ADITYA BIRLA
GRASIM

10/11/2021

The Advisor,
Ministry of Environment, Forest & Climate Change,
Regional Office – Western Region,
E-5, Kendriya Paryavaran Bhavan,
Area Colony, Ravishankar Nagar
Bhopal – 462016

Dear Sir,

Subject: Submission of half Yearly (from April-2021 to September-2021) EC Compliance reports for the Environment Clearances received from MOEF & CC.

Please find enclosed half yearly compliance reports from April-2021 to September-2021 for the following Environment Clearance;

1. F.No. J- 11011/463/2007-I(A), II(I), dated 20/12/2007
2. F.No. J-11011/321/2016-I(A), II(I)Pt, dated 15/01/2018
3. F.No. J-11011/321/2016-I(A), II(I), dated 17/10/2019

Hope you will find same in Order.

Yours Faithfully,
For Grasim Industries Limited
(Unit: Grasim Cellulosic Division, Vilayat)

Ashish Garg
Sr. President & Unit Head
Encl : a.a.
CC : CPCB Vadodara **&** GPCB Bharuch

Six Monthly Compliance Report of Environmental Clearance

For

Viscose Staple Fibre, Sulphuric Acid and Carbon-Di-Sulphide

EC-2007

Submitted To: -	Submitted By:-
1. Ministry of Environment Forest & Climate Change, (WR Office) Bhopal Ministry of Environment Forest & Climate Change, New Delhi 2. Central Pollution Control Board, Zonal Office (Vadodara) 3. Gujarat Pollution Control Board-Bharuch	**Grasim Industries Limited** (Unit: - Grasim Cellulosic Division) Plot No. 1 GIDC Vilayat Industrial Estate, PO-Vilayat, Taluka-Vagra, Dist: - Bharuch-392012, Gujarat, India

Period: -01.04.2021 to 30.09.2021

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat

List of Annexure

Sr. No.	Title	Annexure No.
1	GIDC offer Allotment Letter	Annexure-1
2	GIDC Approval for Water Effluent	Annexure-1A
3	Chlor Alkali EC	Annexure-2
4	Effluent Treatment - Monthly Monitoring Report from Third Party	Annexure-3
5	Registration Certificate for Refilling & Recycling Hazardous Waste	Annexure-4
6	GIL CPP Amendment	Annexure-5
7	Stack - Monthly Monitoring Report from Third Party	Annexure-6
8	Acknowledgment EC Compliance - Apr-21 to Sep-21	Annexure-7
9	Ambient Air (Inside Plant) - Monthly Monitoring Report from Third Party- Apr-21 to Sep-21	Annexure-8
10	VSF CCA & CCA Amendment for Debottlenecking	Annexure-9
11	BEIL Membership – 5000TPA	Annexure-10
12	Upstream & Downstream - Monthly Monitoring Report from Third Party- Apr-21 to Sep-21	Annexure-11
13	Ambient Air (Nearby Villages) - Monthly Monitoring Report from Third Party- Apr-21 to Sep-21	Annexure-12
14	LDO & HSD Licenses	Annexure-13
15	GPCB Monthly Report - Sep-21	Annexure-14
16	Rainwater Harvesting Report	Annexure-15
17	CSR Report	Annexure-16
16	BSE – NSE Report	Annexure-17
17	Information letter to MOEF	Annexure-18
18	CCA Compliance Report (Apr-21 to Sep-21)	Annexure-A

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat

-: Introduction: -

1. Grasim Industries Limited (GIL), incorporated on 25th Aug., 1947; is a flagship company of the Aditya Birla Group and India's pioneer in manufacturing of Viscose Staple Fibre (VSF) a man-made, biodegradable fibre with characteristics akin to cotton.
2. M/s. Grasim Industries Ltd. has four VSF Plants in India which are located at Nagda (Madhya Pradesh), Harihar (Karnataka), Kharach & Vilayat (Gujarat).
3. Grasim Cellulosic Division, Vilayat is a latest plant in the Pulp & Fibre business, commissioned in Apr-2014 which produces both grey VSF and specialty fibre. This is the company's first plant producing specialty grade fibre.
4. The Company's main production is Viscose Staple Fibre, Sulphuric Acid, Carbon-Disulphide.
5. All the operation related permits, including Environmental Clearance, Forest Clearance from MOEF&CC and Consents to Establish (CTE) & Consent to Operate (CTO) has obtained from Gujarat Pollution Control Board, are in place.
6. Environmental quality monitoring in & around the project site is being carried out by GPCB & NABL approved Laboratory on a regular basis.
7. 04 No. of Ambient Air Quality Monitoring Stations (AAQMS) and Environmental Parameter Display Board at main gate have been established.
8. Continuous Emission Monitoring System has installed in process stacks of Rayon (Fibre) plant, H2SO4 - acid plant, CS2 Plant for regular monitoring of CS2, SO2 etc.
9. Online TOC, pH & flow meters installed at the outlet of ETP, before discharging treated effluent to GIDC pipeline.
10. Green belt is being developed as per the CPCB guidelines to curb the emission and also to provide an aesthetic look.
11. Point wise compliance status of Environmental Clearance for GCD, Vilayat is furnished herewith.

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat

Compliance status on Environmental Clearance
MOEF Ref. Letter No.: J-11011/463/2007-IA II (I), dated 20-12-2007

Sr. No.	Stipulation	Compliance Status
1	This reference to application No. Nil, dated 9th May-2007 along with Form-I & pre-feasibility report seeking the environmental clearance for the above mentioned project and subsequent correspondence vide letters dated 28th September 2007, 13th October 2007 and 30th November 2007.	-
2 & 3	The Ministry of Environment & Forest has examined the proposal along with the correspondence mentioned above and noted the proposal is to set up the Viscose Staple Fibre (VSF) plant at plot # 1, GIDC Industrial estate, Vilayat, Vagra, Bharuch district Gujarat by M/s Grasim Industries Limited (Grasim Cellulosic Division)	Latitude: 21 deg 46'8" and 21 deg 47'11" North Longitude: 72 deg 53'18"and 72 deg 54'49" East
	The Total Cost of the Project is Rs. 1200 Crores	Total Cost 1703 Crores
	No ecological sensitive areas are located within 15 KM periphery of the plant site.	Yes
	The proposed plant is to be located in notified Industrial area at GIDC (Gujarat Industrial Development Corporation)	Yes
	Total land taken on lease from Gujarat Industrial Development Corporation for the plant is 567 Acres.	530 Acre area provided on lease from GIDC after having provision of land for power corridor. GIDC offer letter attached as **Annexure-1**

Following will be the products & production capacity: -

Products=>	Viscose Staple Fibre	Carbon Di Sulphide	Sulfuric Acid	Sodium Sulphate (Byproduct)	Power Generation
EC Amendment As per EC No. J-11011/463/2007-IA II (I), Dated 20.12.2007	**127750**	**23725**	**102200**	**83038**	**25 MW**
EC Amendment As per EC No. F. No. J-11011/321/2016-IA-II(I) Pt Dated – 15.01.2018	**255500**	**34675**	**182500**	**166076 to 210788**	**55 MW**
EC Amendment EC No. F. No. J-11011/321/2016-IAII(I) EC issued on 17th October 2019 (Total Capacity after Expansion)	**438000**	**65700**	**346750**	**348576 - 393288**	**55MW**
Total Production (Tons) – Apr-21 to Sep-21	90523	12666	91217	58758	-
Total Production (Tons) – FY-21	136693	26047	100727	90835	-
Total Production (Tons) – FY-20	169572	27766	118695	107381	-
Total Production (Tons) – FY-19	159629	27122	109640	108943	-
Total Production (Tons) – FY-18	133644	20297	112300	101093	-
Raw Material Consumption (TPA) As per EC F. No. J-11011/463/2007-IA-II(I), Dated – 20.12.2007	**Pulp (Dissolving Grade) 130305**	**Caustic Soda 100% 74095**	**Sulphur 55079**	**Charcoal 7118**	
Total Consumption (Tons) – Apr-21 to Sep-21	91970	48227	41803	NIL	
Total Consumption (Tons) – FY-21	137841	71497	54227	NIL	
Total Consumption (Tons) – FY-20	170235	89177	63080	NIL	
Total Consumption (Tons) – FY-19	160595	91930	59121	NIL	
Total Consumption (Tons) – FY-18	134990	80392	53874	NIL	

Note for Production Quantity: - State Environmental Impact Assessment Authority (SEIAA), Gujarat has also issued an amendment vide letter no. SEIAA/Guj./EC/1(d2), 4(d) & 5(f) /96/2011, dated 30-May-2011 in their Permission to increase production of CS2 to 31025 TPA and H2SO4 to 36500 TPA, EC copy has attached as **Annexure-2**

Justification for Raw Material Quantity: Pulp consumption is increased due increase in VSF production under de-bottnecking after receiving EC amendment in Jan-2018.

Power Plant Covered under Chemical Division consent. State Environmental Impact Assessment Authority (SEIAA), Gujarat has issued an amendment vide letter no. SEIAA/Guj./EC/1(d), 4(d) & 5(f) /96/2011, dated 30-May-2011 for use of natural gas in place of charcoal in CS2 plant, details attached as **Annexure-2**

3	Total Water Requirement of the plant will be 25,000 m3/day and will be sourced from Narmada River, supplied by GIDC.	Average Water consumption for last six months (Apr'21 to Sep'21) is **14925 m^3/day** (for VSF plant only), sourced from Narmada River, supplied by GIDC (Except Power plant), following are the tabulated water Consumption details in **Table No.01**

Table No.01

Water Consumption (m3/day)	
Month	**Average**
Apr-21	14759
May-21	15419
Jun-21	15472
Jul-21	15526
Aug-21	15672
Sep-21	12700
Avg.	**14925**

Following are the GIDC offer cum allotment letter details.	
1) Letter No.	**GIDC/POJ/MKT/GRASIM/575 Dated 06th December-2006**
Agreement for Water Supply	15.60 MLD
Effluent Discharge	12.48 MLD
2) Letter No.	**GIDC/SE/CG//BRH/1236 Dated 29th December-2016**
Agreement for Water Supply	25.00 MLD
Effluent Discharge	19.40 MLD
3) Letter No.	**GIDC/BRH/WS/494 Dated 3rd.July,2019**
Agreement for Water Supply	35.00 MLD
Effluent Discharge	23.00 MLD

Necessary agreement of water supply is made with GIDC	Agreement of water supply is made with GIDC on 06.12.2006, details as per **Annexure-1,1A & 1B.**
A full-fledged Effluent Treatment Plant will be installed with Primary & Secondary treatment facilities based on extended aeration activated sludge process.	Full Fledged ETP installed, which comprises of; 1. Primary Treatment: -Grit Chambers, Equalization tank, Neutralization tank & Primary Clarifier with sludge dewatering system installed. 2. Extended aeration activated sludge process: - Diffused aeration system. 3. Secondary treatment: - Biological reactor with secondary clarifier & settling tanks.

Treated effluent quality for the period of **Apr-21 to Sep-21** is summarized as under **Table no. 02**
Monthly Test Report from Unistar Refer as **Annexure – 3**

Third Party Lab Details: -	
Agency: - Unistar Environment & Research lab Pvt. Ltd	**NABL : -** NABL Certificate Number TC-7652
Address: -GIDC, Char Rasta, Vapi	**NABL Certificate Issue Date & Expiry Date:** 26.08.2020 to 25.08.2022 (Copy of NABL Certificate & extension certificate are attached with Test Report **(Annexure-3)**

Table No.02

Month & Date of Sampling	FINAL TREATED EFFLUENT																											
	pH	Temp.	TSS	Oil & Grease	Fluoride	Sulphide	TKN	Amm. N as N	Copper	Zinc	BOD	COD	Total Res Cl2	Arsenic	Mercury	Hexavalent Chromium	Trivalent Chromium	Lead	Cadmium	Nickel	Cyanide	Phenolic Comp	Selenium	Mangnese	Iron	Vanadium	Nitrate Nitrogen	Bio Assay Test
Unit	-	deg C	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	90% Survival of fish after 96hrs.
GPCB limit	6.0 - 9.0	Not Exceed more than 35 deg C	100	10	15	5	50	50	3	15	100	250	1	0.2	0.01	0.1	2	0.1	0.05	3	0.2	5	0.05	2	3	0.2	50	
Apr-21	7.05	31	50	2.0	2.6	BDL	5.2	3.3	0.08	1.21	32	110	BDL	BDL	BDL	0.1	BDL	BDL	0.05	0.08	BDL	BDL	BDL	BDL	0.8	BDL	2.5	Complied
May-21	7.07	32	90	2.1	2.4	1.2	3.2	2.2	0.08	1.23	34	116	BDL	BDL	BDL	BDL	BDL	BDL	0.06	0.09	BDL	BDL	BDL	BDL	0.9	BDL	3.0	Complied
Jun-21	7.16	32	14	2.5	3.6	0.8	4.5	3.3	0.08	1.22	35	111	BDL	BDL	BDL	BDL	BDL	BDL	0.05	0.09	BDL	BDL	BDL	BDL	0.8	BDL	1.0	Complied
Jul-21	7.42	29	26	2.3	1.0	BDL	2.9	BDL	0.09	1.27	29	102	BDL	BDL	BDL	BDL	BDL	BDL	0.04	0.09	BDL	BDL	BDL	BDL	0.9	BDL	0.9	Complied
Aug-21	7.58	27	40	2.8	1.4	0.8	3.2	2.8	0.08	1.25	40	126	BDL	BDL	BDL	BDL	BDL	BDL	0.04	0.08	BDL	0.10	BDL	BDL	1.3	BDL	7.4	Complied
Sep-21	7.60	28	30	2.1	1.3	0.8	2.2	BDL	0.09	1.27	45	143	BDL	BDL	BDL	BDL	BDL	BDL	0.03	0.085	BDL	1.30	BDL	BDL	1.3	BDL	2.3	Complied
Min	**7.16**	**27**	**14**	**2.1**	**1.0**	**BDL**	**2.2**	**BDL**	**0.08**	**1.22**	**29**	**102**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.03**	**0.08**	**BDL**	**BDL**	**BDL**	**BDL**	**0.8**	**BDL**	**0.9**	**Complied**
Max	**7.60**	**32**	**40**	**2.8**	**3.6**	**0.8**	**4.5**	**3.3**	**0.09**	**1.27**	**45**	**143**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.05**	**0.09**	**BDL**	**1.30**	**BDL**	**BDL**	**1.3**	**BDL**	**7.4**	**Complied**
Average	**7.44**	**29**	**28**	**2.4**	**1.8**	**1.3**	**3.2**	**3.1**	**0.09**	**1.25**	**37**	**121**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.04**	**0.09**	**BDL**	**0.70**	**BDL**	**BDL**	**1.1**	**BDL**	**2.9**	**Complied**

	After treatment the treated effluent will be disposed of in Gulf of Khambat via pipeline already laid by GIDC		Treated effluent is being pumped to GIDC effluent collection station, Vilayat, from where it is pumped to Gulf of Khambat by GIDC.
5	The main source of Air pollution will be CS2 plant, Viscose plant, Sulphuric Acid plant and Coal based captive power plant. The proposed pollution control equipment are:		
	CS2 Plant	Carbon disulphide recovery system	4 nos. CS2 Recovery system using condensation route installed in spinning section.
		Oil scrubbing system for recovery of CS2	We have installed natural gas based CS2 plant where for recovery of CS2, installed Genosorb system.
		Water/ chilled water condensers	
		Brine condensers	
		Klaus kiln for CS2 plant	Klaus kiln for CS2 plant installed.
		The stack of 175m shall be provided to reduce GLC of CS2 & H2S	The stack of 175m has provided to reduce GLC of CS2 & H2S from VSF plant.
		Dust extraction cum Ventury scrubbing System for CS2 Furnace	Not applicable as CS2 is manufactured by natural gas instead of charcoal.
	Acid Plant	Gas scrubbing system for tail gases	Caustic Scrubber installed
		Mist eliminators	Installed for all 3 nos. of towers
	Power plant	Electrostatic Precipitator (ESP) in power plant along with 100 m height stack	Electrostatic Precipitator (ESP) in power plant along with 125 m height stack installed under chemical Division
		Ash Handling plant	Ash Handling Plant Installed as a part of Chemical Division.
	Auxiliary section	Cyclone	Cyclones are installed
		Water scrubbers	Ventury water scrubbers are Installed
6	During regeneration process of Cellulose from Viscose in Spg. Machine CS2 & H2S will be liberated. It will be extracted through powerful exhaust system and discharged through chimney.		CS2 & H2S from Spg. Machine is extracted through Powerful exhaust system provided at spinning machines, connected with main chimney of 175m height through EDTA & genosorb plant.
	The part of liberated fugitive emission in work zone area will be controlled by modified exhaust system, motorized curtain in Spg. Machine, Air curtain at stretch & feed rollers and modified bottom exhaust		The part of liberated fugitive emission in work zone area is controlled by modified exhaust system, motorized curtain in Spg. Machine.

<table>
<tr><td rowspan="3">7</td><td>Spent catalyst (5.0 MT/Year)</td><td>Spent Catalyst Disposal Details are as under Table No.03
<table>
<tr><th colspan="2">Table No. 03</th></tr>
<tr><td>Disposed To.</td><td>TSDF (Refer BEIL Membership as Annexure-10)</td></tr>
<tr><td>Agency: -</td><td>Bharuch Enviro Infrastructure Limited</td></tr>
<tr><td>Reference</td><td>BEIL/ANK/2019</td></tr>
<tr><td>Membership Qty.</td><td>5000 Ton/Annum</td></tr>
<tr><td colspan="2">Consent Qty. 5.0 MT/Year</td></tr>
<tr><td>Apr-21 to Sep-21</td><td>5.0 MT</td></tr>
</table></td></tr>
<tr><td>Spent resin from D.M plant (5.0 MT/Year)</td><td>
<table>
<tr><td colspan="2">Spent Resin Disposal Details are as following;</td></tr>
<tr><td>Disposed To.</td><td>TSDF (Refer BEIL Membership as Annexure-10)</td></tr>
<tr><td>Agency: -</td><td>Bharuch Enviro Infrastructure Limited</td></tr>
<tr><td>Reference</td><td>BEIL/ANK/2019</td></tr>
<tr><td>Membership Qty</td><td>5000 Ton/Annum</td></tr>
<tr><td colspan="2">Consent Qty. 5.0 MT/Year</td></tr>
<tr><td>Apr-21 to Sep-21</td><td>0.0 MT</td></tr>
</table></td></tr>
<tr><td>Sulphur de-ashing sludge will be disposed off through common TSDF</td><td>Sulphur de-ashing sludge is not generated as we have natural gas based CS2 plant.</td></tr>
<tr><td></td><td>Used oil will be sold to CPCB registered recyclers</td><td>Used Oil Sold to authorized Registered Agency & following are the details of Agency in Table No 04 & Refer Annexure-4 for Vendor Registration.
<table>
<tr><th colspan="2">Table No. 04</th></tr>
<tr><td>Used Oil is being sent to.</td><td>Registered refiners as per CC&A guidelines</td></tr>
<tr><td>Recycler Details</td><td>M/s ABC Organics & Chemicals, plot # 605, GIDC Estate, Panoli, Dist. Bharuch (Gujarat)</td></tr>
<tr><td>Registration no.</td><td>GPCB/HAZ-RF-184/45/2014, Dated 17/12/2014.</td></tr>
<tr><td>Membership Qty.</td><td>10 KL/Annum</td></tr>
</table></td></tr>
</table>

		Consent Qty. 10.0 MT/Year Apr-21 to Sep-21 | 4.10 MT
	Fly ash will be disposed off as per Fly Ash Notification 2003 and used for brick / cement manufacturing	We have not installed power plant. Power & steam is being taken from CPP operated by our Chemical Division. **(Annexure-5)** Whenever we install power plant after EC is obtained, we commit for 100% utilization of fly ash.
8	The expert appraisal committee (Industry) in its 73rd meeting held on 24th -26th Oct-2007 considered the proposal. All manmade fibres (Rayon) manufacturing units are listed at Sl. 5(d) of schedule of EIA notification 2006 under category A, hence appraisal is at Central level. Since the project located at GIDC, Vilayat, Vagra,. It does not need public consultation as per Para 7(i) III, stage (3) b.	Noted the condition.
9	Based on information submitted by the project authority, the MoEF accords environmental clearance to the above project under EIA notification 2006 subject to the compliance to the below specific & general conditions.	The compliance status are as below;

A. Specific Condition: -

1	The project authority shall maintain emission limit of 50 kg/Ton of Viscose Staple Fibre (VSF) for Carbon di-sulphide (CS2)	We are complying the said stipulation by maintaining emission limits below 50 Kg/T of VSF for CS2. The details are tabulated in below **Table No. 05**

Emission of CS2 /Ton of Viscose Staple Fibre (VSF):
Monthly Stack Monitoring Report from Unistar Please Refer **Annexure-6**

Table No.05

Third Party Lab Details	**Month & Date of Sample**	**CS2 (Kg/Ton of Fibre)**
	Consent Value	**50**
Agency: - Unistar Environment & Research lab Pvt. Ltd ***Address: - Near GIDC, Char Rasta, Vapi*** ***NABL : -*** NABL Certificate Number TC-7753 ***Details of instrument Used for Monitoring: -*** ***Instrument Name: -*** *Stack Monitoring Kit Vss1* ***Instrument ID: -*** *UERL-D/AIR/SMK/01* ***Serial No.:-*** *467 DTJ 15* ***Calibration Date:-*** *26.06.2021*	Apr-21	40
	May-21	37
	Jun-21	22
	Jul-21	20
	Aug-21	23
	Sep-21	26
	Min	**20**

	Expiry Date: - *25.06.2022*	**Max**	**26**
		Avg.	**23**
2	A guard/polishing pond shall be provided before discharge of treated waste water into GIDC pipeline for discharge into sea	3 nos. of guard ponds, each of (L: 90 m, B: 60 m, SWD: 6.5m) equivalent to 75,000m3 capacity installed, which is suitable for storage of > 48 hrs. have been provided before discharge of treated waste water into GIDC pipeline for discharge into Sea.	
2	TOC should continuously monitored	TOC Meter is placed to continuously monitored TOC meter & following are the TOC meter reading tabulated in **Table No. – 06.** (Permissible COD : 250 mg/liter which is equivalent to TOC value of 100 mg/liter)	

Table No.06

TOC Meter Make: - Xylem WTW

Month	Min	Max	Average
Apr-21	54	85	70
May-21	35	92	60
Jun-21	37	71	58
Jul-21	41	69	62
Aug-21	42	80	55
Sep-21	39	60	55

3	The project authorities shall install at least 11 multiple effect evaporator (MEE) to achieve higher than 65% recovery of Sodium Sulphate	We have installed 10 nos. of more efficient (less specific steam consumption) 14 stage multiple effect evaporator (MEE) having higher evaporation Capacity in place earlier visualized 11 small MEE's of 18 m3/hr. Total evaporation is 280 m3/hr. instead 198 m3/hr.
4	Electrostatic Precipitators (ESP's) to power plant boiler shall be provided to control particulate matter.	Electrostatic Precipitators (ESP's) to power plant boiler has provided to control particulate matter as Chemical division have installed CPP. EC has been amended through Chemical division. Pl. refer **Annexure-2**
	3-stage condensing system for recovery of CS2	We have installed 3 stage condensing system with all 4 spinning
	Scrubber to Acid plant chimney	

<table>
<tr><td></td><td>klaus kiln recovery system to recover Sulphur from CS2 plant gases, followed by lime water absorber shall be provided</td><td>lines and Caustic scrubber has installed with Acid plant chimney. Klaus kiln recovery system to recover Sulphur from CS2 plant gases installed for achieving > 96% Sulphur recovery efficiency.</td></tr>
<tr><td rowspan="3">5</td><td>Monitoring arrangement shall be provided with the scrubber & condenser vents and shall be monitored monthly.</td><td>Monitoring arrangements are provided for scrubbers & condenser vents.
Following are the details tabulated as Table No.07</td></tr>
<tr><td colspan="2"><table>
<tr><th colspan="3">Table No.07</th></tr>
<tr><th>Month & date of sample</th><th>CS2 Plant</th><th>Acid Plant</th></tr>
<tr><th>Unit</th><th>SO2 (ppm)</th><th>SO2 (Kg/T of Acid)</th></tr>
<tr><th>GPCB limit</th><th>96% S. recovery</th><th>2</th></tr>
<tr><td>Apr-21</td><td>104</td><td>0.9</td></tr>
<tr><td>May-21</td><td>98</td><td>1.1</td></tr>
<tr><td>Jun-21</td><td>102</td><td>1.3</td></tr>
<tr><td>Jul-21</td><td>98</td><td>1.2</td></tr>
<tr><td>Aug-21</td><td>111</td><td>1.3</td></tr>
<tr><td>Sep-21</td><td>106</td><td>1.1</td></tr>
<tr><td>Min</td><td>98</td><td>0.9</td></tr>
<tr><td>Max</td><td>111</td><td>1.3</td></tr>
<tr><td>Average</td><td>103</td><td>1.2</td></tr>
</table></td></tr>
<tr><td>Report shall be submitted to Ministry's regional office, Bhopal, CPCB & GPCB</td><td>Reports are submitted to MOEF as Annexure-7 to compliance report every six months. Last compliance report submitted in Parivesh on 26.05.2021.</td></tr>
<tr><td>6</td><td>The technology employed shall achieve standards notified by the Ministry for the Rayon Industry vide Gazette Notification no. 195, dated 16th Oct-2006, other than CS2.</td><td>As per Gazette notification, CS2 emission of 125 Kgs/T F is to be met. New control technology using organic solvent based on absorption and desorption to recover CS2 from exhaust gases installed which is helping in achieving CS2 emission level at much lower level.</td></tr>
<tr><td></td><td>1. If there are more than one stack existing in the plant, the required height of all stacks shall be on the minimum emission rate in any of the stacks. In other words, all the stacks carrying CS_2 emission shall</td><td>We have installed only one stack of 175m based on stack height calculation as per notification.</td></tr>
</table>

	be on same height (based on maximum emission rate)	
	2. Number of Stacks shall not be increased from the existing number. However the number of stacks may be reduced. The existing stacks may be rebuilt & if stacks are to be relocated condition no. 3 below applies	We have installed only one stack of 175m height for CS2 emission.
	3. Spacing among the stacks (x) at the minimum shall be 3.0 H (in m). If distance, x between two stacks is less than 3.0H (in m), emission shall be considered as single point source & height of both the stacks shall be calculated considering all emission is going through one stack.	Presently we have installed only one stack for CS2 emission, in future if we increase, we will follow the instructions.
	The Company shall monitor CS2 & H2S regularly and submit data on the emission levels to the Ministry and its Regional office at Bhopal, GPCB and CPCB.	CS2 & H2S is being monitored regularly. Emission details for Apr'21 to Sep'21 is tabulated in **Table No.08**

Emission of CS2 /Ton of Viscose Staple Fibre (VSF):
Monthly Stack Monitoring Details from Unistar refer as **Annexure-6**

Table No.08

Third Party Lab Details	Month & Date of Sample	CS2 (Kg/Ton of Fibre)	H2S mg/Nm3
	Consent Value	**50**	**-**
Agency: - Unistar Environment & Research lab Pvt. Ltd ***Address: - Near GIDC, Char Rasta, Vapi*** ***NABL : - NABL Certificate Number TC-7753*** ***Details of instrument Used for Monitoring: -*** ***Instrument Name: -*** *Stack Monitoring Kit Vss1* ***Instrument ID: -*** *UERL-D/AIR/SMK/01* ***Serial No.:-*** *467 DTJ 15* ***Calibration Date: -*** *26.06.2021* ***Expiry Date: -*** *25.06.2022*	**Apr-21**	40	118
	May-21	37	112
	Jun-21	22	60
	Jul-21	20	56
	Aug-21	23	61
	Sep-21	26	54
	Min	**20**	**54**
	Max	**26**	**61**
	Avg.	**23**	**58**

	Provision shall be made for retrofit additional equipment's, if necessary in future	In future if required, company is committed to install additional equipment.

7	The effluent should be treated in ETP having primary & secondary treatment facilities and treated effluent should meet the standards to be prescribed by the GPCB or under E. P. Act-1986 whichever are more stringent	Full Fledged ETP installed, which comprises of Primary, Extended aeration activated sludge process and secondary treatment. Details are tabulated in **Table No. 09**

Treated effluent quality for the period of Apr-21 to Sep-21 is summarized as under in **Table No. 09**

Monthly Analysis Report from Unistar refer as **Annexure-03**

Agency: - Unistar Environment & Research lab Pvt. Ltd
Address: -GIDC, Char Rasta, Vapi
NABL : - NABL Certificate Number TC-7753

Table No.09

Month & Date of Sampling	FINAL TREATED EFFLUENT																											
	pH	Temp.	TSS	Oil & Grease	Fluoride	Sulphide	TKN	Amm. N as N	Copper	Zinc	BOD	COD	Total Res Cl2	Arsenic	Mercury	Hexavalent Chromium	Trivalent Chromium	Lead	Cadmium	Nickel	Cyanide	Phenolic Comp	Selenium	Mangnese	Iron	Vanadium	Nitrate Nitrogen	Bio Assay Test
Unit	-	deg C	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	90% Survival of fish after 96hrs.
GPCB limit	6.0 - 9.0	Not Exceed more than 35 deg C	100	10	15	5	50	50	3	15	100	250	1	0.2	0.01	0.1	2	0.1	0.05	3	0.2	5	0.05	2	3	0.2	50	
Apr-21	7.05	31	50	2.0	2.6	BDL	5.2	3.3	0.08	1.21	32	110	BDL	BDL	BDL	0.1	BDL	BDL	0.05	0.08	BDL	BDL	BDL	BDL	0.8	BDL	2.5	Complied
May-21	7.07	32	90	2.1	2.4	1.2	3.2	2.2	0.08	1.23	34	116	BDL	BDL	BDL	BDL	BDL	BDL	0.06	0.09	BDL	BDL	BDL	BDL	0.9	BDL	3.0	Complied
Jun-21	7.16	32	14	2.5	3.6	0.8	4.5	3.3	0.08	1.22	35	111	BDL	BDL	BDL	BDL	BDL	BDL	0.05	0.09	BDL	BDL	BDL	BDL	0.8	BDL	1.0	Complied
Jul-21	7.42	29	26	2.3	1.0	BDL	2.9	BDL	0.09	1.27	29	102	BDL	BDL	BDL	BDL	BDL	BDL	0.04	0.09	BDL	BDL	BDL	BDL	0.9	BDL	0.9	Complied
Aug-21	7.58	27	40	2.8	1.4	0.8	3.2	2.8	0.08	1.25	40	126	BDL	BDL	BDL	BDL	BDL	BDL	0.04	0.08	BDL	0.10	BDL	BDL	1.3	BDL	7.4	Complied
Sep-21	7.60	28	30	2.1	1.3	0.8	2.2	BDL	0.09	1.27	45	143	BDL	BDL	BDL	BDL	BDL	BDL	0.03	0.085	BDL	1.30	BDL	BDL	1.3	BDL	2.3	Complied
Min	**7.16**	**27**	**14**	**2.1**	**1.0**	**BDL**	**2.2**	**BDL**	**0.08**	**1.22**	**29**	**102**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.03**	**0.08**	**BDL**	**BDL**	**BDL**	**BDL**	**0.8**	**BDL**	**0.9**	**Complied**
Max	**7.60**	**32**	**40**	**2.8**	**3.6**	**0.8**	**4.5**	**3.3**	**0.09**	**1.27**	**45**	**143**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.05**	**0.09**	**BDL**	**1.30**	**BDL**	**BDL**	**1.3**	**BDL**	**7.4**	**Complied**
Average	**7.44**	**29**	**28**	**2.4**	**1.8**	**1.3**	**3.2**	**3.1**	**0.09**	**1.25**	**37**	**121**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.04**	**0.09**	**BDL**	**0.70**	**BDL**	**BDL**	**1.1**	**BDL**	**2.9**	**Complied**

	Total quantity of effluent should not exceed 60m3/ ton of production. The production shall be regulated to match the permitted discharge quantity by GIDC/GPCB	The quantity of effluent discharged is 25.51 m3 / Ton of Fibre against stipulation of 60m3/TF. **Avg. water Intake**: 14925 m3/day **Effluent discharge:** 12827 m3/day Following are the details tabulated in **Table No.10**

Table No.10	
Effluent Generation (m3/day)	
Month	**Average**

<table>
<tr><td></td><td></td><td><table>
<tr><td>Apr-21</td><td>11912</td></tr>
<tr><td>May-21</td><td>13079</td></tr>
<tr><td>Jun-21</td><td>13083</td></tr>
<tr><td>Jul-21</td><td>13602</td></tr>
<tr><td>Aug-21</td><td>11834</td></tr>
<tr><td>Sep-21</td><td>13449</td></tr>
<tr><td>Avg.</td><td>12827</td></tr>
</table></td></tr>
<tr><td>8</td><td>The project authorities shall produce the copy of agreement with GIDC for discharge of treated wastewater to the Ministry & its Regional office within three months and submit the same to Regional office</td><td>Agreement with GIDC for water supply & discharge of treated waste water in GIDC chamber was done. A Copy of same was submitted along with earlier six monthly compliance report to MoEF & CC.
Following are the GIDC offer cum allotment letter details;
<table>
<tr><td>4) Letter No.</td><td>GIDC/POJ/MKT/GRASIM/575
Dated 06th December-2006</td></tr>
<tr><td>Agreement for Water Supply</td><td>15.60 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>12.48 MLD</td></tr>
<tr><td>5) Letter No.</td><td>GIDC/SE/CG//BRH/1236
Dated 29th December-2016</td></tr>
<tr><td>Agreement for Water Supply</td><td>25.00 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>19.40 MLD</td></tr>
<tr><td>6) Letter No.</td><td>GIDC/BRH/WS/494
Dated 3rd.July,2019</td></tr>
<tr><td>Agreement for Water Supply</td><td>35.00 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>23.00 MLD</td></tr>
</table>
Pl. refer attached Annexure # 1,1A & 1B.</td></tr>
<tr><td>9</td><td>The project authorities shall take up the in-house or through IIT's research studies for further reduction of CS2 emission below 50 Kg/ Ton of production of VSF within three months and submit the same to Regional office</td><td>In house research studies done and many steps taken to further reduce the CS2 emission level. Some of the initiatives taken are :
1) Control technology using organic solvent based on absorption and desorption to recover CS2 from exhaust gases installed
2) Natural Gas based CS2 plant installed in place of conventional charcoal process to avoid CS2 emission from CS2 plant</td></tr>
</table>

		Above information is submitted to MOEF through letter, dated 05.11.18 Please refer as **Annexure-18**
	Brief of Technology: - **Introduction: -** The spinning line is equipped with CS2 condensation system wherein CS2 entrapped in Tow during wet spinning process is recovered by vaporizing the same with LP Steam followed by Condensation of CS2 in series of Condensers using soft water at ambient temperature and chilled water in final condenser. Around 46-50% of CS2 added in the process can be recovered by this process depending on the ambient temperature. To reduce emission load from stack further technological operations to recover CS2 from exhaust gases is imperative. We had taken lab scale trials at our Nagda unit using genosorb solvent which is comprises of POLY-ETHYLENE GLYCOL DIALKALINE ETHER (Chemical from Clariant) for adsorption of CS2 & H2S. H2S is stripped off & taken to vent/chimney. CS2 is stripped and condensed & recovered. The lab scale trials ws successful results with 80% removal of CS2. Finally, semi commercial scale plant was set up in Nagda utilizing 10% of total gases being taken to chimney was taken. After lab & pilot plant trials of six months, it was decided to put 02 nos. of 45,000 Nm3/hr. Genosorb commercial scale unit at Vilayat. **Process Step: -** • Gas coming from the different areas of spinning and Auxiliary section is washed out using cooling water to remove acid mist & to cool the gas. • Washed gas sent to cooler to get the required 25°C of Gas temperature for absorption using chilled water. • In absorption tower, mainly CS2 and minor amount of H2S is absorbed in GENOSORB and remaining gases exhausted through chimney. • After absorption GENOSORB sent to H2S stripper column, In this column H2S gas is stripped out using HOT AIR at 70°C • CS2 rich GENESORB sent to CS2 stripping column, CS2 is stripped out using LIVE STEAM at 125°C • Stripped CS2 is cooled in two stages, in first stage cooled up to 70°C to condensate water & then up to 25°C to condense CS2. • Condensed CS2 is @ 100% pure and sent to CS2 plant for Storage & re use.	
	The industry shall measure ambient air quality for CS2, and H2S at the 3 ambient air quality monitoring stations set up in consultation with the GSPCB to ensure CS2 and H2S emission not exceed 100 microgram/m3 and 150 microgram/m3	Ambient air quality is being monitored regularly for CS2 & H2S emissions, 4 nos. ambient air quality monitoring stations (covering all directions) placed in consultation with the GPCB. CS2 & H2S emission are well below the prescribed standards.
10	Summary of 6 months (Apr-21 – Sep-21) is tabulated below in **Table No. 11** Monthly Report from Unistar Please refer **Annexure No. -08** **Agency:** - Unistar Environment & Research Lab Pvt. Ltd **Instrument ID & Name: -** 1) UERL/AIR/RDS/02– Respirable Dust Sampler (RDS: SR.No.160203106) (Calibration Period: - 30.07.2021 – 29.07.2022) 2) UERL/AIR/FPS/08– Fine Particulate Sampler (FPS: SR.No.160402021)(Calibration Period: - 30.07.2021 – 29.07.2022)	

Table No. 11

Month	ETP MCC Room		ER Office		Aluminum Chloride plant		Security Gate (CA Plant)	
	H_2S	CS_2	H_2S	CS_2	H_2S	CS_2	H_2S	CS_2
Norms -->	**150**	**100**	**150**	**100**	**150**	**100**	**150**	**100**
Apr-21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
May-21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Jun-21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Jul-21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Aug-21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Sep-21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Min	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**
Max	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**
Avg.	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**

11	The Solid & Hazardous waste shall be segregated according to its calorific contents and stored separately for treatment and disposal	Solid / Hazardous waste being categorized as per guideline of GPCB consent, treatment & disposal practice is followed accordingly. We are member of BEIL, Dahej for transportation & disposal of hazardous waste; Following are the Disposal details tabulated in **Table No. 12**

Type of waste	Category	Treatment /Disposal
Chemical sludge from ETP	34.3	Collection, storage, transportation, disposal at Cement Industries/ TSDF-BEIL
Used Oil	5.1	Collection, storage, transportation, disposal by selling to registered refiners.
Discarded container	33.3	Collection storage, transportation, disposal by selling to vendors after detoxification
Discarded bags/liner	33.3	Collection, storage, transportation, disposal by selling to vendors after detoxification
Spent catalyst from H2SO4 plant	17.2	Collection, storage, transportation, disposal to TSDF-BEIL
Spent catalyst from H2SO4 plant	34.2	Collection, storage, transportation, disposal to TSDF-BEIL
Please refer **Annexure-9** for CCA from GPCB		

Table No. 12

Month	Chemical sludge-ETP-MT		Used Oil (MT)		PVC bags/Liners		Bio Sludge from ETP		Spent Catalyst-MT		Spent Resin-MT	
	Generation	Disposal	Generation	Disposal	Generation	Disposal	Generation	Disposal	Generation	Disposal	Generation	Disposal

CC&A Qty.	7000 MT (35.3)		10.0 KL (5.1)		70 MT (33.1)		5833 MT		5.0 MT (17.2)		5.0 MT (35.2)	
Apr-21	2249	954	0.0	0.0	1.25	1.25	873	1064	5.0	5.0	0.0	0.0
May-21	2000	3429	4.10	4.10	6.67	6.67	700	525	0.0	0.0	0.0	0.0
Jun-21	1051	2234	0.0	0.0	10.73	10.73	510	205	0.0	0.0	0.0	0.0
Jul-21	700	1417	0.0	0.0	1.39	1.39	850	406	0.0	0.0	0.0	0.0
Aug-21	750	895	0.0	0.0	7.09	7.09	515	0	0.0	0.0	0.0	0.0
Sep-21	650	637	0.0	0.0	3.44	3.44	500	0	0.0	0.0	0.0	0.0
Total	**7400**	**9567**	**4.10**	**4.10**	**30.57**	**30.57**	**3948**	**2200**	**5.0**	**5.0**	**0.0**	**0.0**
Disposed To=>	**J K Cement**		**M/S ABC Organic**		**Sold to Vendors**		**TSDF BEIL Dahej**		**TSDF BEIL Dahej**		**TSDF BEIL Dahej**	

12	Fly Ash generated from CPP shall be utilize as per fly ash notification 1999 and subsequent amendment in 2003	We have not installed CPP, shall comply utilizing 100% fly ash as per guidelines when CPP is installed.
13	Green belt development 150 Acre out of 567 Acre to mitigate the effect of fugitive emission all around the plant.	In order to achieve 33% greenbelt, we have developed greenbelt in our factory complex along the boundary wall and open space area. Total 98,000 nos. tree have been planted till Sep-2021 additional ~5,000 trees to be planted by Mar-22 to cover 33% of total plant area the detail action plan are Tabulated in **Table No. 13**
	The development of green belt along the boundary wall and two additional rows in predominant wind direction shall be provided in consultation with the local DFO as per the CPCB guideline	We have developed greenbelt along with boundary wall & planted different plant species in campus area. Following are the list of plant species. Plant species were selected as per the directives of CPCB & DFO. Photograph of green belts is attached below**.**

Table No. 13

Sr. No	Duration	Area (Acre.) for Plantation	Number of Plant
1	Existing (Till FY; 2017-18)	**60**	**37,500 Plants**
2	2018-19	**25**	**15,000 Plants**

Existing Plantation Species:

Neem (*Azadirachta indica*), Kasood (*Cassia siamea*), Pine/Junglisaru (*Casuarina equisetifolia*), Orchid tree (*Bauhinia blakeana*), Gulmohar (*Delonix regia*), Rain tree (*Samanea saman*), Yellow Gulmohar (*Peltophorum ferrugineum*), Bottle brush (*Callistemon sp*.), Earleaf

3	2019-20	**25**	**15,000 Plant**
4	2020-21	**25**	**15,000 Plant**
5	2021-22	**25**	**15,000 Plant**
6	2022-23	**25**	**15,000 Plant**
Total=>		**185**	**1,12,500 Plant**

Acacia (*Acacia auriculiformis)*, Kadamb (*Neolamarckia cadamba*), Basant Rani (*Tabebuia rosea*), Safeda (*Eucalyptus*), *Bougainvillea spectabilis*, Lawn Plantation and Shrubbery.

The Existing Species for plantation are Selected by following CPCB guidelines

Proposed Plantation Species: Neem (*Azadirachta indica*), Kasood (*Cassia siamea*), Pine/Junglisaru (*Casuarina equisetifolia*), Orchid tree (*Bauhinia blakeana*), Saptparni (*Alstonia scholaris*), Gulmohar (*Delonix regia*), Rain tree (*Samanea saman*), Shisham (*Dalbergia sissoo*), Bel (*Aegle marmelos*), Arjun tree (*Terminalia arjuna*), Cassia fistula (Amaltas), Yellow Gulmohar (*Peltophorum ferrugineum*), Bottle brush (*Callistemon sp*.), Kadamb (*Neolamarckia cadamba*), Semal/Kapok (*Bombax ceiba*), Jamun (*Syzygium cumini*), Apple blossom tree (Cassia javanica), Sausage tree (*Kigelia pinnata*), Basant Rani (*Tabebuia rosea*), Morpankhi (*Thuja occidentalis*), Safeda (*Eucalyptus*), Guh babool (*Acacia farnesiana*), Kaner (Nerium indicum), Champa (*Plumeria rubra*), Holy basil (*Ocimum tenuiflorum*), Jarul (*Lagerstroemia speciosa*), *Bougainvillea spectabilis*, Lemon (*Citrus lemon*), Sankuppi (*Clerodendrum inerme*), Lawn Plantation and Shrubbery etc.

Plant species for Odor management : Neem (*Azadirachta indica*), Saptparni (*Alstonia scholaris*), Guh babool (*Acacia farnesiana*), Morpankhi (*Thuja occidentalis*), Bougainvillea (*Bougainvillea spectabilis*), Lemon (*Citrus lemon*), Kaner (Nerium indicum), Mehndi (*Lawsonia inermis*), Champa (*Plumeria rubra*), Holy basil (*Ocimum tenuiflorum*), Tulsi (*Ocimum sanctum*), Sankuppi (*Clerodendrum inerme*), Jasmine tree (*Plumeria alba*), Jarul (*Lagerstroemia speciosa*), Gurhal (*Hibiscus rosa sinensis*), Bunchgrass (*Vetiveria zizanioides*) etc.

Gaseous emission (SO2 & NOx) tolerant species: Neem (*Azadirachta indica*), Bel (*Aegle marmelos*), Kasood (*Cassia siamea*), Earleaf Acacia (*Acacia auriculiformis),* Saptparni (*Alstonia scholaris*), Aldu (*Ailanthus excelsa*), Siris (*Albizia lebbeck*), Shisham (*Dalbergia sissoo*), Pipal (*Ficus religiosa*), White fig (*Ficus infectoria*), Maulsari (*Mimusops elengi*), Kaner (Nerium indicum), Jarul (*Lagerstroemia speciosa*) etc.

Green Belt Development Photographs are as under :-




14	The project proponent shall comply with the environmental protection measures and safeguards recommended in the EIA/EMP	Total project cost was Rs. 1200 Crores as mentioned in EC. As committed in the EIA/EMP, Unit has been allocated capital cost Rs. 170.5 Crores and recurring cost Rs. 15.5 Crores per annum respectively for implementations of environmental pollution control measures as per condition stipulated by the MoEF & CC & state government. Detailed EIA/EMP report is explained below & Capex – Opex Details are tabulated under **Table No. 14**

Table No. 14

Fund Utilize for environmental Management are under (Rs. In Crore)

Sr. No.	Particular	Capex	Opex FY-17	Opex FY-18	Opex FY-19	Opex FY-20	Opex FY-21
1	Effluent Treatment	79.00	11.50	10.56	11.00	11.00	13.35
2	Air Pollution Control	91.00	03.50	04.00	03.30	05.17	14.35
3	Green Belt Development	00.50	00.50	00.55	01.30	0.51	0.13
4	Waste Management	01.50	00.50	00.60	01.60	3.07	2.90
Total Amount (In Crore)=>		**172.00**	**16.00**	**15.71**	**17.20**	**19.75**	**30.73**

Environmental monitoring Program: - In order to ensure that the predicted impact levels are within the acceptable limits and to further mitigate the impacts wherever possible from proposed facilities, following monitoring programs are undertaken;

Air Environment: Air quality surveillance program which includes;

1. Monitoring of air quality of all 4 stacks for CS2, H2S, PM, SO2 & NOx by our Lab as well as 3rd party Lab.
2. Ground level concentration is monitored for CS2, H2S, PM, SO2 & Nox in the impact zone as a part of ambient air monitoring by our Lab & 3rd party Lab.
3. Port holes and sampling facilities are provided in each stack as per CPCB guidelines, periodic performance evaluation of control measures & equipment's are done

Noise Environment: Noise generated sources are regularly monitored, ambient noise level is being monitored on quarterly basis inside & outside of plant area and strictly adhered the Factory Act norms of workroom and ambient levels as per E P Act.

Water Environment: For effective environmental pollution control the following measures are taken;

1. Daily monitoring of treated effluent in our Lab as well as third party monitoring by outside labs.
2. Evaluation of ETP performance is done regularly, based on the results of treated effluent.
3. Treated sewage is 100% used in green belt, sewage quantity is very less as only plant sewage comes to STP.
4. 2 nos. of guard ponds, each of (L: 90 m, B: 60 m, SWD: 6.5m) equivalent to 50,000m3 capacity installed, which is suitable for storage of 48 hrs. treated effluent to meet the emergency situation in discharge of treated effluent through GIDC pipeline

5. Water conservation measures are taken and achieved very less discharge of treated effluent (< 35m3 / Ton of fibre as against 60m3 / Ton of fibre.

Land Environment: Following measures are taken to avoid adverse impacts on biological activities;

1. All precautions are taken to avoid any spillages on ground.
2. A record of Solid & Hazardous waste is maintained & monitored regularly by Env. Cell
3. Waste is categorized based on CC&A by GPCB. Hazardous waste is stored separately and disposed as per GPCB guidelines through online Manifest.
4. Green belt development program is undertaken and planted > 10,000 tree every year which will be continued to cover > 33% area as green belt.

Biological Environment: Following measures are taken to avoid adverse impacts on biological activities;

1. Survival rate of planted trees are closely monitored. New saplings are planted in place of dead saplings as per guideline which is closely monitored by Horticulture department.
2. Past project environmental monitoring has taken up, our plant is commissioned in Apr-2014 and only 3 financial years are completed.

15	The project authorities shall obtain the membership of TSDF and waste water disposal facility and copy of the same shall be submitted to the GPCB and Ministries regional office at Bhopal within three months.	We have obtained the membership of TSDF and waste water disposal facility and copy of the same has submitted to the GPCB and Ministries regional office at Bhopal regularly with six monthly compliance reports Membership with TSDF for waste disposal, **TSDF Name: -** Bharuch Enviro Infrastructure Limited, Dahej. **Ref :** -BEIL/ANK/2019 **Membership Qty: -** 5000Ton/Annum Membership copy is attached herewith as Annexure-**10** Membership copy is attached for waste water disposal through GIDC pipeline, Pl. refer **Annexure-1**
16	Occupational health surveillance of the workers shall be carried out on a regular basis and records shall be maintained as per the factories Act.	In FY-21, 100% employees undergo with occupational health surveillance every 6 month / 12 month depending on exposure. Record is available with Occupational Health Centre. No one is suffering from any occupational health related disease. Details are given for different type of test reports of employees, conducted on Yearly / Six monthly basis in table below in **Table No. 15** Also, for the employee's safety, at frequent interval we have organized on-site COVID testing & vaccination facilities.

Table No. 15

Spirometry (FY-21)

Name of Dept.		FVC (liters)	FEV 1	FEV 1/ FVC %	PEF	Conclusion

	Total Employees				Litres/Sec	
Admin Department (SCM, Purchase, Account, Legal, IT Dept.)	**61**	1	0	0	1	Approx. 2.04% deviation from normal
%		1.64	0.00	0.00	1.64	
Process Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC, Civil)	**547**	2	0	1	3	Approx. 0.82% is deviation from normal
%		0.37	0.00	0.18	0.55	
Technical Cell, WCM, Customer Focus, Electrical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**66**	1	0	0	1	Approx. 1.10% is deviation from normal
%		1.52	0.00	0.00	1.52	
Mechanical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**177**	1	0	0	1	Aprox 2.2% deviation from normal
%		0.56	0.00	0.00	0.56	
QC & QA Instrumentation Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**92**	1	1	0	0	Aprox 2.1% deviation from normal
%		1.09	1.09	0.00	0.00	
P&A (HR, Security & Services, ER, CSR, HORTICULTURE, Workshop) Dept.	**20**	0	0	0	1	Aprox 1.7% deviation from normal
%		0.00	0.00	0.00	5.00	

		Circulatory system (FY- 21)				Vision		ENT
Employees	**Total Employees**	**Pulse**	**ECG**	**Blood Pressure**	**Hemat Hb**	**Distant Vision**	**Color Blindness**	**Audiometry**
Admin Department (SCM, Purchase, Account, Legal, IT Dept.)	**61**	1	0	1	0	1	0	2
%		1.64	0.00	1.64	0.00	1.64	0.00	3.28
Process Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC, Civil)	**547**	8	0	10	2	4	11	7
%		1.46	0.00	1.83	0.37	0.73	2.01	1.28
Technical Cell, WCM, Customer Focus, Electrical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**66**	3	0	2	0	1	0	0
%		4.55	0.00	3.03	0.00	1.52	0.00	0.00

Mechanical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**177**	4	0	4	1	0	0	1
%		2.26	0.00	2.26	0.56	0.00	0.00	0.56
QC & QA Instrumentation Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**92**	2	0	1	0	0	0	0
%		2.17	0.00	1.09	0.00	0.00	0.00	0.00
P&A (HR, Security & Services, ER, CSR, HORTICULTURE, Workshop) Dept.	**20**	0	0	1	0	1	0	0
%		0.00	0.00	5.00	0.00	5.00	0.00	0.00

17	The project authorities shall take up all out efforts to protect the water bodies and biodiversity around the plant.	Regular monitoring of Water & Air quality done by our Lab and 3rd party. There is only one water body namely "Bhooki Khadi"" which is approximately 500 m from boundary wall. Water from this is being used for irrigation and cattle feeding.
	A monitoring mechanism for water / air quality , production & crop pattern around the plant shall be adopted and comparative status shall be reported annually to the Ministries Regional office, GPCB & CPCB	Water, Air quality & production is being monitored regularly and compared with base line. Same is being reported to Ministries Regional office on six monthly basis and submitting reports to GPCB on monthly basis for the same. Data are tabulated Under **Table No.16** & refer monthly data from Unistar Test Report **Annexure – 11**
	Agency: - Unistar Environment & Research Lab **Address: -** Near GIDC Office Char Rasta, Vapi-396195	**NABL Accreditation: -** NABL Certificate Number TC-7652

Table No. 16

Parameters	Up Stream					Down Stream				
	pH	**Temperature**	**Turbidity**	**Nitrate**	**Phenolic Compound**	**pH**	**Temperature**	**Turbidity**	**Nitrate**	**Phenolic Compound**
UOM		**Deg C**	**NTU**	**PPM**	**PPM**		**Deg C**	**NTU**	**PPM**	**PPM**
Base Line	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
Apr-21	7.64	31	1	0.5	BDL(MDL:0.001)	7.52	32	5	0.4	BDL(MDL:0.001)
May-21	7.71	32	1	0.6	BDL(MDL:0.001)	7.52	32	5	0.5	BDL(MDL:0.001)

Jun-21	7.96	32	5	0.2	BDL(MDL:0.001)	6.58	32	1	0.1	BDL(MDL:0.001)
Jul-21	7.91	29	5	0.3	BDL(MDL:0.001)	6.63	29	1	0.1	BDL(MDL:0.001)
Aug-21	7.84	28	5	0.4	BDL(MDL:0.001)	6.89	28	1	0.2	BDL(MDL:0.001)
Sep-21	7.74	27	5	1.1	BDL(MDL:0.001)	**6.58**	7.64	27	5	BDL(MDL:0.001)
Min	**7.74**	**27**	**1**	**0.2**	**BDL**	**6.58**	**27**	**1**	**0.1**	**BDL**
Max	**7.96**	**32**	**5**	**1.1**	**BDL**	**7.64**	**32**	**5**	**1.4**	**BDL**
Avg.	**7.86**	**29**	**4**	**0.5**	**BDL**	**6.94**	**29**	**2**	**0.5**	**BDL**

B. General Condition: -

I)	The project authorities must strictly adhere to the stipulations of the SPCB/State Government or any statutory body	All stipulations made by GPCB are strictly complied. Pl. refer detailed CCA Report tabulated under **Annexure-A**
II)	No 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 the Ministry for clearance, a fresh reference shall be made to the Ministry to access the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	We have received EC for expansion of VSF plant capacity from 255500 TPA to 438000TPA along with expansion of CS2 & H2SO4 plants on 17th Oct-19, also for setting up Solvent Spun Cellulosic fibre plant for 100 T/d and CPP of 55 MW. We have implemented capacity expansion under de-bottlenecking of VSF plant.
III)	The gaseous emission (SO2, Nox, H_2S & CS_2) and PM along with RSPM levels from various process units shall confirm to the standards prescribed by the concerned authorities from time to time.	Gaseous emission is monitored regularly and results confirm to the standards specified by both GPCB and CPCB The lab results are summarized for the period Oct-20 to Mar-21 as under **Table No.18 & Table No. 19** Monthly Report from Unistar Refer as **Annexure-6.**

Table No. 18		
Third Party Lab Details	**Month & Date of Sample**	**CS2 (Kg/Ton of Fibre)**
	Consent Value	**50**
	Apr-21	40
	May-21	37
Agency: - Unistar Environment & Research lab Pvt. Ltd ***Address: - Near GIDC, Char Rasta, Vapi*** ***NABL: - NABL Certificate Number TC-7753*** ***Details of instrument Used for Monitoring: -*** ***Instrument Name: -*** *Stack Monitoring Kit Vss1* ***Instrument ID: -*** *UERL-D/AIR/SMK/01* ***Serial No.: -*** *467 DTJ 15* ***Calibration Date: -*** *26.06.2021* ***Expiry Date: -*** *25.06.2022*	Jun-21	22
	Jul-21	20
	Aug-21	23
	Sep-21	26
	Min	**20**
	Max	**26**
	Avg.	**23**

Agency: - Unistar Environment & Research Lab Pvt. Ltd

Instrument ID & Name: -

1) UERL/AIR/RDS/02 - RDS: SR.No.160203106– Respirable Dust Sampler (Calibration Period: - 30.07.2021 – 29.07.2022)

2)UERL/AIR/FPS/08 – FPS: SR. No.160402021 - Fine Particulate Sampler (Calibration Period: - 30.07.2021 – 29.07.2022)

Monthly Report from Unistar refer as **Annexure- 8**

Table No. 19 (For Ambient Air)

Month	Near ETP MCC Room						Near ER Office					
	SPM PM10	**SPM PM2.5**	**SO2**	**NO2**	**H2S**	**CS2**	**SPM PM10**	**SPM PM2.5**	**SO2**	**NO2**	**H2S**	**CS2**
Norms =>	100	60	80	80	150	100	100	60	80	80	150	100
UOM=>	**µg/m3**						**µg/m3**					
Apr-21	84	35	16	21	BDL	BDL	80	31	12	17	BDL	BDL
May-21	82	26	18	23	BDL	BDL	78	31	15	18	BDL	BDL
Jun-21	77	28	16	19	BDL	BDL	73	22	19	22	BDL	BDL
Jul-21	75	27	14	20	BDL	BDL	71	20	15	23	BDL	BDL
Aug-21	72	26	16	19	BDL	BDL	69	21	11	15	BDL	BDL
Sep-21	75	26	18	21	BDL	BDL	71	22	16	19	BDL	BDL

Min	**72**	**26**	**14**	**19**	**BDL**	**BDL**	**69**	**20**	**11**	**15**	**BDL**	**BDL**
Max	**84**	**35**	**18**	**23**	**BDL**	**BDL**	**80**	**31**	**19**	**23**	**BDL**	**BDL**
Average	**74**	**26**	**16**	**20**	**BDL**	**BDL**	**70**	**21**	**14**	**19**	**BDL**	**BDL**

	At no time, the emission shall exceed the prescribed limits.	Till date, the emission level has never exceeded prescribed limits. **(Refer Table No.19)**
	In the event of failure of any pollution control system adopted by the unit, the unit shall be immediately put of the operation and shall not be restarted until the desired efficiency has been achieved	We Will put of operation in case of failure of any pollution control system In the event of failure of any pollution control system adopted by the unit, the unit will immediately put of the operation and will not restart until the desired efficiency has been achieved
IV)	The location of Ambient Air Quality (AAQ) monitoring stations shall be reviewed in consultation with SPCB and additional shall be installed, if required, in the downwind direction as well as where maximum ground level concentration is anticipated.	The location of Ambient Air Quality (AAQ) monitoring stations have been reviewed & there are 4 nos. AAQ monitoring stations installed in consultation with GPCB in nearby 4 villages, at Derol, Vilayat, Sarnar and Argama within 2-3 kms radius.

There are 4 nos. of Ambient air quality monitoring stations covering all directions in nearby villages. Monthly monitoring is being done on monthly by NABL accredited Lab. The Ambient Air quality results for the period of Apr-21 to Sep-21 is tabulated as under **Table No. 17**

Monthly Report from Unistar Refer as **Annexure-12**

Agency: - Unistar Environment & Research Lab Pvt. Ltd

Instrument ID & Name: -

1) Respirable Dust Sampler - RDS: SR.No.160203118–UERL/AIR/RDS/ 02(Calibration Period: - 30.07.2021 – 29.07.2022)

2) Fine Particulate Sampler - FPS:SR.No.160802033 - UERL/AIR/FPS/08– (Calibration Period: - 30.07.2021 – 29.07.2022)

Table No. 17

Month	SARNAR						DEROL						ARGAMA						VILAYAT					
	SPM PM10	SPM PM2.5	SO2	NO2	H2S	CS2	SPM PM10	SPM PM2.5	SO2	NO2	H2S	CS2	SPM PM10	SPM PM2.5	SO2	NO2	H2S	CS2	SPM PM10	SPM PM2.5	SO2	NO2	H2S	CS2
	µg/m3						µg/m3						µg/m3						µg/m3					
Norms ->	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**
Apr-21	73	25	16	21	BDL	BDL	79	28	14	18	BDL	BDL	69	23	13	18	BDL	BDL	76	29	17	22	BDL	BDL
May-21	72	22	13	14	BDL	BDL	82	32	15	16	BDL	BDL	66	19	15	16	BDL	BDL	72	28	16	19	BDL	BDL
Jun-21	69	25	15	19	BDL	BDL	79	28	11	12	BDL	BDL	61	17	12	17	BDL	BDL	68	21	18	22	BDL	BDL
Jul-21	71	20	14	20	BDL	BDL	68	24	12	11	BDL	BDL	69	16	10	17	BDL	BDL	70	21	20	23	BDL	BDL
Aug-21	64	24	18	23	BDL	BDL	74	25	13	15	BDL	BDL	62	20	11	19	BDL	BDL	63	19	16	21	BDL	BDL

Sep-21	57	16	14	16	BDL	BDL	62	21	15	16	BDL	BDL	61	18	12	15	BDL	BDL	59	16	14	18	BDL	BDL
Min	**57**	**16**	**14**	**16**	**BDL**	**BDL**	**62**	**21**	**11**	**11**	**BDL**	**BDL**	**61**	**16**	**10**	**15**	**BDL**	**BDL**	**59**	**16**	**14**	**18**	**BDL**	**BDL**
Max	**71**	**25**	**18**	**23**	**BDL**	**BDL**	**79**	**28**	**15**	**16**	**BDL**	**BDL**	**69**	**20**	**12**	**19**	**BDL**	**BDL**	**70**	**21**	**20**	**23**	**BDL**	**BDL**
Average	**65**	**21**	**15**	**20**	**BDL**	**BDL**	**71**	**24**	**13**	**13**	**BDL**	**BDL**	**63**	**18**	**11**	**17**	**BDL**	**BDL**	**65**	**19**	**17**	**21**	**BDL**	**BDL**

V)	Dedicated scrubbers and stack of appropriate height as per CPCB guidelines shall be provided to control the emissions from various stacks/vents.	Dedicated scrubbers and stack of appropriate height as per CPCB guidelines are provided to control the emissions from various stacks/vents. **Rayon plant** – 175m stack (As per stack height formula H(m)= 11Q^0.41-3Vs*D/U Q- CS2 emission rate (kgs/hr) Vs-Stack Velocity (m/sec) D- Diameter of Stack, U- Annual Avg Wind speed at top of stack (m/sec) **H2SO4 plant** – 50m stack **CS2 Plant** – 100m stack provided
	The scrubber water shall be sent to ETP for further treatment	The scrubber water is routed through ETP.
VI)	All the chemicals / solvents storage tank shall be under negative pressure to avoid any leakages. Breather valve, N2 blanketing and secondary condensers with brine chilling system shall be provided for all the storage tanks to minimize vapor loses. All liquid raw material shall be stored in storage tanks and drums.	All storage tanks are suitably designed to avoid leakages for storage under atmospheric conditions. CS2 is stored under water due its volatile nature. Dykes re provided at all chemical storage area as per guidelines to arrest spillages / leaks with Emergency response plan for any such event.
VII)	The company shall undertake following waste minimization measures;	
	- Metering & control of quantities of active ingredients to minimize waste	Metering & measurement system is in place. Reduction in wastage is also reflected in specific consumption of chemicals
	- Reuse of by-products from the process as raw material or as RM substitution in other processes	Sodium Sulphate is bye-product. Though it is not used in our process, it is being utilized by detergent, glass, & paper industries
	- Use of automated filling to minimize spillages	Chemicals such as Caustic, Sodium hypochlorite, Sulphuric acid, Carbon disulphide is transported through pipelines. Sodium sulphate is bagged through automatic bagging M/c.
	- Use of "closed feed" system into batch reactors	Not Applicable as ours is continuous process.

	- Venting equipment through vapor recovery system	There is one CS2 recovery system/machine (total 4 nos.) wherein CS2 is being recovered by condensation.
VIII)	Fugitive emissions in the work zone environment, product & raw materials storage area shall be regularly monitored. The emissions shall confirm to the limits imposed by SPCB/ CPCB	Fugitive emissions in work zone environment & storage area are monitored by our Lab on monthly basis and are well within stipulated norms. Lab data are tabulated as **Table No. 20**

Agency: - Environmental Monitoring Lab
Address: -Internal Lab
Details of instrument Used for Monitoring: -
Inst. Calibration done by: - Respo Products
Instrument Name: - Toxirae III (for H2S Measurement) **&** For CS2 measurement following IS 5182 (Part 20): 1982 method.
Serial No.: - G011236349
Calibration Date: - 13.02.2021
Expiry Date: - 12.08.2021

Table No. 20

Date	Pulp Warehouse						Central Stores						Fibre warehouse						Salt Go down					
	Entry		Middle		Last		Entry		Middle		Last		Entry		Middle		Last		Entry		Middle		Last	
	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S	CS2	H2S
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Apr-21	0.17	Tr	0.19	Tr	0.26	Tr	0.28	Tr	0.21	Tr	0.18	Tr	0.17	Tr	0.12	Tr	0.24	Tr	0.21	Tr	0.17	Tr	0.22	Tr
May-21	0.19	Tr	0.26	Tr	0.24	Tr	0.15	Tr	0.21	Tr	0.19	Tr	0.18	Tr	0.21	Tr	0.18	Tr	0.16	Tr	0.14	Tr	0.21	Tr
Jun-21	0.22	Tr	0.14	Tr	0.18	Tr	0.17	Tr	0.21	Tr	0.15	Tr	0.17	Tr	0.2	Tr	0.21	Tr	0.21	Tr	0.19	Tr	0.18	Tr
Jul-21	0.2	Tr	0.15	Tr	0.21	Tr	0.22	Tr	0.18	Tr	0.26	Tr	0.12	Tr	0.14	Tr	0.12	Tr	0.13	Tr	0.23	Tr	0.31	Tr
Aug-21	0.22	Tr	0.19	Tr	0.23	Tr	0.18	Tr	0.26	Tr	0.23	Tr	0.14	Tr	0.12	Tr	0.17	Tr	0.17	Tr	0.19	Tr	0.18	Tr
Sep-21	0.29	Tr	0.2	Tr	0.21	Tr	0.22	Tr	0.19	Tr	0.21	Tr	0.12	Tr	0.1	Tr	0.1	Tr	0.24	Tr	0.26	Tr	0.29	Tr
Min	**0.17**	**Tr**	**0.14**	**Tr**	**0.18**	**Tr**	**0.15**	**Tr**	**0.18**	**Tr**	**0.15**	**Tr**	**0.12**	**Tr**	**0.1**	**Tr**	**0.1**	**Tr**	**0.13**	**Tr**	**0.14**	**Tr**	**0.18**	**Tr**
Max	**0.29**	**Tr**	**0.26**	**Tr**	**0.26**	**Tr**	**0.28**	**Tr**	**0.26**	**Tr**	**0.26**	**Tr**	**0.18**	**Tr**	**0.21**	**Tr**	**0.24**	**Tr**	**0.24**	**Tr**	**0.26**	**Tr**	**0.31**	**Tr**
Avg.	**0.21**	**Tr**	**0.18**	**Tr**	**0.22**	**Tr**	**0.20**	**Tr**	**0.21**	**Tr**	**0.21**	**Tr**	**0.15**	**Tr**	**0.14**	**Tr**	**0.17**	**Tr**	**0.19**	**Tr**	**0.20**	**Tr**	**0.24**	**Tr**

IX)	The project authorities shall strictly comply with the rules and guidelines under manufacture, storage and import of hazardous chemicals Rules 1989 as amended up to date and Hazardous waste (management & handling) Rules 1989 as amended time to time. Authorization from the GPCB shall be obtained for collection, storage, treatment and disposal of hazardous wastes	Deputy Controller of Explosive from M/s PESO (PETROLEUM & Explosives Safety Organization), has granted license for storage of 60 KL light diesel oil and storage of 10 KL HSD at 2 locations in plant area for DG sets. We have valid factory license from DISH. Copy of factory & Petroleum License copy attached as **Annexure -13** Hazardous waste Rules 2000 is fully complied as per the consent stipulated

		norm and Unit is complying all the waste defined in CC& A. Hazardous waste is being disposed to M/ 5. BEIL, Dahej TSDF facility and annual hazardous waste disposal details are submitted on GPCB XGN online site and waste disposal online report is attached as **Annexure-14.** Unit has obtained CC&A # AWH 104228 for collection, storage, treatment and disposal of hazardous waste from GPCB dated 27th Nov 2019 which is valid up to 23rd Mar 2024.
X)	The overall noise levels in and around the plant area shall be kept well within the standard by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall confirm to the standards prescribed under the Environment (P) Act, 1986 Rules 1989 viz.**75 dB (day time and 70 dB (night time)**	Following measures taken to control noise level: - Provision of Silencers - Acoustic Enclosures - Rubber pads for rotating equipment

The Noise level (dB) at workroom for last 6 months is tabulated as under Table No. 21:

Calibration Period: - 18.01.21 – 18.01.22

dB Meter: - Make: - Lutron Sr.No.348982

Certification Agency: - Tools MRO Safety **/ Address: -** 806 – 808, Abhinandan Royale, Opp. Rajhans Olympia, Bhatar Road, Surat – 395007, Gujarat, India

Reference Standard : - Sound Level Calibrator**, Sr. No.** 3421624**, Calibration Valid Up to : 22.07.2022**

Table no.21

Area	Apr-21		May-21		Jun-21		Jul-21		Aug-21		Sep-21	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Norms=>	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**
Main Gate	59.3	53.8	54.6	52.2	52.5	50.3	51.3	56.1	51.4	50.2	54.3	53.9
Material Gate	56.7	52.4	59.7	57.3	51.7	49.7	54.2	57.8	49.5	47.8	52.2	51.3
OHC	54.3	50.8	55.9	53.8	54.7	52.3	53.5	52.3	55.1	52.8	54.9	50.4
Derol	55.6	50.1	52.7	52.6	53.2	51.6	52.8	50.4	54.3	53.1	53.7	50.1
Vilayat	57.3	51.6	53.1	52.9	51.2	51.7	54.2	53.2	54.3	50.4	55.1	52.7
Sarnar	56.7	52.9	54.2	53.7	54.2	52.6	52.5	52.1	54.1	51.7	54.8	51.5
Argama	54.5	51.7	52.8	51.3	52.8	51.7	52.3	50.9	53.7	50.3	53.7	50.2
Min	**54.3**	**50.1**	**52.7**	**51.3**	**51.2**	**49.7**	**51.3**	**50.4**	**49.5**	**47.8**	**52.2**	**50.1**
Max	**57.3**	**52.9**	**59.7**	**57.3**	**54.7**	**52.6**	**54.2**	**57.8**	**55.1**	**53.1**	**55.1**	**52.7**
Avg.	**55.7**	**51.4**	**54.4**	**53.3**	**53.1**	**51.7**	**53.0**	**52.4**	**53.7**	**51.3**	**54.2**	**51.1**

XI)	The company shall develop rain water harvesting structures	Survey has been done for roof top rain water harvesting. Job is being taken up

	to harvest the runoff water for recharge of ground water	in few locations. Pl. refer **Annexure-15** In addition to survey we have provided roof top water recharging facility at 7 locations inside the plant, Please find below photograph for your reference. 

Tentative Water Saving through Rain Water Harvesting

Year	Reservoir Area-1	Reservoir Area-2	fire house area	Area	Rainfall			Rain Water Harvesting
	M2				(MM)	(CM)	(Mtr.)	M3
2021	86400	43200	240	129840	819	81.9	0.819	106339

XII)	The company shall undertake eco-development measures including community welfare measures in the project area for the overall improvement of the environment.	We have been undertaking various community development measures in and around 25 Villages and 83,809 nos. of beneficiaries covered in FY'21. Unit has proposed Eco development plan yearly basis through CSR activities and submitting CSR activities update in Annual Environment Audit Report to GPCB on yearly basis.
	The eco development plan should be submitted to SPCB within three months of receipt of this letter for approval	Eco development measures including community welfare being done under CSR initiatives as attached in **Annexure-16** & its expenditure details are in below **Table No. 22**

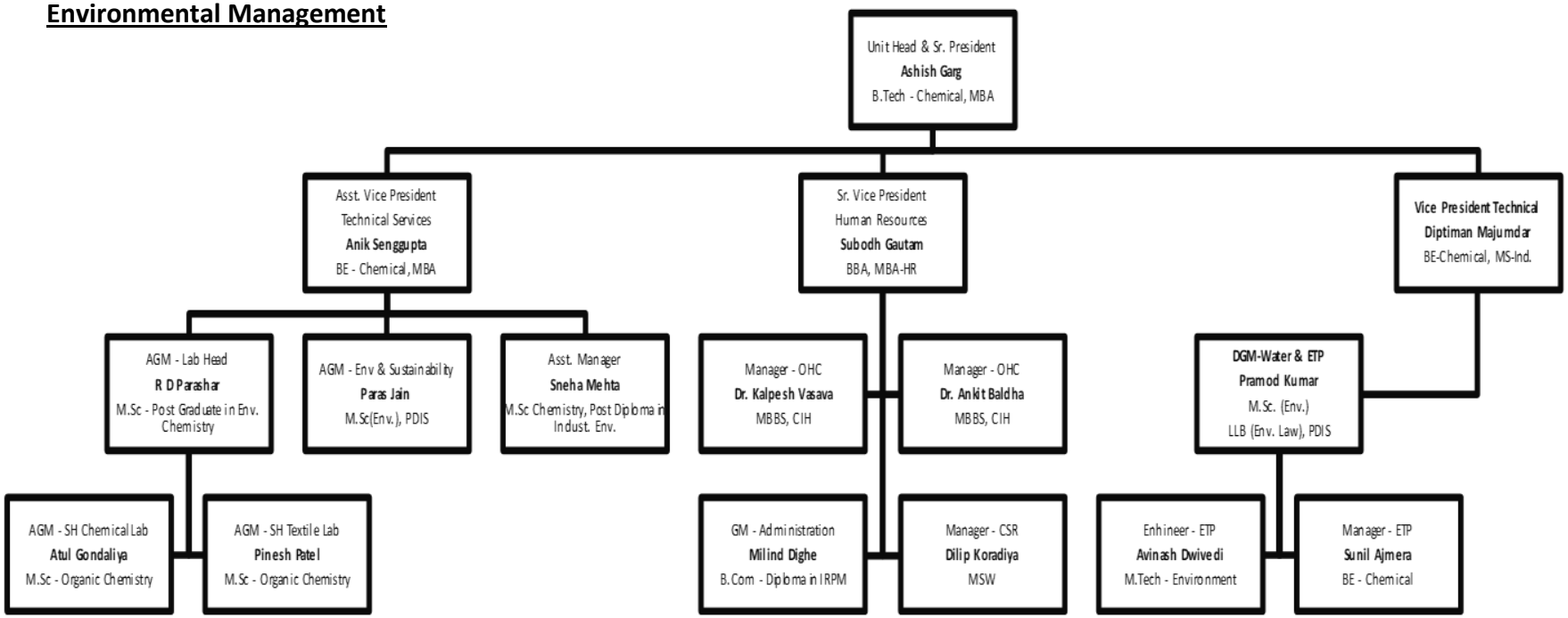
Table No. 22

Financial Year	Average Net Profit (in Crore) of the company (As per 135(S) company's Act)	Allocate CSR Amount (2%)	Actual Spent in CSR (Amount in Crore)	% Spent CSR against Net Profit
2015-2016	791.00	15.82	15.05	
2016-2017	790.00	15.80	18.06	
2017-2018	1107.00	22.14	29.84	

	2018-2019	1699.00	33.97	47.14		
	2019-2020	2421.32	48.43	58.98		
	2020-2021	2253.08	45.06	84.66		
	Total=>	**9061.4**	**181.22**	**253.73**	**2.80%**	

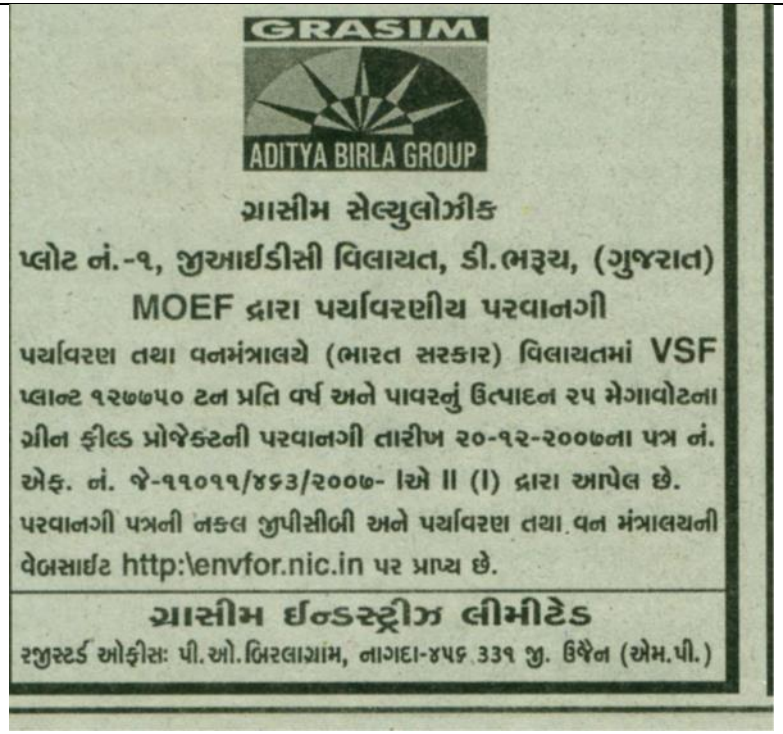
XIII)	A separate Environment Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and monitoring functions. The details of the Cell shall be submitted to MoEF regional officer prior to commissioning of the plant.	We have personnel within Environment Management/ Engineering, Chemical, botany & water resources and also from Process & Engineering. Pl. refer below Organization chart.

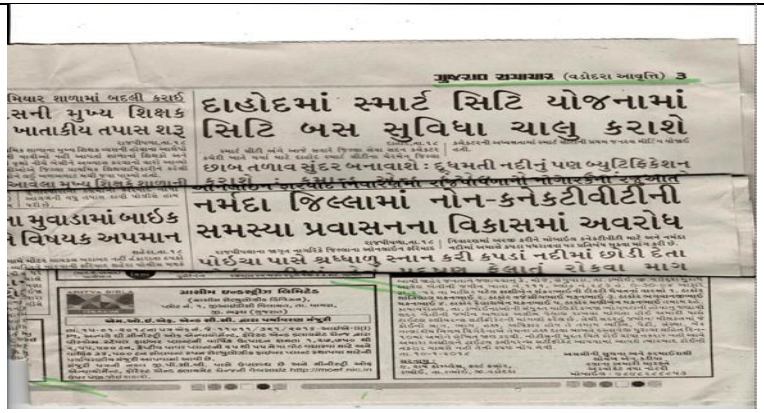
Organization Chart for Environmental Management



	The project authorities shall earmark separate funds to implement the condition stipulated by MoEF as well as state government along with the implementation schedule for all the conditions stipulated herein	Total project cost was Rs. 1200 Crores as mentioned in EC. As committed in the EIA/EMP, unit has allocated capital cost Rs. 170.5 Crores and recurring cost Rs. 15.5 Crores per annum respectively for implementation of environmental

<table>
<tr><td rowspan="3">XIV)</td><td></td><td>pollution control measures as per condition stipulated by the MoEF as well as state Govt.</td></tr>
<tr><td>The funds so provided shall not be diverted for any other purpose.</td><td>Funds are used in Air pollution control measures, water pollution control measures, Environmental monitoring & management, waste management, green belt development. We hereby declare that the capital & recurring fund is not diverted for other purpose.</td></tr>
<tr><td colspan="2">
<table>
<tr><th colspan="8">Fund Utilize for environmental Management are under (Rs. In Crore)</th></tr>
<tr><th>Sr. No.</th><th>Particular</th><th>Capex</th><th>Opex FY-17</th><th>Opex FY-18</th><th>Opex FY-19</th><th>Opex FY-20</th><th>Opex FY-21</th></tr>
<tr><td>1</td><td>Effluent Water</td><td>79.00</td><td>11.50</td><td>10.56</td><td>11.00</td><td>11.00</td><td>13.35</td></tr>
<tr><td>2</td><td>Air Pollution Control</td><td>91.00</td><td>03.50</td><td>04.00</td><td>03.30</td><td>5.17</td><td>14.35</td></tr>
<tr><td>3</td><td>Green Belt Development</td><td>00.50</td><td>00.50</td><td>00.55</td><td>01.30</td><td>0.51</td><td>0.13</td></tr>
<tr><td>4</td><td>Waste Management</td><td>01.50</td><td>00.50</td><td>00.60</td><td>01.60</td><td>3.07</td><td>2.90</td></tr>
<tr><td colspan="2">Total Amount (In Crore)=></td><td>172.00</td><td>16.00</td><td>15.71</td><td>17.20</td><td>19.75</td><td>30.73</td></tr>
</table>
</td></tr>
<tr><td>XV)</td><td>The implementation of the project vis-a-vis environmental action plans shall be monitored by the concerned regional office of MoEF/ GPCB/ CPCB. A six monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the company.</td><td>Six monthly compliance status report is being regularly submitted, pl. refer attached Annexure-7 of last report as acknowledgement, dated 21/05/2018.
<table>
<tr><th>Compliance Period</th><th>Date of Report Submission</th></tr>
<tr><td>Apr-16 to Sep-16</td><td>10.11.2016</td></tr>
<tr><td>Oct-16 to Mar-17</td><td>24.04.2017</td></tr>
<tr><td>Apr-17 to Sep-17</td><td>14.06.2017</td></tr>
<tr><td>Oct-17 to Mar-18</td><td>21.05.2018</td></tr>
<tr><td>Apr-18 to Sep-18</td><td>12.09.2018</td></tr>
<tr><td>Sep-18 to Mar-19</td><td>14.06.2019</td></tr>
<tr><td>Oct-19 to Mar-20</td><td>01.06.2020</td></tr>
<tr><td>Apr-20 to Sep-20</td><td>01.12.2020</td></tr>
<tr><td>Oct-20 to Mar-21</td><td>26.05.2021</td></tr>
</table>
</td></tr>
<tr><td>XVI)</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 SPCB/Committee and may also be seen at website of MoEF htpp://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter at</td><td>EC issued on 20.12.2007, received on 24.12.2007 following are the advertisement details.</td></tr>
</table>

	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.	
	Name of Paper : - Indian Express **Date of Issue:** - 28.12.2007 **In :** - English language	**Name of Paper :** - Gujarati Loksatta **Date of Issue:** - 28.12.2007 **In :** - Gujarati language
		
	EC Amendment on 15.01.2018 & following are the advertisement details. **Name of Paper :** - Times of India **Date of Issue:** - 19.01.2018 **In :** - English language	 **Name of Paper :** - Gujarat Samachar **Date of Issue:** - 19.01.2018 **In :** - Gujarati language

		
XVII)	The project authorities shall inform the Regional Office as well as Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of the start of the project	We have submitted the same in last six monthly EC compliance report & BSE – NSE report to MoEF & CC, Bhopal. Pl. Refer **Annexure-7** for EC compliance report & for BSE-NSE refer **Annexure-17.** Project / plant activities are as under; (1) EC received on 20th Dec-07, (2) Civil & other const. work started in Jun-2011. (3) 1st line commissioned in Mar-2014. (4) All 4 lines commissioned by Jan-2015.
10.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory	Noted & will abide
11.	The Ministry reserves the rights to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	-NA to PP
12.	The above conditions will be enforced, inter-alia under the provision of the Water (Prevention & control of pollution) Act-1977, the Air (Prevention & control of pollution) Act-1981, the Environment (Protection) Act- 1986, Hazardous waste (Management & Handling) Rules-2003 and the Public Liability Insurance Act-1991 along with their amendments and rules.	-We are following terms & conditions GPCB CC&A compliance. (Report attached as Annexure).

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF

For
Grasim Cellulosic Division (GCD), Vilayat Project

Monitoring of Ambient Air Quality, Noise Levels & Surface water quality

Ambient Air Quality:
The scenario of existing Ambient Air Quality in the study area has been assessed through a network of 06 Ambient Air Quality locations which are established in and around the plant premises. The monitoring stations are established based on the consultation with the Regional office of Gujarat Pollution Control Board, Bharuch.
Third party NABL & GPCB accredited laboratory has been entrusted for carrying our Environmental monitoring, analysis & reporting of environmental parameters at locations designated within and around plant premises.

Pre- calibrated Fine dust samplers have been used for carrying out ambient air quality monitoring in line with provisions of National Ambient Air Quality Standards (NAAQS). The parameters monitored are PM10, PM 2.5, Sulphur dioxide (SO2), Oxides of Nitrogen (NOx) & Carbon mono oxide (CO).

Noise Environment:
Noise level being monitored in Ambient & Work zone area at different Locations once in a quarter. The noise levels at each location were recorded for 24 hours, using integrated sound level meter.

Water Quality:
The existing status of water quality for surface water was assessed by collecting the water samples from nearby Bhookhi Khadi for upstream & downstream. Portable water from Plant & Labor Camp is also analyzed. The overall water quality parameters have been found to be below the stipulated permissible limits.

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF

For
Grasim Cellulosic Division (GCD), Vilayat Project

Green belt development

Green Belt Development:
A green belt is being developed along the plant boundary, along the roads & other available open space, using native species avenue plantation as per the CPCB guidelines for curbing emission and providing aesthetic look.

'> 40,000 trees covering an area of 25 Hact, with survival rate of 80 % have already been planted till date. A nursery for growing the saplings, being used for plantation purposes, has also been established inside the plant premises.

Criteria used for selection of species for greenbelt:

- Fast growing
- Thick canopy cover
- Perennial & evergreen
- Large leaf area index
- High sink potential
- Efficient in absorbing pollutants without affecting their growth
- Suitable for the local seasons

Plantation Species:
Neem (*Azadirachta indica*), Kasood (*Cassia siamea*), Pine/Junglisaru (*Casuarina equisetifolia*), Orchid tree (*Bauhinia blakeana*), Gulmohar (*Delonix regia*), Rain tree (*Samanea saman*), Yellow Gulmohar (*Peltophorum ferrugineum*), Bottle brush (*Callistemon sp*.), Earleaf Acacia (*Acacia auriculiformis)*, Kadamb (*Neolamarckia cadamba*), Basant Rani (*Tabebuia rosea*), Safeda (*Eucalyptus*), *Bougainvillea spectabilis*, Lawn Plantation and Shrubbery.

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF

For

Grasim Cellulosic Division (GCD), Vilayat Project

Green belt development

Plant species for Odor management;

Neem (Azadirachta indica), Saptparni (Alstonia scholaris), Guh babool (Acacia farnesiana), Morpankhi (Thuja occidentalis), Bougainvillea (Bougainvillea spectabilis), Lemon (Citrus lemon), Kaner (Nerium indicum), Mehndi (Lawsonia inermis), Champa (Plumeria rubra), Holy basil (Ocimum tenuiflorum), Tulsi (Ocimum sanctum), Sankuppi (Clerodendrum inerme), Jasmine tree (Plumeria alba), Jarul (Lagerstroemia speciosa), Gurhal (Hibiscus rosa sinensis), Bunchgrass (Vetiveria zizanioides) etc.

Gaseous emission (SO2 & NOx) tolerant species:

Neem (Azadirachta indica), Bel (Aegle marmelos), Kasood (Cassia siamea), Earleaf Acacia (Acacia auriculiformis), Saptparni (Alstonia scholaris), Aldu (Ailanthus excelsa), Siris (Albizia lebbeck), Shisham (Dalbergia sissoo), Pipal (Ficus religiosa), White fig (Ficus infectoria), Maulsari (Mimusops elengi), Kaner (Nerium indicum), Jarul (Lagerstroemia speciosa) etc.

Six Monthly Compliance Report of Environmental Clearance
For
Expansion of Viscose Staple Fibre, Captive Power Plant and Setting up Solvent Spun Cellulosic Fibre

EC-2018

Submitted to:-	Submitted By: -
1. Ministry of Environment Forest & Climate Change, (WR Office) Bhopal Ministry of Environment Forest & Climate Change, New Delhi **2.** Central Pollution Control Board, Zonal Office (Vadodara) **3.** Gujarat Pollution Control Board-Bharuch	**Grasim Industries Limited** (Unit: - Grasim Cellulosic Division) Plot No. 1 GIDC Vilayat Industrial Estate, PO-Vilayat, Taluka-Vagra, Dist.: - Bharuch-392012, Gujarat, India
Period: -01.04.2021 to 30.09.2021	

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat Project

List of Annexure

Sr. No.	Title	Annexure No.
1	Copy of Water Agreement	Annexure-01
2	GIDC Approval for Water Effluent	Annexure-1A
3	Effluent Treatment - Monthly Monitoring Report from Third Party– Apr-21 to Sep-21	Annexure-02
4	NABL Certificate : Unistar	Annexure-03
5	Chlor Alkali : Amendment in Name	Annexure-04
6	MoEF EC Compliance letter - CA plant	Annexure-05
7	EC Amendment	Annexure-06
8	Ambient Air Quality Report : Monthly Monitoring Report from Third Party – Apr-21 to Sep-21	Annexure-07
9	Rain Water Harvesting Report	Annexure-08
10	Training Details	Annexure-09
11	Status of EIA/EMP	Annexure-10
12	Acknowledgment of Six monthly EC Compliance Report	Annexure-11
13	Form-V : Environmental Statement	Annexure-12
14	Advertisement Details	Annexure-13
15	BEIL membership	Annexure-14
16	GPCB Monthly Patrak- Sep-21	Annexure-15
17	CCA Compliance Report (Apr-21 to Sep-21)	Annexure-A

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat

-: Introduction: -

1. Grasim Industries Limited (GIL), incorporated on 25th Aug., 1947; is a flagship company of the Aditya Birla Group and India's pioneer in manufacturing of Viscose Staple Fibre (VSF) a man-made, biodegradable fibre with characteristics akin to cotton.
2. M/s. Grasim Industries Ltd. has four VSF Plants in India which are located at Nagda (Madhya Pradesh), Harihar (Karnataka), Kharach & Vilayat (Gujarat).
3. Grasim Cellulosic Division, Vilayat is a latest plant in the Pulp & Fibre business, commissioned in Apr-2014 which produces both grey VSF and specialty fibre. This is the company's first plant producing specialty grade fibre.
4. The Company's main production is Viscose Staple Fibre, Sulphuric Acid, Carbon-Disulphide.
5. All the operation related permits, including Environmental Clearance, Forest Clearance from MOEF&CC and Consents to Establish (CTE) & Consent to Operate (CTO) has obtained from Gujarat Pollution Control Board, are in place.
6. Environmental quality monitoring in & around the project site is being carried out by GPCB & NABL approved Laboratory on a regular basis.
7. 04 No. of Ambient Air Quality Monitoring Stations (AAQMS) and Environmental Parameter Display Board at main gate have been established.
8. Continuous Emission Monitoring System has installed in process stacks of Rayon (Fibre) plant, H_2SO_4 - acid plant and CS2 Plant for regular monitoring of CS2, SO2 etc.
9. Online TOC, pH & flow meters installed at the outlet of ETP, before discharging treated effluent to GIDC pipeline.
10. Green belt is being developed as per the CPCB guidelines to curb the emission and also to provide an aesthetic look.
11. Point wise compliance status of Environmental Clearance for GCD, Vilayat is furnished herewith.

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat

Compliance status on Environmental Clearance
MOEF Ref. Letter No.: J-11011/321/2016-IA II(I)Pt, Dated 15.01.18

General Profile: -

Sr. No.	Stipulation	Compliance Status
1	This has reference to your proposal no. IA / GJ / IND2 /58913 /2016, dated 23rd January, 2017, submitting the EIA/EMP report on the above subject matter	---
2.	The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance to the project for expansion of Viscose Staple Fibre from 1,27,750 TPA to 2,55,500 TPA, Captive Power Plant from 25 MW to 55 MW and setting up Solvent Spun Cellulosic Fibre unit of 36,500 TPA by M/s Grasim Industries Ltd (Grasim Cellulosic Division) at Plot No. 1, GIDC Industrial Area Vilayat, Tehsil Vagra, District Bharuch (Gujarat)	Latitude: 21 deg 46'8" and 21 deg 47'11" North Longitude: 72 deg 53'18"and 72 deg 54'49" East
3.	The Existing & proposed Production capacity:	Production increased under de-bottlenecking for Viscose Staple Fibre & Sod. Sulphate after receiving EC, CTE & CTO. **Following will be the products & production capacity, refer in Table No.01 :-**

Table No. 01					
Products=>	**Viscose Staple Fibre**	**Carbon Di sulphide**	**Sulfuric Acid**	**Sodium Sulphate (Byproduct)**	**Power Generation**
EC Amendment As per EC No. F. No. J-11011/321/2016-IA-II(I) Pt Dated – 15.01.2018	**255500**	**34675**	**182500**	**166076 to 210788**	**55 MW**
EC Amendment EC No. F. No. J-11011/321/2016-IAII(I) EC issued on 17th October 2019 (Total Capacity after Expansion)	**438000**	**65700**	**346750**	**348576 - 393288**	**55MW**
Total Production (Tons) – Apr-21 to Sep-21	90523	12666	91217	58758	-
Total Production (Tons) – FY-21	136693	26047	100727	90835	-
Total Production (Tons) – FY-20	169572	27766	118695	107381	-
Total Production (Tons) – FY-19	159629	27122	109640	108943	-
Total Production (Tons) – FY-18	133644	20297	112300	101093	-

Sr. No.	Stipulation	Compliance Status
4	The existing land area is 222.63 ha and no additional land will be required for the proposed expansion.	The existing land area is 222.63 ha and no additional land is required for the proposed expansion.
	Industry will develop greenbelt in an area of 33 % i.e., 73.46 ha out of 222.63 ha area of the project.	In order to achieve 33% greenbelt, we have developed greenbelt in our factory complex along the boundary wall and open space area. Total 98,000 nos. tree have been planted till Sep-2021 additional ~5,000 trees to be planted by Mar-22 to cover 33% of total plant area the detail action plan is Tabulated in **Table No. 02.** We have developed greenbelt along with boundary wall & planted different plant species in campus area. Following are the list of plant species. Plant species were selected as per the directives of CPCB & DFO. Photograph of green belts is attached below**.**

Table No. 02

Sr. No	Duration	Area (Acre.) for Plantation	Number of Plant
1	Existing (Till FY; 2017-18)	**60**	**37,500 Plants**
2	2018-19	**25**	**15,000 Plants**
3	2019-20	**25**	**15,000 Plant**
4	2020-21	**25**	**15,000 Plant**
5	2021-223	**25**	**15,000 Plant**
6	2022-23	**25**	**15,000 Plant**
Total=>		**185**	**1,12,500 Plant**

Existing Plantation Species:

Neem (*Azadirachta indica*), Kasood (*Cassia siamea*), Pine/Junglisaru (*Casuarina equisetifolia*), Orchid tree (*Bauhinia blakeana*), Gulmohar (*Delonix regia*), Rain tree (*Samanea saman*), Yellow Gulmohar (*Peltophorum ferrugineum*), Bottle brush (*Callistemon sp*.), Earleaf Acacia (*Acacia auriculiformis)*, Kadamb (*Neolamarckia cadamba*), Basant Rani (*Tabebuia rosea*), Safeda (*Eucalyptus*), *Bougainvillea spectabilis*, Lawn Plantation and Shrubbery.

The Existing Spices for plantation are Selected by following CPCB guidelines

Proposed Plantation Species: Neem (*Azadirachta indica*), Kasood (*Cassia siamea*), Pine/Junglisaru (*Casuarina equisetifolia*), Orchid tree (*Bauhinia blakeana*), Saptparni (*Alstonia scholaris*), Gulmohar (*Delonix regia*), Rain tree (*Samanea saman*), Shisham (*Dalbergia sissoo*), Bel (*Aegle marmelos*), Arjun tree (*Terminalia arjuna*), Cassia fistula (Amaltas), Yellow Gulmohar (*Peltophorum ferrugineum*), Bottle brush (*Callistemon sp*.), Kadamb (*Neolamarckia cadamba*), Semal/Kapok (*Bombax ceiba*), Jamun (*Syzygium cumini*), Apple blossom tree (Cassia javanica), Sausage tree (*Kigelia pinnata*), Basant Rani (*Tabebuia rosea*), Morpankhi (*Thuja occidentalis*), Safeda (*Eucalyptus*), Guh babool (*Acacia farnesiana*), Kaner (Nerium indicum), Champa (*Plumeria rubra*), Holy basil (*Ocimum tenuiflorum*), Jarul (*Lagerstroemia speciosa*), *Bougainvillea spectabilis*, Lemon (*Citrus lemon*), Sankuppi (*Clerodendrum inerme*), Lawn Plantation and Shrubbery etc.

Plant species for Odor management : Neem (*Azadirachta indica*), Saptparni (*Alstonia scholaris*), Guh babool (*Acacia farnesiana*), Morpankhi (*Thuja occidentalis*), Bougainvillea (*Bougainvillea spectabilis*), Lemon (*Citrus lemon*), Kaner (Nerium indicum), Mehndi (*Lawsonia inermis*), Champa (*Plumeria rubra*), Holy basil (*Ocimum tenuiflorum*), Tulsi (*Ocimum sanctum*), Sankuppi (*Clerodendrum inerme*), Jasmine tree (*Plumeria alba*), Jarul (*Lagerstroemia speciosa*), Gurhal (*Hibiscus rosa sinensis*), Bunchgrass (*Vetiveria zizanioides*) etc.

Gaseous emission (SO2 & NOx) tolerant species: Neem (*Azadirachta indica*), Bel (*Aegle marmelos*), Kasood (*Cassia siamea*), Earleaf Acacia (*Acacia auriculiformis),* Saptparni (*Alstonia scholaris*), Aldu (*Ailanthus excelsa*), Siris (*Albizia lebbeck*), Shisham (*Dalbergia sissoo*), Pipal (*Ficus religiosa*), White fig (*Ficus infectoria*), Maulsari (*Mimusops elengi*), Kaner (Nerium indicum), Jarul (*Lagerstroemia speciosa*) etc.

	   	
	The estimated project cost is Rs.2560 Crores.	Spent Rs. 10 crores for debottlenecking. We had amended production quantity vide EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019 which is under construction.
	Employment will be provided to 1300 persons as direct & 1200 persons indirectly after expansion.	Noted and provided employment as per condition.
	Industry proposes to allocate Rs.64.04 Crores towards enterprise social commitment	We have received the EC F. No. J-11011/321/2016-IAII(I) on 17th October 2019 and we have invested only Rs. 10 Crore as a part of De-bottlenecking activity out of investment of Rs. 2560 crore of project cost shown in the proposed expansion. Accordingly, industry has made action plan to spend Rs. 25 Lakhs in FY 20. We have provided modern RO drinking water facility in the three nearby villages. Villages Name: Sarnar, Saladra, Derol & spent 18.83 lacs as per the below ESC plan. In FY-21, in order to support the surrounding community in the COVID Pandemic situation, we have spent Rs 8.55 lacs. Major activities were distribution of Ration Kits, food packets to footpath people, mask distribution, distribution of PPE kit to Department of health Bharuch, sanitizer distribution, Vitamin C tablet distribution, for sanitization sprinkled hypo.

5	There are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. within 10 km from the project site. Narmada River (estuarine region) is at a distance of 9.0	We have noted & There are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. within 10 km from the project site. Narmada River (estuarine region)

<table>
<tr><td></td><td>km in SSW direction from the project site</td><td>is at a distance of 9.0 km in SSW direction from the project site.</td></tr>
<tr><td>6</td><td>The total fresh water requirement is 35,000 m3/day, which will be met from Gujarat Industrial Development Cooperation (GIDC) water supply</td><td>We shall met fresh water requirement through GIDC as being done for existing plant.
Average Water consumption for last three months (Apr'21 to Sep'21) – 14925 m3/day (for VSF plant only), sourced from Narmada River, supplied by GIDC (Except Power plant), following are the tabulated water Consumption details in Table No.04</td></tr>
<tr><td></td><td>
<table>
<tr><th colspan="2">Table No.01</th></tr>
<tr><th colspan="2">Water Consumption (m3/day)</th></tr>
<tr><th>Month</th><th>Average</th></tr>
<tr><td>Apr-21</td><td>14759</td></tr>
<tr><td>May-21</td><td>15419</td></tr>
<tr><td>Jun-21</td><td>15472</td></tr>
<tr><td>Jul-21</td><td>15526</td></tr>
<tr><td>Aug-21</td><td>15672</td></tr>
<tr><td>Sep-21</td><td>12700</td></tr>
<tr><td>Avg.</td><td>14925</td></tr>
</table>
</td><td>Following are the GIDC offer cum allotment letter details;

<table>
<tr><td>1) Letter No.</td><td>GIDC/POJ/MKT/GRASIM/575 Dated 06th December-2006</td></tr>
<tr><td>Agreement for Water Supply</td><td>15.60 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>12.48 MLD</td></tr>
<tr><td>2) Letter No.</td><td>GIDC/SE/CG//BRH/1236 Dated 29th December-2016</td></tr>
<tr><td>Agreement for Water Supply</td><td>25.00 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>19.40 MLD</td></tr>
<tr><td>3) Letter No.</td><td>GIDC/BRH/WS/494 Dated 3rd.July,2019</td></tr>
<tr><td>Agreement for Water Supply</td><td>35.00 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>23.00 MLD</td></tr>
</table>
</td></tr>
<tr><td></td><td>Necessary agreement of water supply is made with GIDC</td><td>Agreement of water supply is made with GIDC on 06.12.2006, details as per Annexure-01, 1A & 1B.</td></tr>
<tr><td></td><td>Effluent generated from the project will be treated in the existing effluent treatment plant, and the treated effluent will be discharged into Bay of Kambhat through GIDC pipeline</td><td>The Effluent generated from the project will be treated in the existing effluent treatment plant, and the treated effluent will be discharged into Bay of Kambhat through GIDC pipeline
Existing TP Details are as below, Full Fledged ETP installed, which comprises of;
1. Primary Treatment: -Grit Chambers, Equalization tank, Neutralization tank & Primary Clarifier with sludge dewatering system installed.
2. Extended aeration activated sludge process: - Diffused aeration system.
3. Secondary treatment: - Biological reactor with</td></tr>
</table>

		secondary clarifier & settling tanks.

Treated effluent quality for the period of Apr-21 to Sep-21 is summarized as under **Table no. 05**
Monthly Test Report from Unistar Refer as **Annexure – 02**

Third Party Lab Details: -

Agency: - Unistar Environment & Research lab Pvt. Ltd

Address: -GIDC, Char Rasta, Vapi

NABL : - NABL Certificate Number TC-7652

NABL Certificate Issue Date & Expiry Date: *26.08.2020 to 25.08.2022*
(Copy of NABL Certificate & extension certificate are attached with Test Report (Annexure-03))

Table No.05

Month & Date of Sampling	FINAL TREATED EFFLUENT																											
	pH	Temp.	TSS	Oil & Grease	Fluoride	Sulphide	TKN	Amm. N as N	Copper	Zinc	BOD	COD	Total Res Cl2	Arsenic	Mercury	Hexavalent Chromium	Trivalent Chromium	Lead	Cadmium	Nickel	Cyanide	Phenolic Comp	Selenium	Mangnese	Iron	Vanadium	Nitrate Nitrogen	Bio Assay Test
Unit	-	deg C	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	90% Survival of fish after 96hrs.
GPCB limit	6.0 - 9.0	Not Exceed more than 35 deg C	100	10	15	5	50	50	3	15	100	250	1	0.2	0.01	0.1	2	0.1	0.05	3	0.2	5	0.05	2	3	0.2	50	
Apr-21	7.05	31	50	2.0	2.6	BDL	5.2	3.3	0.08	1.21	32	110	BDL	BDL	BDL	0.1	BDL	BDL	0.05	0.08	BDL	BDL	BDL	BDL	0.8	BDL	2.5	Complied
May-21	7.07	32	90	2.1	2.4	1.2	3.2	2.2	0.08	1.23	34	116	BDL	BDL	BDL	BDL	BDL	BDL	0.06	0.09	BDL	BDL	BDL	BDL	0.9	BDL	3.0	Complied
Jun-21	7.16	32	14	2.5	3.6	0.8	4.5	3.3	0.08	1.22	35	111	BDL	BDL	BDL	BDL	BDL	BDL	0.05	0.09	BDL	BDL	BDL	BDL	0.8	BDL	1.0	Complied
Jul-21	7.42	29	26	2.3	1.0	BDL	2.9	BDL	0.09	1.27	29	102	BDL	BDL	BDL	BDL	BDL	BDL	0.04	0.09	BDL	BDL	BDL	BDL	0.9	BDL	0.9	Complied
Aug-21	7.58	27	40	2.8	1.4	0.8	3.2	2.8	0.08	1.25	40	126	BDL	BDL	BDL	BDL	BDL	BDL	0.04	0.08	BDL	0.10	BDL	BDL	1.3	BDL	7.4	Complied
Sep-21	7.60	28	30	2.1	1.3	0.8	2.2	BDL	0.09	1.27	45	143	BDL	BDL	BDL	BDL	BDL	BDL	0.03	0.085	BDL	1.30	BDL	BDL	1.3	BDL	2.3	Complied
Min	**7.16**	**27**	**14**	**2.1**	**1.0**	**BDL**	**2.2**	**BDL**	**0.08**	**1.22**	**29**	**102**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.03**	**0.08**	**BDL**	**BDL**	**BDL**	**BDL**	**0.8**	**BDL**	**0.9**	**Complied**
Max	**7.60**	**32**	**40**	**2.8**	**3.6**	**0.8**	**4.5**	**3.3**	**0.09**	**1.27**	**45**	**143**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.05**	**0.09**	**BDL**	**1.30**	**BDL**	**BDL**	**1.3**	**BDL**	**7.4**	**Complied**
Average	**7.44**	**29**	**28**	**2.4**	**1.8**	**1.3**	**3.2**	**3.1**	**0.09**	**1.25**	**37**	**121**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**BDL**	**0.04**	**0.09**	**BDL**	**0.70**	**BDL**	**BDL**	**1.1**	**BDL**	**2.9**	**Complied**

	Total power requirement of 55 MW will be met from the captive power plant. Three 175 TPH coal/petcoke fired boilers will be installed for the proposed CPP.	Presently we are getting 25 MW captive power from the CPP of Chlor alkali plant which is in the same campus. Installation of 30 MW Captive Power Plant with one 175TPH Coal fired boiler is under progress.

	Multi cyclone separator/ bag filter with a stack of height of 125 m will be installed to control the particulate emissions within prescribed norms	We shall install ESP instead of the Multi Cyclone Separator/bag filter with a stack height of 125m to control the particulate emission within prescribe norms.
	Existing unit has 2 DG sets of 1250 KVA capacity, that are used as standby during power failure. Stack height of 30 m has been provided as per CPCB norms for the existing DG sets	Existing DG sets will be used for standby power requirement, in case any power failure. Stack height of 30 m has been provided as per CPCB norms for the existing DG sets
7	All Manmade Fibres Manufacturing (Rayon) projects are listed at 5(d) of Schedule to the Environment Impact Assessment (EIA) Notification, 2006, under Category 'A' and requires appraisal at central level by Expert Appraisal Committee (EAC) in the Ministry	Noted
8	The terms of references (ToR) was granted on 2nd February, 2017 with the exemption from public consultation in terms of para 7 (i), Point Ill, Stage (3)(i)(b) of EIA Notification, 2006	Noted
9	The proposal for environmental clearance (EC) was placed before the EAC (lndustry-2) in its 251h meeting held during 5-7 July, 2017 in the Ministry. The project proponent and their consultant M/s J. M. EnviroNet Pvt Ltd, presented the EIA/EMP report as per the ToR. The EAC, found the EIA/EMP report satisfactory and in consonance with the ToR, and recommended the proposal for environmental clearance with certain conditions	Noted
10	Based on the proposal submitted by the project proponent and recommendations of the EAC (lndustry-2), the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project **'Expansion of Viscose Staple Fibre from 1,27,750 TPA to 2,55,500 TPA, Captive Power Plant from 25 MW to 55 MW and setting up Solvent Spun Cellulosic Fibre unit of 36,500 TPA'** by M/s Grasim Industries Ltd (Grasim Cellulosic Division) at Plot No. 1, GIDC Industrial Area Vilayat, Tehsil Vagra, District Bharuch (Gujarat), under the provisions of EIA Notification, 2006 and the amendments made therein, subject to the compliance of terms and conditions, as under:	Noted

10.Terms & Conditions

<table>
<tr><td>i)</td><td>The environmental clearance issued by SEIAA vide letter dated 30th May, 2011 for the project 'Chlor-alkali unit with value added products (as a backward integration of VSF plant)' at the same premises, should be rectified to reflect M/s Grasim Industries Ltd (Grasim Chemical Division) as the project proponent in place of M/s Grasim Cellulosic (A Unit of Grasim Industries Ltd)</td><td>The Amendment in Name has been done on 04th May 2019; Now the industry shall be read as M/S. Grasim Industries Limited (Chemical Division) instead of M/S. Grasim Cellulosic Division.
Please refer attached Annexure-04</td></tr>
<tr><td>ii)</td><td>The Monitoring report on compliance status of the conditions stipulated by SEIAA in the environmental clearance dated 30th May, 2011, shall be submitted to the Ministry through the Regional Office, for further review of the project, if so required.</td><td>The monitoring report on compliance status of the conditions stipulated by SEIAA in the environmental clearance dated 30th May, 2011 has already submitted to ministry.
Please refer Annexure-05</td></tr>
<tr><td>iii)</td><td>Effluent shall be treated properly before discharging to Bay of Kambhat through GIDC pipeline.</td><td>The effluent is treated & the quality of effluent is verified before its discharge to Bay of Kambhat through GIDC pipeline which is being done for existing capacity& shall follow for additional too.</td></tr>
<tr><td>iv)</td><td>Altleast, 50 % of the fuel requirement shall be met from natural gas and the rest 50 % may be met from briquette/coal (with Sulphur content less than 0.5%).</td><td>Condition has amended for use of 100% coal with ETP bio mass. We shall ensure to use coal of < 0.5% Sulphur contents. Pl. refer attached Annexure-06</td></tr>
<tr><td>v)</td><td>Proposed effluent generation (27160 KLD) shall be reused after treating/processing through RO, etc. and fresh water requirement shall accordingly be restricted to 22,000 KLD</td><td>The Condition is amended for 28,000 KLD water after reusing/recycling of 7,350 KLD through RO plant.
Please refer Annexure-06</td></tr>
<tr><td>vi)</td><td>Smart energy conservation equipments (like LED/solar light) shall be installed in the factory and premises.</td><td>Smart energy conservation equipments (like LED/solar light) is started to install.</td></tr>
<tr><td></td><td colspan="2">
<table>
<tr><th>New LED Fittings changed in place of conventional in FY-2019 (Nos.)</th><th>New LED Fittings changed in place of conventional in FY-2020 (Nos.)</th><th>Planned LED fittings in FY-2021 (Nos.)</th><th>Actual Procured LED in FY-2021 (Nos.)</th><th>LED fittings in FY-2021 (Nos.)</th><th>LED fittings in FY-2022 (Nos.) Last FY Backlogs + New Procurement</th></tr>
<tr><td>1650</td><td>2327</td><td>1700</td><td>1258</td><td>790</td><td>2670+442 = 3112</td></tr>
<tr><td colspan="6">Note: In FY-21, Plant was stopped in the month of Apr-20 & May-20 due to lockdown in COVID 19 Pandemic.
• In this period, our procurement activities were kept on hold, hence procurement of LED light for FY-2021 seems less against the planned.
• In FY-22, we have planned to install the LED fittings for last year back log quantity & the new procurement quantity i.e. 3112 nos.</td></tr>
</table>
</td></tr>
<tr><td>vii)</td><td>As assured, 5 MW power (of the total power requirement) shall be generated from solar power/renewable energy sources.</td><td>Scheme is under review & to be implemented in further Financial years.</td></tr>
</table>

<table>
<tr><td>viii)</td><td>Green belt of 10 m width shall be developed along the periphery of the plant with three layers of trees. At least 33 % of the area shall be developed as green area with trees</td><td>In order to achieve 33% greenbelt, we have developed greenbelt in our factory complex along the boundary wall and open space area. Total 98,000 nos. tree have been planted till Sep-2021 additional ~5,000 trees to be planted by Mar-22 to cover 33% of total plant area the detail action plan are Tabulated in Table No. 06.</td></tr>
<tr><td></td><td colspan="2">
Table No. 06
<table>
<tr><th>Sr. No</th><th>Duration</th><th>Area (Acre.) for Plantation</th><th>Number of Plant</th></tr>
<tr><td>1</td><td>Existing
(Till FY; 2017-18)</td><td>60</td><td>37,500 Plants</td></tr>
<tr><td>2</td><td>2018-19</td><td>25</td><td>15,000 Plants</td></tr>
<tr><td>3</td><td>2019-20</td><td>25</td><td>15,000 Plant</td></tr>
<tr><td>4</td><td>2020-21</td><td>25</td><td>15,000 Plant</td></tr>
<tr><td>5</td><td>2021-223</td><td>25</td><td>15,000 Plant</td></tr>
<tr><td>6</td><td>2022-23</td><td>25</td><td>15,000 Plant</td></tr>
<tr><td colspan="2">Total=></td><td>185</td><td>1,12,500 Plant</td></tr>
</table>
</td><td><u>Existing Plantation Species:</u>
Neem (Azadirachta indica), Kasood (Cassia siamea), Pine/Junglisaru (Casuarina equisetifolia), Orchid tree (Bauhinia blakeana), Gulmohar (Delonix regia), Rain tree (Samanea saman), Yellow Gulmohar (Peltophorum ferrugineum), Bottle brush (Callistemon sp.), Earleaf Acacia (Acacia auriculiformis), Kadamb (Neolamarckia cadamba), Basant Rani (Tabebuia rosea), Safeda (Eucalyptus), Bougainvillea spectabilis, Lawn Plantation and Shrubbery.
The Existing Spices for plantation are Selected by following CPCB guidelines</td></tr>
<tr><td></td><td colspan="2"><u>Proposed Plantation Species:</u> Neem (Azadirachta indica), Kasood (Cassia siamea), Pine/Junglisaru (Casuarina equisetifolia), Orchid tree (Bauhinia blakeana), Saptparni (Alstonia scholaris), Gulmohar (Delonix regia), Rain tree (Samanea saman), Shisham (Dalbergia sissoo), Bel (Aegle marmelos), Arjun tree (Terminalia arjuna), Cassia fistula (Amaltas), Yellow Gulmohar (Peltophorum ferrugineum), Bottle brush (Callistemon sp.), Kadamb (Neolamarckia cadamba), Semal/Kapok (Bombax ceiba), Jamun (Syzygium cumini), Apple blossom tree (Cassia javanica), Sausage tree (Kigelia pinnata), Basant Rani (Tabebuia rosea), Morpankhi (Thuja occidentalis), Safeda (Eucalyptus), Guh babool (Acacia farnesiana), Kaner (Nerium indicum), Champa (Plumeria rubra), Holy basil (Ocimum tenuiflorum), Jarul (Lagerstroemia speciosa), Bougainvillea spectabilis, Lemon (Citrus lemon), Sankuppi (Clerodendrum inerme), Lawn Plantation and Shrubbery etc.
<u>Plant species for Odor management :</u> Neem (Azadirachta indica), Saptparni (Alstonia scholaris), Guh babool (Acacia farnesiana), Morpankhi (Thuja occidentalis), Bougainvillea (Bougainvillea spectabilis), Lemon (Citrus lemon), Kaner (Nerium indicum), Mehndi (Lawsonia inermis), Champa (Plumeria rubra), Holy basil (Ocimum tenuiflorum), Tulsi (Ocimum sanctum), Sankuppi (Clerodendrum inerme), Jasmine tree (Plumeria alba), Jarul (Lagerstroemia speciosa), Gurhal (Hibiscus rosa sinensis), Bunchgrass (Vetiveria zizanioides) etc.
<u>Gaseous emission (SO2 & NOx) tolerant species:</u> Neem (Azadirachta indica), Bel (Aegle marmelos), Kasood (Cassia siamea), Earleaf Acacia (Acacia auriculiformis), Saptparni (Alstonia scholaris), Aldu (Ailanthus excelsa), Siris (Albizia lebbeck), Shisham (Dalbergia sissoo), Pipal (Ficus religiosa), White fig (Ficus infectoria), Maulsari (Mimusops elengi), Kaner (Nerium indicum), Jarul (Lagerstroemia speciosa) etc.</td></tr>
</table>

	Green Belt Development Photographs are as under :- 

ix)	The proponent shall plant and maintain at least 1 lakh native trees for five year in the nearby villages.	FY 2021-22, We have planted more 4570 trees in the nearby villages & 5,000 trees to be planted in FY-22.
x)	Enterprises social commitment (ESC) plan shall be implemented with at least 2.5 % of the project cost. As proposed, Hospital (with modern facilities) may be constructed/ maintained, and also construct and maintain modern RO drinking water facility in the five nearby village.	We have received the EC F. No. J-11011/321/2016-IAII(I) on 17th October 2019 and we have invested only Rs. 10 Crore as a part of De-bottlenecking activity out of investment of Rs. 2560 crore of project cost shown in the proposed expansion. Accordingly, industry has made action plan to spend Rs. 25 Lakhs in FY 20. We have provided modern RO drinking water facility in the three nearby villages. Villages Name: Sarnar, Saladra, Derol & spent 18.83 lacs as per the below ESC plan. In FY-21, in order to support the surrounding community in the COVID Pandemic situation, we have spent Rs 8.55 lacs. Major activities were distribution of Ration Kits, food packets to footpath people, mask distribution, distribution of PPE kit to Department of health Bharuch, sanitizer distribution, Vitamin C tablet distribution, for sanitization sprinkled hypo. For FY-22, Schemes are under implementation.

Action Plan for ESC implementation							
Sector	**Activity**	**1st Year**	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**	**Total Amount**
		01.04.18 - 31.03.19	**01.04.19 - 31.03.20**	**01.04.20 - 31.03.21**	**01.04.21 - 31.03.22**	**01.04.22 - 31.03.23**	
Education	Provision of New Anganwadi	0.00	0.00	0.00	1.80	0.00	1.80
Health	Provision of Mobile Medical Dispensary	0.00	18.83	0.00	0.00	0.00	18.83
	Health Clinic in nearby villages (Smart Diagnostic Centre cub)	0.00	0.00	0.00	0.00	0.00	0.00
Sustainable Livelihood	Energy program-solar street light.	0.00	0.00	0.50	0.50	0.00	1.00
	Vermi Compost Unit	0.00	0.00	1.00	1.00	0.00	2.00
Infrastructure Development	Community RO plant(no-2) for drinking water	0.00	0.00	0.00	0.50	0.90	1.40
Grand Total (Rs in Lacks) ➔		**0.00**	**18.83**	**1.50**	**3.80**	**0.90**	**25.0**
Spent Status➔		**0.00**	**18.83**	**-**	**-**	**-**	**-**
Note:	De-bottlenecking Cost: Rs. 10 Crores						
	ESC @ 2.5% = 25 Lakh						

10.1 General Conditions: -

i.	The project authorities must strictly adhere to the stipulations made by the Central Pollution Control Board, State Pollution Control Board, State Government and any other statutory authority	We strictly adhere to the stipulations made by the Central Pollution Control Board, State Pollution Control Board, State Government and any other statutory authority. CPCB – Six monthly EC Compliance GPCB – Monthly Patrak – Please Refer **Annexure -15**
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	Noted, We will not do any further expansion or modifications in the plant without prior approval of the Ministry of Environment, Forest and Climate Change. Presently We have applied for amendment in EC for increasing the production capacity of Viscose staple fibre (VSF) from 2, 55,500 to 4,38,000 TPA. ***Application No. :*** *F. No. J-11011/321/2016-IA-II(I)Pt, Dated 15.01.18*
iii.	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board	There are 4 nos. AAQ monitoring stations installed in consultation with GPCB in nearby 4 villages, at Derol, Vilayat, Sranar and

	(SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated	Argama within 2-3 kms radius. Also monitoring AAQ inside plant periphery.

There are 4 nos. of Ambient air quality monitoring stations covering all directions in nearby villages. Monthly monitoring is being done on monthly by NABL accredited Lab. The Ambient Air quality results for the period of Apr-21 to Sep-21 is tabulated as under **Table No. 08**

Monthly Report from Unistar Refer as <u>Annexure-07</u>

Agency: - Unistar Environment & Research Lab Pvt. Ltd

Instrument ID & Name: -

1) Respirable Dust Sampler - RDS: SR.No.160203118–UERL/AIR/RDS/ 02(Calibration Period: - 30.07.2021 – 29.07.2022)

2) Fine Particulate Sampler - FPS:SR.No.160802033 - UERL/AIR/FPS/08– (Calibration Period: - 30.07.2021 – 29.07.2022)

Table No. 08

Month	SARNAR						DEROL						ARGAMA						VILAYAT					
	SPM PM10	SPM PM2.5	SO2	NO2	H2S	CS2	SPM PM10	SPM PM2.5	SO2	NO2	H2S	CS2	SPM PM10	SPM PM2.5	SO2	NO2	H2S	CS2	SPM PM10	SPM PM2.5	SO2	NO2	H2S	CS2
	µg/m3						µg/m3						µg/m3						µg/m3					
Norms -->	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**
Apr-21	73	25	16	21	BDL	BDL	79	28	14	18	BDL	BDL	69	23	13	18	BDL	BDL	76	29	17	22	BDL	BDL
May-21	72	22	13	14	BDL	BDL	82	32	15	16	BDL	BDL	66	19	15	16	BDL	BDL	72	28	16	19	BDL	BDL
Jun-21	69	25	15	19	BDL	BDL	79	28	11	12	BDL	BDL	61	17	12	17	BDL	BDL	68	21	18	22	BDL	BDL
Jul-21	71	20	14	20	BDL	BDL	68	24	12	11	BDL	BDL	69	16	10	17	BDL	BDL	70	21	20	23	BDL	BDL
Aug-21	64	24	18	23	BDL	BDL	74	25	13	15	BDL	BDL	62	20	11	19	BDL	BDL	63	19	16	21	BDL	BDL
Sep-21	57	16	14	16	BDL	BDL	62	21	15	16	BDL	BDL	61	18	12	15	BDL	BDL	59	16	14	18	BDL	BDL
Min	**57**	**16**	**14**	**16**	**BDL**	**BDL**	**62**	**21**	**11**	**11**	**BDL**	**BDL**	**61**	**16**	**10**	**15**	**BDL**	**BDL**	**59**	**16**	**14**	**18**	**BDL**	**BDL**
Max	**71**	**25**	**18**	**23**	**BDL**	**BDL**	**79**	**28**	**15**	**16**	**BDL**	**BDL**	**69**	**20**	**12**	**19**	**BDL**	**BDL**	**70**	**21**	**20**	**23**	**BDL**	**BDL**
Average	**65**	**21**	**15**	**20**	**BDL**	**BDL**	**71**	**24**	**13**	**13**	**BDL**	**BDL**	**63**	**18**	**11**	**17**	**BDL**	**BDL**	**65**	**19**	**17**	**21**	**BDL**	**BDL**

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 followed	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 are being followed.
v.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA(night time)	Following measures are taken to control noise level: • Provision of Silencers • Acoustic Enclosures • Rubber pads for rotating equipment

The Noise level (dB) at workroom for last 6 months is tabulated as under **Table No. 09:**

Calibration Period: - 18.01.21 – 18.01.22

dB Meter: - Make: - Lutron Sr.No.348982

Certification Agency: - Tools MRO Safety **/ Address: -** 806 – 808, Abhinandan Royale, Opp. Rajhans Olympia, Bhatar Road, Surat – 395007, Gujarat, India

Reference Standard : - Sound Level Calibrator**, Sr. No.** 3421624**, Calibration Valid Up to : 22.07.2022**

Table No.09

Area	Apr-21		May-21		Jun-21		Jul-21		Aug-21		Sep-21	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Norms=>	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**
Main Gate	59.3	53.8	54.6	52.2	52.5	50.3	59.3	53.8	54.6	52.2	52.5	50.3
Material Gate	56.7	52.4	59.7	57.3	51.7	49.7	56.7	52.4	59.7	57.3	51.7	49.7
OHC	54.3	50.8	55.9	53.8	54.7	52.3	54.3	50.8	55.9	53.8	54.7	52.3
Derol	55.6	50.1	52.7	52.6	53.2	51.6	55.6	50.1	52.7	52.6	53.2	51.6
Vilayat	57.3	51.6	53.1	52.9	51.2	51.7	57.3	51.6	53.1	52.9	51.2	51.7
Sarnar	56.7	52.9	54.2	53.7	54.2	52.6	56.7	52.9	54.2	53.7	54.2	52.6
Argama	54.5	51.7	52.8	51.3	52.8	51.7	54.5	51.7	52.8	51.3	52.8	51.7
Min	**54.3**	**50.1**	**52.7**	**51.3**	**51.2**	**49.7**	**54.3**	**50.1**	**52.7**	**51.3**	**51.2**	**49.7**
Max	**57.3**	**52.9**	**59.7**	**57.3**	**54.7**	**52.6**	**57.3**	**52.9**	**59.7**	**57.3**	**54.7**	**52.6**
Avg.	**55.7**	**51.4**	**54.4**	**53.3**	**53.1**	**51.7**	**55.7**	**51.4**	**54.4**	**53.3**	**53.1**	**51.7**

vi.	The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water	Survey has been done for roof top rain water harvesting. Job is being taken up in few locations. Pl. refer **Annexure-08** In addition to survey we have provided roof top water recharging facility at 7 locations inside the plant, Please find below photograph for your reference. 

Tentative Water Saving through Rain Water Harvesting								
Year	Reservoir Area-1	Reservoir Area-2	fire house area	Area	Rainfall			Rain Water Harvesting
	M2				(MM)	(CM)	(Mtr.)	M3
2021	86400	43200	240	129840	819	81.9	0.819	106339

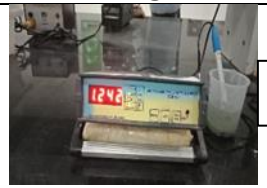
vii.	Training shall be imparted to all employees on safety and health aspects of chemicals handling.	Trainings are imparted to all employees on safety and health aspects of chemicals handling. Please refer **Annexure-09** for training details.
	Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.	Pre-employment and routine periodical medical examinations for all employees are undertaken on regular basis.
	Training to all employees on handling of chemicals shall be imparted.	Training is done for all employees on chemical handling.
viii.	The company shall also 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, and risk mitigation measures relating to the project shall be implemented.	All conditions as prescribed in EC, NOC and CC&A is maintained and monitored regularly. Detailed status of EIA/EMP is attached as **Annexure-10**
ix.	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration.	We have been undertaking various community development measures in and around 25 Villages and 83,809 nos. Of beneficiaries covered in FY'21. Unit has proposed Eco development plan yearly basis through CSR activities and submitting CSR activities update in Annual Environment Audit Report to GPCB on yearly basis.
x.	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment	Eco development measures including community welfare being done under CSR initiatives as attached in & its expenditure details are in below **Table No.10**

Table No. 10

Financial Year	Average Net Profit (in Crore) of the company (As per 135(S) company's Act)	Allocate CSR Amount (2%)	Actual Spent in CSR (Amount in Crore)	% Spent CSR against Net Profit
2015-2016	791.00	15.82	15.05	
2016-2017	790.00	15.80	18.06	
2017-2018	1107.00	22.14	29.84	

2018-2019	1699.00	33.97	47.14		
2019-2020	2421.32	48.43	58.98		
2020-2021	2253.08	45.06	84.66		
Total=>	**9061.4**	**181.22**	**253.73**	**2.80%**	

xi.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions	We have personnel within Environment Management/ Engineering, Chemical, botany & water resources and also from Process & Engineering. Pl. refer below Organization chart.



Conductivity & TDS Meter

pH Meter

High Volume Sampler

Analytical Balance

BOD Incubator

Oven & Muffle Furnace

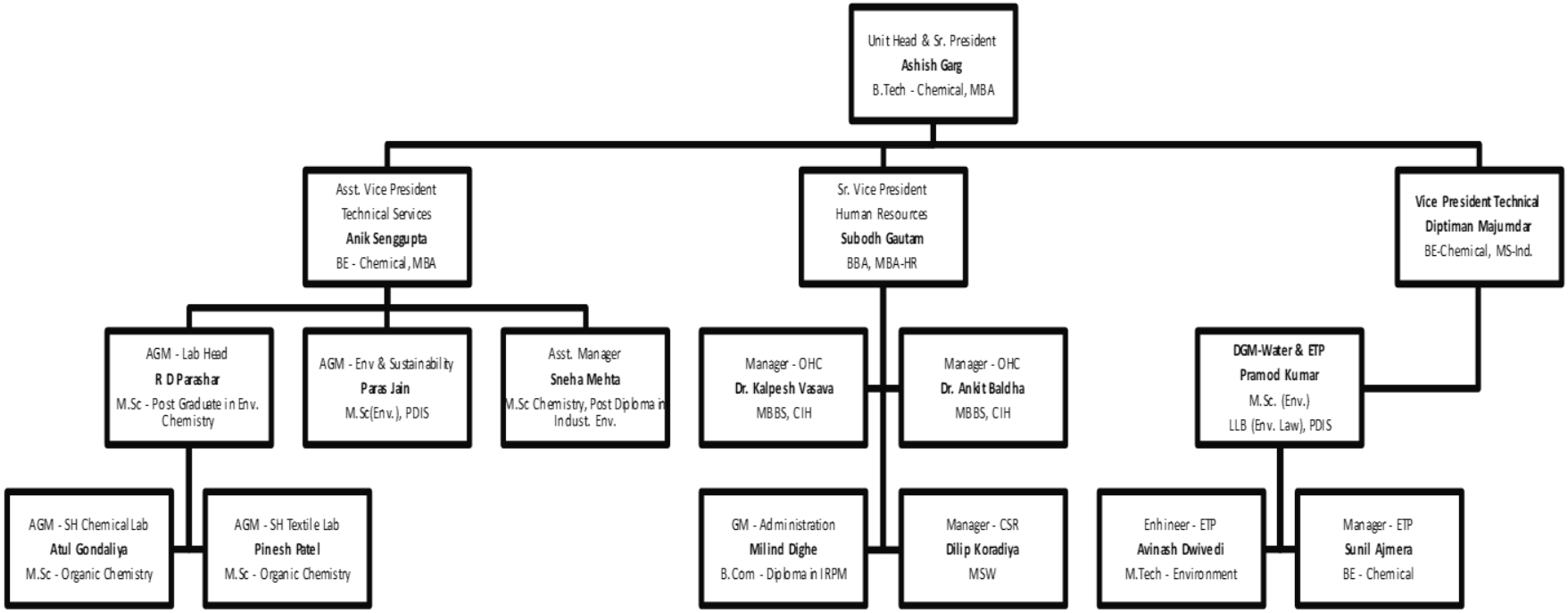
Spectro photo Meter

COD Digester

Available Facilities In Laboratory

Name of Parameter	***Testing Facility Available Yes or Not***	***Name of Instrument***
pH	Yes	pH Meter
Colour	Yes	Physically
Temperature	Yes	Thermometer
TSS	Yes	Filtration method
Oil & Grease	Yes	Extraction Method
Fluoride	No	-
Sulphide	Yes	Resin Method
Ammonical Nitrogen as N	No	-
Copper	No	-
Zinc	Yes	EDTA Method
COD	Yes	COD Digestion Method

BOD	Yes	3 Days Incubation Method
Total Residual Chlorine	Yes	Titrimetric Method
Arsenic	No	-
Mercury	No	-
Hexavalent Chromium	Yes	UV Spectrophotometer
Total Chromium	No	-
Lead	No	-
Cadmium	No	-
Nickel	No	-
Cyanide	No	-
Phenolic Compound	No	-
Selenium	No	-
Mn	No	-
Iron	Yes	Comparison Method
Vanadium	No	-
Ambient Air Monitoring	Yes	-
Stack Monitoring Kit	Yes	-
dB Meter	Yes	Sound Meter
MLSS, MLVSS, MLRSS	Yes	Filtration, Oven, Muffle furnace



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.	Separate funds is earmarks on annual basis for Environmental management Please refer **Table No.11** for fund Utilization details.

Table No.11

Sl.	Particular	Capex	Opex FY-17	Opex FY-18	Opex FY-19	Opex FY-20	Opex FY-21
1	Effluent treatment Plant	79.00	11.50	10.56	11.0	11.00	13.35
2	Air Pollution Control	91.00	03.50	04.00	3.3	5.17	4.70
3	Green belt development	00.50	00.50	00.55	1.3	0.51	0.13
4	Waste Management	01.50	00.50	00.60	1.6	3.07	2.90
Total Amount (In Crore)=>		**172.00**	**16.00**	**15.71**	**17.20**	**19.75**	**21.08**
In FY-19 (EDTA for H2S Recovery) (In Crore)		**35.0**	**-**	**-**	**-**	**-**	**9.65**
Total Amount (In Crore)=>		**210.0**	**-**	**-**	**-**	**-**	**30.73**

xiii.	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal	A copy of clearance letter is submitted to Panchayat & GIDC authorities.
xiv.	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	Regularly submitted 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 are posted on the website of the company Please refer **Annexure-11** of last EC's six-monthly compliance submitted.

xv.	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 by e-mail	The environmental statement for each financial year ending 31st March in Form-V as is submitted to the 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 also sent to the respective Regional offices by e-mail Please refer attached Form-V **for FY-21. Annexure-12**
xvi.	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	EC issued on 15.01.2018, and advertisement released on 18.01.2018. Copy attached as **Annexure-13**
	Name of Paper : - Indian Express **Date of Issue: -** 28.12.2007 **In : -** English language	**Name of Paper : -** Gujarati Loksatta **Date of Issue: -** 28.12.2007 **In : -** Gujarati language

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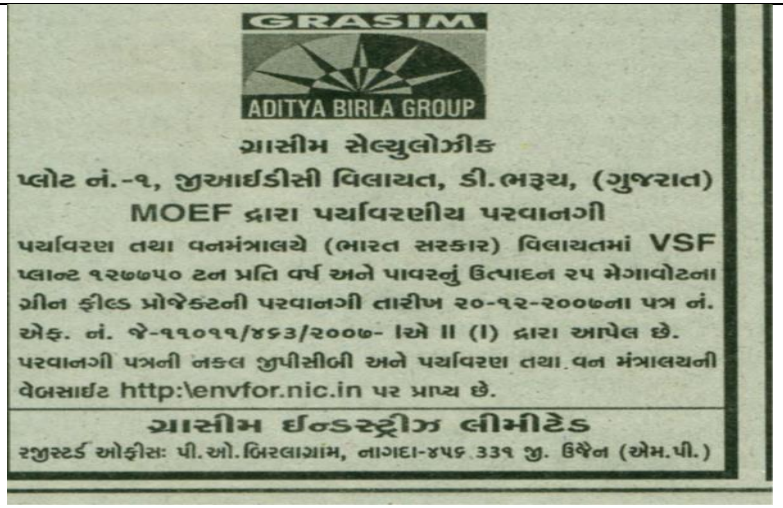
GRASIM
ADITYA BIRLA GROUP
Grasim Cellulosic
Plot No.-1, GIDC Vilayat
Dist: Bharuch, (Gujarat)
Environment Clearance by MOEF
Vide letter No. F.No.J-11011/463/2007-IA II (I), dated 20-12-07, which was received on 24-12-2007, the Ministry of Environment and Forests (Govt. Of India) has accorded Environmental Clearance for the Green Field Viscose Staple Fibre (127750 TPA) and Captive Power Plant (25 MW).
Copies of the clearance letter are available with GPCB and may also be seen at website of the Ministry of Environment and Forests at http:\envfor.nic.in
Grasim Industries Limited
Registered Office: P.O.-Birlagram, Nagda-456 331 Dist.-Ujjain (MP)
</td>
<td>

GRASIM
ADITYA BIRLA GROUP
ગ્રાસીમ સેલ્યુલોઝીક
પ્લોટ નં.-૧, જીઆઈડીસી વિલાયત, ડી.ભરૂચ, (ગુજરાત)
MOEF દ્વારા પર્યાવરણીય પરવાનગી
પર્યાવરણ તથા વનમંત્રાલયે (ભારત સરકાર) વિલાયતમાં VSF પ્લાન્ટ ૧૨૭૭૫૦ ટન પ્રતિ વર્ષ અને પાવરનું ઉત્પાદન ૨૫ મેગાવોટના ગ્રીન ફીલ્ડ પ્રોજેક્ટની પરવાનગી તારીખ ૨૦-૧૨-૨૦૦૭ના પત્ર નં. એફ. નં. જે-૧૧૦૧૧/૪૬૩/૨૦૦૭- Iએ II (I) દ્વારા આપેલ છે.
પરવાનગી પત્રની નકલ જીપીસીબી અને પર્યાવરણ તથા વન મંત્રાલયની વેબસાઈટ http:\envfor.nic.in પર પ્રાપ્ય છે.
ગ્રાસીમ ઈન્ડસ્ટ્રીઝ લીમીટેડ
રજીસ્ટર્ડ ઓફીસઃ પી.ઓ.બિરલાગ્રામ, નાગદા-૪૫૬ ૩૩૧ જી. ઉજૈન (એમ.પી.)
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<td>EC Amendment on 15.01.2018 & following are the advertisement details.
Name of Paper : - Times of India
Date of Issue: - 19.01.2018
In : - English language</td>
<td>Name of Paper : - Gujarat Samachar
Date of Issue: - 19.01.2018
In : - Gujarati language</td>
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THE TIMES OF INDIA, AHMEDABAD
FRIDAY, JANUARY 19, 2018
TIMES CITY
incentive: CM
PUBLIC NOTICE
ENVIRONMENTAL CLEARANCE
Woman, aide break into houses using duplicate key, held
Grasim Industries Limited
(Grasim Cellulosic Division),
Plot # 1, GIDC Vilayat, Tal.-Vagra,
Dist. Bharuch (Gujarat)
Environment Clearance by MoEF&CC
</td>
<td>

ગુજરાત સમાચાર (વડોદરા આવૃત્તિ) 3
દાહોદમાં સ્માર્ટ સિટિ યોજનામાં સિટિ બસ સુવિધા ચાલુ કરાશે
છાબ તળાવ સુંદર બનાવાશે : દૂધમતી નદીનું પણ બ્યુટિફિકેશન કરાશે
નર્મદા જિલ્લામાં નોન-કનેકટીવીટીની સમસ્યા પ્રવાસનના વિકાસમાં અવરોધ
પોઈચા પાસે શ્રધ્ધાળુ સ્નાન કરી કપડાં નદીમાં છોડી દેતા
ગ્રાસીમ ઇન્ડસ્ટ્રીઝ લિમિટેડ
(ગ્રાસીમ સેલ્યુલોઝીક ડિવિઝન),
પ્લોટ નં. ૧, જીઆઈડીસી વિલાયત, તા. વાગરા,
જી. ભરૂચ (ગુજરાત)
એમ.ઓ.ઈ.એફ. એન્ડ સી.સી. દ્વારા પર્યાવરણ મંજૂરી
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xvii.	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project	We have done EC amendment & received EC No. F. No. J-11011/321/2016-IAII (I); on 17th October 2019, plant start up activity started against the EC issued on 17th October 2019. Once the start up activity is completed we shall inform the Regional Office as well as the Ministry as per the condition.
11.	The Ministry may revoke or suspend the clearance, at subsequent stages, if implementation of any of the above conditionsis not satisfactory	We have noted & will abide above conditions satisfactorily
12.	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions	----
13.	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	We are following terms & conditions GPCB CC&A compliance, Please refer attached detailed CCA Report as **Annexure-A**

Six Monthly Compliance Report of Environmental Clearance

For

Expansion of Viscose Staple Fibre, Sulphuric Acid and Carbon Disulphide

EC-2019

Submitted to:-	Submitted By:-
1. Ministry of Environment Forest & Climate Change, (WR Office) Bhopal Ministry of Environment Forest & Climate Change, New Delhi 2. Central Pollution Control Board, Zonal Office (Vadodara) 3. Gujarat Pollution Control Board-Bharuch	**Grasim Industries Limited** (Unit: - Grasim Cellulosic Division) Plot No. 1 GIDC Vilayat Industrial Estate, PO-Vilayat, Taluka-Vagra, Dist.: - Bharuch-392012, Gujarat, India
Period: -01.04.2021 to 30.09.2021	

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat

List of Annexure

Sr. No.	Title	Annexure No.
1	GIDC offer Allotment Letter	Annexure-1
2	Acknowledgment for Amendment of EC Condition	Annexure-2
3	LDO & HSD Licenses	Annexure-3
4	GPCB Monthly Patrak Sep-21	Annexure-4
5	Third Party Monitoring Reports	Annexure-5
5	Status of EIA/EMP	Annexure-6
6	Acknowledgment EC Clearance submitted to Panchayat	Annexure-7
7	Advertisement Details	Annexure-8

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat Project

-: Introduction: -

1. Grasim Industries Limited (GIL), incorporated on 25th Aug., 1947; is a flagship company of the Aditya Birla Group and India's pioneer in manufacturing of Viscose Staple Fibre (VSF) a man-made, biodegradable fibre with characteristics akin to cotton.
2. M/s. Grasim Industries Ltd. has four VSF Plants in India which are located at Nagda (Madhya Pradesh), Harihar (Karnataka), Kharach & Vilayat (Gujarat).
3. Grasim Cellulosic Division, Vilayat is a latest plant in the Pulp & Fibre business, commissioned in Apr-2014 which produces both grey VSF and specialty fibre. This is the company's first plant producing specialty grade fibre.
4. The Company's main production is Viscose Staple Fibre, Sulphuric Acid, Carbon-Disulphide.
5. All the operation related permits, including Environmental Clearance, Forest Clearance from MOEF&CC and Consents to Establish (CTE) & Consent to Operate (CTO) has obtained from Gujarat Pollution Control Board, are in place.
6. Environmental quality monitoring in & around the project site is being carried out by GPCB & NABL approved Laboratory on a regular basis.
7. 04 No. of Ambient Air Quality Monitoring Stations (AAQMS) and Environmental Parameter Display Board at main gate have been established.
8. Continuous Emission Monitoring System has installed in process stacks of Rayon (Fibre) plant, H2SO4 acid plant and CS2 plant for regular monitoring of CS2, SO2 etc.
9. Online TOC, pH & flow meters installed at the outlet of ETP, before discharging treated effluent to GIDC pipeline.
10. Green belt is being developed as per the CPCB guidelines to curb the emission and also to provide an aesthetic look.
11. Point wise compliance status of Environmental Clearance for GCD, Vilayat is furnished herewith.

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat

Compliance status on Environmental Clearance
EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019

Sr. No.	Stipulation	Compliance Status
1	This has reference to your Online proposal no. IA/ GJ / IND2 /58913 /2016, dated 23rd February 2019, for environmental clearance to the above subject.	-
2	The Ministry of Environment, Forest and Climate Change has considered the proposal for environmental clearance to the project for expansion of Viscose Staple Fibre from 2,55,500 TPA to 4,38,000TPA, Sulfuric acid (1,82,500 to 3,46,750TPA) and Carbon- Disulphide (34675 to 65,700 TPA) by M/s Grasim Industries Ltd (Grasim Cellulosic Division) in an area of 222.63 ha at Plot No.1, GIDC Industrial Area, Vilayat, Taluka Vagra, District Bharuch (Gujarat).	Latitude : 21 deg 46'8" and 21 deg 47'11"North Longitude : 72 deg 53'18"and 72 deg 54'49"East
3	The Existing & proposed Production capacity:	We have started the plant start up activity against the EC No. F. No. J-11011/321/2016-IAII (I); issued on 17th October 2019 & for the same CCA application is done. Following are the production details.

Products=>	Viscose Staple Fibre	Carbon Di Sulphide	Sulfuric Acid	Sodium Sulphate (Byproduct)	Power Generation
EC No. F. No. J-11011/321/2016-IAII(I) EC issued on 17th October 2019 (TPA)	**4,38,000**	**65,700**	**3,46,750**	**3,48,576 - 3,93,288**	**55MW**
Total Production (Tons) – Apr-21 to Sep-21	90523	12666	91217	58758	-
Total Production (Tons) – FY-21	136693	26047	100727	90835	-
Total Production (Tons) – Oct-19 to Mar-20	85154	11895	54006	54623	-

4	Existing land area is 222.63 ha (2226300m2). No additional land will	No additional land is required for the proposed expansion.

<table>
<tr><td></td><td>be required for the proposed expansion.</td><td></td></tr>
<tr><td></td><td>The estimated project cost is Rs. 3500 Crores against the previously envisaged Rs. 2560 crores.</td><td>-</td></tr>
<tr><td></td><td>Total capital cost earmarked towards environmental control measures is Rs. 420 crores against Rs 150 crores and the recurring cost (operational and maintenance) will be about Rs. 70 crores against Rs 15 crores per annum.</td><td>Separate funds is earmarks on annual basis for Environmental management.
At present capital cost of Rs. 210 crores spent as per the condition given in EC-2007 & EC-2018. Additional cost will be incur for the expansion project.</td></tr>
<tr><td></td><td>Total employment will be 1400 persons as regular & 1300 persons on contract after expansion.</td><td>Total employment 1500 persons as regular & 1400 persons on contract are provided.</td></tr>
<tr><td>5</td><td>There are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. within 10 km. Narmada River flows at 9 km in south south west.</td><td>We have noted & there are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. within 10 km from the project site. Narmada River (estuarine region) is at a distance of 9.0 km in SSW direction from the project site.</td></tr>
<tr><td>6</td><td>Total water requirement is 52,500 m3/day, including fresh water requirement of 38,500m3/day proposed to be met from Gujarat Industrial Development (GIDC) pipeline.</td><td>Fresh water requirement met through GIDC pipeline. Water consumption for last six months (Apr’21-Sep’21) – 14925 m3/day, sourced from Narmada River, supplied by GIDC, following are the tabulated water Consumption details in Table No.01</td></tr>
<tr><td></td><td>
<table>
<tr><th colspan="2">Table No.01</th></tr>
<tr><th colspan="2">Water Consumption (m3/day)</th></tr>
<tr><th>Month</th><th>Average</th></tr>
<tr><td>Apr-21</td><td>14759</td></tr>
<tr><td>May-21</td><td>15419</td></tr>
<tr><td>Jun-21</td><td>15472</td></tr>
<tr><td>Jul-21</td><td>15526</td></tr>
<tr><td>Aug-21</td><td>15672</td></tr>
<tr><td>Sep-21</td><td>12700</td></tr>
<tr><td>Avg.</td><td>14925</td></tr>
</table>
</td><td>Following are the GIDC offer cum allotment letter details; Please refer Annexure-01 for GIDC Water Allotment Letter;
<table>
<tr><td>1) Letter No.</td><td>GIDC/POJ/MKT/GRASIM/575 Dated 06th December-2006</td></tr>
<tr><td>Agreement for Water Supply</td><td>15.60 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>12.48 MLD</td></tr>
<tr><td>2) Letter No.</td><td>GIDC/SE/CG//BRH/1236 Dated 29th December-2016</td></tr>
<tr><td>Agreement for Water Supply</td><td>25.00 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>19.40 MLD</td></tr>
<tr><td>3) Letter No.</td><td>GIDC/BRH/WS/494</td></tr>
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<tr><td></td><td>Dated 3rd.July,2019</td></tr>
<tr><td>Agreement for Water Supply</td><td>35.00 MLD</td></tr>
<tr><td>Effluent Discharge</td><td>23.00 MLD</td></tr>
</table>
</td></tr>
<tr><td></td><td>Effluent - 40,000 m3/day will be treated in the Effluent Treatment Plant of which around 14,000m3/day of treated effluent will be recycled back to VSF plant and remaining 26000m3/day will be discharge through GIDC common Pipeline into deep Sea after recovery of water from the effluent.</td><td>The average quantity of effluent treated & discharged from Apr-21 to Sep-21 is 12827 m3/day, please refer following Table No.02
We have installed one skid of RO on the one stream of existing plant effluent and getting the recovery as mentioned in below Table No.03. Once the effluent quantity -40,000m3/day is generated we will divert the stream to effluent RO for desire recovery of effluent quantity as per the condition.</td></tr>
<tr><td></td><td>
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<tr><th colspan="2">Table No.02</th></tr>
<tr><th colspan="2">Effluent Generation (m3/day)</th></tr>
<tr><th>Month</th><th>Average</th></tr>
<tr><td>Apr-21</td><td>11912</td></tr>
<tr><td>May-21</td><td>13079</td></tr>
<tr><td>Jun-21</td><td>13083</td></tr>
<tr><td>Jul-21</td><td>13602</td></tr>
<tr><td>Aug-21</td><td>11834</td></tr>
<tr><td>Sep-21</td><td>13449</td></tr>
<tr><td>Avg.</td><td>12827</td></tr>
</table>
</td><td>
<table>
<tr><th colspan="2">Table No.03</th></tr>
<tr><th>Month</th><th>RO permeate (m3/day)</th></tr>
<tr><td>Apr-21</td><td>2548</td></tr>
<tr><td>May-21</td><td>1993</td></tr>
<tr><td>Jun-21</td><td>2423</td></tr>
<tr><td>Jul-21</td><td>2433</td></tr>
<tr><td>Aug-21</td><td>2666</td></tr>
<tr><td>Sep-21</td><td>2761</td></tr>
<tr><td>Avg.</td><td>2471</td></tr>
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</td></tr>
<tr><td></td><td>Power requirement after expansion will be 60 MW which will be mt from Captive Power Plant. No DG sets will be required.</td><td>Presently we are getting 25MW from captive plant installed under chemical division. The installation of 30MW captive power plant is under progress. Remaining 5MW we will get from the captive power plant of Chemical Division which is in same campus.</td></tr>
<tr><td>7</td><td>The project category covered under Category A of item 5(d) 'Manmade fibres manufacturing' of the schedule to the Environment Impact Assessment (EIA) Notification, 2006 under category 'A' and requires appraisal/approval at central level in the Ministry.</td><td>Noted</td></tr>
</table>

8	Standard Terms of Reference for the project was issued on 24th August, 2018. Public hearing is exempted as the project site is located inside the notified industrial area.	Noted
9	The proposal was considered by the sectorial Expert Appraisal Committee (Industry-2) in the meeting held on 26-28 June 2019, wherein the project proponent and their accredited consultant presented the EIA/EMP report. The committee found the EIA/EMP report complying with the ToR and recommended the project for grant of environmental clearance.	Noted
10	Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project for expansion of Viscose Staple Fibre (2,55,500 to 4,38,000TPA), Sulphuric Acid (1,82,500 to 3,46,750TPA) and carbon- Disulphide (34675 to 65,700 TPA) by M/s Grasim Industries Ltd (Grasim Cellulosic Division) at Plot No. 1, GIDC Industrial Area Vilayat, Tehsil Vagra, District Bharuch (Gujarat), under the provisions of EIA Notification, 2006 and the amendments made therein, subject to the compliance of terms and conditions, as under:	Noted
10	**Terms & Condition**	
(a)	Necessary permission as mandated under Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 , as applicable from time to time, shall be obtained from the state Pollution Control Board.	We have started the plant start up activity against the EC No. F. No. J-11011/321/2016-IAII (I); issued on 17th October 2019 & for the same CCA application is done for necessary permission as mandate for Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.

(b)	Treated effluent shall be recycled back to VSF Plant and remaining 26000m3/day will be discharged through GIDC common pipeline into deep sea after recovery of water from the effluent.	The average quantity of effluent treated & discharged from Apr-21 to Sep-21 is 12827 m3/day. (Please refer above **Table No. 02**) We have commissioned one skid of RO on the one stream of existing plant effluent and getting the average recovery 2471 m3/day as mentioned in above in **Table No.03.** As per increase of effluent quantity we will; commission other skid of the RO for recovery of water from treated effluent and shall be recycled to VSF plant and remaining treated effluent less than 26000m3/day will be discharged through GIDC pipeline in to deep sea.
(c)	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.	We have started the plant start up activity against the EC No. F. No. J-11011/321/2016-IAII (I); issued on 17th October 2019 & for the same CCA application is done for necessary authorization required under the Hazardous and other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste management Rules, 2016 shall be taken and we shall adhere the rules.
(d)	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 emission shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	To control source and the fugitive emissions, suitable pollution control devices will be installed and will be connected with main chimney of 175m height to meet the prescribed norms and/or the NAAQS.
(e)	Solvent management, if any, shall be carried out as follows: (i) Reactor shall be connected to the chilled brine condenser system. (ii) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (iii) The condensers shall have provided with sufficient HTA and residence time so as to achieve more than 98% recovery. (iv) Solvents shall be stored in separate space specified with all safety measures. (v) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (vi) Entire plant shall be flame proof. The solvent storage tanks	At present we are not handling any solvent, when we start to use, we will abide the given condition.

	shall be provided with breather valve to prevent losses.	
(f)	Total fresh water requirement shall not exceed 38,500m3/day proposed to be met from Gujarat Industrial Development (GIDC) pipeline. Pipeline Prior permission in this regard shall be obtained from the concerned regulatory authority.	Average fresh water consumption quantity from Apr-21 to Sep-21 is 14925 m3/day, please refer above **Table No.01.** Necessary authorization for required quantity of water is taken from Gujarat Industrial Development (GIDC).
(g)	Rain water harvesting structures shall be provided to reduce dependency of fresh surface water for industrial purpose. In any case, no ground water shall be used for the plant.	Rain water harvesting structures are provided to reduce dependency of fresh surface water for industrial purpose. & we are not using ground water inside the plant.
(h)	The storm water from the premises shall be collected and discharged through a separate conveyance system.	Separate conveyance system for the discharge of storm water is provided.
(i)	Hazardous chemicals shall be stored in tanks, tank farms, drums, carboys etc. Flame arresters shall be provided on the tank farm, and solvent transfer through pumps.	Hazardous chemicals are stored in tanks, tank farms, drums, carboys, Flame arresters are provided with the Hazardous chemicals carrying vehicles.
(j)	Process organic residues and spent carbon, if any shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.	We have applied for amendment of the condition on 24.02.2020 This condition needs to amend as ETP inorganic sludge (Gypsum) shall be sent to cement industries/ TSDF/Co-processing unit, Process organic residue & spent carbon and ETP bio (Organic) sludge to be burnt in power plant or sent to TSDF/ Co processing unit. Please refer **Annexure-02** for acknowledgment copy.
(k)	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 Motor Vehicle Act (MVA), 1989.	Deputy Controller of Explosive from M/s PESO (PETROLEUM & Explosives Safety Organization), has granted license for storage of 60 KL light diesel oil and storage of 10 KL HSD at 2 locations in plant area for DG sets. We have valid factory license from DISH. Copy of factory & Petroleum License copy attached as **Annexure -03** Hazardous waste Rules 2000 is fully complied as per the consent stipulated norm and Unit is complying all the waste defined in CC& A. Hazardous waste is being disposed to M/ 5. BEIL, Dahej TSDF facility and annual hazardous waste disposal details are submitted on GPCB

<table>
<tr><td></td><td></td><td>XGN online site and waste disposal online report is attached as Annexure-04. Unit has obtained CC&A # AWH 104228 for collection, storage, treatment and disposal of hazardous waste from GPCB dated 21st May 2019 which is valid up to 23rd Mar 2024.</td></tr>
<tr><td>(l)</td><td>The company shall undertake waste minimization measures as below;
(i) Metering and control of quantities of active ingredients to minimize waste.
(ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.
(iv) Use of close Feed system into batch reactors.
(v) Venting equipment through Vapour recovery system.
(vi) Use of high-pressure hoses for equipment clearing to reduce wastewater generation.</td><td>The waste minimization measures are taken as below;
1. We have installed H2S recovery plant where from H2S gas Sulphur is extracted in solid form & reuse for the production of Sulphuric acid and CS2.
2. High pressure hoses are use for the cleaning of equipments.
3. We have installed CAP plant to recover CS2 from the process.</td></tr>
<tr><td>(m)</td><td>The green belt of at least 5-10m 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 consultant with the State Forest Department.</td><td>In order to achieve 33% greenbelt, we have developed greenbelt in our factory complex along the boundary wall and open space area. Total 98,000 nos. tree have been planted till Sep-2021 additional ~5000 trees to be planted by Mar-22 to cover 33% of total plant area the detail action plan are Tabulated in Table No. 05.
We have developed greenbelt along with boundary wall & planted different plant species in campus area. Following are the list of plant species. Plant species were selected as per the directives of CPCB & DFO. Photograph of green belts is attached below.</td></tr>
<tr><td></td><td>
Table No. 05
<table>
<tr><th>Sr. No</th><th>Duration</th><th>Area (Acre.) for Plantation</th><th>Number of Plant</th></tr>
<tr><td>1</td><td>Existing
(Till FY; 2017-18)</td><td>60</td><td>37,500 Plants</td></tr>
<tr><td>2</td><td>2018-19</td><td>25</td><td>15,000 Plants</td></tr>
<tr><td>3</td><td>2019-20</td><td>25</td><td>15,000 Plant</td></tr>
</table>
</td><td><u>Existing Plantation Species:</u>
Neem (Azadirachta indica), Kasood (Cassia siamea), Pine/Junglisaru (Casuarina equisetifolia), Orchid tree (Bauhinia blakeana), Gulmohar (Delonix regia), Rain tree (Samanea saman), Yellow Gulmohar (Peltophorum ferrugineum), Bottle brush (Callistemon sp.), Earleaf Acacia (Acacia auriculiformis), Kadamb (Neolamarckia cadamba), Basant Rani</td></tr>
</table>

4	2020-21	**25**	**15,000 Plant**
5	2021-223	**25**	**15,000 Plant**
6	2022-23	**25**	**15,000 Plant**
Total=>		**185**	**1,12,500 Plant**

(*Tabebuia rosea*), Safeda (*Eucalyptus*), *Bougainvillea spectabilis*, Lawn Plantation and Shrubbery.

The Existing Spices for plantation are Selected by following CPCB guidelines

Proposed Plantation Species: Neem (*Azadirachta indica*), Kasood (*Cassia siamea*), Pine/Junglisaru (*Casuarina equisetifolia*), Orchid tree (*Bauhinia blakeana*), Saptparni (*Alstonia scholaris*), Gulmohar (*Delonix regia*), Rain tree (*Samanea saman*), Shisham (*Dalbergia sissoo*), Bel (*Aegle marmelos*), Arjun tree (*Terminalia arjuna*), Cassia fistula (Amaltas), Yellow Gulmohar (*Peltophorum ferrugineum*), Bottle brush (*Callistemon sp*.), Kadamb (*Neolamarckia cadamba*), Semal/Kapok (*Bombax ceiba*), Jamun (*Syzygium cumini*), Apple blossom tree (Cassia javanica), Sausage tree (*Kigelia pinnata*), Basant Rani (*Tabebuia rosea*), Morpankhi (*Thuja occidentalis*), Safeda (*Eucalyptus*), Guh babool (*Acacia farnesiana*), Kaner (Nerium indicum), Champa (*Plumeria rubra*), Holy basil (*Ocimum tenuiflorum*), Jarul (*Lagerstroemia speciosa*), *Bougainvillea spectabilis*, Lemon (*Citrus lemon*), Sankuppi (*Clerodendrum inerme*), Lawn Plantation and Shrubbery etc.

Plant species for Odor management : Neem (*Azadirachta indica*), Saptparni (*Alstonia scholaris*), Guh babool (*Acacia farnesiana*), Morpankhi (*Thuja occidentalis*), Bougainvillea (*Bougainvillea spectabilis*), Lemon (*Citrus lemon*), Kaner (Nerium indicum), Mehndi (*Lawsonia inermis*), Champa (*Plumeria rubra*), Holy basil (*Ocimum tenuiflorum*), Tulsi (*Ocimum sanctum*), Sankuppi (*Clerodendrum inerme*), Jasmine tree (*Plumeria alba*), Jarul (*Lagerstroemia speciosa*), Gurhal (*Hibiscus rosa sinensis*), Bunchgrass (*Vetiveria zizanioides*) etc.

Gaseous emission (SO2 & NOx) tolerant species: Neem (*Azadirachta indica*), Bel (*Aegle marmelos*), Kasood (*Cassia siamea*), Earleaf Acacia (*Acacia auriculiformis),* Saptparni (*Alstonia scholaris*), Aldu (*Ailanthus excelsa*), Siris (*Albizia lebbeck*), Shisham (*Dalbergia sissoo*), Pipal (*Ficus religiosa*), White fig (*Ficus infectoria*), Maulsari (*Mimusops elengi*), Kaner (Nerium indicum), Jarul (*Lagerstroemia speciosa*) etc.

(n)	At least 0.25% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action shall be prepared and submitted to the Ministry's Regional office.	Detailed plan prepared under the CER with time bound action and submitted to the Ministry's Regional office. Under CER action plan for 02nd year (From 01.04.20 - 31.03.21), currently we have spent Rs. 5.0 lacs by providing the Solar light in nearby village.

Table No. 06
Action Plan for CER Implementation

Sector	Activity	1st Year 17.10.19 - 31.03.20	2nd Year 01.04.20 - 31.03.21	3rd Year 01.04.21 - 31.03.22	4th Year 01.04.22 - 31.03.23	5th Year 01.04.23 - 31.03.24	Total Amount (In Lacks)
Health Care	Hospital or Adopt Primary Health Center(Plan to adopt 41 Govt. PHC Center in Bharuch district)	0	100	80	50	30	260
Waste Management	To make the sewage collection pit & transfer the sewage to our STP	0	60	30	30	30	150
	Biogas plant	0	10	20	10	20	60
Energy Conservation	Provision of Solar Power Plant	0	25	10	10	5	50
	Save Energy Programme - Provision of Solar Street Light" (1000Nos.)	0	15	5	5	5	30
Water Management	Provision of Water recharging Well	0	20	20	10	0	50
	Pond Recharging	0	100	50	50	50	250
	Drinking water supply - RO Plant & Others	0	10	5	5	5	25
Grand Total (Rs in Lacks)==>		**0**	**340**	**220**	**170**	**145**	**875**

Note : Against the submitted above plan under CER, In view of critical situation due to COVID 19 Pandemic, we are planning to spent the CER amount for the provision of hospital for improvement of medical facilities for nearby community.

Note: Total Project Cost: Rs. 3500 Crores;

CER @ 0.25% = 8.75 Crores

(o)	For the DG sets, emission limits and the stack height shall be conformity with the extant regulations and the CPCB guidelines. Acoustic enclosures shall be provided	DG sets are used as standby during power failure only. Stack height of 30 m has been provided as per CPCB norms for the existing DG sets. Kindly Refer attached Test Report as **Annexure-05.**

Name of Agency: M/s. Unistar Pvt. Ltd
Instrument No. UERL/AIR/SMK/01
Instrument No. Stack Monitoring Kit, VSS1**, Serial No.** 467 DTJ 15
Calibration Date: 26.06.2021; **Calibration Expire On :-** 25.06.2022

Table No.07

Month	DG Set-1			DG Set-2		
Unit	Particulate matter (mg/Nm3)	Sulphur Dioxide (PPM)	Oxide of Nitrogen (PPM)	Particulate matter (mg/Nm3)	Sulphur Dioxide (PPM)	Oxide of Nitrogen (PPM)
GPCB limit	**150**	**100**	**50**	**150**	**100**	**50**
Apr-21	90	13	28	84	10	33
May-21	76	8	21	76	12	22
Jun-21	71	11	24	79	9	20
Jul-21	68	9	22	81	12	23
Aug-21	74	12	26	69	10	21
Sep-21	81	15	24	76	13	22
Min	**68**	**8**	**21**	**69**	**9**	**20**
Max	**90**	**15**	**28**	**84**	**13**	**33**
Average	**77**	**11**	**24**	**78**	**11**	**24**

(p)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.	To protect the possible fire hazards during manufacturing process in material handling firefighting system is provided in present plant & same will be provided for expansion project as per the norms.
(q)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers is carried out on a regular basis for running plant and records are maintained as per the Factories Act.
(r)	Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and other fugitive emissions.	Raw materials are stored in the silos / covered areas to prevent dust pollution and other fugitive emissions.

(s)	Continuous online (24x7) monitoring system for stack emission 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 capacity and flow meters in the channel/drain carrying effluent within the premises.	We have provided the Continuous online (24x7) monitoring system for stack emission to be installed for measurement of flue gas discharge and the pollutants concentration. Data shall be transmitted to the CPCB and SPCB server once the plant commissioning activities completed. Treated effluent discharge through closed pipeline where difficult to provide the camera. In place of camera we have installed TOC meter for continuously monitoring the treated effluent quality.
(t)	The energy sources for lighting purpose shall preferably LED based.	LED based lighting are most preferred in the newly commissioned plant.
(u)	Transportation of raw materials/products should be carefully performed using GPS enabled vehicles.	Transportation of raw materials/products are carried out in 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 Central Pollution Control Board, State Pollution Control Board(SPCB), State Government and any other statutory authority	We have valid consent for running plant for which we abide the stipulations. We have started the plant start up activity against the EC No. F. No. J-11011/321/2016-IAII (I); issued on 17th October 2019 & for the same CCA application is done.
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	We have received EC for expansion of VSF plant capacity from to 255500 TPA to 438000 along with expansion of CS2 & H2SO4 plants on 17th Oct-19, also for setting up Solvent Spun Cellulosic fibre plant for 100 TPD and CPP of 55 MW.
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 station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated	The location of Ambient Air Quality (AAQ) monitoring stations have been reviewed & there are 4 nos. AAQ monitoring stations installed in consultation with GPCB in nearby 4 villages, at Derol, Vilayat, Sarnar and Argama within 2-3 kms radius.

iv.	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.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 161h November, 2009 are being followed.
v.	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA(night time)	Following measures taken to control noise level in running plant; - Provision of Silencers - Acoustic Enclosures - Rubber pads for rotating equipment

The Noise level (dB) at workroom for last 6 months is tabulated as under Table No. 08:

Calibration Period: - 18.01.21 – 18.01.22

dB Meter: - Make: - Lutron Sr.No.348982

Certification Agency: - Tools MRO Safety **/ Address: -** 806 – 808, Abhinandan Royale, Opp. Rajhans Olympia, Bhatar Road, Surat – 395007, Gujarat, India

Reference Standard : - Sound Level Calibrator**, Sr. No.** 3421624**, Calibration Valid Up to :** 22.07.2022

Table no. 08

Area	Apr-21		May-21		Jun-21		Jul-21		Aug-21		Sep-21	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Norms=>	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**
Main Gate	59.3	53.8	54.6	52.2	52.5	50.3	51.3	56.1	51.4	50.2	54.3	53.9
Material Gate	56.7	52.4	59.7	57.3	51.7	49.7	54.2	57.8	49.5	47.8	52.2	51.3
OHC	54.3	50.8	55.9	53.8	54.7	52.3	53.5	52.3	55.1	52.8	54.9	50.4
Derol	55.6	50.1	52.7	52.6	53.2	51.6	52.8	50.4	54.3	53.1	53.7	50.1
Vilayat	57.3	51.6	53.1	52.9	51.2	51.7	54.2	53.2	54.3	50.4	55.1	52.7
Sarnar	56.7	52.9	54.2	53.7	54.2	52.6	52.5	52.1	54.1	51.7	54.8	51.5
Argama	54.5	51.7	52.8	51.3	52.8	51.7	52.3	50.9	53.7	50.3	53.7	50.2
Min	**54.3**	**50.1**	**52.7**	**51.3**	**51.2**	**49.7**	**51.3**	**50.4**	**49.5**	**47.8**	**52.2**	**50.1**
Max	**57.3**	**52.9**	**59.7**	**57.3**	**54.7**	**52.6**	**54.2**	**57.8**	**55.1**	**53.1**	**55.1**	**52.7**
Avg.	**55.7**	**51.4**	**54.4**	**53.3**	**53.1**	**51.7**	**53.0**	**52.4**	**53.7**	**51.3**	**54.2**	**51.1**

vi	The Company shall harvest rainwater from the roof tops of the buildings to recharge ground water, an to utilize the same for different industrial operation within the plant.	We have provided the ground water recharging facility in present plant where roof top water is collected & use to recharge the ground water. Following is the pic attached for the reference. 

Tentative Water Saving through Rain Water Harvesting

Year	Reservoir Area-1	Reservoir Area-2	fire house area	Area	Rainfall			Rain Water Harvesting
	M2				(MM)	(CM)	(Mtr.)	M3
2021	86400	43200	240	129840	819	81.9	0.819	106339

vii	Training shall be imparted to all employees on safety and health aspects of chemicals handling.	Trainings are imparted to all employees on safety and health aspects of chemicals handling for expansion project.
	Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.	Pre-employment and routine periodical medical examinations for all employees are undertaken on regular basis.
viii	The company shall also 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, and risk mitigation measures relating to the project shall be implemented.	All conditions as prescribed in EC, NOC and CC&A is maintained and monitored regularly. Detailed status of EIA/EMP is attached as **Annexure-06.**
ix.	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration and other stake holders. Also eco-development measures shall be undertaken for overall improvement of the	We have been undertaking various community development measures in and around 25 Villages and 83,809 nos. Of beneficiaries covered in FY'21. Unit has proposed Eco development plan yearly basis through CSR activities and submitting CSR activities update in Annual Environment Audit Report to GPCB on yearly

	environment.	basis.
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.	In present plant, we have personnel within Environment Management/ Engineering, Chemical, botany & water resources and also from Process & Engineering. Pl. refer below Organization chart.

Name of Parameter	***Testing Facility Available Yes or Not***	***Name of Instrument***
pH	Yes	pH Meter
Colour	Yes	Physically
Temperature	Yes	Thermometer
TSS	Yes	Filtration method
Oil & Grease	Yes	Extraction Method
Fluoride	No	-
Sulphide	Yes	Resin Method
Ammonical Nitrogen as N	No	-
Copper	No	-
Zinc	Yes	EDTA Method
COD	Yes	COD Digestion Method
BOD	Yes	3 Days Incubation Method
Total Residual Chlorine	Yes	Titrimetric Method
Arsenic	No	-
Mercury	No	-
Hexavalent Chromium	Yes	UV Spectrophotometer
Total Chromium	No	-
Lead	No	-
Cadmium	No	-
Nickel	No	-
Cyanide	No	-
Phenolic Compound	No	-
Selenium	No	-
Mn	No	-
Iron	Yes	Comparison Method
Vanadium	No	-
Ambient Air Monitoring	Yes	-
Stack Monitoring Kit	Yes	-
dB Meter	Yes	Sound Meter
MLSS, MLVSS, MLRSS	Yes	Filtration, Oven, Muffle furnace

Conductivity & TDS Meter

Analytical Balance

Spectro photo Meter

pH Meter

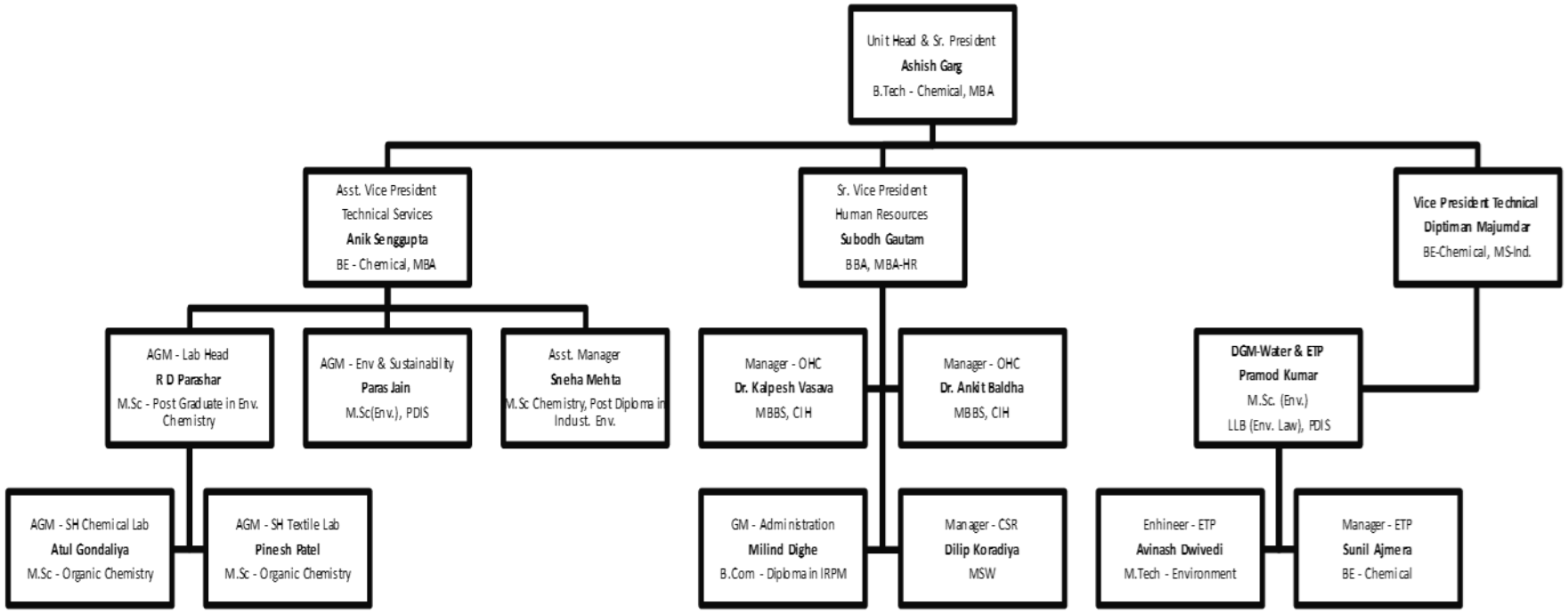
BOD Incubator

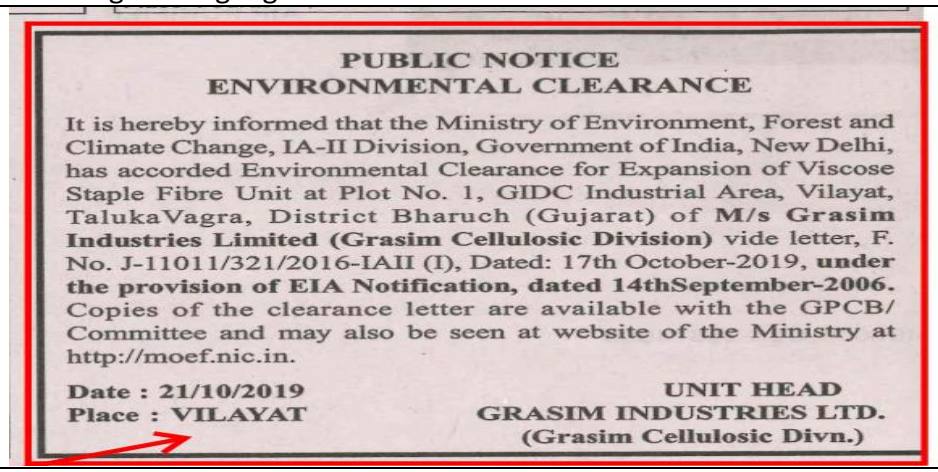
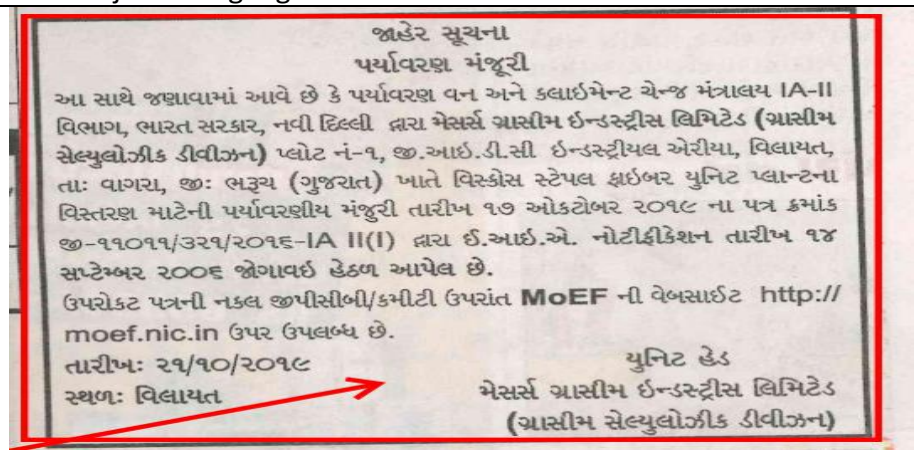
COD Digester

High Volume Sampler

Oven & Muffle Furnace

Available Facilities In Laboratory

	
xii	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	A copy of the clearance letter submitted to concern Panchayat. Please refer **Annexure-07** for the reference.
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	We are submitting the six monthly compliance report to the respective Regional Office of MoEFCC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report is also posted on the website of the company.

	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 by e-mail	The environmental statement for each financial year ending 31st March in Form-V as is submitted to the 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 also sent to the respective Regional offices 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	EC issued on 17.10.2019, and advertisement released on 24.10.2019 Copy attached as **Annexure-08**
	Name of Paper : - The Times of India, Ahemdabad **Date of Issue: -** 24.10.2019 **In : -** English language	**Name of Paper : -** Divya Bhaskar, Vadodara **Date of Issue: -** 24.10.2019 **In : -** Gujarati language
	 **PUBLIC NOTICE** **ENVIRONMENTAL CLEARANCE** It is hereby informed that the Ministry of Environment, Forest and Climate Change, IA-II Division, Government of India, New Delhi, has accorded Environmental Clearance for Expansion of Viscose Staple Fibre Unit at Plot No. 1, GIDC Industrial Area, Vilayat, TalukaVagra, District Bharuch (Gujarat) of **M/s Grasim Industries Limited (Grasim Cellulosic Division)** vide letter, F. No. J-11011/321/2016-IAII (I), Dated: 17th October-2019, **under the provision of EIA Notification, dated 14thSeptember-2006.** Copies of the clearance letter are available with the GPCB/ Committee and may also be seen at website of the Ministry at http://moef.nic.in. **Date : 21/10/2019** **Place : VILAYAT** **UNIT HEAD** **GRASIM INDUSTRIES LTD.** **(Grasim Cellulosic Divn.)**	 જાહેર સૂચના પર્યાવરણ મંજૂરી આ સાથે જણાવામાં આવે છે કે પર્યાવરણ વન અને કલાઈમેન્ટ ચેન્જ મંત્રાલય IA-II વિભાગ, ભારત સરકાર, નવી દિલ્લી દ્વારા મેસર્સ ગ્રાસીમ ઈન્ડસ્ટ્રીસ લિમિટેડ (ગ્રાસીમ સેલ્યુલોઝીક ડીવીઝન) પ્લોટ નં-૧, જી.આઈ.ડી.સી ઈન્ડસ્ટ્રીયલ એરીયા, વિલાયત, તા: વાગરા, જી: ભરૂચ (ગુજરાત) ખાતે વિસ્કોસ સ્ટેપલ ફાઈબર યુનિટ પ્લાન્ટના વિસ્તરણ માટેની પર્યાવરણીય મંજુરી તારીખ ૧૭ ઓકટોબર ૨૦૧૯ ના પત્ર ક્રમાંક જી-૧૧૦૧૧/૩૨૧/૨૦૧૬-IA II(I) દ્વારા ઈ.આઈ.એ. નોટીફીકેશન તારીખ ૧૪ સપ્ટેમ્બર ૨૦૦૬ જોગાવઈ હેઠળ આપેલ છે. ઉપરોકટ પત્રની નકલ જીપીસીબી/કમીટી ઉપરાંત **MoEF** ની વેબસાઈટ http://moef.nic.in ઉપર ઉપલબ્ધ છે. તારીખ: ૨૧/૧૦/૨૦૧૯ સ્થળ: વિલાયત યુનિટ હેડ મેસર્સ ગ્રાસીમ ઈન્ડસ્ટ્રીસ લિમિટેડ (ગ્રાસીમ સેલ્યુલોઝીક ડીવીઝન)

xvii	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.	We will submit the desired information on project completion to the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
11	The Ministry may revoke or suspend the clearance, at subsequent stages, if implementation of any of the above conditions is not 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	Presently we are following terms & conditions GPCB CC&A compliance, please refer attached detailed CCA Report as **Annexure-A** We have started the plant start up activity against the EC No. F. No. J-11011/321/2016-IAII (I); issued on 17th October 2019 & for the same CCA application is done, Once CCA received we will abide the condition.

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF

For
Grasim Cellulosic Division (GCD), Vilayat Project

Monitoring of Ambient Air Quality, Noise Levels & Surface water quality

Ambient Air Quality:
The scenario of existing Ambient Air Quality in the study area has been assessed through a network of 06 Ambient Air Quality locations which are established in and around the plant premises. The monitoring stations are established based on the consultation with the Regional office of Gujarat Pollution Control Board, Bharuch.
Third party NABL & GPCB accredited laboratory has been entrusted for carrying our Environmental monitoring, analysis & reporting of environmental parameters at locations designated within and around plant premises.

Pre- calibrated Fine dust samplers have been used for carrying out ambient air quality monitoring in line with provisions of National Ambient Air Quality Standards (NAAQS). The parameters monitored are PM10, PM 2.5, Sulphur dioxide (SO2), Oxides of Nitrogen (NOx) & Carbon mono oxide (CO).

Noise Environment:
Noise level being monitored in Ambient & Work zone area at different Locations once in a quarter. The noise levels at each location were recorded for 24 hours, using integrated sound level meter.

Water Quality:
The existing status of water quality for surface water was assessed by collecting the water samples from nearby Bhookhi Khadi for upstream & downstream. Portable water from Plant & Labor Camp is also analyzed. The overall water quality parameters have been found to be below the stipulated permissible limits.

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF

For
Grasim Cellulosic Division (GCD), Vilayat Project

Green belt development

Green Belt Development:
A green belt is being developed along the plant boundary, along the roads & other available open space, using native species avenue plantation as per the CPCB guidelines for curbing emission and providing aesthetic look.

'> 40,000 trees covering an area of 25 Hact, with survival rate of 80 % have already been planted till date. A nursery for growing the saplings, being used for plantation purposes, has also been established inside the plant premises.

Criteria used for selection of species for greenbelt:

- Fast growing
- Thick canopy cover
- Perennial & evergreen
- Large leaf area index
- High sink potential
- Efficient in absorbing pollutants without affecting their growth
- Suitable for the local seasons

Plantation Species:
Neem (*Azadirachta indica*), Kasood (*Cassia siamea*), Pine/Junglisaru (*Casuarina equisetifolia*), Orchid tree (*Bauhinia blakeana*), Gulmohar (*Delonix regia*), Rain tree (*Samanea saman*), Yellow Gulmohar (*Peltophorum ferrugineum*), Bottle brush (*Callistemon sp*.), Earleaf Acacia (*Acacia auriculiformis)*, Kadamb (*Neolamarckia cadamba*), Basant Rani (*Tabebuia rosea*), Safeda (*Eucalyptus*), *Bougainvillea spectabilis*, Lawn Plantation

and Shrubbery.

Compliance Status Report for "Environmental Clearance" Accorded by the MoEF

For

Grasim Cellulosic Division (GCD), Vilayat Project

Green belt development

Plant species for Odor management;

Neem (Azadirachta indica), Saptparni (Alstonia scholaris), Guh babool (Acacia farnesiana), Morpankhi (Thuja occidentalis), Bougainvillea (Bougainvillea spectabilis), Lemon (Citrus lemon), Kaner (Nerium indicum), Mehndi (Lawsonia inermis), Champa (Plumeria rubra), Holy basil (Ocimum tenuiflorum), Tulsi (Ocimum sanctum), Sankuppi (Clerodendrum inerme), Jasmine tree (Plumeria alba), Jarul (Lagerstroemia speciosa), Gurhal (Hibiscus rosa sinensis), Bunchgrass (Vetiveria zizanioides) etc.

Gaseous emission (SO_2 & NO_x) tolerant species:

Neem (Azadirachta indica), Bel (Aegle marmelos), Kasood (Cassia siamea), Earleaf Acacia (Acacia auriculiformis), Saptparni (Alstonia scholaris), Aldu (Ailanthus excelsa), Siris (Albizia lebbeck), Shisham (Dalbergia sissoo), Pipal (Ficus religiosa), White fig (Ficus infectoria), Maulsari (Mimusops elengi), Kaner (Nerium indicum), Jarul (Lagerstroemia speciosa) etc.