENTAL CLEARENCE

Name of the Project	:	Expansion of Viscose Staple Fibre (51,100 TPA to 87,600 TPA) & Captive Power Plant (10 MW to 20 MW) at Kumarapatnam, Ranebennur, Haveri, Karnataka by M/s Grasim Industries Ltd.
Clearance letter No. & date	:	MoEF Letter No. J-11011/371/2006-IA.II(I) dated 08.11.2007 & amended on 30.12.2013
Address for Correspondence	:	Grasim Industries Limited : Kumarapatnam Grasilene Division Kumarapatnam - 581123 Ranebennur, Haveri, Karnataka
Date of commencement	:	May 2011
Date of completion (actual &/or planned)	:	Production started from October 2012

<table>
<tr><th>Sl.No.</th><th>EC Condition</th><th>Status</th></tr>
<tr><td colspan="3">A. Specific Condition</td></tr>
<tr><td>i.</td><td>The process emissions in the form of SO_2 from the acid plant shall be scrubbed by caustic or wet scrubber. Electrostatic Precipitators (ESPs) shall be provided to power plant boiler to control particulate matter. Double conversion Double Absorption (DCDA) system in H2SO4 production area, 3-stage condensing system for recovery of CS2, Klaus Kiln Sulphur recovery system to recover Sulphur from CS2 plant tail gases etc. shall be provided. Vents from scrubbers and condensers shall be periodically monitored and maintained as per the best practicable technology.</td><td>The process emissions in the form of SO_2 from the acid plant are being scrubbed by wet scrubber. Electrostatic Precipitators (ESPs) are being installed at power plant boiler to control particulate emission.
Sulphuric Acid is manufactured by Double Conversion Double Absorption (DCDA) process by burning sulphur in air to form sulphur dioxide, which is then catalytically converted to sulphur trioxide and absorbed in sulphuric acid in Absorption Towers to get sulphuric acid.
Klaus Kiln Sulphur recovery system to recover Sulphur from CS2 plant tail gases etc. are being provided.
Vents from scrubbers and condensers are being periodically monitored and maintained as per the best practicable technology.
<table>
<tr><th>S. No.</th><th>Unit/plant facility</th><th>Section</th><th>Air Pollution Control Equipment</th></tr>
<tr><td rowspan="3">1.</td><td rowspan="3">VSF Plant</td><td>Spinning</td><td>• CS2 recovery system
• Exhaust system to maintain clean working environment</td></tr>
<tr><td>Carbon disulphide plant</td><td>• Klaus Kiln Plant for sulphur recovery
• Scrubber</td></tr>
<tr><td>Sulphuric Acid Plant</td><td>• Mist Eliminator / Demister
• Scrubber</td></tr>
<tr><td>2.</td><td>Captive Power Plant</td><td>Boiler</td><td>• Electrostatic Precipitator with Epic-III controls</td></tr>
</table></td></tr>
<tr><td></td><td>  </td><td>  </td></tr>
<tr><td></td><td>Sulphuric Acid Plant Stack with Alkali Scrubber & Demister to reduce SO2 emissions and sulphuric acid mist respectively.</td><td>CFBC boiler with 110 m chimney and advanced ESP</td></tr>
</table>

ii.	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. Further efforts shall be made to bring down CS_2 levels. CS_2 storage tanks shall be provided with water dyke and sprinkling arrangements. The company shall monitor CS_2 and H_2S regularly and data on the emission levels shall be submitted to the Ministry and its Regional Office at Bangalore, KSPCB and CPCB. Provision shall be made for retrofitting additional equipment if necessary.	The technology employed is sufficient to achieve standards notified by the Ministry regarding ambient air quality and stack emission norms for CS_2 and H_2S. Regular monitoring is being carried out and monitoring data is submitted to concerned authorities on regular basis. The ambient air quality results are enclosed as **Annexure 1**. **Efforts made to bring down CS2 levels:** ➢ Line 1 & 2 machines CS2 recovery troughs have been replaced with new FRP trough. ➢ Line 1 & 2 conventional cutters are replaced with Chinese cutters. ➢ Line 3 CS2 recovery trough, SS 904L has been replaced with astrolite recovery trough. ➢ Line 3 CS2 vapour scrubber and condenser system modified to improve the CS2 Recovery. ➢ Line 1,2 &3 provided with acrylic sheet shutters on machine to minimize the CS2 entry into atmosphere. ➢ CS_2 storage tanks are provided with water dyke and sprinkling arrangements. ➢ Provisions are being made for retrofitting additional equipment as when required. ➢ Optimized the addition of CS2 in the process by modifying process retention time and upgrading the technology. ➢ Installed higher capacity process Chilled water Pump for improving CS2 recovery .
iii.	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 KSPCB to ensure CS_2 and H_2S not to exceed 100 µg/m³ ad 150 µg/m³ respectively.	Grasim has already set up 3 ambient air quality monitoring stations in consultation with the KSPCB. CS2 and H2S being monitored as per the AAQM Guidelines. The monitored values are well within the prescribed standards at all times. Industry has also installed continuous online AAQM stations at all the three locations. The ambient air quality results are enclosed as **Annexure 1.**
 **AAQM Station at ETP**		 **AAQM Station at Intake-well**
		

<table>
<tr><th colspan="2">AAQM Station at Guest House</th><th>Continuous Display of Air Quality Data at Factory Main Gate</th></tr>
<tr><td>iv.</td><td>The water requirement from River Thungabhadra after expansion shall not exceed 18,670 m³/day. Prior permission for the draw of 18,670 m³/day water from Tungabhadra river shall be obtained from the concerned Department. The quantity of wastewater shall not exceed 61.2 m³/Ton of product as proposed for the expansion plant.
Sodium sulphate recovery shall be increased from 71.4% to 89% in the proposed expansion. All the wastewater shall be treated in effluent treatment plant (ETP) having primary and secondary treatment facilities and treated waste water shall be discharged into river only after meeting the standards prescribed by the KSPCB or under EPA whichever are more stringent.</td><td>➢ The water requirement from River Tungabhadra after expansion does not exceed 18,670 m³/day and Prior permission for water withdrawal has been obtained from concern authority.
➢ The quantity of wastewater shall not exceed 61.2 m³/Ton of product as proposed for the expansion plant and maintaining less than 54 m3 /Ton of Product.
➢ Overall Na2SO4 recovery is achieved 90.5 % and efforts are being made for further recovery.
➢ The wastewater is being treated in effluent treatment plant (ETP) having primary and secondary treatment facilities and treated waste water is being discharged into river only after meeting the standards prescribed by the KSPCB or under EPA whichever are more stringent.
➢ Continuous online effluent analysing devise is installed at mixed effluent outlet point.</td></tr>
<tr><td>v.</td><td>The fly ash from power plant boilers shall be utilized as per Fly ash notification, 1999 and subsequently amended in 2003.</td><td>The fly ash from power plant boilers is being utilized as per Fly ash notification, 1999 and subsequently amended in 2003. During October-2020 to March-2021, 15886 MT of fly ash generated and entire quantity has been sold to brick manufacturing units.
<table>
<tr><th>Sl No</th><th>Month</th><th>Fly Ash Utilized (MT)</th><th>Bottom Ash (MT)</th></tr>
<tr><td>1.</td><td>Oct-20</td><td>3739.0</td><td>565.1</td></tr>
<tr><td>2.</td><td>Nov-20</td><td>1689.0</td><td>249.0</td></tr>
<tr><td>3.</td><td>Dec-20</td><td>2026.0</td><td>465.7</td></tr>
<tr><td>4.</td><td>Jan-21</td><td>2987.0</td><td>475.4</td></tr>
<tr><td>5.</td><td>Feb-21</td><td>2747.0</td><td>355.1</td></tr>
<tr><td>6.</td><td>Mar-21</td><td>2698.0</td><td>286.0</td></tr>
<tr><td colspan="2">Total</td><td>15886</td><td>2396.3</td></tr>
</table></td></tr>
<tr><td>vi.</td><td>The solid waste shall be segregated according to its calorific content and stored separately for treatment and disposal. De-ashed charcoal, churi, dried ETP sludge shall be mixed with coal and used as fuel in boilers. Used/waste oil shall be provided to registered recyclers/ reprocessors.</td><td>Solid waste is being segregated according to its calorific content and stored separately for treatment and disposal. De-ashed charcoal churi and ETP organic sludge being used in Boiler as fuel after mixing with coal.
Used oil is being sold to KSPCB authorized recycler.
Plastic Waste being sold to KSPCB authorized recycler.</td></tr>
<tr><td></td><td>Green belt of adequate width and density shall be developed in 14 ha out of 41 ha project area to mitigate the effect of fugitive emissions all around the plant. The development of green belt along the boundary wall, open</td><td>Out of the total plant area i.e. 266 ha, 96 ha (36% of the plant area) adequate greenbelt has been developed and maintained to mitigate the effect of fugitive emissions.
Photographs showing the green belt along the boundary wall, open space and avenue roads are enclosed below which has been developed in consultation with the local DFO as per the</td></tr>
</table>

	space and avenue roads shall be provided in consultation with the local DFO as per the CPCB guidelines.	CPCB guidelines.
	           
vii.	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.	Grasim is being/ will be complying with the environmental protection measures and safeguards recommended in EIA/EMP/Risk analysis reports as well as the recommendations of the public hearing panel.
B. GENERAL CONDITIONS		
i.	The project authorities must strictly adhere to the stipulations made by the Karnataka Pollution Control Board (KSPCB) and the State Government.	Grasim Industries Ltd. are adhered to the stipulations made by the Karnataka State Pollution Control Board (KSPCB) 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	Noted. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. Prior application will be submitted in the Ministry for clearance for any deviations or alterations in the project proposal.

<table>
<tr><td></td><td>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.</td><td></td></tr>
<tr><td>iii.</td><td>The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19.05.1993 and standards prescribed from time to time. The State Board may specify more stringent standards for relevant parameters keeping in view nature of the industry and its size and location. At no time, emission levels shall go beyond prescribed standards. Continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case emission level exceeds limit.</td><td>The gaseous emissions from various process units are being maintained well within the prescribed limits and adequate pollution control equipment's are being installed.
Continuous monitoring system is installed at stacks to monitor SPM. The stack Monitoring results are as below:
<table>
<tr><th rowspan="2">Month</th><th colspan="2">Spinning stack</th><th>Power plant stack</th><th>Sulphuric acid plant</th></tr>
<tr><th>CS2 (mg/m3)</th><th>H2S (mg/m3)</th><th>SPM (mg/m3)</th><th>SO2 (mg/m3)</th></tr>
<tr><td>Oct-20</td><td>690.9</td><td>8.30</td><td>43.35</td><td>162.50</td></tr>
<tr><td>Nov-20</td><td>725.6</td><td>7.90</td><td>45.45</td><td>159.30</td></tr>
<tr><td>Dec-20</td><td>660.4</td><td>7.10</td><td>46.0</td><td>157.30</td></tr>
<tr><td>Jan-21</td><td>758.60</td><td>8.35</td><td>46.05</td><td>162.95</td></tr>
<tr><td>Feb-21</td><td>693.80</td><td>8.44</td><td>46.45</td><td>164.30</td></tr>
<tr><td>Mar-21</td><td>737.40</td><td>8.64</td><td>46.05</td><td>165.55</td></tr>
</table>
The Photographs of the Continuous monitoring system installed at stacks are enclosed below.
Interlocking facilities is being provided so that process can be automatically stopped in case emission level exceeds limit.</td></tr>
<tr><td colspan="3"> 
Recovery Stack
 
Lime Kiln Stack
 
Acid Plant Stack
 
Power Plant Stack
 
Monitoring Station</td></tr>
<tr><td>iv.</td><td>At least three ambient air quality monitoring stations shall be established in the downward direction as well as where maximum concentration of SPM,</td><td>Grasim Industries had already established 3 ambient air quality monitoring stations in downward direction as well as where maximum concentration of SPM, SO2 and NOx are anticipated in consultation with the KSPCB.</td></tr>
</table>

<table>
<tr><td></td><td>SO2 and NOx are anticipated in consultation with the KSPCB. Data on ambient air quality and stack emissions shall be regularly submitted to this Ministry including its Regional Office at Bangalore/KSPCB and CPCB once in six months.</td><td>Photographs of 3 ambient air quality monitoring stations are enclosed above.
Data on ambient air quality and stack emissions is being regularly submitted to Ministry including its Regional Office at Bangalore/KSPCB and CPCB once in six months along with the EC Compliance report.
Results of ambient air quality and stack emissions (October-2020 to March-2021) are enclosed as Annexure 1.</td></tr>
<tr><td>v.</td><td>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 KSPCB. Action shall be taken to reduce fugitive emissions in the work zone environment as far as possible. Dust collectors shall be provided at transfer points to control fugitive emissions</td><td>Fugitive emission in the work zone environment being monitored and the values are well within the prescribed standards. The results of Fugitive emissions in the work zone are:
(SPM in µg/m^3)
<table>
<tr><th>S. No.</th><th>Locations</th><th>Results</th></tr>
<tr><td>1.</td><td>Chipper House (Pulp Plant)</td><td>354.00</td></tr>
<tr><td>2.</td><td>Lime Kiln (Pulp Plant)</td><td>312.00</td></tr>
<tr><td>3.</td><td>Biogas Plant (Pulp Plant)</td><td>298.00</td></tr>
<tr><td>4.</td><td>ETP Lime Godown (GRD)</td><td>363.00</td></tr>
<tr><td>5.</td><td>Coal Storage Area</td><td>513.00</td></tr>
<tr><td>6.</td><td>Charcoal Storage Area</td><td>421.00</td></tr>
</table>
Measures taken to reduce fugitive emissions are:
➢ Out of the total plant area i.e. 266 ha, 96 ha (36% of the plant area) adequate greenbelt has been developed and maintained to mitigate the effect of fugitive emissions.
➢ Motorised shutters are provided on machine to minimize the fugitive emissions
➢ Transfer of fly ash is/will be done through pneumatic conveying system & stored in closed silos.
➢ Wagon Tippler system installed for unloading the coal and transferring directly into boiler, which will reduce the dust emission at shop floor.
➢ Covered conveyor belts are/will be used for material transfer within the plant premises.
➢ Regular sweeping of all the roads and floors is being / will be done with the help of vacuum sweeping machine.
➢ Water sprinkling is being / will be done on roads near coal and fly ash storage areas.
➢ On regular basis Water spraying being done on roads where the heavy vehicles movements are taking place to minimize the fugitive emission.
➢ Dust collectors are being provided at transfer points to control fugitive emissions.
➢ Powder PAC replaced with liquid PAC to avoid fugitive emission at source.</td></tr>
</table>

Wagon Tippler Complex

concreted Approach Road & covered conveyor belt

Covered Conveyor Belt

vi.	Adequate number of influent and effluent quality monitoring stations should be set up in consultation with the KSPCB. Regular monitoring shall be carried out for relevant parameters.	3 Number of monitoring stations has been established to monitor the influent and effluent quality in consultation with the KSPCB and regular monitoring is being carried out. Photographs of effluent quality monitoring stations are enclosed below.

Online Monitoring Station at ETP outlet

Treated Effluent Quality Parameters Display

The effluent quality monitoring results are given below.

Effluent Quality Monitoring Results

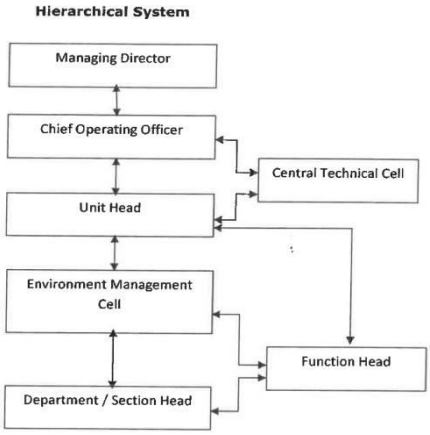
Sl. No.	Parameters	Units	KSPCB Limits	Month					
				Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
1	Total Suspended Solids	mg/l	Max 100	55	50	49	50	48	49
2	Total dissolved Solids (Inorganic)	"	Max 2100	1810	1806	1806	1839	1818	1822
3	Temperature	Deg. C	**	33	33	32	32	33	33
4	pH	-	6 to 8.5	7.25	7.24	7.43	7.41	7.35	7.47
5	Oils & Grease	mg/l	Max 10	1.45	1.70	1.40	1.48	1.50	1.92
6	BOD3 at 27 ^{o}C	"	Max 30	16	17	17	16	17	17
7	COD	"	Max 250	156	153	151	153	166	165
8	Mercury (as Hg)	"	Max 0.01	ND	ND	ND	ND	ND	ND
9	Hexavalent Chromium (as Cr^{+6})	"	Max 0.1	ND	ND	ND	ND	ND	ND
10	Total Chromium (as Cr)	"	Max 2.0	ND	ND	ND	ND	ND	ND
11	Zinc as (Zn)	"	Max 2.0	0.15	0.16	0.17	0.18	0.18	0.17
12	Sulphate (as SO4)	"	Max 1000	892	901	860	837	857	838
13	Phenolic compounds (as C6H5OH)	"	Max 1.0	ND	ND	ND	ND	ND	ND
14	Bioassay as per IS 6582 - 1971	% Survival	Not less than 90% of test animal shall survive in 96 hours	100	100	100	100	100	100
15	Sulphide (as S)	mg/l	Max 2.0	1.79	1.61	1.64	1.67	1.67	1.62

vii.	Industrial wastewater shall be properly collected and treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be discharged into river only after meeting the standards prescribed by the KSPCB or under E(P)A, whichever are more stringent.	Industrial Waste water is being collected and treated in Effluent Treatment Plant (ETP). Effluent is being treated based on primary treatment for clarification and neutralization followed by secondary treatment designed on the principle of extended aeration activated sludge process. Treated water conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. KSPCB has given permission for discharging the treated effluent after mixing with the sewage from the plant vide their letter Consent order AW-302619 dated 11.05.2017. Discharge of effluent is less than 15120 m^3/d. The combined effluent is meeting the stipulated standards.
viii.	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	Industry is complying with the rules and regulations under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 2000 and further amendments. Approvals from Chief Inspector of Factories, Chief Inspector of Explosives, Fire & Safety Inspectorate etc. has been obtained vide letter no. MY-DWR-783, valid up to 31.12.2021.

	Explosives, Fire Safety Inspectorate etc. must be obtained.	
ix.	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. Authorisation from the KSPCB must be obtained for collection, storage, treatment and disposal of hazardous wastes.	Grasim industries are strictly adhering to the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and further amendments. Authorisation from the KSPCB has been obtained for collection, storage, treatment and disposal of hazardous wastes vide Authorisation No. 307546 dated 30.08.2018.
x.	The overall noise levels in and around the plant area shall be kept within the standards (85 dBA) by providing noise 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).	The overall noise levels in and around the plant is maintained well within the standards. Adequate equipment's including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. Equipment's are subjected to Non-Destructive Testing. 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). The Noise monitoring results are as below.

Ambient Noise Level -dB (A) at different locations

Month & Year	Time	Guest House	SBM Building	Intake well	ETP Lab	Air strip
Oct-20	Day time	53	54	56	61	53
	Night time	40	41	42	48	39
Nov-20	Day time	52	55	58	62	52
	Night time	41	42	42	48	38
Dec-20	Day time	51	53	59	60	51
	Night time	40	41	43	45	37
Jan-21	Day time	50	54	60	63	50
	Night time	41	43	42	48	39
Feb-21	Day time	51	53	56	60	51
	Night time	40	44	43	46	38
Mar-21	Day time	50	52	54	59	50
	Night time	41	43	44	47	37

xi.	Rainwater shall be harvested to conserve the fresh water and recharge the ground water and an action plan shall be submitted to the Ministry.	Rainwater harvesting structures are being constructed to channelize the rainwater flow from rooftops, paved and cemented area within premises. The Facility available can collect & use rain water from about 4,08,000 m² area.
xii.	All the measures regarding occupational health surveillance of the workers shall be undertaken and regular medical examination of all the employees be ensured as per the Factories Act and records maintained, specifically for those who 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.	In the view of COVID-19 pandemic, employee's special tests were not conducted. OHC and the Medical centre operating @ Factory and in residential colony are continuously taking care of the employees and their family members also.
	Structure of EMC 	
xiii.	All the recommendations of the Charter on the Corporate Responsibility for the Environmental protection (CREP) for the fibre plants shall be implemented.	Noted but Fibre plant does not fall under CREP . CREP reports for M/s. Harihar Polyfibres is enclosed as **Annexure-III**
xiv.	The company must undertake socio-economic development activities in the surrounding villages like community development programs, educational programs, drinking water supply and health care etc. for the overall improvement of the environment.	Socio-economic developmental activities are being carried out by the Industry under Group's CSR policy. CSR activities are carried out under 5 major headings i.e. • Education, • Health, • Sustainable Livelihood, • Infrastructure Development & • Social empowerment During this pandemic, our CSR activity is more concentrating on the health and maintaining hygienic condition in nearby villages and also supporting the villagers for fighting against the pandemic. We have received appreciation letter for the same from District Administration of Haveri. CSR activity report along with the photographs of the beneficiaries for October-2020 to March-2021 is enclosed as **Annexure II**

<table>
<tr>
<td>xv.</td>
<td>As proposed in EIA/EMP, Rs. 45.00 Crores and Rs. 4.50 Crores earmarked towards capital cost and recurring cost/annum for pollution control measures shall be used exclusively to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government. A time bound implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Ministry's Regional Office at Bangalore. The funds shall not be diverted for any other purposes.</td>
<td>Out of the total project cost i.e. Rs. 45.00 Crores, Grasim Industries has earmarked Rs. 4.50 Crores for the environmental pollution control measures. As proposed requisite fund earmarked for environment protection is not diverted to any other purpose.
Project Expense details as follows;
a) Total expenditure on the project: Rs.449.00 Crore.
b) Actual expenditure incurred on environmental Management Plan: Rs .155.90 Crore (For details refer below table)
<table>
<tr><th>Environmental Improvement Projects</th><th>Investment (Rs. In Crores)</th></tr>
<tr><td>Multistage flash evaporators for recovery of Sodium Sulphate from lean stream to meet the TDS limit in mixed treated effluent.</td><td>64.60</td></tr>
<tr><td>CFBC Boiler as against AFBC Boiler to reduce Coal consumption</td><td>67.00</td></tr>
<tr><td>New 200 TPD Sulphuric Acid plant ipo 1 new & 1 old 100 TPD acid plant to reduce SO2 emission</td><td>20.00</td></tr>
<tr><td>Up gradation of ETP i.e. primary clarifier, pump house, diffused aeration system, sludge dewatering system, etc.</td><td>4.30</td></tr>
<tr><td>Total investment</td><td>155.90</td></tr>
</table>
</td>
</tr>
<tr>
<td>xvi.</td>
<td>The regional Office of this Ministry at Bangalore/CPCB/KSPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted regularly</td>
<td>M/s.Grasim Industries Ltd. is regularly submitting the six monthly compliance reports and the monitored data along with statistical interpretation to the concerned authorities.</td>
</tr>
<tr>
<td>xvii.</td>
<td>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 KSPCB/Committee and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local news papers that are widely circulated in the region of which one shall be in the vernacular language of the locally concerned and a copy of the same should be</td>
<td>The Industry had advertised in two local news papers (One in English and one in vernaculars) regarding the accordance of Environmental Clearance by the MoEF. The advertisement appeared in "Deccan Herald", English paper dated 15.11.2007 & "Prajavani" Kannada paper dated 14.11.2007.</td>
</tr>
</table>

	forwarded to the Regional office at Bangalore.	
xviii.	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 commencing the land development work.	The same has been informed to the concerned authorities.

Half-Yearly Compliance

REPORT

EC Letter No. - 11011/371/2006-IA.II(I)
Dated - 13/08/2019

Ministry of Environment, Forest and Climate Change New Delhi

Period of compliance :- October 2020 - March 2021

FOR

Expansion of
Viscose staple fibre from 87,600 TPA to 1,75,200 TPA
Pulp plant from 74,400 TPA to 1,48,400 TPA
Captive power plant from 20 MW to 50 MW
And setting up Excel fibre plant of capacity 36,500 TPA

By

M/s. Grasim Industries Ltd.

At
Kumarapatnam, Ranebennur,
Haveri, Karnataka

Prepared & Submitted by

M/s. Grasim Industries Ltd.
Kumarapatnam, District – Haveri – 581122 Karnataka
Tel: 08192-243850/53
Email: grasim.karnara@adityabirla.com

POINT-WISE REPLY OF CONDITION STIPULATED IN ENVIRONMENTAL CLEARENCE

Name of the Project	:	Expansion of Fibre Plant from 87,600 to 1,75,200 TPA, Pulp Plant from 74,400 to 1,48,800 TPA, Captive Power Plant from 20 to 50 MW and setting up Excel Fibre Plant of capacity 36,500 TPA by M/s. Grasim Industries Ltd in an area of 431.36 ha at Kumarapatnam, Ranebennur, Haveri, Karnataka.
Clearance letter No. & date	:	MoEF Letter No. **IA-J-11011/371/2006-IA II(I)** **DATED : 13.08.2019**
Address for Correspondence	:	Grasim Industries Limited : Kumarapatnam Grasilene Division Kumarapatnam - 581123 Ranebennur, Haveri, Karnataka
Date of commencement	:	19.10.2019
Date of completion (actual &/or planned)	:	As a part of EC; a) 20TPD Fibre CTO obtained on 23.01.2020 & production started. b) 30TPD Pulp CTO obtained on 23.01.2020 & production yet to start.

Sl No.	Conditions	Status
(i)	Environmental clearance shall be subject to obtaining prior clearance from the wildlife angle including clearance from the Standing Committee of the National Board for Wildlife, as applicable.	Clearance certificate issued by Principal Chief Conservator of Forests (Wildlife) &Chief Wildlife Warden,Bengaluru. Vide Letter No. PCCF/WLD/CR-07/2018-19
(ii)	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	Industry has obtained Consent to Operate for existing production including additional 20TPD Fibre and 30TPD Pulp under debottlenecking project. Authorization No. 307304 for M/s. Harihara Polyfibers and Authorization No.307546 for M/s. Grasilene Division having validity up to 30.06.2021.
(iii)	The treated effluent of 72468 cum/day shall conform to the standards prescribed under the Environment (Protection) Rules, 1986, for discharge into the Tunghbadra river. Necessary permission for discharge shall be obtained from the concerned regulatory authority.	Grasim Industries Ltd. are adhered to the stipulations made by the Karnataka State Pollution Control Board (KSPCB) and the State Government under Environmental (Protection) Rules,1986 and having sufficient treatment facilities with upgraded tertiary treatment facility. obtained permission from the concerned regulatory authority for discharging the treated waste water into Tungabhadra river with quantity 48120m3/day for existing Pulp and Fibre production with additional 20 TPD Fibre and 30 TPD Pulp by debottlnecking project without increasing water consumption and effluent discharge. (Consent No. AW-316809 for M/s. Harihar Polyfibers and Consent No. AW-316809 for M/s. Grasilene Division) Industry obtained CFE for remaining 220TPD Viscose Staple Fibre and 100TPD Excel Fibre with

Vide consent letter No. CFE No. CTE-323930 Dated 25.02.2021.
Also unit applied for CFO renewal on 23.04.2021 for both M/s.Harihar Polyfibres and M/s.Grasilene Division with additional quantity 40TPD Viscose Staple Fibre. to Karnataka State Pollution Control Board (KSPCB) on 23.04.2021 along with enhancing limit of effluent discharge volume into River as per provision given in the EC .

Effluent Quality Monitoring Results

Sl. No.	Parameters	Units	KSPCB Limits	Month					
				Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
1	Colour & Odour		All efforts are made to remove colour & unpleasant odour at the source as far as practicable.						
2	Total Suspended Solids	mg/l	Max 100	55	50	49	50	48	49
3	Total dissolved Solids (Inorganic)	"	Max 2100	1810	1806	1806	1839	1818	1822
4	Temperature	Deg. C	**	33	33	32	32	33	33
5	pH	-	6 to 8.5	7.25	7.24	7.43	7.41	7.35	7.47
6	Oils & Grease	mg/l	Max 10	1.45	1.70	1.40	1.48	1.50	1.92
7	Residual Chlorine	"	Max 1.0	0.50	0.48	0.31	0.39	0.48	0.38
8	Ammonical Nitrogen(as N)	"	Max 50	1.55	2.13	1.19	1.33	1.93	1.99
9	Total Kjeldal Nitrogen(N)		Max 100	2.18	2.52	1.54	1.68	2.35	2.46
10	BOD3 at 27 oC	"	Max 30	16	17	17	16	17	17
11	Free ammonia as (NH3)	"	Max 5.0	0.59	0.73	0.47	0.40	0.64	0.64
12	COD	"	Max 250	156	153	151	153	166	165
13	Arsenic (as As)		Max 0.2	ND	ND	ND	ND	ND	ND
14	Mercury (as Hg)	"	Max 0.01	ND	ND	ND	ND	ND	ND
15	Hexavalent Chromium (as Cr^{+6})	"	Max 0.1	ND	ND	ND	ND	ND	ND
16	Total Chromimium (as Cr)	"	Max 2.0	ND	ND	ND	ND	ND	ND
17	Boron (as B)	"	Max 2.0	ND	ND	ND	ND	ND	ND
18	Chloride (as Cl)		Max 1000	334	354	336	348	347	333
19	Flouride (as F)	"	Max 2.0	ND	ND	ND	ND	ND	ND
20	Disolve Phosphate (as P)	"	Max 5.0	0.43	0.58	0.50	0.53	0.58	0.49
21	Sulphate (as SO4)	"	Max 1000	892	901	860	837	857	838
22	Phenols (as C6H5OH)	"	Max 1.0	ND	ND	ND	ND	ND	ND

	23	Bioassay as per IS 6582 - 1971	% Survival	Not less than 90% of test animal shall survive in 96 hours	100	100	100	100	100	100
	24	Sulphide (as S)	"	Max 2.0	1.79	1.61	1.64	1.67	1.67	1.62
	25	Adsorable Organic Halogens (AOX)	Kg/Ton of Pulp	Max 1.0	0.27	0.24	0.23	0.24	0.23	0.23
	26	Treated effluent Volume	M3/day	48120 m3/day (w.r.t. existing CFO)	30752	31747	30509	33029	31926	31317

(iv)	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.	The industry has obtained Authorization under the Hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 and industry is strictly following the Rules made under Solid Waste Management Rules, 2016 and as per the directions issued under the KSPCB Consent orders and being submitted the compliance reports with photographic evidences time to time. (Authorization No. 307304 for M/s. Harihar Polyfibers and Authorization No.307546 for M/s. Grasilene Division having validity up to 30.06.2021)

(v)	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emissions shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	**Industry has taken following initiative to control Fugitive emission .** ➢ Out of the total plant area i.e. 266 ha, 96 ha (36% of the plant area) adequate greenbelt has been developed and maintained to mitigate the effect of fugitive emissions. ➢ Motorised shutters are provided on machine to minimize the fugitive emissions ➢ Transfer of fly ash is/will be done through pneumatic conveying system & stored in closed silos. ➢ Wagon Tippler system installed for unloading the coal and transferring directly into boiler, which will reduce the dust emission at shop floor. ➢ Covered conveyor belts are/will be used for material transfer within the plant premises. ➢ Regular sweeping of all the roads and floors is being / will be done with the help of vacuum sweeping machine. ➢ Water sprinkling is being / will be done on roads near coal and fly ash storage areas. ➢ On regular basis Water spraying being done on roads where the heavy vehicles movements are taking place to minimize the fugitive emission. ➢ Dust collectors are being provided at transfer points to control fugitive emissions. ➢ Powder PAC replaced with liquid PAC to avoid fugitive emission at source. Also industry has constructed stacks with the height as per the CPCB guidelines for proper dispersion in the air.
	 **Wagon Tippler Complex**	 **concreted Approach Road & covered conveyor belt**

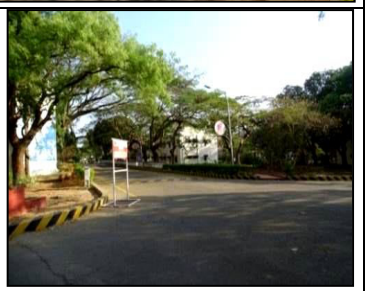
	 **Covered Conveyor Belt**	
(vi)	Solvent management, if any, shall be carried out as follows:	
	Reactor shall be connected to chilled brine condenser system.	CS2 is the only solvent being used by industry for Xanthation process and reactor called as Xanthator (Churn) and having chilled water jacket surrounding the reactor.
	Reactor and solvent handling pump shall have mechanical seals to prevent leakages.	Solvent Pumping being done by displacing solvent with water pressure.
	The condensers shall be provided with sufficient HTA and residence time so as to achieve more than 98% recovery.	Condenser designed with Sufficient Heat Transfer Area (HTA) to achieve desired recovery.
	Solvents shall be stored in a separate space specified with all safety measures.	CS_2 storage tanks are provided with water dyke and sprinkling arrangements.
	Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.	Earthing arrangement made for all electrical equipment and to ensure earthing condition audit being done periodically.
	Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.	The entire plant having the fire hydrant charged line with standby system and smoke detector installed at all identified critical areas. Solvent being stored under water pressure in storage tank provided with water dyke.
(vii)	Total fresh water requirement shall not exceed 87,480 cum/day proposed to be met from Tungabhadra river. Prior permission in this regard shall be obtained from the concerned regulatory authority.	Acceptable and industry has obtained permission letter from concern authority Karnataka Niravari Nigam Ltd(KNNL) and Letter No: KE/KNNN/BNV.5/D/J.E.4/Industrial Water/297/3/2017-18
(viii)	Rain water harvesting structures shall be provided to reduce dependency of fresh surface water for industrial purposes. In any case, no ground water shall be used for the plant.	Rainwater harvesting structures are being constructed to channelize the rainwater flow from rooftops, paved and cemented area within premises. The Facility available can collect & use rain water from about 4, 08,000 m² area. Industry is not using ground water for plant operation.
(ix)	The storm water from the premises shall be collected and discharged through a separate conveyance system.	Separate conveyance made to collect storm water drains into the water reservoir.

<table>
<tr><td>(x)</td><td>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.</td><td>Hazardous chemicals/substances are stored in the separate storage yard provided with dyke wall system. Solvent transfer line provided with chilled water jacket with NRV.</td></tr>
<tr><td>(xi)</td><td>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.</td><td>At Pulp unit Centric Cleaner pulp rejects generating as Organic residue and being sent Cardboard Industries.
ETP bio sludge is basically organic sludge having more than 75% organic content with Gross calorific value 2700 Kcal/Kg and being used in CFBC boiler as fuel along with Coal.
Inorganic sludge being sent for Bricks Manufacture.</td></tr>
<tr><td>(xii)</td><td>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</td><td>The Company is strictly complying 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 being followed the Motor Vehicle Act (MVA), 1989.</td></tr>
<tr><td>(Xiii)</td><td>The company shall undertake waste minimization measures as below:-</td><td></td></tr>
<tr><td>a</td><td>Metering and control of quantities of active ingredients to minimize waste.</td><td>Industry being upgraded with best available technologies periodically to achieve the desired quantity of products with minimum raw materials.
The below table shows the raw material consumption from last two financial year.

<table>
<tr><td colspan="4">Pulp Plant Major Raw material Consumption</td></tr>
<tr><td>Raw Material/ Financial Year</td><td>UoM</td><td>FY-20</td><td>FY-21</td></tr>
<tr><td>Wood</td><td>Tons/TP</td><td>3.016</td><td>3.022</td></tr>
<tr><td>Water</td><td>m3/TP</td><td>109.59</td><td>109.8</td></tr>
</table>

<table>
<tr><td colspan="4">Fibre Plant Major Raw material Consumption</td></tr>
<tr><td>Raw Material/ Financial Year</td><td>UoM</td><td>FY-20</td><td>FY-21</td></tr>
<tr><td>Pulp</td><td>Tons/TF</td><td>1.003</td><td>1.003</td></tr>
<tr><td>Water</td><td>m3/TF</td><td>52.7</td><td>55.6</td></tr>
<tr><td>Caustic Soda</td><td>T/TF</td><td>0.497</td><td>0.490</td></tr>
<tr><td>Coal</td><td>Tons/TF</td><td>2.04</td><td>2.04</td></tr>
<tr><td>Carbon Disulphide (CS2)</td><td>T/TF</td><td>0.160</td><td>0.162</td></tr>
<tr><td>Sulphuric Acid (H2SO4)</td><td>T/TF</td><td>0.680</td><td>0.665</td></tr>
</table>
</td></tr>
</table>

b	Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.	Industry being followed and adopted 3R method (Reduce, Recycle, Reuse)
c	Use of automated filling to minimize spillage.	• Wagon Tippler system installed for unloading the coal and transferring directly into boiler, which will significantly reduce the spillage of coal as well as dust emission. • Covered conveyor belts are/will be used for material transfer within the plant premises. •Wood Chips are being fed to the Pulp Digester through Conveyor Belt.
	 **Wagon Tippler**	 **covered conveyor belt**
d	Use of Close Feed system into batch reactors.	 **Covered Conveyor Belt**
e	Venting equipment through vapour recovery system.	Installed CS2 vapour recovery system and generated vapour passing through Scrubber followed by three stage condensers before venting
	 Scrubber with three stage condenser System	

f	Use of high pressure hoses for equipment clearing to reduce wastewater generation.	Acceptable and being followed.
(Xiii)	The green belt of at least 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.	Out of the total plant area i.e. 266 ha, 96 ha (36% of the plant area) adequate greenbelt has been developed and maintained to mitigate the effect of fugitive emissions. Photographs showing the green belt along the boundary wall, open space and avenue roads are enclosed below which has been developed in consultation with the local DFO as per the CPCB guidelines.
	  	
	  	
	  	
	  	
(Xiv)	At least 1.5% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office.	Total expenses incurred for increasing the Production 20TPD Fibre and 30TPD Pulp under debottlenecking project with the project cost is Rs.1152.56 Lacs for Fibre and 3000 Lacs for Pulp and expenses incurred for the CER activities are as below.

Expenses under Corporate Environment Responsibility (CER)		
Sl No.	**particulars**	**Cost (Rs in Lac**
1	Surrounding village Road repairing work.	13.0
2	Drinking Water line laid to Village New Nalavagal .	9.0
3	Safe Drinking Water plant maintenance work at villages Irani and Nadiharalalli	2.5
4	LED Light fittings given to surrounding Villages Gram Panchayath	2.0
5	Mask, Hand Sanitizer and thermal scanner issued to surrounding Villages Gram Panchayath.	1.0
6	Distributed 50,000 Pulp wood species saplings issued to farmers with free of cost under farmers economy development program by the Industry.	2.5
5	Distributed 11.33 lacs Pulp wood species saplings to farmers with subsidiary price under farmers economy development program by the Industry	34.0
	Total	**64.0**

In this regard, industry has submitted the letter to MoEF & CC dated: 22.10.2019 and requested to amend this condition to 0.25% of total investment cost against 1.5% as CER expenses as the industry is brownfield project with investment between 1000 Cr to 10000 Cr.

Letter enclosed as **Annexure IV**

Also Industry still not started expansion project and under debottlenecking project started production 20TPD Fibre and 30TPD Pulp yet be started in addition to existing production capacity without installing any new Equipment's/Machines and obtained CFO from state regulatory authorities. CER expense details will be submitted after implementation of expansion project.

(Xv)	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.	Not proposed any additional D.G. sets for the expansion activity.
(Xvi)	The unit shall make all arrangements for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.	The industry has taken utmost possible protection and safety measures within the industrial premises with respect to fire hazard, material handling, firefighting system etc., and it will be upgraded as per the future expansion activities. Also mock drill being done periodically.
(Xvii)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	In the view of COVID-19 pandemic, employee's special tests were not conducted. OHC and the Medical centre operating @ Factory and in residential colony are continuously taking care of the employees and their family members also.
(Xviii)	Storage of raw materials shall be either in silos or covered areas to prevent dust pollution and other fugitive emissions.	Industry has provided safe storage yard for all the raw materials/chemicals in the closed shed/covered areas and provided necessary water sprinkling arrangements and conveyor system to reduce the dust and fugitive emissions. The following photographs shows the storage yard.

Wagon Tippler Complex

concreted Approach Road & covered conveyor belt

Covered Conveyor Belt

(XiX) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

The gaseous emissions from various process units are being maintained well within the prescribed limits and adequate pollution control equipment are being installed. Continuous monitoring system are installed at stacks to monitor SPM. The stack Monitoring results are as below:

Month	Spinning stack		Power plant stack	Sulphuric acid plant
	CS2 (mg/m3)	H2S (mg/m3)	SPM (mg/m3)	SO2 (mg/m3)
Oct-20	690.9	8.30	43.35	162.50
Nov-20	725.6	7.90	45.45	159.30
Dec-20	660.4	7.10	46.0	157.30
Jan-21	758.60	8.35	46.05	162.95
Feb-21	693.80	8.44	46.45	164.30
Mar-21	737.40	8.64	46.05	165.55

The Photographs of the Continuous monitoring system installed at stacks are enclosed below.

Interlocking facilities is being provided so that process can be automatically stopped in case emission level exceeds limit. The online data has been transmitted to CPCB and SPCB server. Grasim has already set up 3 ambient air quality monitoring stations in downward direction as well as where maximum concentration of SPM, SO2 and NOx are anticipated in consultation with the KSPCB. CS2 and H2S values are being monitored as per the AAQM Guidelines. The monitored values are well within the prescribed standards at all times. Industry has also installed OCEMS to monitor the effluent quality in consultation with the KSPCB and regular monitoring is being carried out. Also industry has installed web camera with night vision capability to monitor final discharge treated effluent.

Recovery Stack Station

Lime Kiln Stack

Acid Plant Stack

Power Plant Stack

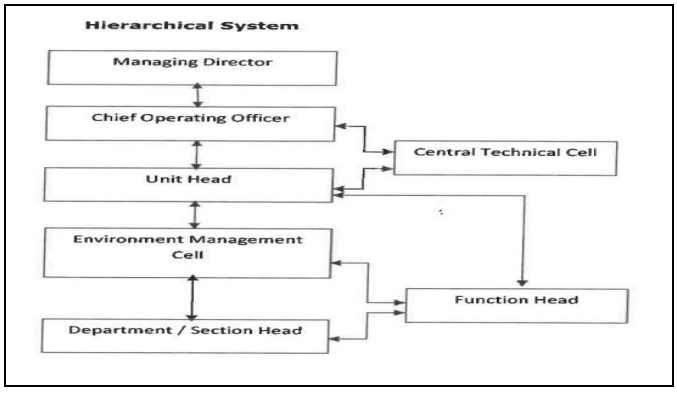
Monitoring

	 **Online Monitoring Station at ETP outlet**	 **Treated Effluent Quality Parameters online Display**
(XX)	The energy sources for lighting purposes shall preferably be LED based.	Industry is using less energy consumable LED lights. Total around 100 LED lights fittings installed at M/s. Harihar Polyfibers and Around 650 LED lights fittings installed at M/s. Grasilene Division.
(XXi)	Transportation of raw materials/products should be carefully performed using GPS enabled vehicles.	In this regard, industry has submitted the letter to MoEF & CC dated: 22.10.2019 and requested to amend this condition, because wood is the major raw material consumed in the pulping process which comes mainly from the unorganized market. Hence it is highly difficult to ensure use of GPS enabled vehicles. In addition to that, industry is taking maximum care for safety precautions while transporting raw materials and end products so that no major damage will be caused to environment. Letter enclosed as **Annexure IV**
10.1	**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.	Industry is strictly adhering to the stipulations made by the KSPCB/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	Note. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. Prior application will be submitted in the Ministry for clearance for any deviations or alterations in the project proposal.

<table>
<tr><td>(iii)</td><td>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.</td><td>Grasim has already set up 3 ambient air quality monitoring stations installed to ensure both downward & upward air direction as well as where maximum concentration of SPM, SO2 and NOx are anticipated in consultation with the KSPCB. The monitored values are well within the prescribed standards at all times.</td></tr>
<tr><td></td><td> 
AAQM Station at ETP</td><td> 
AAQM Station at Intake-well</td></tr>
<tr><td></td><td> 
AAQM Station at Guest House</td><td> 
Continuous Display of Air Quality Data at Factory Main Gate</td></tr>
<tr><td>(iv)</td><td>The National Ambient Air Quality Emission Standards issued by the Ministry vide
G.S.R. No. 826(E) dated 161h November, 2009 shall be complied with.</td><td>Complied
Result sheet enclosed as Annexure 1</td></tr>
<tr><td>(v)</td><td>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 the Environment (Protection) Act, 1986 and the Rules made thereunder.</td><td>The overall noise levels in and around the plant is maintained well within the standards.
Adequate equipment's including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. Equipment's are subjected to Non-Destructive Testing. 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). The Noise monitoring results are as below.</td></tr>
</table>

		Ambient Noise Level -dB (A) at different locations					
	Month & Year	Time	Guest House	SBM Building	Intake well	ETP Lab	Air strip
	Oct-20	Day time	53	54	56	61	53
		Night time	40	41	42	48	39
	Nov-20	Day time	52	55	58	62	52
		Night time	41	42	42	48	38
	Dec-20	Day time	51	53	59	60	51
		Night time	40	41	43	45	37
	Jan-21	Day time	50	54	60	63	50
		Night time	41	43	42	48	39
	Feb-21	Day time	51	53	56	60	51
		Night time	40	44	43	46	38
	Mar	Day time	50	52	54	59	50
		Night time	41	43	44	47	37

(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.	The rainwater flow from rooftops, paved and cemented area within premises are channelized by providing the storm water drains all along the internal roads of the industry. The Facility available can collect & use rain water from about 4,08,000 m² area.
(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.	Grasim is conducting regular trainings for the employees on safety and health aspects of chemical handling. Pre-employment medical examinations are made mandatory in the industry. OHC and the Medical centre operating @ Factory and in residential colony are continuously taking care of the employees and their family members also. It is also conducting the periodical medical examination for all employees.

(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.	complied
(iX)	The company shall undertake all measures for improving socio-economic conditions of the surrounding area. CER 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.	Socio-economic developmental activities are being carried out by the Industry under Group's CSR policy. CSR activities are carried out under 5 major headings i.e. • Education, • Health, • Sustainable Livelihood, • Infrastructure Development & • Social empowerment During this pandemic, our CSR activity is more concentrating on the health and maintaining hygienic condition in nearby villages and also supporting the villagers for fighting against the pandemic. We have received appreciation letter for the same from District Administration of Haveri. CSR activity report along with the photographs of the beneficiaries for October -2020 to March-2021 is enclosed as **Annexure II.**
(X)	(i) **A** separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	A separate Environment Management Cell is established which takes care of environmental management system implementation, treatment plant operations & maintenance, air & effluent analysis, environmental record management, ensuring the adherence to environmental legal requirements, audits etc.
	Structure of EMC 	

(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.	Agreed and will be followed same during the implementation of project.
(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.	Environmental clearance submitted to all concern authorities and taken acknowledgement.
(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	Acceptable and being followed
(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.	Agreed and same being followed.
(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.	The Industry had advertised in two local newspapers (One in English and one in vernaculars) regarding the accordance of Environmental Clearance by the MoEF. The advertisement appeared in "Deccan Herald", English paper dated 20.08.2019 & "Prajavani" Kannada paper dated 20.08.2019

11.0	The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.	Acceptable
12.0	The above conditions will be enforced, *inter alia* under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention&. Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Acceptable

Annexure I

AAQM Results

Particulars	CS_2	H_2S	NO_2	NO	NO_X	PM_{10}	$PM_{2.5}$	SO_2
	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Location 1: ETP								
Oct-2020	7.08	7.00	16.59	8.27	24.86	39.68	23.88	5.43
Nov-2020	7.72	8.27	17.21	9.23	26.44	41.82	26.27	6.30
Dec-2020	7.87	7.33	15.71	8.38	24.09	41.19	22.97	6.24
Jan-2021	8.26	7.56	16.26	8.61	24.87	42.90	24.72	7.20
Feb-2021	7.87	7.03	15.71	7.92	23.63	44.86	24.87	6.24
Mar-2021	7.84	7.19	15.41	8.76	24.17	47.27	26.79	6.31
Location 2: Guest House								
Oct-2020	5.34	6.29	7.38	4.14	11.52	42.44	28.39	5.31
Nov-2020	6.45	6.88	8.57	5.90	14.47	44.56	31.57	7.07
Dec-2020	6.43	5.65	7.02	5.10	12.12	39.50	25.68	5.23
Jan-2021	5.86	6.10	7.98	5.61	13.59	41.86	26.76	5.90
Feb-2021	6.45	5.13	7.86	4.95	12.81	42.86	25.17	6.15
Mar-2021	5.83	5.61	8.44	5.16	13.60	45.63	27.32	6.87
Location 3: Intake Well								
Oct-2020	4.13	4.64	6.85	3.67	10.52	37.31	23.46	4.88
Nov-2020	4.57	5.27	7.79	4.18	11.97	41.53	27.23	5.28
Dec-2020	4.17	4.75	7.50	3.95	11.45	39.61	23.93	4.91
Jan-2021	4.99	5.34	8.04	4.51	12.55	40.64	25.11	5.49
Feb-2021	4.37	4.75	7.50	4.22	11.72	36.73	22.76	4.59
Mar-2021	4.96	5.23	8.02	4.93	12.95	37.01	23.54	5.06

Annexure II

GRASIM INDUSTRIES LIMITED- HARIHAR

CORPORATE SOCIAL RESPONSIBILITY REPORT

3rd- QUARTERLY (OCTOBER 2020 TO DECEMBER 2020)

The CSR activities progressively started implemented from the beginning of this quarter after covid19 lockdown. The major highlights of this quarter was, Awareness to the students on covid prevention, Artificial Limb fitment camp, promotion of vegetable cultivation, animal vaccination, prevention of water and vector borne diseases, Mass covid diagnostic camps in villages, TB Awareness and diagnostic camps, BP and Diabetic testing camps, Face mask and spinning candle bag stitching activity under women empowerment activities are the few them.

I. Education Projects:

Covid Awareness in schools: Since Govt. Education Department decided to start the schools from 1st January 2021, the sensitization programmes are conducted in Govt. Primary Schools and High Schools on Covid 19. Total 628 students from 7 Govt. schools are covered under the awareness programme.

Figure 1 Covid Awareness in school

Mid-Day Meals Ration Distribution to Students: Mid-day Meals ration distribution was organized in 8 schools. Total 425 students benefited from the programme. CSR team organized students in the village schools.

Figure 2. Mid Day Meal Ration Distribution

II. Health Projects:

Children Immunization programme: To reduce the infant mortality, the monthly immunization programme has been supported in the villages. The new born babies are covered under regular immunization. The immunization camps are organized in village Govt. Anganwadies in collaboration with Primary Health centers. Total 666 children are benefited from these camps.

Tuberculosis Awareness Programme:

In collaboration with Primary Health Center Maknur and Airani, Tuberculosis awareness programme and House to house Survey activity was organized at downstream and upstream villages. Total 1104 people are given awareness and out of them, three are diagnosed with Tuberculosis. Diagnosed persons are referred for DOTs scheme.

Figure 3.TB Sensitization Programme

Figure 4.Covid Testing camp

Covid Awareness and Diagnostic camp: Covid awareness camps and diagnostic camps are organized in upstream and downstream villages in collaboration with Primary Health center of Maknur and Airani. Support was given to organize mass testing camps at Kavalettu, Hulikatti, Kodiyal and Karur village. Total 1689 people are covered under awareness programme and 270 people are screened for Covid. Not a single case was diagnosed with the Covid in these camps.

Hygiene and Sanitation Awareness Programme: Sanitation awareness programme was organized at Nalwagal, Kavalettu and Nadiharlahalli villages. Awareness on daily personal hygiene and sanitation, menstrual hygiene, clean drinking water etc. are given to the general public. Total 270 people are benefited under these awareness programmes.

Figure 5.Larva Survey

Awareness on Water borne and Vector borne diseases: Awareness on water and vector borne disease are organized in down and upstream villages in collaboration with Health Dept. In this process total 5517 larva breading sites are surveyed and identified and destroyed. Residents are given awareness to keep their

surround clean. The mosquito breading sites like, old tiers, coconut shells, open drums and tanks are asked to clean once in two days.

General Health Checkup: The General Health Checkup camp was organized through Grasim Jana Kalayan Hospital in up and down stream villages. Total 276 people treated in these camps. Major issues like, blood pressure, fits, cough, skin disease etc. was diagnosed and treated.

Figure 6.General Health checkup camp

Artificial Limb Fitment camp:

The disabilities in most of the time considered as curse, especially in rural India. Hence efforts have been made by both government as well as social development organization to mitigate the biases and discrimination related to disabilities. In one such empowerment efforts, Grasim Harihar every year in commemoration of birth anniversary of Sh. Aditya Vikram Birlaji conducting artificial limb fitment camp on 14th of November. Every year this camp brings lot of beneficiaries from wide and corner of Karnataka State. The Jaipur foots are prepared and fitted to beneficiaries with the technical support from Karnataka Marwari Youth Federation-Bangaluru. This year is 26th year of Artificial Limb Fitment Camp. Till date 3970 people with limb problem received the benefit from this project.

Figure 7.Inauguration of Artificial Limb fitment camp Sh. Ajay Kumar Gupta, Sr. President &Unit Head

Figure 8.Artificial Limb fixing for young boy

Due to Covid pandemic scenario, this year's artificial limb fitment camp was conducted with accurate planning and utmost care. The enrollment of the beneficiaries was done through online system. The registered beneficiaries are further segregated based on their geographic location and allotted time schedules for the limb measurements. The technical agency, Karnataka Marwari Youth Federation Bangaluru has taken measurement for

the Limbs on 19th and 20th November 2020 and prepared the limbs at their workshop at Bangaluru. The distribution of leg to the beneficiaries was done on 2nd and 3rd of December 2020.

The project was profoundly guided by Unit Head Shri. Ajay Kumar Gupta. In the programme organized to conduct the Artificial Limb fitment camp, he motivated the beneficiaries to lead an enthusiastic life with the help of Artificial Limbs. He shared the life stories of renowned persons, who have excelled in sports, arts and different professions, despite of their disabilities with the help of artificial limbs.

Total 129 people from varied age group benefited from the Artificial Limb fitment camp.

Servicing Activity of Rise Legs: Previous year (FY 2019-20) an agency from Bengaluru by name "Rise Leg" was engaged to manufacture and fix sophisticate legs. These legs are durable and required servicing every year. Mr. Arun Cherian and his team from Rise Leg Bengaluru serviced the legs of four beneficiaries on 28th and 29th Dec 2020.

Figure 9.Servicing of Rise Legs

Figure 10. Child Health Care Programmes

Reproductive and Child Health care: To promote the children and mother health and reduce the IMR and MMR, the reproductive and child health care was given importance. The new born babies and mothers are regularly followed up and immunization activities are organized in the villages to facilitate immunization of mother and child. Total 8 new born babies and mother are covered under this activity.

Children Health Checkup Camp: Children health checkup camp and Healthy baby show was conducted at Nadiharlahalli and Airani village in collaboration with Primary Health Center of Airani. Total 36 children are covered under health checkup.

Figure 11. Children Health Checkup camp

Nutrition Programme for mother and Child: Nutrition supplements, multivitamin tablets and Iron Folic tablets are distributed among the children and mothers, to mitigate the problem of malnourishment among the children and anemia among the mothers. Total 857 children and mothers are benefited through this activity. The activity was conducted in collaboration with Health Department and women and child welfare department.

Figure 12. Nutrition Programme

Figure 13. BP and Diabetic Testing Camp

Blood Pressure and Diabetic Diagnostic Camp: Blood Pressure and Diabetic Camp was organized in collaboration with Primary Health Center in Nalwagalu, Kavalettu, Nadiharlahalli, Airani and Hirebidare village. Total 875 people covered under these diagnostic camp and out of them 16 found diabetic positive. The identified patients are referred for the treatment. World Diabetic Day was observed at Nadiharlahalli on 14th November to create awareness on diabetics.

Figure 14. Vegetable Seed Distribution

III. Sustainable Livelihood Projects:

Vegetable Cultivation Project: Vegetable cultivation project was initiated in this quarter. Vegetable seeds like, beans, horse beans, Okra, Brinjal, rib guard, palk leaf, red leaf etc. was distributed among 25 farmers of 4 villages. This will help them earn in cash.

Veterinary Camp: Livestock health checkup and vaccination camp was organized at Hirebidare, Airani and Nadiharlahalli village in collaboration with Veterinary hospital of Airani and Hulikatti.

Total 1730 animals of 322 farmers are treated and vaccinated in these camps. Vaccination on foot and mouth disease, deworming, anemia, infertility etc. was given to the animals.

Figure 15. Animal Mineral mix distribution to Famers

Skill Training Centers: Tailoring training center are successfully operating in Nadiharlahalli, Airani and Kavalettu village. Total 21 people are receiving training in these centers. Total 46 ladies, who have successfully completed their six months course, have received their training certificates.

Total 6SHG members of Hirebidare village are engaged in spinning candle bag manufacturing.

Figure 16. Skill Training center at Airani village

Water Conservation Project: Farm pond and sock pits are constructed in collaboration with Grama Panchayat of Hirebidare and Airani village. Total 27 farm pond and sock pits have been constructed.

IV. Infrastructure Development Projects:

Street light Distribution: To support the rural electrification and promote smooth commute of general public in the village roads; street lights are distributed to Kodiyal Hospet Grama Panchayat. Total 25 sets of street lights are handed over to Grama Panchayat Secretary. This project has benefited 1500 people.

Figure 17.Street Light Distribution

Seating Arrangement in Public Gathering Places: Cement Concrete benches are fixed at Nalwagal and Hulikatti village public gathering places, like parks, temple veranda, and road side to enable the senior citizens, women to sit and rest during their visit to these public places. People of Hulikatti and Nalwagal are benefited from this facilities.

Figure 18.Cement Benches for public

V. Social Projects:

Figure 19.Gandhi Jayanti Celebration

Gandhi Jayanti Celebration: Gandhi Jayanti was celebrated at Nadiharalahalli on 2nd October 2020. The village elders, Anganwadi Teachers, Asha workers, School Teachers participated in this programme. Gandhian thoughts and way of living etc. was remembered on this occasion.

World Nutrition Day: World Nutrition day was observed on 12th November 2020 to create awareness on importance of nutrition food among the children and women. Programme was observed in collaboration with Health Dept. in two downstream villages.

Figure 20.World Nutrition day

CSR village visit by Vice President HR: As part of orientation visit Shri Sandeep Bhatt, Vice President-HR visited three downstream villages- Nadiharlahalli, Airani and Hirebidare. During his visit he interacted with village elders, newly elected Grama Panchayat members, School teachers, students, Self Help group members and Tailoring training centers. The village elders welcomed him with garland and shawl.

Figure 21.VP HR -Sh.Sandeep Bhatt-visit to village

GRASIM INDUSTRIES LIMITED- HARIHAR

CORPORATE SOCIAL RESPONSIBILITY REPORT

4th - QUARTER (JANUARY 2021 TO MARCH 2021)

The CSR projects that are initiated in the 2nd and 3rd quarter have been produced some visible impact in the 4th quarter. The major initiatives are; Covid prevention activities in Govt. Schools, Govt. School infrastructure Development projects, Horticulture projects, Vegetable cultivation projects for women, organic farming projects, Women empowerment activities through income generation activities through garment activities, Uniform stitching activities, Specialized Health camps in the community, prevention of water and vector borne diseases, support to rural art and sports etc.

I. EDUCATION PROJECTS:

Republic day Celebrated in Govt. Schools: Despite of Covid limitations and schools are under lock down; the school development and management committees (SDMCs), Gram Panchayat members, village elders and school children from senior classes have participated in the Republic Day celebration in the 2 Govt. Schools in the downstream villages. Total 75 people participated in the celebration.

Thermal Scanners and Sanitizers Support to Govt. Schools: Govt. Schools that are started for 6th to 10th standard, after the Covid lock down, are supported with thermal scanners and sanitizers. Total 4 government schools are supported and that has benefited 650 students.

Cultural Stage for Govt. School: School cultural stage was constructed at Govt. Higher Primary School of Kavalettu village. In a programme organized at Govt. Higher Primary school premises of Kavalettu village on 18th February 2021, Shri. Ajay Kumar Gupta, Unit Head, has inaugurated the cultural stage and handed over it to the School Development and Management Committee (SDMC).

Promotion of Computer Literacy: To promote the computer literacy in the Govt. Schools, computers are installed in Govt. Higher Primary Schools of Airani and Hirebidare village. Total 6 computers are installed in these schools. The Teachers and Management committees of these schools have appreciated the support from the CSR team.

II. HEALTH PROJECTS:

Blood Pressure and Diabetic Testing Camps: Blood pressure and Diabetic Testing camps are held in villages in collaboration with Primary Health Centers of Airani and Maknur. Total 9 Blood Pressure and Diabetic Testing camps are organized and 312 people are participated; out of them 28 persons found diabetic positives.

Prevention of water and vector borne diseases: Since the majority villages are on the shore of Tunga Badhra river and surrounded by paddy fields; the water logging area resulting in high breeding ground for the mosquitos. In order to prevent the mosquito breeding; the probable breeding sites near the residential area are surveyed and destroyed. Total 577 such breeding sites are identified and destroyed. Along with this awareness on water and vector borne diseases are created among 2049 people.

National Pulse Polio Campaign: The first phase of national pulse polio campaign was held from 31st January 2021 to 3rd February 2021. Under CSR initiatives, the campaign was supported in all 12 villages and 2 Primary Health center areas with vehicle arrangement for shifting the vaccinations, volunteer's movement and food facilities for the volunteers. Total 2563 children received the polio vaccinations.

Dental Camp: Dental camp was organized in collaboration with District Hospital Davangere, Dental Association Davangere and Ayushman Bharat Mission at Airani village. The project aimed at identifying people without teeth and fixing them with teeth sets. Total 22 people participated in this camp and 12 are selected for the teeth sets. Dr. Tippeswamy and team from District Hospital Davangere participated and selected the beneficiaries.

Healthy Baby Show and Support to Nutrition Supplements: The Healthy baby show and nutrition campaign for children are organized in 4 villages in the collaboration of Primary Health center of Airani and Maknur village. Total 403 children are benefited from this programme.

Children Immunization Programme: Children Immunization programme are organized in all villages in collaboration with Primary Health Centers. Total 228 children are immunized.

Girl Child Day: National Girl Child day was observed on 24th January 2021 at Nadiharlahalli village. Total 55 girl children along with mothers participated in this programme. Awareness was given on girl child education, Sukanya Samradhi Yojana etc. was given to the parents.

Women Health Awareness Programmes: Women Health awareness Programmes were organized in Hirebidare, Airani and Nadiharlahalli village. Topics like malnutrition among women, prenatal care, post-natal care, menstrual hygiene, Brest cancer etc. covered in these awareness programme.

The awareness on sanitary pad usage and importance of menstrual hygiene was covered in the small women group meetings. Total 400 sanitary pads produced by the women self-help groups are sold during this awareness Programmes.

Awareness was also created among the women folk related to growing anemia related problems observed among the women folk in the district and state of Karnataka. This has observed the mortality among the new mothers and children. The information related to preparation of mineral mix, locally available nutrition rich vegetables, grains etc. are explained.

Covid Vaccination Drive: Since Govt. Health Department has initiated the Covid vaccination drive for the front line workers as well as for the general public, above 45 years of age; CSR team was fully engaged in creating awareness on Covid vaccination as well as motivating them to get the vaccination in the nearest Govt. Hospitals. Total 567 people received the Covid vaccinations from CSR villages.

III. SUSTAINABLE LIVELIHOOD PROJECTS:

Horticulture Projects: Horticulture Projects are supported in the beginning of the year has started giving yield. Total 10 farmers supported with the seedlings of pepper, curry leaves, drumstick etc. The project has increased income of the farmers. A success story of one of the farmer is shared below.

Success Story: 01

Horticulture Project

Nagappa a poor farmer with a small Land holding of 4 Acres with dry land. His Land was on the slop of the hillocks with boulders and bushes on it. He used to cultivate only Jowar in the rainy season. Last year CSR team has supported him with land leveling project on Public and Private partnership model, with 25% contribution from farmer. Under this project 2-acre land was leveled and made suitable for horticulture. After land leveling last December; Project team supported him with drumstick seeds of improved verities.

He developed 1200 saplings of drum sticks in his small nursery in the summers of 2020. Plantation of the drumstick saplings were done in the month of June 2020. With the help of horticulture department, he received subsidized loan to drill the bore well. He adopted drip irrigation for the drum stick saplings.

He has adopted mixed cropping pattern, wherein he has cultivated tomato, and Bens alongside the saplings of drum stick. He has received very good tomato and Bens crop and has earned around Rs. 50000/- in each crop. At present the drum stick is 10 months old and he started receiving yield of drum stick from 7th month onwards. Per week he is plucking around 125 kg to 150kg's of drum stick and getting a rate of Rs. 60 to Rs. 80 per kg. His weekly income from drum stick is Rs 7500/- to Rs.9000/-.

Nagappa has shared his happiness for this support from the CSR project. After tomato and Bens, he has planted Areca nut saplings in between drumstick plants. The Areca nut takes 5-6 years' time for its first yield; that is also cash crop; till then he will receive income from drum stick. Nagappa, a hard working progressive and organic farmer. He prepares organic mix and wormy compost and use these manures for the cultivation. There was sense of happiness and proud feeling in the face of Nagappa.

Vegetable cultivation Project: Vegetable cultivation project was taken up in 4 villages with 19 women farmers. This is one of the successful project implemented in this year. This project has helped in increasing the income of the women farmers. A detailed Success story is shared here with;

Success Story -02:

Vegetable cultivation Project

CSR team has taken up vegetable cultivation project for women farmers in 4 villages. These women farmers owned very small land area and full family is partially engaged in agriculture. Other days these women are engaged in day wage work in bigger farmer's farm land with per day wage of Rs. 125 to Rs.150/-. Hence these poor women farmers have been identified and motivated to cultivate the vegetables along with their daily wage work.

Total 19 such women had been identified and supported with various verities of vegetable seeds.

The women have cultivated Okra, black eyed peas, cucumber, horse beans, beans, ridge gourd, bottle gourd, beetroot, fenugreek leafs, paalak leafs, mint leaves, red leaves, etc. They have earned very good profit by selling in this in their weekly local market. The details of profit earned by these as below and they are still plucking the yields.

Vegetable Cultivation Project							
Sl.No	**Name**	**Village**	**Crop**	**Area**	**Expense**	**Income**	**Profit till Feb2021**
1	Kotramma Nagendrappa Lagubigi	Airani	Okra (Lady finger)	2 acre	20,000	Rs.8000/- first sale	8000
2	Laxmavva Manjappa poojar	Airani	Okra (Lady finger)	2 acre	22000	80,000	58,000
3	Vanajakshi Shivappa Katagi	Airani	Okra (Lady finger)	1 and 1/2 acre	25,000	1 lakh	75,000
4	Netra Sudeer kumar K	Airani	Black eyed peas	2 acre	20,000	48,000	28,000
5	Sunita Basavaraj Anner	Airani	Okra (Lady finger)	1 acre	16,000	40,000	24,000
6	Sunandamma Ramappa Hanchina Mane	Nadiharalahalli	Okra and Ridge Gourd	1 acre	8,000	23,000	15,000
7	Manjula Hanumantappa Nalavagala	Nadiharalahalli	Okra (Lady finger)	1 acre	15,000	35,000	20,000
8	Susheelamma Chandrappa Bhudanaala	Nadiharalahalli	Okra (Lady finger)	1/2 acre	7,000	15,000	8,000
9	Renukamma Kuruvateppa Bennur	Hirebidare	Cucumber	1 acre	6,000	24,000	18,000
10	Savitramma Basavarajappa Kuruvatti	Hirebidare	Cucumber	1 acre	8,000	32,000	24,000
11	Nagamma Chatrappa Dibbad	Hirebidare	Black eyed peas	2 acre	25,000	57,000	32,000
12	Jayamma Mailappa Sirageri	Hirebidare	Okra, Ridge Gourd, Amaranth, Mint leaves and Paalak	1 acre	5,000	16,000	11,000
13	Laxmavva Ningappa Vataganahalli	Hirebidare	Beetroot, Fenugreek, Paalak	1 acre	3,000	18,000	15,000
14	Rekha Pakirappa Hosahalli	Hirebidare	Okra, Ridge Gourd, Amaranth, Mint leaves and Paalak	1 acre	7,000	13,000	6,000

15	Paramma Hanumantappa Machenahalli	Nalavagala	Okra, Ridge Gourd & Clustered Beans	2 acre	20,000	60,000	40,000
16	Jayamma Shivajappa Karura	Nalavagala	Okra, Ridge Gourd & Clustered Beans	2 acre	0	0	Growth stage
17	Manjamma Nilappa Begar	Nalavagala	Okra, Ridge Gourd & Clustered Beans	2 acre	15,000	48,500	33,500
18	Geetamma yuvaraj Hittalamani	Nalavagala	Okra, Ridge Gourd, Clustered Beans & Cucumber	2 acre	28,650	67,500	38,850
19	Ratnamma kaalingappa Hittalamani	Nalavagala	Okra, Ridge Gourd, Clustered Beans & Brinjal	2 acre	32,600	67,600	35,000

Organic Farming Project: To promote the organic farming in the villages, farmers are supported with trainings and inputs. In this process 2 farmers are supported with Verme Compost pits. They are producing Verme compost and they are using it for their plantations.

Apart from this total 15 farmers are supported with plastic drums to prepare the "Jeevambruth" the mixer of Jaggrey, tamarind, flour of grains, urine and cow dung mix etc. This mix helps in creating microorganisms in the soil and improve the fertility in the soil. This has reduced the cost of Chemical fertilizer and good crop.

Woman Empowerment and Income Generation Activity: To promote the women empowerment and income generation activities; the women self help groups are supported with the stiching activities. Total 5 SHG members are engaged in mask stitching and Spinning Candle bag stitiching activities; total 1500 candle bags are stitiched and supplied to the company. Total 2000 face masks are stiched and sold in the local market.

The women Group at Nadiharlahalli, started the "Vinayaka" Garments. The Garment has engaged 5 women in producing petticoats, blows, school uniform, Salver Kamiz and ornamental golds etc.

Total 23 Self Help Group members of Up and Down stream village are engaged in company's staff and workmen uniform stitching activity. These women self-help groups stitched total 710 uniform and distributed among the staff and workmen.

Farm Road: Farm road was renovated in Nalwagal, Vodeyarayanahalli, Hirebidare and Airani village. Based on the request from the farmers and village leaders, the farm road that are devastated during the rainy season are renovated by putting gravels and soil. This has helped in smooth movement of men, animals, agriculture tools and materials of farmers. Total 7 KM road was renovated in these 4 villages.

IV. INFRASTRUCTURE PROJECTS:

Community Hall: Community Hall was constructed at Airani village. That is helpful for general public in conducting village level meetings, social and religious Programmes.

Village Road Construction: Village road was cleaned at Nalwagal; based on the request from the Kodiyal Hospet village Gram Panchayat. Total 3Km of road was cleaned.

Street Light Distribution: Street lights are distributed to Kodiyal Hospet Gram Panchayat. This has helped the people of Kodiyal Hospet village to commute on the village road during the night. The Gram Panchayat has thanked the CSR team for this support.

V. SOCIAL PROJECTS:

Support to Village Cultural Center: Supported 2faith based cultural centers at Nalwagal village for its up keeping and maintenance of cleanliness.

Support to Sharana Sahitya Programme: Supported Sharana Sahitya cultural programme for 4 days at Kavaletu village. The Programmes like folk songs, vachana reciting, dance etc. are organized. Teams from nearby villages participated in this programme.

Support to Village Cricket tournament: Rural Cricket tournament was organized at Nalwagal village. Total 20 team from different villages participated in this tournament. Tournament was held from 1st February to 5th February 2021.

Support to Maintenance of National Heritage Sites: The two national heritage sites, Mylaralingeshwar temple and Kurvati Basaveshwara temple of Hagribommanahalli Taluk of Bellary District are supported to maintenance and its up keeping every year.

Population Survey: Supported the Govt. Agencies in conducting the National Population Survey in all CSR villages. The village volunteers are actively engaged in house to house survey and enrolling the family member's details under national Population Survey.

Award on "Best Skill Development Initiatives": Bangalore Chamber of Industries and Commerce-BCIC announced the BCIC CSR Impact Awards 2020 to appreciating the social responsibility efforts of both Individuals and Companies across Karnataka. The aim of the award is to identify and recognize the efforts of companies in their exemplary work in the area of Corporate Social Responsibility (CSR). The selection process for the BCIC CSR Impact Awards is extremely competitive and is assessed by eminent Juries.

Women Empowerment through skill Development initiatives was the project under the category in which the organization has applied for the award.

Our Organization was awarded for "Best Skill Development Initiative" .

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Annexure-III

<table>
<tr><th>Sl. No.</th><th>CREP conditions for Pulp & Paper Industry along with implementation schedule</th><th>Implementation Status of M/s. Harihar Poly Fibres Industry</th></tr>
<tr><td>1</td><td>Discharge of AOx Kg/tonne of paper:
➢ AOx 1.5 kg/tonne of paper within 2 years.
➢ AOx 1.0 Kg/Tonne of paper in 5 years</td><td>The Unit achieved average value of AOx is 0.23 Kg/Tonne of Pulp.</td></tr>
<tr><td>2</td><td>Installation of Lime Kiln: within 4 years</td><td>Installed the Lime kiln along with online continuous emission monitoring system connected to CPCB server.</td></tr>
<tr><td>3</td><td>Wastewater discharge cum/tonne of paper:
➢ Less than 140 cum/tonne of paper within 2 years.
➢ Less than 120 cum/tonne in 4 years for units installed before 1992.
➢ Less than 100 cum/tonne of paper per units installed after 1992.</td><td>The average wastewater discharge is 93.64 cum/tonne of Pulp.</td></tr>
<tr><td>4</td><td>Odor control by burning the reduced Sulphur emissions in the boiler/lime kiln.</td><td>Odor causing high concentrated low volume non condensable gases are collected in single vessel and being burnt in Lime kiln.

All influent drains are covered concrete Slabs.</td></tr>
<tr><td>5</td><td>Utilization of treated effluent for irrigation wherever possible.</td><td>The industry is utilizing about 3000 m3 of treated effluent per day in non-monsoon seasons for greenery development. Efforts being made to utilize more treated effluent for greenery development in non-monsoon season by covering all the available adjacent land surrounding of industry.</td></tr>
<tr><td>6</td><td>Color removal from the effluent.
.</td><td>Industry has installed Color Removal technology (Tertiary Clarifier) with 7.0Crore capital investment and Operating cost 1.5 Lac per day.
<table>
<tr><th>Parameter of Treated Wastewater</th><th>Unit</th><th>KSPCB target</th><th>Before Tertiary Treatment</th><th>After Tertiary Treatment</th><th>% of Reduction</th></tr>
<tr><td>COD</td><td>ppm</td><td>250</td><td>230</td><td>160</td><td>30.4</td></tr>
<tr><td>BOD</td><td>ppm</td><td>30</td><td>26</td><td>17</td><td>34.6</td></tr>
<tr><td>TSS</td><td>ppm</td><td>100</td><td>85</td><td>35</td><td>59</td></tr>
<tr><td>Inlet/Outlet Colour</td><td>PtCo</td><td>NA</td><td>900</td><td>180</td><td>80</td></tr>
</table>
In addition to above DO increased by 22% i.e average DO value 4.1ppm to 5.0ppm.</td></tr>
</table>

Annexure IV

ADITYA BIRLA

GRASIM

Date: 22.10.2019

Scientist – E & Member Secretary (EAC)
Ministry of Environment, Forest & Climate Change (IA-II Section)
Indira Paryavaran Bhawan
Jorbhag Road
New Delhi - 3

Sir,

Sub : Expansion of Fibre Plant, Pulp Plant, Captive Power Plant & setting up Excel Fibre Plant at Village Kumarapatnam, Taluka Ranebennuru, District Haveri (Karnataka) by M/s Grasim Industries Ltd regarding
Environmental Clearance # F.No. IA-J-11011/371/2006-IA II(I)

Reference to the above, we thank you for granting us the Environmental Clearance (EC) for the aforesaid expansion project by M/s Grasim Industries Ltd.

We would like to bring to the industry's view & plea against the specific EC conditions as mentioned below for your kind notice :

Condition No. 10 (i) *– Environmental Clerance shall be subject to obtaining prior clearance from the Wildlife angle including clearance from the Standing Committee of the National Board of Wildlife, as applicable.*

Industry's view & plea : As per the Gazette Notification Dated 6th July 2017 (enclosed as Annexure – 1 for Ref please), Ranebennurur Blackbuck Sanctuary has been notified with a clear demarcation of Eco-sensitive Zone and related conditions to be followed for developmental activities. Accordingly, industry has submitted the letter duly approved by Principal Chief Conservator of Forests (Wildlife) & Chief Wildlife Warden of Karnataka State Forest Department dated 14.06.2019 along with 1:50000 Topo map indicating distance of sanctuary from industry and eco-sensitive zone duly authorized by Chief Wildlife Warden – Enclosed as Annexure – 2. Hence, based on these details, we would like to inform that clearance form Standing Committee of the National Board of Wildlife is not applicable in our case.

Received
24/X/2019
Dr. U. Sridharan
Scientist 'G'
Ministry of Environment, Forests & Climate Change
Regional Office, Southern Zone
Kendriya Sadan, 4th Floor, Koramangala
Bengaluru-560 034.

Birla Cellulose
Fibres from Nature

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W : www.grasim.com | E : grasimharihar@adityabirla.com | CIN : L17124MP1947PLC000410
Regd. Office : P.O. Birlagram, Nagda 456 331 (M.P.)

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Condition No. 10 (XV) – *At least 1.5% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) & item-wise details along with time bound action plan shall be prepared & submitted.*

Industry's view & plea : As per the office memorandum from IA Division, MoEF&CC regarding CER dated 1st May 2018 (enclosed as Annexure – 3 for Ref please), the industry has to spend 0.25% additional capital investment for CER as the aforesaid project is a brownfield project with investment between 1000 Cr to 10000 Cr. Hence, we request your kindself to amend this condition to 0.25% of total investment cost against 1.5% as CER expenses.

Condition No. 10 (XV) – *Transportation of raw materials / products should be carefully performed using GPS enabled vehicles.*

Industry's view & plea : Wood is the major raw material consumed in Pulping process, which comes mainly from unorganized market. Hence, it is practically highly difficult to ensure use of GPS enabled vehicles. However, industry will put maximum efforts to take care of all types of safety precautions while transporting raw materials and end products so that no major damage will be caused to environment. Hence, we request your kindself to amend this condition.

Industry will put maximum and sincere efforts to meet remaining conditions given in the EC.

Thanking you,

Yours faithfully,

For **M/s Grasim Industries Ltd.**

Ajay Kumar Gupta
Senior President & Unit Head

Encl: Annexures as mentioned above

CC: **Regional Director**
MoEF&CC Regional Office
Kendriya Sadan
Bangalore

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