ADITYA BIRLA

GRASIM

Date: 25.05.2024

Dr. Yogesh Kumar
IRO, Ministry of Environment, Forest & Climate Change
407, Aaranya Bhavan,
Sector-10, Gandhinagar

Dear Sir,

Subject: Half Yearly (From Oct-2023 to March -2024) EC Compliance reports for the Environment Clearance received from MOEFF & CC, New Delhi.

Please find enclosed six-monthly Environment Compliance reports for following Environment Clearances.

1. F. No. J-11011/321/2016-IAII (I); dated 17.10.2019 (Latest EC)
2. F. No. J-11011/321/2016-IA II (I), dated 16.08.2018
3. F. No. J-11011/321/2016-IA II(I)Pt, dated 15.01.2018
4. F. No. J-11011/463/2007-IA II (I), dated 20.12.2007

Hope you will find same in Order.

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

Sanjay Kumar Verma
Sr. President & Unit head
Encl: a.a

CC to:
1. M.R. Macwana, Unit Head- Bharuch- GPCB, Gandhinagar - 382010, Gujarat.
2. K.N. Vaghamshi, Regional Officer Bharuch - GPCB, Phase -II GIDC Bharuch.
3. The Regional director, CPCB, Parivesh Bhawan, Aatmajyoti Ashram Rd, Opp. VMC Ward Office No. 10, Subhan Pura, Vadodara, Gujarat 390023

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

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.	Acknowledged
2	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)	Industry is setup 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
	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.	No ecological sensitive areas are located within 15 KM periphery of the plant site.
	The proposed plant is to be located in notified Industrial area at GIDC.	Plant is located on Plot No.1 of GIDC Industrial Estate, Vilayat, Taluka- Vagra, District – Bharuch, Gujarat
	Total land taken on lease from Gujarat Industrial Development Corporation for the plant is 567 Acres.	530 Acre land provided on lease from GIDC after having provision of land for power corridor vide Letter No. GIDC/PROJ/MKT/GRASIM/575 dt. 06.12.2006

Following will be the products and production capacity;

Sr. No.	Products	Capacity
1	Viscose Staple Fibre	127750 Tonnes / annum
2	Carbon Disulphide	23725 Tonnes / annum
3	Sulphuric Acid	10220 Tonnes / annum
4	Power Generation	25 MW
Sr. No.	**By-Products**	**Capacity**
1	Anhydrous Sodium Sulphate	83038 Tonnes / annum

Industry has taken following subsequent environment clearances for expansion in production capacities;

- Environment Clearance No. F. No. J-11011/321/2016-IA-II(I) Pt Dated – 15.01.2018
- Environment Clearance No. F. No. J-11011/321/2016-IA-II(I) Pt Dated – 16.08.2018
- Environment Clearance No. F. No. J-11011/321/2016-IAII(I) dated 17.10.2019

Summary of total production capacities of all environmental clearances and actual production during the reporting period is mentioned in **Table No.1**

Table No. 1

Products=>	Viscose Staple Fibre	Carbon Di Sulphide	Sulfuric Acid	Sodium Sulphate (Byproduct)	Power Generation	Solvent Spun Cellulosic Fibre (Excel Fibre)
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 – As per EC No. F. No. J-11011/321/2016-IA-II(I) Pt Dated – 16.08.2018	**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**	**36500**
Total Production (Tons) – Oct-23 to Mar-24	210144	17351	116562	126747	27.00	NIL
Total Production (Tons) – Apr-23 to Sep-23	207270	16319	109178	121029	29.71	NIL

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) – Oct-23 to Mar-24	212194	93910	54223	NIL
Total Consumption (Tons) – Apr-23 to Sep-23	209176	92017	50531	NIL

Justification for Raw Material Quantity: Raw Material consumption is increased due to increase in VSF production after receiving EC amendment for expansion in Jan-2018 and Oct-2019.

Note: 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 & Letter No. SEIAA/GUJ/EC/1(d),4(d)&5(f)/98/2012 dt. 22.03.2012 for use of natural gas in place of charcoal in CS2 plant and 25MW powerplant which is installed by Grasim Chemical. As per the EC No. F. No. J-11011/321/2016-IAII(I) issued on 15.01.2018, the remaining 30MW powerplant is installed by us. Kindly refer the Power generation details in above table.

3	Pulp dissolving grade (130305 Tonnes / annum), Caustic Soda 100% (74095 Tonnes / annum), Sulphur (55079 Tonnes / annum), Charcoal (7118 Tonnes / annum), Zinc (383 Tonnes / annum) and Coal (255500 Tonnes / annum) will be used as Raw Material	Industry has taken environment clearance for expansion in production capacities on 15.01.2018 and 17.10.2019. Details of total Raw Materials consumed during the reporting period is mentioned in **Table No.1**
4	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 reporting period (Oct'23 to Mar'24) is 15500 m3/day, Water is sourced from Narmada River and supplied by GIDC. Summary of water consumption for reporting period is tabulated in **Table No.02**.
	Necessary agreement of water supply is made with GIDC	Agreement of water supply is made with GIDC on 06.12.2006, 24.12.2016 and 03.07.2019, details are as under;

Table No.02

Water Consumption (m3/day)	
Month	**Average**
Oct'23	18278
Nov'23	15205
Dec'23	16480
Jan'24	14271
Feb'24	14765
Mar'24	13999
Avg.	**15500**

		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
	A full-fledged Effluent Treatment Plant will be installed with Primary and Secondary treatment facilities based on extended aeration activated sludge process.	A full-fledged Effluent Treatment Plant is installed having Primary and Secondary treatment facility based on extended aeration activated sludge process. Effluent Treatment Plant consist of following major equipment; 1. Grit Chamber – 2 Nos 2. Primary Clarifier – 2 Nos 3. Biological Reactor - 7 aeration Lagoons 4. Secondary Clarifier - 2 Nos 5. Treated Effluent RO – 14 MLD Capacity
	Treated effluent quality will be maintained as per the standards prescribed by CPCB/GPCB. After treatment treated effluent will be disposed off in Gulf of Khambhat vis pipeline already laid by GIDC.	Industry has ensured that the treated effluent quality meets the norms prescribed by GPCB. Analysis of treated effluent is carried out monthly by NABL accredited lab M/s. Unistar Environment and Research Lab. Monitoring results for reporting period Oct'23 to Mar'23 are summarized in **Table No.3** After treatment, treated effluent is pumped to GIDC effluent collection station, Vilayat, from where it is pumped & disposed in Gulf of Khambhat by GIDC.

Table No.3

Third Party Lab Details: -

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

Month	FINAL TREATED EFFLUENT																												
	pH	Temp.	TSS	Oil & Grease	Phenolic Comp	Cyanide	Fluoride	Sulphide	Amm. N as N	Total Kzeld Nit. (TKN)	Nitrate Nitrogen	Total Res Cl2	Arsenic	Trivalent Chromium	Hexavalent Chrom	Cu	Pb	Hg	Ni	Zn	Cd	BOD	COD	Selenium	Vanadium	Mn	Iron	Bio Assay-96 Hrs. fish	Toxicity Test - 96 Hrs. fish
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	mg/lit	mg/lit
Limit	06-09		100	10	5	0.2	15	5	50	50	50	1	0.2	2	0.1	3	0.1	0.01	3	15	0.05	100	250	0.05	0.2	2	3	90%	90%
Oct-23	7.86	30.00	10.00	BDL	BDL	0.20	1.11	0.40	5.20	10.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.14	BDL	60.00	222.00	BDL	BDL	0.65	1.13	Complied	Complied
Nov-23	7.05	29.00	8.00	BDL	BDL	BDL	0.78	0.25	BDL	5.90	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.10	0.11	0.04	52.00	181.50	BDL	BDL	0.42	0.99	Complied	Complied
Dec-23	7.38	29.50	18.00	BDL	BDL	BDL	1.38	BDL	BDL	4.60	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.62	0.06	38.00	124.90	BDL	BDL	0.30	2.13	Complied	Complied
Jan-24	7.20	29.00	15.00	BDL	BDL	BDL	1.01	BDL	BDL	3.70	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.21	0.28	0.03	46.00	160.00	BDL	BDL	0.18	0.85	Complied	Complied
Feb-24	7.01	30.00	44.00	BDL	BDL	BDL	0.90	BDL	BDL	5.20	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.15	0.25	0.04	31.00	109.50	BDL	BDL	0.14	0.66	Complied	Complied
Mar-24	7.59	30.50	24.00	BDL	BDL	BDL	2.00	0.60	2.80	6.70	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.19	0.26	0.03	52.00	160.80	BDL	BDL	0.16	1.13	Complied	Complied
Min	7.01	29.00	8.00	BDL	BDL	BDL	0.78	0.25	2.80	3.70	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.11	0.03	31.00	109.50	BDL	BDL	0.14	0.66	**Complied**	**Complied**
Max	7.86	30.50	44.00	BDL	BDL	BDL	2.00	0.60	5.20	10.80	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.10	0.62	0.06	60.00	222.00	BDL	BDL	0.65	2.13	**Complied**	**Complied**
Avg	7.35	29.67	19.83	BDL	BDL	BDL	1.20	0.42	4.00	6.15	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.32	0.28	0.04	46.50	159.78	BDL	BDL	0.31	1.15	**Complied**	**Complied**

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 is:		
	CS2 Plant	Carbon disulphide recovery system	CS2 Recovery system using condensation route is installed in spinning section for all lines.
		Oil scrubbing system for recovery of CS_2	In order to further reduce the emissions, we have installed latest technology Carbon Adsorption Plant (CAP) in place of earlier CS2 Genosorb plant. Emissions are reduced due to increase in CS2 recovery from exhaust gases before releasing from chimney.
		Water/ chilled water condensers	
		Brine condensers	
		Klaus kiln for CS2 plant	Klaus kiln for CS2 plant is installed.
		The stack of 175m shall be provided to reduce GLC of CS2 & H2S	The stack of 175m has been provided to reduce GLC of CS2 & H2S from VSF plant.
		Dust extraction cum Venturi scrubbing System for CS2 Furnace	Not applicable, As CS2 is being manufactured by using natural gas instead of charcoal.
	Acid Plant	Gas scrubbing system for tail gases	Caustic Scrubber is installed
		Mist eliminators	Mist eliminators are provided in acid tower
	Power plant	Electrostatic Precipitator (ESP) in power plant along with 100 m height stack	Electrostatic Precipitator (ESP) in captive power plant along with 125 m height stack is installed.
		Ash Handling plant	Ash Handling Plant is installed.
	Auxiliary section	Cyclone	Cyclones are installed
		Water scrubbers	Venturi water scrubbers are Installed
6	During regeneration process of Cellulose from Viscose in Spinning Machine CS2 and H2S will be liberated. The liberated CS2 and H2S will be extracted through powerful exhaust system and discharge through chimney.		A powerful exhaust system is provided on all spinning machines. Extracted CS2 and H2S is taken in H2S Scrubbing Plant for recovery of Sulphur from H2S and then CAP for further recovery of CS2. After recovery, remaining gases are discharged through 175-meter-high Chimney for proper dispersion.
	The part of liberated fugitive emission in work zone area will be controlled by modified exhaust system, motorized curtain in Spinning Machine, Air curtain at stretch & feed rollers and modified bottom exhaust.		Exhaust system at Spinning Machine is designed to control maximum fugitive emission. Motorized shutters are provided at Spinning machine, powerful bottom exhaust system is installed to minimize the fugitive emission in work zone.

<table>
<tr><td>7</td><td>Spent Catalyst (2.5 MT/year), Spent resin from DM plant (4MT/year) and Sulphur sludge will be disposed of through common TSDF and used oil will be sold to CPCB registered recyclers. Fly ash will be disposed off as per fly ash Notification 2003 and used for brick/cement manufacturing.</td><td>Industry has taken membership of Common TSDF M/s. Bharuch Enviro Infrastructure Limited (Membership No. OTH/474) & M/s. Safe Enviro Private Limited (Membership No. 103910) for disposal of Hazardous waste. Detail of hazardous waste disposal during reporting period (Oct’23 to Mar’24) is summarized in Table No.4.</td></tr>
<tr><td></td><td colspan="2">
Table No. 4
<table>
<tr><th>Name of Waste</th><th>CCA Quantity (MT/Year)</th><th>Disposal Quantity (MT) (Oct-23 to Mar-24)</th><th>Disposal Pathway</th><th>Agency</th></tr>
<tr><td>Spent Catalyst</td><td>15.00</td><td>4.86</td><td>Landfill</td><td>TSDF, M/s BEIL Infrastructure Limited</td></tr>
<tr><td>Used Oil</td><td>25.00</td><td>17.39</td><td>Recycling</td><td>M/s. S.B Lubricants, M/s. RK Steel</td></tr>
</table>
Note:

Sulphur De-ashing sludge is not generated as Industry has installed natural gas based CS2 plant.
Industry has installed 30 MW captive power plant after receiving environment clearance issued on 15.01.2018. Fly ash generated from CPP is sold to authorized cement & brick manufacturers along with compliance of all other provisions of fly ash Notification 2003 as amended up to date.

</td></tr>
<tr><td>8</td><td>The expert appraisal committee (Industry) in its 73rd meeting held on 24th -26th October 2007 considered the proposal. All Man Made Fibres (Rayon) manufacturing units are listed at Sl. No. 5(d) of schedule of EIA notification 2006 under category A, hence appraisal is at Central level. Since the project located at GIDC Notified industrial estate, Vilayat, Vagra, it does not need public consultation as per Para 7(i) III, stage (3) b. – Public Consultation of EIA Notification, 2006</td><td>Acknowledged, Industry is setup on Plot No.1, GIDC Industrial Estate Vilayat, Tal- Vagra, Dist. Bharuch</td></tr>
<tr><td>9</td><td>Based on information submitted by the project authorities, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA notification 2006 subject to the compliance of following Specific and General conditions.</td><td>Acknowledged, the compliance status of Specific and General conditions is as below;</td></tr>
</table>

A. Specific Condition: -

<table>
<tr><th>Sr.</th><th>Stipulation</th><th>Compliance Status</th></tr>
<tr><td>1</td><td>The project authorities shall maintain emission limit of 50 kg / Ton of VSF for CS2.</td><td>Industry has adopted control measures for CS2 emission from VSF manufacturing to achieve emission level far below the stipulated norms. CS2 Emission monitoring is done by NABL accredited laboratory on monthly basis. CS2 emission results for reporting period Oct’23 to Mar’24 is summarized in Table No.05
<table>
<tr><th colspan="3">Table No.05</th></tr>
<tr><td rowspan="2">NABL Laboratory Details</td><td>Month</td><td>CS2 (kg/T of VSF)</td></tr>
<tr><td>Norms</td><td>95 (kg/T of VSF)</td></tr>
<tr><td rowspan="11">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: - Handy Sampler
Instrument ID: - UERL/AIR/HS/03
Serial No.: - 91-I-19
Calibration Date: - 02.02.2024
Expiry Date: - 01.02.2025</td><td>Oct’23</td><td>12.60</td></tr>
<tr><td>Nov’23</td><td>13.20</td></tr>
<tr><td>Dec’23</td><td>11.80</td></tr>
<tr><td>Jan’24</td><td>12.20</td></tr>
<tr><td>Feb’24</td><td>11.60</td></tr>
<tr><td>Mar’24</td><td>12.10</td></tr>
<tr><td>Min</td><td>11.60</td></tr>
<tr><td>Max</td><td>13.20</td></tr>
<tr><td rowspan="2">Avg.</td><td rowspan="2">12.25</td></tr>
<tr><td colspan="3">At no time, the emission exceeded the prescribed limits.
(Refer Table No.05)</td></tr>
</table></td></tr>
<tr><td>2</td><td>A guard/polishing pond shall be provided before discharge of treated waste water into GIDC pipeline for discharge into sea and TOC should be continually monitored.</td><td>Three guard/polishing ponds are constructed with each pond having capacity of 25000 m3. Total holding capacity is 75,000 m3, which is suitable for storage of treated effluent around 72 hrs. Treated effluent is discharged into sea through GIDC pipeline.
A TOC Meter is installed for continuous monitoring of TOC of treated effluent. TOC meter reading for reporting period is summarized in Table No.06.</td></tr>
</table>

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<tr><td></td><td></td><td>
<table>
<tr><th colspan="2">Table No.06</th></tr>
<tr><th colspan="2">TOC Meter Make: - Xylem WTW (UOM - mg/l)</th></tr>
<tr><th>Month</th><th>Avg.</th></tr>
<tr><td>Oct’23</td><td>35.10</td></tr>
<tr><td>Nov’23</td><td>36.32</td></tr>
<tr><td>Dec’23</td><td>41.32</td></tr>
<tr><td>Jan’24</td><td>44.01</td></tr>
<tr><td>Feb’24</td><td>42.59</td></tr>
<tr><td>Mar’24</td><td>57.76</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>The project authorities shall install at least 11 multiple effect evaporators to achieve higher than 65% recovery of Sodium Sulphate.</td><td>Industry has installed 10 nos. of more efficient, high capacity (less specific steam consumption) 14 stage multiple effect evaporator (MEE). Total installed evaporation capacity is 280 m3/hr. Post expansion & increase in production capacity in EC, additional 10 nos. are being installed with 16 stage multiple effect evaporator. Total installed evaporation capacity is 350 m3/hr.</td></tr>
<tr><td rowspan="4">4</td><td>Electrostatic Precipitators (ESP’s) to power plant boiler shall be provided to control particulate matter.</td><td>Electrostatic Precipitators (ESP’s) to power plant boiler has been provided to control particulate matter.</td></tr>
<tr><td>3-stage condensing system for recovery of CS2</td><td>3 stage condensing system for CS2 recovery is provided.</td></tr>
<tr><td>Scrubber to Acid plant chimney</td><td>Alkali scrubber has been installed at Acid Plant chimney.</td></tr>
<tr><td>klaus kiln recovery system to recover Sulphur from CS2 plant gases, followed by lime water absorber shall be provided</td><td>Klaus kiln recovery system has been installed for recover Sulphur from CS2 plant gases. Klaus kiln Systems recovers > 96% Sulphur and tail gases is passed through alkali scrubber before discharge from stack.</td></tr>
<tr><td>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
<table>
<tr><th colspan="4">Table No.07</th></tr>
<tr><th>Month</th><th colspan="2">CS2 Plant</th><th>Acid Plant-1</th><th>Acid Plant-2</th></tr>
<tr><th>Unit</th><th>CS2 (mg/nm3)</th><th>H2S (mg/nm3)</th><th>SO2 (Kg/T of Acid)</th><th>SO2 (Kg/T of Acid)</th></tr>
<tr><td>GPCB limit</td><td>180</td><td>45</td><td>1.5</td><td>1.5</td></tr>
<tr><td>Oct’23</td><td>BDL</td><td>BDL</td><td>1.11</td><td>0.96</td></tr>
</table>
</td></tr>
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<table>
<tr><td></td><td></td><td>
<table>
<tr><td>Nov’23</td><td>BDL</td><td>BDL</td><td>1.02</td><td>1.08</td></tr>
<tr><td>Dec’23</td><td>BDL</td><td>BDL</td><td>1.12</td><td>1.01</td></tr>
<tr><td>Jan’24</td><td>BDL</td><td>BDL</td><td>1.06</td><td>1.16</td></tr>
<tr><td>Feb’24</td><td>BDL</td><td>BDL</td><td>1.08</td><td>1.14</td></tr>
<tr><td>Mar’24</td><td>BDL</td><td>BDL</td><td>0.98</td><td>1.04</td></tr>
<tr><td>Min</td><td>BDL</td><td>BDL</td><td>0.98</td><td>0.96</td></tr>
<tr><td>Max</td><td>BDL</td><td>BDL</td><td>1.12</td><td>1.16</td></tr>
<tr><td>Average</td><td>BDL</td><td>BDL</td><td>1.06</td><td>1.07</td></tr>
<tr><td colspan="5">Note: At no time, the emission exceeded the prescribed limits.
(Refer Table No.07)</td></tr>
</table>
</td></tr>
<tr><td></td><td>Report shall be submitted to Ministry's regional office, Bhopal, CPCB & GPCB</td><td>Reports are regularly submitted to Ministry's regional office, Bhopal, CPCB & GPCB with compliance report every six months. Last compliance report submitted on 23.11.2023</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>Industry has installed state of the art advanced technology for achieving standards notified time to time for Rayon Industry by Ministry of Environment, Forest and Climate change.</td></tr>
<tr><td></td><td>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.</td><td>CS2 & H2S is being monitored regularly. Monitoring details for reporting period from Oct’23 to Mar’24 is tabulated in Table No.08. Monitoring results are regularly submitted to Ministry Regional office, Bhopal, GPCB and CPCB along with six monthly compliance report.
<table>
<tr><th colspan="4">Table No.08</th></tr>
<tr><th rowspan="2">NABL Laboratory Details</th><th>Month</th><th>CS2 (kg/T of VSF)</th><th>H2S (kg/T of VSF)</th></tr>
<tr><th>CCA Norms></th><th>95</th><th>30</th></tr>
<tr><td rowspan="6">Agency: - Unistar Environment & Agency: - Unistar Environment & Research lab Pvt. Ltd
Address: - Near GIDC, Char Rasta, Vapi
NABL: - NABL Certificate Number TC-</td><td>Oct’23</td><td>12.60</td><td>3.92</td></tr>
<tr><td>Nov’23</td><td>13.20</td><td>4.10</td></tr>
<tr><td>Dec’23</td><td>11.80</td><td>3.80</td></tr>
<tr><td>Jan’24</td><td>12.20</td><td>3.50</td></tr>
<tr><td>Feb’24</td><td>11.60</td><td>3.30</td></tr>
</table>
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<table>
<tr><td></td><td></td><td>
<table>
<tr><td rowspan="5">7753
Details of instrument Used for Monitoring: -
Instrument Name: - Handy Sampler
Instrument ID: - UERL/AIR/HS/03
Serial No.: - 91-I-19
Calibration Date: - 02.02.2024
Expiry Date: - 01.02.2025</td><td>Mar’24</td><td>12.10</td><td>3.80</td></tr>
<tr><td>Min</td><td>11.60</td><td>3.30</td></tr>
<tr><td>Max</td><td>13.20</td><td>4.10</td></tr>
<tr><td rowspan="2">Avg.</td><td rowspan="2">12.25</td><td rowspan="2">3.74</td></tr>
<tr></tr>
<tr><td colspan="4">Note: At no time, the emission exceeded the prescribed limits.
(Refer Table No.08)</td></tr>
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</td></tr>
<tr><td></td><td>Provision shall be made for retrofit additional equipment if necessary in future.</td><td>Industry has made provision for additional equipment during setup of Plant. Industry has adopted H2S Scrubbing Plant based on advance technology for H2S abetment and CAP Plant for recovery of CS2.</td></tr>
<tr><td>7</td><td>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</td><td>A full-fledged Effluent Treatment Plant is installed having Primary and Secondary treatment facility based on extended aeration activated sludge process. Effluent Treatment Plant has of following major equipment;
1. Grit Chamber – 2 Nos
2. Primary Clarifier – 2 Nos
3. Biological Reactor - 7 aeration Lagoons
4. Secondary Clarifier - 2 Nos
5. Treated Effluent RO – 14 MLD Capacity
Treated effluent quality is monitored on regular basis and meet the norms prescribed by GPCB. Treated effluent quality results for reporting period from Oct’23 to Mar’24 is summarized in Table No.09.</td></tr>
<tr><td></td><td>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.</td><td>
<table>
<tr><td colspan="2">Table No.10</td></tr>
<tr><td colspan="2">Effluent Discharge (m3/day)</td></tr>
<tr><td>Month</td><td>Average</td></tr>
<tr><td>Oct’23</td><td>13976</td></tr>
<tr><td>Nov’23</td><td>12134</td></tr>
<tr><td>Dec’23</td><td>13147</td></tr>
<tr><td>Jan’24</td><td>11766</td></tr>
<tr><td>Feb’24</td><td>12403</td></tr>
</table>
The quantity of effluent discharged is 12.26 m3/Ton of Fibre against stipulation of 60m3/TF.
Avg. water Intake: 15500 m3/day
Effluent discharge: 12261 m3/day
Details of effluent discharge for
</td></tr>
</table>

		Mar'24	10138	reporting period are tabulated in **Table No.10**
		Avg.	**12261**	

Agency: - Unistar Environment & Research lab Pvt. Ltd

Address: -GIDC, Char Rasta, Vapi

NABL: - NABL Certificate Number TC-7753

Table No.09

Month	FINAL TREATED EFFLUENT																											
	pH	Temp.	TSS	Oil & Grease	Phenolic Comp	Cyanide	Fluoride	Sulphide	Amm. N as N	Total Kzeld Nit. (TKN)	Nitrate Nitrogen	Total Res Cl2	Arsenic	Trivalent Chromium	Hexavalent Chrom	Cu	Pb	Hg	Ni	Zn	Cd	BOD	COD	Selenium	Vanadium	Mn	Iron	Bio Assay-96 Hrs. fish	Toxicity Test - 96 Hrs. fish
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	mg/lit	mg/lit
Limit	06-09		100	10	5	0.2	15	5	50	50	50	1	0.2	2	0.1	3	0.1	0.01	3	15	0.05	100	250	0.05	0.2	2	3	90%	90%
Oct-23	7.86	30.00	10.00	BDL	BDL	0.20	1.11	0.40	5.20	10.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.14	BDL	60.00	222.00	BDL	BDL	0.65	1.13	Complied	Complied
Nov-23	7.05	29.00	8.00	BDL	BDL	BDL	0.78	0.25	BDL	5.90	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.10	0.11	0.04	52.00	181.50	BDL	BDL	0.42	0.99	Complied	Complied
Dec-23	7.38	29.50	18.00	BDL	BDL	BDL	1.38	BDL	BDL	4.60	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.62	0.06	38.00	124.90	BDL	BDL	0.30	2.13	Complied	Complied
Jan-24	7.20	29.00	15.00	BDL	BDL	BDL	1.01	BDL	BDL	3.70	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.21	0.28	0.03	46.00	160.00	BDL	BDL	0.18	0.85	Complied	Complied
Feb-24	7.01	30.00	44.00	BDL	BDL	BDL	0.90	BDL	BDL	5.20	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.15	0.25	0.04	31.00	109.50	BDL	BDL	0.14	0.66	Complied	Complied
Mar-24	7.59	30.50	24.00	BDL	BDL	BDL	2.00	0.60	2.80	6.70	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.19	0.26	0.03	52.00	160.80	BDL	BDL	0.16	1.13	Complied	Complied
Min	7.01	29.00	8.00	BDL	BDL	BDL	0.78	0.25	2.80	3.70	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.11	0.03	31.00	109.50	BDL	BDL	0.14	0.66	**Complied**	**Complied**
Max	7.86	30.50	44.00	BDL	BDL	BDL	2.00	0.60	5.20	10.80	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.10	0.62	0.06	60.00	222.00	BDL	BDL	0.65	2.13	**Complied**	**Complied**
Avg	7.35	29.67	19.83	BDL	BDL	BDL	1.20	0.42	4.00	6.15	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.32	0.28	0.04	46.50	159.78	BDL	BDL	0.31	1.15	**Complied**	**Complied**

Note: All parameters are well below the prescribed norms (Kindly refer above Table No.09)

8	The project authorities shall produce the copy of agreement with GIDC for discharge of treated wastewater to the Ministry and its Regional office within three months and submit the same to the Ministry / Regional office	Agreement done with GIDC for supply of water and discharge of treated effluent through GIDC pipeline to deep see is 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;** **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
9	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.	In house research / studies done and steps taken to further reduce the CS2 emission level are as under: 1) Best Available Technology based Carbon Absorption Plant (CAP) is installed for recovery of CS2. (Brief Details of the technology is enclosed as **Annexure-1** 2) Natural Gas based CS2 plant installed in place of conventional charcoal process to avoid CS2 emission from CS2 plant.	
10	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 GPCB to ensure CS2 and H2S emission not exceed 100 microgram/m3 and 150 microgram/m3 respectively.	4 nos. of ambient air quality monitoring stations covering all four directions are placed in consultation with the GPCB. Ambient air quality monitoring is being done regularly for CS2 & H2S emission. CS2 & H2S concentration is well within the prescribed standards. Summary of six month (Oct-23 – Mar-24) monitoring results is tabulated below in **Table No. 11.**	

Agency: - Unistar Environment & Research Lab Pvt. Ltd

Instrument ID & Name: - 1) UERL/AIR/RDS/19– Respirable Dust Sampler (RDS: SR.No.1796 DTD 2013) (Calibration Period: - 31.07.2023 – 30.07.2024)
2) UERL/AIR/FPS/22– Fine Particulate Sampler (FPS: SR.No.195 DTK 2013) (Calibration Period: - 31.07.2023 – 30.07.2024)

Table No. 11 (UOM - microgram/m3)

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**
Oct-23	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Nov-23	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Dec-23	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Jan-24	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Feb-24	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Mar-24	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

At no time, the emission exceeded the prescribed limits. **(Refer Table No.11)**

11	The Solid & Hazardous waste shall be segregated according to its calorific contents and stored separately for treatment and disposal	The solid and hazardous waste is segregated based on its properties and Treatment & Disposal is done accordingly. Industry has taken membership of the common TSDF BEIL, Dahej & SEPL, Dahej having facility of incineration and landfill. Waste disposal is being done as per the procedure laid down by CPCB and GPCB. Waste disposal detail is tabulated in **Table No. 12**

Table No. 12

Month	Chemical sludge-ETP (MT)		Used Oil (MT)		PVC bags/Liners (MT)		Bio Sludge from ETP (MT)		Spent Catalyst (MT)		Spent Resin (MT)	
	Category - 35.3		Category – 5.1		Category – 33.1		Category – 35.3		Category – 17.2		Category – 35.2	
	Generation	Disposal	Generation	Disposal	Generation	Disposal	Generation	Disposal	Generation	Disposal	Generation	Disposal
CC&A Qty.	**20000 MT**		**25KL**		**160 MT**		**15000 MT**		**15.0 MT**		**12.0 MT**	
Oct'23	1300.00	1223.99	0.00	0.00	7.06	7.06	100.00	260.00	0.00	0.00	0.00	0.00
Nov'23	1200.00	551.23	2.12	2.12	6.79	6.79	150.00	305.82	2.30	2.30	0.00	0.00
Dec'23	1200.00	1301.79	2.51	2.51	13.71	13.71	400.00	547.18	0.00	0.00	0.00	0.00
Jan'24	1900.00	2199.88	0.00	0.00	1.33	1.33	700.00	661.14	0.00	0.00	0.00	0.00
Feb'24	1689.30	1479.53	2.64	2.64	10.6	10.6	700.00	683.44	0.00	0.00	0.00	0.00
Mar'24	2600.00	2500.72	0.00	0.00	13.66	13.66	700.00	700.66	0.00	0.00	0.00	0.00
Total	**9889.30**	**9257.14**	**7.27**	**7.27**	**53.15**	**53.15**	**2750.00**	**3158.24**	**2.30**	**2.30**	**0.00**	**0.00**
Disposal Pathway	**Utilization**		**Recycling**		**Recycling**		**Land Fill**		**Land Fill**		**Incineration**	
Disposed To=>	**J K, Ultratech Cement**		**M/S S B Lubricants**		**Sold to authorized Recyclers**		**TSDF BEIL & SEPL (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.	Fly Ash generated from CPP is supplied to authorized bricks & cement manufacturers. Unit is filling stipulated comprehensive report annually and the same is being submitted to MOEFCC, CPCB & SPCB.
13	Green belt of adequate width and density shall be developed in 150 Acres out of 567 acres project area to mitigate the effect of	Industry has developed greenbelt, in open space area and around

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<td>fugitive emission all around the plant.
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</td>
<td>factory complex along the boundary wall. Total 1,32,500 nos. tree have been planted till Mar-2024. Existing plantation details and proposed plan is tabulated in Table No.13
<table>
<tr><th colspan="4">Table No. 13</th></tr>
<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 Plants</td></tr>
<tr><td>4</td><td>2020-21</td><td>25</td><td>15,000 Plants</td></tr>
<tr><td>5</td><td>2021-22</td><td>25</td><td>15,000 Plants</td></tr>
<tr><td>6</td><td>2022-23</td><td>25</td><td>20,000 Plants</td></tr>
<tr><td>7</td><td>2023-24</td><td>25</td><td>15,000 Plants</td></tr>
<tr><td colspan="2">Total=></td><td>195</td><td>1,32,500 Plants</td></tr>
</table>
Details of existing plant species and proposed plant species along with Plant species for odor management, Gaseous emission (SO2 & NOx) tolerant species is enclosed as Annexure-2. Plant species are selected as per the directives of CPCB & DFO.</td>
</tr>
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<td>14</td>
<td>The project proponent shall comply with the environmental protection measures and safeguards recommended in the EIA/EMP</td>
<td>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 & GPCB. Detailed EIA/EMP report is explained below & Capex – Opex Details are tabulated under Table No. 14.</td>
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</table>

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	Opex FY-22	Opex FY-23	Opex FY-24
1	Effluent Treatment	79.00	11.50	10.56	11.00	11.00	13.35	14.85	35.60	38.63
2	Air Pollution Control (Including H2S Scrubbing Plant & CAP Plant)	350.00	03.50	04.00	03.30	05.17	14.35	14.23	162.85	150.80
3	Green Belt Development	00.50	00.50	00.55	01.30	0.51	0.13	0.08	1.09	3.83
4	Waste Management	01.50	00.50	00.60	01.60	3.07	2.90	1.78	4.37	2.97
Total Amount (In Crore) =>		**431.00**	**16.00**	**15.71**	**17.20**	**19.75**	**30.73**	**30.94**	**203.91**	**196.23**

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. 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 upto 72 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.

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 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.

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 Ministry's regional office at Bhopal within three months.	Industry has obtained membership of common TSDF, BEIL, Bharuch for disposal of hazardous waste. Details are as under; **TSDF Name: -** Bharuch Enviro Infrastructure Limited, Dahej. **Ref:** -BEIL/ANK/2022, Membership No. OTH/474 **Membership Qty: -** 8000 Ton/Annum **TSDF Name: -** Safe Enviro Pvt Ltd, Membership No. 103910 **Membership Qty: -** 5000 Ton/Annum Industry has taken permission / membership of GIDC pipeline network for disposal of treated effluent.
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.	We have established an Occupational Health Center (OHC). Routine periodical medical examinations for all employees are carried out. Records are maintained at OHC as per the Factories Act. Findings of Health surveillance reveals that no one is suffering from any occupational health related disease. Details of test conducted and numbers of employee covered is summarized in **Table No. 15**

Table No. 15

Spirometry (FY-24)

Name of Dept.	Total Employees	FVC (liters)	FEV 1	FEV 1/ FVC %	PEF Litres/Sec	Conclusion
Admin Department (SCM, Purchase, Account, Legal, IT Dept.)	**92**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	
Process Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC, Civil)	**750**	0	0	0	0	Approx. 0% is deviation from normal
%		0	0	0	0	
Technical Cell, WCM, Customer Focus, Electrical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**130**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	
Mechanical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**290**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	
QC & QA Instrumentation Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**132**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	
P&A (HR, Security & Services, ER, CSR, HORTICULTURE, Workshop) Dept.	**30**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	

Table No. 15						
Spirometry (FY-24)						
Name of Dept.	Total Employees	FVC (liters)	FEV 1	FEV 1/ FVC %	PEF Litres/Sec	Conclusion

Circulatory system (FY- 24)						Vision		ENT
Employees	Total Employees	Pulse	ECG	Blood Pressure	Hemat Hb	Distant Vision	Color Blindness	Audiometry
Admin Department (SCM, Purchase, Account, Legal, IT Dept.)	**92**	0	0	3	0	0	0	3
%		0	0	3.26	0	0	0	3.26
Process Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC, Civil)	**750**	6	3	18	3	4	25	7
%		0.8	0.4	2.4	0.4	0.5	3.33	0.9
Technical Cell, WCM, Customer Focus, Electrical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**130**	1	2	5	1	0	4	1
%		0.76	1.5	3.8	0.76	0	3	0.76
Mechanical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**290**	2	1	8	1	1	12	5
%		0.68	0.34	2.75	0.34	0.34	4.13	1.72
QC & QA Instrumentation Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**132**	0	1	2	0	7	5	1
%		0	0.75	1.5	0	5.3	3.78	0.75
P&A (HR, Security & Services, ER, CSR, HORTICULTURE, Workshop) Dept.	**30**	0	0	0	1	0	0	1
%		0	0	0	3.33	0	0	3.33

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 is being done by Environment Lab established by industry and 3rd party NABL accredited laboratory. 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 by nearby villages.
	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	Water, Air quality & production is being monitored regularly and compared with base line. Same is being reported to Ministry’s Regional

	office, GPCB & CPCB	office on six monthly basis and submitting reports to GPCB on monthly basis for the same. Data are tabulated Under **Table No.16** Crop pattern study is done by M/s Kadam Environmental Consultant.
Agency: - Unistar Environment & Research Lab **Address: -** Near GIDC Office Char Rasta, Vapi-396195		**NABL Accreditation: -** NABL Certificate Number TC-7753

Table No.16

Month	Up Stream - Down Stream (Bhukhi Khadi) Analysis Data																							
	Up-Stream												Down-Stream											
	pH	Temp.	Turbidity	TSS	Ammonical Nitrogen	Nitrate	Phenolic Comp	BOD	Dissolved Oxygen	Total Nitrogen	Salinity	Dissolved Phosphate	pH	Temp.	Turbidity	TSS	Ammonical Nitrogen	Nitrate	Phenolic Comp	BOD	Dissolved Oxygen	Total Nitrogen	Salinity	Dissolved Phosphate
Unit	-	deg C	mg/lit	mg/lit	mg/lit	PPM	PPM	mg/lit	mg/lit	mg/lit	ppt	mg/lit	-	deg C	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit	mg/lit
Oct-23	8.08	30.00	0.10	62.00	0.27	BDL (MDL:0.1)	BDL (MDL:0.001)	2.00	6.60	2.60	0.19	0.26	7.82	30.00	0.10	28.00	0.26	BDL (MDL:0.1)	BDL (MDL:0.001)	BDL (MDL:1.0)	6.80	3.10	0.24	0.30
Nov-23	7.80	28.00	0.10	68.00	0.42	BDL (MDL:0.1)	BDL (MDL:0.001)	2.00	6.20	2.80	0.21	0.31	7.86	28.00	0.10	66.00	0.36	BDL (MDL:0.1)	BDL (MDL:0.001)	2.00	6.50	3.40	0.25	0.37
Dec-23	8.05	29.40	0.10	6.00	0.22	1.20	BDL (MDL:0.001)	2.00	6.50	1.70	0.14	0.19	7.98	29.40	0.10	4.00	0.24	1.10	BDL (MDL:0.001)	2.00	6.60	2.00	0.15	0.20
Jan-24	7.49	29.00	0.10	18.00	0.25	0.60	BDL(MDL:0.001)	BDL(MDL:1.0)	6.60	2.10	0.39	0.30	7.79	29.00	0.10	14.00	0.26	1.00	BDL(MDL:0.001)	BDL(MDL:1.0)	6.70	2.20	0.38	0.34
Feb-24	8.02	30.00	0.10	10.00	0.29	0.40	BDL(MDL:0.001)	BDL(MDL:1.0)	6.70	2.60	0.52	0.32	8.12	30.00	0.10	8.00	0.29	0.80	BDL (MDL:0.001)	BDL(MDL:1.0)	6.80	2.80	0.56	0.36
Mar-24	8.01	30.50	1.00	BDL(MDL:4.0)	0.24	0.60	BDL (MDL:0.001)	BDL(MDL:1.0)	6.60	2.80	0.34	BDL(MDL:0.1)	7.94	30.50	1.00	BDL(MDL:4.0)	0.26	0.50	BDL (MDL:0.001)	BDL(MDL:1.0)	6.70	3.00	0.34	BDL(MDL:0.1)

Note: All parameters are well within the prescribed limits.

B. General Condition: -

I)	The project authorities shall strictly adhere to the stipulations of the SPCB/State Government or any statutory body.	Industry is complying all the stipulations of GPCB / state government. GPGB has granted Common Consent and Authorization (CCA) to industry which is valid up to 23/03/2024.
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.	No expansion or modification is done in industry without prior permission of Ministry. Expansion is done with following prior permission / clearance. Environment Clearance No. F. No. J-11011/321/2016-IA-II(I) Pt dated 15.01.2018 Environment Clearance No. F. No. J-11011/321/2016-IA II (I) dated 16.08.2018 Environment Clearance No. F. No. J-11011/321/2016-IAII(I) dated 17.10.2019

III)	The gaseous emission (SO2, NOx, H_2S & CS_2) and Particulate Matter along with RSPM levels from various process units shall confirm to the standards prescribed by the concerned authorities from time to time. 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	Gaseous emission is monitored regularly and results confirm to the standards specified by both GPCB and CPCB. The lab results are summarized for the reporting period from Oct-23 to Mar-24 in table above **Table No.17 & Table No. 18** below. Industry has developed Controls to put off the operations in case of failures of any pollution control devices and operations are not restored until the desired efficiency is achieved.

Table No. 17

Third Party Lab Details	Month of Sample	CS2 (Kg/Ton of Fibre)
	CCA Norms	**95**
	Oct'23	12.60
	Nov'23	13.20
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/AIR/HS/03* ***Serial No.: -*** *91-I-19* ***Calibration Date: -*** *03.02.2024* ***Expiry Date:*** *- 02.02.2025*	Dec'23	11.80
	Jan'24	12.20
	Feb'24	11.60
	Mar'24	12.10
	Min	11.60
	Max	13.20
	Avg.	12.25
At no time, the emission exceeded the prescribed limits. **(Refer Table No.17)**		

Agency: - Unistar Environment & Research Lab Pvt. Ltd

Instrument ID & Name: -1) Respirable Dust Sampler - RDS: SR. No. 160203106 - UERL/AIR/RDS/ 02(Calibration Period: - 31.07.2023 – 30.07.2024)
2) Fine Particulate Sampler - FPS: SR. No. 160402021 - UERL/AIR/FPS/08(Calibration Period: - 31.07.2023 – 30.07.2024)

Table No. 18 (For Ambient Air) µg/m3

Month	Near ETP MCC Room						Near ER Office					
	SPM PM10	SPM PM2.5	SO_2	NO_2	H_2S	CS_2	SPM PM10	SPM PM2.5	SO_2	NO_2	H_2S	CS_2
Norms	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**
Oct'23	54.2	20.3	20.3	21.6	BDL	BDL	51.8	17.0	18.8	18.3	BDL	BDL
Nov'23	52.8	19.6	18.4	21.8	BDL	BDL	50.6	18.2	21.7	24.4	BDL	BDL

Dec'23	54.9	17.4	20.3	24.0	BDL	BDL	52.6	20.0	18.8	20.3	BDL	BDL
Jan'24	56.1	20.9	18.5	21.4	BDL	BDL	50.8	19.1	21.3	24.1	BDL	BDL
Feb'24	58.1	18.3	20.3	23.6	BDL	BDL	53.6	20.3	18.8	21.6	BDL	BDL
Mar'24	55.4	20.2	18.6	22.0	BDL	BDL	50.6	18.5	21.6	23.8	BDL	BDL
Min	**52.8**	**17.4**	**18.4**	**21.4**	**BDL**	**BDL**	**50.6**	**17**	**18.8**	**18.3**	**BDL**	**BDL**
Max	**58.1**	**20.9**	**20.3**	**24**	**BDL**	**BDL**	**53.6**	**20.3**	**21.7**	**24.4**	**BDL**	**BDL**
Average	**55.3**	**19.5**	**19.4**	**22.4**	**BDL**	**BDL**	**51.7**	**18.9**	**20.2**	**22.1**	**BDL**	**BDL**

Note: At no time, the emission exceeded the prescribed limits. (Refer Table No.18)

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 in consultation with GPCB and 4 nos. AAQ monitoring stations installed in nearby 4 villages, at Derol, Vilayat, Sarnar and Argama within 2-3 kms radius. Monthly monitoring is being done on monthly by NABL accredited Lab. The Ambient Air quality results for the period of Oct-23 to Mar-24 is tabulated as under **Table No. 19.**

Agency: - Unistar Environment & Research Lab Pvt. Ltd

Instrument ID & Name: - 1) Respirable Dust Sampler - RDS: SR. No. 160203106 - UERL/AIR/RDS/ 02(Calibration Period: - 31.07.2023 – 30.07.2024)

2) Fine Particulate Sampler - FPS: SR. No. 160402021 - UERL/AIR/FPS/08(Calibration Period: - 31.07.2023 – 30.07.2024)

Table No. 19

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
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**
Oct-23	70.1	25.1	21.4	21.2	BDL	BDL	72.9	23.6	17.8	18.8	BDL	BDL	77.5	24.4	18.6	20.5	BDL	BDL	69.2	21.5	21.2	23.8	BDL	BDL
Nov-23	75.2	22.7	23.2	25.5	BDL	BDL	76.8	27.2	18.7	20.6	BDL	BDL	80.1	25.7	15.6	19.4	BDL	BDL	73.8	26.1	20.8	23.6	BDL	BDL
Dec-23	52.9	16.5	21.7	24.2	BDL	BDL	58.5	23.3	17.4	20.3	BDL	BDL	57.7	17.8	14.7	18.2	BDL	BDL	58.2	21.6	19.2	21.6	BDL	BDL
Jan-24	55.6	18.7	20.3	21.9	BDL	BDL	58.2	21.9	18.7	21.6	BDL	BDL	52.9	17.3	18.2	20.8	BDL	BDL	57.4	22.0	21.8	23.2	BDL	BDL
Feb-24	57.2	20.2	17.2	19.8	BDL	BDL	51.8	17.0	21.8	25.0	BDL	BDL	54.4	18.2	19.6	21.6	BDL	BDL	59.2	23.2	17.2	24.2	BDL	BDL
Mar-24	55.3	20.6	19.8	21.9	BDL	BDL	50.5	19.8	23.1	26.7	BDL	BDL	50.1	15.7	23.2	27.2	BDL	BDL	56.6	21.9	21.4	24.5	BDL	BDL
Min	52.9	16.5	17.2	19.8	BDL	BDL	50.5	17.0	17.4	18.8	BDL	BDL	50.1	15.7	14.7	18.2	BDL	BDL	56.6	21.5	17.2	21.6	BDL	BDL
Max	75.2	25.1	23.2	25.5	BDL	BDL	76.8	27.2	23.1	26.7	BDL	BDL	80.1	25.7	23.2	27.2	BDL	BDL	73.8	26.1	21.8	24.5	BDL	BDL
Average	61.1	20.6	20.6	22.4	BDL	BDL	61.5	22.1	19.6	22.2	BDL	BDL	62.1	19.9	18.3	21.3	BDL	BDL	62.4	22.7	20.3	23.5	BDL	BDL

Note: All results are in µg/m3 and Till date, the emission level has never exceeded prescribed limits. **(Refer Table No.19)**

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. Details are as under; **Rayon plant** – 175m stack; **H2SO4 plant-1** – 50 m stack; **H2SO4 plant-2** – 60 m stack; **CS2 Plant** – 100 m stack

	The scrubber water shall be sent to ETP for further treatment	The scrubber water is routed through ETP for further treatment.
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 are 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 are 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	We are recovering Sulphur from H2S gas which is generated during fibre spinning process & reuse it as a raw material for the manufacturing of CS2 & H2SO4.
	- 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 to avoid spillages.
	- Use of "closed feed" system into batch reactors	All chemicals are fed in closed feed system to avoid any spillage.
	- Venting equipment through vapor recovery system	CS2 vapor recovery system is installed at each spinning machine (6 no's) to recover CS2.
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, product and raw material storage area is being monitored by Environmental Lab on regular basis and results are well within stipulated norms. Lab data are tabulated as **Table No. 20**

Inst. Calibration done by: - TMS

Instrument Name: - Toxirae III (for H2S Measurement) **&** For CS2 measurement following IS 5182 (Part 20): 1982 method

Serial No.: - G011236349, **Calibration Date: -** 13.09.2023, **Expiry Date: -** 11.09.2024

Table No. 20

Month	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
Oct'23	0.10	Tr	0.12	Tr	0.13	Tr	0.10	Tr	0.11	Tr	0.13	Tr	0.12	Tr	0.14	Tr	0.12	Tr	0.14	Tr	0.14	Tr	0.14	Tr
Nov'23	0.12	Tr	0.14	Tr	0.14	Tr	0.12	Tr	0.11	Tr	0.14	Tr	0.12	Tr	0.14	Tr	0.14	Tr	0.15	Tr	0.14	Tr	0.14	Tr
Dec'23	0.11	Tr	0.12	Tr	0.14	Tr	0.12	Tr	0.14	Tr	0.12	Tr	0.14	Tr	0.13	Tr	0.12	Tr	0.12	Tr	0.15	Tr	0.14	Tr
Jan'24	0.12	Tr	0.13	Tr	0.11	Tr	0.11	Tr	0.10	Tr	0.12	Tr	0.12	Tr	0.14	Tr	0.13	Tr	0.12	Tr	0.15	Tr	0.12	Tr
Feb'24	0.14	Tr	0.12	Tr	0.13	Tr	0.10	Tr	0.12	Tr	0.08	Tr	0.14	Tr	0.15	Tr	0.12	Tr	0.14	Tr	0.15	Tr	0.15	Tr
Mar'24	0.12	Tr	0.12	Tr	0.14	Tr	0.10	Tr	0.13	Tr	0.12	Tr	0.11	Tr	0.14	Tr	0.12	Tr	0.12	Tr	0.12	Tr	0.13	Tr
Min	**0.10**	**Tr**	**0.12**	**Tr**	**0.11**	**Tr**	**0.10**	**Tr**	**0.10**	**Tr**	**0.08**	**Tr**	**0.11**	**Tr**	**0.13**	**Tr**	**0.12**	**Tr**	**0.12**	**Tr**	**0.12**	**Tr**	**0.12**	**Tr**
Max	**0.14**	**Tr**	**0.14**	**Tr**	**0.14**	**Tr**	**0.12**	**Tr**	**0.14**	**Tr**	**0.14**	**Tr**	**0.14**	**Tr**	**0.15**	**Tr**	**0.14**	**Tr**	**0.15**	**Tr**	**0.15**	**Tr**	**0.15**	**Tr**
Avg.	**0.12**	**Tr**	**0.13**	**Tr**	**0.13**	**Tr**	**0.11**	**Tr**	**0.12**	**Tr**	**0.12**	**Tr**	**0.13**	**Tr**	**0.14**	**Tr**	**0.13**	**Tr**	**0.13**	**Tr**	**0.14**	**Tr**	**0.14**	**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 SPCB shall be obtained for collection, storage, treatment and disposal of hazardous wastes.	Industry is strictly complying the rules and guidelines under the Manufacture, storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. Industry has obtained license for storage of 60 KL light diesel oil and storage of 10 KL HSD at 2 locations in plant area for DG sets from Deputy Controller of Explosive from M/s PESO (PETROLEUM & Explosives Safety Organization). We have valid factory license from DISH. Industry has taken authorization (CC&A # AWH 100730) for collection, storage, treatment and disposal of hazardous wastes under the provisions of Hazardous Waste Rules, amended as on date. CCA issued by GPCB on 22nd June 2022 which is valid up to 23rd Mar 2024. Hazardous waste is being disposed to M/s. BEIL, Dahej & M/s. SEPL, Dahej (TSDF) facility and annual hazardous waste disposal details are submitted on GPCB XGN online site.

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 (Protection) Act, 1986 Rules 1989 viz.75 dB (day time and 70 dB (night time)	Industry has provided relevant noise control measures such as acoustic hoods, silencers, acoustic enclosures at all nose sources. Ambient noise inside the plant and around the plant in nearby villages conforms to the Environment (Protection) Act, 1986 Rules, 1989. The Noise level (dB) at workroom for reporting period from Oct'23 to Mar'24 is tabulated in **Table No. 21.**

Sound Level Meter: - SL 4023 SD

Reference Standard: - Sound Level Calibrator**, Sr. No.** 3421624**, Calibration Valid Up to:** 01.02.2025

Table No.21 (UOM – dBA)

Area	Oct-23		Nov-23		Dec-23		Jan-24		Feb-24		Mar-24	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
	75	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**
Main Gate	64.8	58.8	60.2	55.8	61.2	56.2	60.6	55.9	61.2	53.2	61.9	54.8
Material Gate	69.2	64.1	62.7	57.1	63.2	56.9	62.1	57.2	61.6	54.4	62.4	54.9
OHC	65.5	62.5	65.9	53.8	66.3	54.5	64.6	55.8	62.1	53.1	62.6	54.0
Derol	75	70	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0
Vilayat	65	55	65.0	55.0	65.0	55.0	65.0	55.0	65.0	55.0	65.0	55.0
Sarnar	55	45	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0
Argama	50	40	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0
Min	**50.0**	**40.0**	**50.0**	**40.0**	**50.0**	**40.0**	**50.0**	**40.0**	**50.0**	**40.0**	**50.0**	**40.0**
Max	**75.0**	**70.0**	**75.0**	**70.0**	**75.0**	**70.0**	**75.0**	**70.0**	**75.0**	**70.0**	**75.0**	**70.0**
Avg.	**63.5**	**56.5**	**62.0**	**53.8**	**62.2**	**53.9**	**61.8**	**54.1**	**61.4**	**53.0**	**61.7**	**53.4**

Note: All results are within prescribed limits. **(Refer Table No.21)**

XI)	The company shall develop rain water harvesting structures to harvest the runoff water for recharge of ground water	Survey has been done for roof top rain water harvesting. Job is already taken up at some locations, nearby locations to reservoir are diverted to fresh water reservoir. Tentative details of water saving done through implemented scheme are enclosed below:

Tentative Water Saving through Rain Water Harvesting (Oct-23 to Mar-24)

Reservoir Area-1	Reservoir Area-2	fire house area	Area	Rainfall			Rain Water Harvesting
M2				(MM)	(CM)	(Mtr.)	M3
86400	43200	240	129840	43.1	4.31	0.0431	5596.10

	The company shall undertake eco-development measures including	We have been undertaking various community development

XII)	community welfare measures in the project area for the overall improvement of the environment.	measures in and around 25 Villages and 45867 nos. of beneficiaries covered from Apr-23 to Mar'24. 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 & expenditure details of CSR activities 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	
2021-2022	1798.71	35.97	42.47	
2022-2023	1497.56	29.95	54.19	
Total=>	**12357.67**	**247.14**	**350.39**	**2.84 %**

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.	A Separate Environment Management Cell already exists with technically qualified personnel who are under the direct control of senior executives for Environment Management and monitoring function. Organogram of environment management cell is Enclosed as **Annexure-3**. Detail of testing facility & testing equipment available in environmental laboratory is enclosed as **Annexure-4.**
XIV)	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. The funds so provided shall not be diverted for any other purpose.	As mentioned in Environment Clearance, total project cost was INR 1200 Crores. As committed in the EIA/EMP, unit has allocated capital cost of INR 170.5 Crores and recurring cost INR 15.5 Crores per annum respectively for implementation of environmental pollution control measures as per condition stipulated by the

MoEF as well as state Govt.

Funds are utilized 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. Details of fund utilized for environmental management is mentioned in **Table-23**

Sr. No.	Particular	Capex	Opex FY-17	Opex FY-18	Opex FY-19	Opex FY-20	Opex FY-21	Opex FY-22	Opex FY-23	Opex FY-24
1	Effluent Water	79.00	11.50	10.56	11.00	11.00	13.35	14.85	35.60	38.63
2	Air Pollution Control (Including H2S Scrubbing Plant & CAP Plant)	350.00	03.50	04.00	03.30	5.17	14.35	14.23	162.85	150.80
3	Green Belt Development	00.50	00.50	00.55	01.30	0.51	0.13	0.08	1.09	3.83
4	Waste Management	01.50	00.50	00.60	01.60	3.07	2.90	1.78	4.37	2.97
Total Amount (In Crore) =>		**431.00**	**16.00**	**15.71**	**17.20**	**19.75**	**30.73**	**30.94**	**203.91**	**196.23**

XV)

The implementation of the project vis-à-vis environmental action plans shall be monitored by the concerned regional office of MoEF/ GPCB/ CPCB.

Acknowledged, Industry submits every six-monthly environment clearance compliance report to MoEFCC, CPCB and GPCB.

A six-monthly compliance status report shall be submitted to monitoring agencies and shall be posted on the website of the company.

Six monthly compliance status report is being regularly submitted to monitoring agencies as well as being posted on the website of the company. Last compliance report is summitted on 23.11.2023.

Compliance Period	Date of Report Submission
Oct-23 to Mar-24	23.11.2023

XVI)

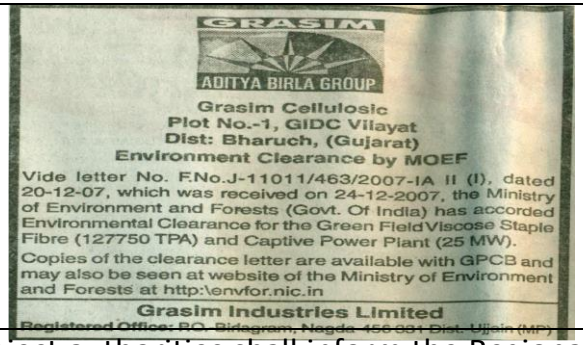
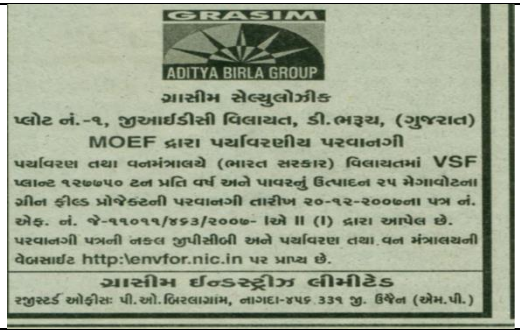
The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at website of MoEF htpp://envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely

Advertisement has been released in two local newspapers within 7 days from the date of issue of the clearance letter.

Issue of Environment Clearance: 20.12.2007

Release of Advertisement : 24.12.2007

EC Advertisement copies are enclosed below:

	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
		
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	Industry has informed BSE & NSE regarding commissioning of project vide letters dated 31.07.2014 & 03.03.2015. We have submitted the same to Regional Office of MoEF & CC, Bhopal. Project / plant activities are as under; (1) EC received on 20th Dec-07, (2) Civil & another 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	Acknowledged
11.	The Ministry reserves the rights to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	Acknowledged
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	Noted, Industry is complying all the applicable provisions of the Water (Prevention & control of pollution) Act-1977, the Air (Prevention & control of pollution) Act-1981, the Environment (Protection) Act- 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

	Insurance Act-1991 along with their amendments and rules.	and the Public Liability Insurance Act-1991.

Note: Copy of the Monthly Environmental Monitoring reports by NABL accredited laboratory for Effluent and Emission for the last month of the compliance period i.e. Mar-24 is enclosed as Annexure-6 for reference.

Compliance status on Environmental Clearance

MOEF Ref. Letter No.: J-11011/321/2016-IA II(I)Pt, Dated 15.01.2018

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 15.01.2018

General Profile: -

<table>
<tr><th>Sr. No.</th><th>Stipulation</th><th>Compliance Status</th></tr>
<tr><td>1.</td><td>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.</td><td>Acknowledged</td></tr>
<tr><td>2.</td><td>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)</td><td>Industry is setup 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</td></tr>
<tr><td>3.</td><td>The Existing & proposed products and capacities are as under;
<table>
<tr><th>S No.</th><th>Products/Units</th><th>Existing Capacity (as per EC dated 20.12.2007)</th><th>Additional Capacity</th><th>Capacity after Expansion</th></tr>
<tr><td>1</td><td>Viscose Staple Fibre</td><td>127750 TPA</td><td>127750 TPA (Debottlenecking 36500; New Machine 91250)</td><td>255500 TPA</td></tr>
<tr><td>2</td><td>Solvent Spun Cellulosic Fibre</td><td>--</td><td>36500 TPA</td><td>36500 TPA</td></tr>
<tr><td>3</td><td>Sulphuric Acid*</td><td>102200 TPA</td><td>80300 TPA</td><td>182500 TPA</td></tr>
</table></td><td>Industry has taken following subsequent environment clearance for expansion in production capacities;

• Environment Clearance No. F. No. J-11011/321/2016-IAII(I) dated 17.10.2019

Summary of total production capacities of all environmental clearances and actual production during the reporting period is mentioned in Table No.1</td></tr>
</table>

4	Carbon Disulphide*	23725 TPA	10950 TPA	34675 TPA
5	Anhydrous Sodium Sulphate (By Product)	83038 TPA	83038 – 127750 TPA	166076 – 210788 TPA
6	Captive Power Plant	25 MW	30 MW	55 MW
**Not listed in the Schedule to EIA Notification 2006 and subsequent amendments therein*				

Table-1

Products=>	**Viscose Staple Fibre**	**Carbon Di Sulphide**	**Sulfuric Acid**	**Sodium Sulphate (Byproduct)**	**Power Generation**	**Solvent Spun Cellulosic Fibre (Excel Fibre)**
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**	**36500**
Total Production (Tons) – Oct-23 to Mar-24	210144	17351	116562	126747	27.00	NIL
Total Production (Tons) – Apr-23 to Sep-23	207270	16319	109178	121029	29.71	NIL

Note: 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 & Letter No. SEIAA/GUJ/EC/1(d),4(d)&5(f)/98/2012 dt. 22.03.2012 for use of natural gas in place of charcoal in CS2 plant and 25MW powerplant which is installed by Grasim Chemical. As per the EC No. F. No. J-11011/321/2016-IAII(I) issued on 15.01.2018, remaining 30MW powerplant is installed by us. Kindly refer the Power generation details in above table.

4.	The existing land area is 222.63 ha and no additional land will be required for the proposed expansion.	Industry has setup proposed expansion on existing land area and no additional land is required.
	Industry will develop greenbelt in an area of 33 % i.e., 73.46 ha out of 222.63 ha area of the project.	Industry has developed greenbelt, in open space area and around factory complex along the boundary wall. Total 1,32,500 nos. tree have been planted till

<table>
<tr>
<td></td>
<td></td>
<td>Mar’2024. Existing plantation details and proposed plan is tabulated in Table No.2

<table>
<tr><th colspan="4">Table No. 2</th></tr>
<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 Plants</td></tr>
<tr><td>4</td><td>2020-21</td><td>25</td><td>15,000 Plants</td></tr>
<tr><td>5</td><td>2021-22</td><td>25</td><td>15,000 Plants</td></tr>
<tr><td>6</td><td>2022-23</td><td>25</td><td>20,000 Plants</td></tr>
<tr><td>7</td><td>2023-24</td><td>25</td><td>15.000 Plants</td></tr>
<tr><td colspan="2">Total=></td><td>210</td><td>1,32,500 Plants</td></tr>
</table>
Details of existing plant species and proposed plant species is enclosed as Annexure-2. Plant species are selected as per the directives of CPCB & DFO. Photograph of the existing green belts is attached in above EC Compliance report of EC Dated 17.10.2019.</td>
</tr>
<tr>
<td></td>
<td>The estimated project cost is Rs.2560 Crores.</td>
<td>We have spent Rs. 10 crores for debottlenecking of existing plant.
Industry has taken following subsequent environment clearance for expansion in production capacities;
• Environment Clearance No. F. No. J-11011/321/2016-IAII(I) dated 17.10.2019.
Project cost after amendment in EC for expansion and installation of new higher capacity lines is Rs. 3500 Cr.</td>
</tr>
<tr>
<td></td>
<td>Employment will be provided to 1300 persons as direct & 1200 persons indirectly after expansion.</td>
<td>Noted and complied the condition</td>
</tr>
</table>

<table>
<tr><td></td><td>Industry proposes to allocate Rs. 64.04 Crores towards enterprise social commitment</td><td>Industry has taken following subsequent environment clearance for expansion in production capacities;
• Environment Clearance No. F. No. J-11011/321/2016-IAII(I) dated 17.10.2019.
Industry has invested Rs. 10 Crores as a part of De-bottlenecking activity out of investment. Accordingly, industry has made action plan to spend Rs. 25 Lakhs in FY 20. RO drinking water facility is provided in the three nearby villages namely Sarnar, Saladra, Derol & spent 18.83 lacs as per the ESC plan.
Remaining amount is invested for the betterment of Environment as per the OM issued by MOEF Impact assessment Division– F. No, 22-65/2017-IA.III, dated 30th September 2020. We have invested Rs. 173.67 Crore for the installation Best available technologies i.e. CAP plant for CS2 Recovery and the H2S recovery plant as a part of our ESC investment. This has brought down emission levels far below the statutory norms.</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 from the project site. Narmada River (estuarine region) is at a distance of 9.0 km in SSW direction from the project site.</td><td>Acknowledged, Plant is setup on Plot No.1 GIDC Industrial Estate, Vilayat, Taluka- Vagra, Dist.- Bharuch and 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>The total fresh water requirement is 35,000 m3/day, which will be met from Gujarat Industrial Development Cooperation (GIDC) water supply.</td><td>GIDC offer cum allotment letter details are mentioned in Table No. 03.

<table>
<tr><th colspan="2">Table No. 03</th></tr>
<tr><td>1) Letter No.</td><td>GIDC/POJ/MKT/GRASIM/575, Dated 06th December-2006</td></tr>
<tr><td>Agreement for Water</td><td>15.60 MLD</td></tr>
</table>
</td></tr>
</table>

		Supply	
		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
		Agreement of water supply is made with GIDC on 06.12.2006, 29.12.2016 and 03.07.2019.	
	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.	The Effluent generated from plant is treated in the existing effluent treatment plant, and the treated effluent is discharged into Bay of Kambhat through GIDC pipeline. Treated effluent quality for the period of Oct-23 to Mar-24 is summarized as under **Table no. 04.**	

Table No.04

Third Party Lab Details: -

Agency: - Unistar Environment & Research lab Pvt. Ltd, **Address: -**GIDC, Char Rasta, Vapi

NABL: **-** NABL Certificate Number TC-7753

Month	FINAL TREATED EFFLUENT																											
	pH	Temp.	TSS	Oil & Grease	Phenolic Comp	Cyanide	Fluoride	Sulphide	Amm. N as N	Total Kzeld Nit. (TKN)	Nitrate Nitrogen	Total Res Cl2	Arsenic	Trivalent Chromium	Hexavalent Chrom	Cu	Pb	Hg	Ni	Zn	Cd	BOD	COD	Selenium	Vanadium	Mn	Iron	Bio Assay-96 Hrs. fish	Toxicity Test - 96 Hrs. fish
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	mg/lit	mg/lit
Limit	06-09		100	10	5	0.2	15	5	50	50	50	1	0.2	2	0.1	3	0.1	0.01	3	15	0.05	100	250	0.05	0.2	2	3	90%	90%
Oct-23	7.86	30.00	10.00	BDL	BDL	0.20	1.11	0.40	5.20	10.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.14	BDL	60.00	222.00	BDL	BDL	0.65	1.13	Complied	Complied
Nov-23	7.05	29.00	8.00	BDL	BDL	BDL	0.78	0.25	BDL	5.90	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.10	0.11	0.04	52.00	181.50	BDL	BDL	0.42	0.99	Complied	Complied
Dec-23	7.38	29.50	18.00	BDL	BDL	BDL	1.38	BDL	BDL	4.60	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.62	0.06	38.00	124.90	BDL	BDL	0.30	2.13	Complied	Complied
Jan-24	7.20	29.00	15.00	BDL	BDL	BDL	1.01	BDL	BDL	3.70	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.21	0.28	0.03	46.00	160.00	BDL	BDL	0.18	0.85	Complied	Complied
Feb-24	7.01	30.00	44.00	BDL	BDL	BDL	0.90	BDL	BDL	5.20	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.15	0.25	0.04	31.00	109.50	BDL	BDL	0.14	0.66	Complied	Complied
Mar-24	7.59	30.50	24.00	BDL	BDL	BDL	2.00	0.60	2.80	6.70	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.19	0.26	0.03	52.00	160.80	BDL	BDL	0.16	1.13	Complied	Complied
Min	7.01	29.00	8.00	BDL	BDL	BDL	0.78	0.25	2.80	3.70	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	0.11	0.03	31.00	109.50	BDL	BDL	0.14	0.66	**Complied**	**Complied**
Max	7.86	30.50	44.00	BDL	BDL	BDL	2.00	0.60	5.20	10.80	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.10	0.62	0.06	60.00	222.00	BDL	BDL	0.65	2.13	**Complied**	**Complied**
Avg	7.35	29.67	19.83	BDL	BDL	BDL	1.20	0.42	4.00	6.15	0.80	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.32	0.28	0.04	46.50	159.78	BDL	BDL	0.31	1.15	**Complied**	**Complied**

	Total power requirement of 55 MW will be met from the captive power plant. Three 175 TPH coal/pet coke fired boilers will be installed for the proposed CPP.	25 MW captive powerplant is installed by Grasim Chemical Division as per 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 & Letter No. SEIAA/GUJ/EC/1(d),4(d)&5(f)/98/2012 dt. 22.03.2012. Remaining 30 MW Captive Power Plant with one 175TPH Coal fired boiler is installed by Industry.
	Multi cyclone separator/ bag filter with a stack of height of 125 m will be installed to control the particulate emissions within prescribed norms.	Industry has installed 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 are used as standby during power failure. Stack height of 30 m has been provided as per CPCB norms.
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	Acknowledged
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	Acknowledged
9.	The proposal for environmental clearance (EC) was placed before the EAC (Industry-2) in its 25th 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.	Acknowledged
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 **'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:-	Acknowledged

10. Terms & Conditions

i)	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	The Amendment in Name change has been done by SEIAA by Letter No. SEIAA/GUJ/EC/1(d),4(d)&5(f)/678/2019 dated 04th May 2019; Now name of industry shall be read as M/S. Grasim Industries Limited (Chemical Division) instead of M/S. Grasim Cellulosic (A Unit of Grasim Industries Limited) in environmental

<table>
<tr><td></td><td>Grasim Cellulosic (A Unit of Grasim Industries Ltd).</td><td>clearance issued by SEIAA vide letter dated 30th May, 2011.</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 been submitted to Regional office MoEFCC, Bhopal vide our letter dated 20.10.2016. Regional office of MoEFCC has forwarded monitoring report to MOEFCC, Delhi vide their letter No. 18-A-80/2011 (SEAC)/ 1336 dated 30.11.2017.</td></tr>
<tr><td>iii)</td><td>Effluent shall be treated properly before discharging to Bay of Kambhat through GIDC pipeline.</td><td>A full-fledged Effluent Treatment Plant is installed having Primary and Secondary treatment facility based on extended aeration activated sludge process. Effluent Treatment Plant has of following major equipment.
1. Grit Chamber – 2 Nos
2. Primary Clarifier – 2 Nos
3. Biological Reactor - 7 aeration Lagoons
4. Secondary Clarifier - 2 Nos
5. Treated Effluent RO – 14 MLD Capacity
The effluent is treated in effluent treatment plant & the quality of effluent is verified before its discharge to Bay of Kambhat through GIDC pipeline.
Treated effluent quality for the period of Oct-23 to Mar-24 is summarized in Table no. 04.</td></tr>
<tr><td>iv)</td><td>At least, 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>This Condition has amended for use of 100% coal with ETP bio mass vide letter no. F No. J -11011/321/2016-IA-II(I) dated 16th August 2018.</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 vide letter no. F No. J -11011/321/2016-IA-II(I) dated 16th August 2018.</td></tr>
<tr><td>vi)</td><td>Smart energy conservation equipment’s (like LED/solar light) shall be installed in the factory and premises.</td><td>LED based lighting are preferred in the newly commissioned plant. LED & Solar LED Lights installed in the period (Oct’23 to Mar’24) is as below:
<table><tr><td>LED Light Installed</td><td>1170 Nos</td></tr><tr><td>LED Solar Street light Installed</td><td>-</td></tr></table></td></tr>
</table>

vii)	As assured, 5 MW power (of the total power requirement) shall be generated from solar power/renewable energy sources.	We have started the procuring of renewable 5 MW power from Renew Surya Uday Pvt. Ltd.
viii)	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	Industry has developed greenbelt, in open space area and around factory complex along the boundary wall. Total 1,32,500 nos. trees have been planted till Mar-2024. Existing plantation details and proposed plan is tabulated in **Table No.2.**Details of existing plant species and proposed plant species along with is enclosed as **Annexure-2.** Plant species are selected as per the directives of CPCB & DFO. Photograph of the existing green belts is available above in EC Compliance report of EC Dated 17.10.2019

ix)	The proponent shall plant and maintain at least 1 lakh native trees for five year in the nearby villages.	In FY 2023-24, We adopted conventional and Miyawaki technique and planted 68000 saplings with proper care and protection.
		
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 nearbyvillage.	Industry has taken following subsequent environment clearance for expansion in production capacities; • Environment Clearance No. F. No. J-11011/321/2016-IAII(I) dated 17.10.2019. Industry has invested Rs. 10 Crores as a part of De-bottlenecking activity out of investment. Accordingly, industry has made action plan to spend Rs. 25 Lakhs in FY 20. RO drinking water facility provided in the three nearby villages namely Sarnar, Saladra, Derol & spent 18.83 lacs as per the ESC plan. Industry has additionally invested Rs. 173.67 Crore for the installation Best available technologies i.e. CAP plant for CS2 Recovery and the H2S recovery plant which is the part of our ESC

		investment. This has brought down emission levels far below the norms.
10.1 **General Conditions: -**The grant of environmental clearance is subject to compliance of other general conditions as under;		
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.	Industry strictly adhere to the stipulations made by the Central Pollution Control Board, State Pollution Control Board, State Government and any other statutory authority. Industry regularly submits the Six-Monthly Compliance report CPCB and GPCB along with MoEF&CC.
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	No expansion or modification is done in industry without prior permission of Ministry. Expansion is done with following prior permission / clearance. • Environment Clearance No. F. No. J-11011/321/2016-IAII(I) dated 17.10.2019
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	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. Also monitoring AAQ inside plant periphery. Monthly monitoring is being done by NABL accredited Lab. The Ambient Air quality results for the period ofOct-23 to Mar-24 is tabulated as under **Table No. 05**.

Agency: - Unistar Environment & Research Lab Pvt. Ltd

Instrument ID & Name: - 1) Respirable Dust Sampler - RDS: SR. No. 160203106–UERL/AIR/RDS/ 02(Calibration Period: - 31.07.2023 – 30.07.2024)

2) Fine Particulate Sampler - FPS: SR. No. 160402021 - UERL/AIR/FPS/08– (Calibration Period: - 31.07.2023 – 30.07.2024)

Table No. 05

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					
Norm	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**	**100**	**60**	**80**	**80**	**150**	**100**
Oct-23	70.1	25.1	21.4	21.2	BDL	BDL	72.9	23.6	17.8	18.8	BDL	BDL	77.5	24.4	18.6	20.5	BDL	BDL	69.2	21.5	21.2	23.8	BDL	BDL

Nov-23	75.2	22.7	23.2	25.5	BDL	BDL	76.8	27.2	18.7	20.6	BDL	BDL	80.1	25.7	15.6	19.4	BDL	BDL	73.8	26.1	20.8	23.6	BDL	BDL
Dec-23	52.9	16.5	21.7	24.2	BDL	BDL	58.5	23.3	17.4	20.3	BDL	BDL	57.7	17.8	14.7	18.2	BDL	BDL	58.2	21.6	19.2	21.6	BDL	BDL
Jan-24	55.6	18.7	20.3	21.9	BDL	BDL	58.2	21.9	18.7	21.6	BDL	BDL	52.9	17.3	18.2	20.8	BDL	BDL	57.4	22.0	21.8	23.2	BDL	BDL
Feb-24	57.2	20.2	17.2	19.8	BDL	BDL	51.8	17.0	21.8	25.0	BDL	BDL	54.4	18.2	19.6	21.6	BDL	BDL	59.2	23.2	17.2	24.2	BDL	BDL
Mar-24	55.3	20.6	19.8	21.9	BDL	BDL	50.5	19.8	23.1	26.7	BDL	BDL	50.1	15.7	23.2	27.2	BDL	BDL	56.6	21.9	21.4	24.5	BDL	BDL
Min	52.9	16.5	17.2	19.8	BDL	BDL	50.5	17.0	17.4	18.8	BDL	BDL	50.1	15.7	14.7	18.2	BDL	BDL	56.6	21.5	17.2	21.6	BDL	BDL
Max	75.2	25.1	23.2	25.5	BDL	BDL	76.8	27.2	23.1	26.7	BDL	BDL	80.1	25.7	23.2	27.2	BDL	BDL	73.8	26.1	21.8	24.5	BDL	BDL
Average	61.1	20.6	20.6	22.4	BDL	BDL	61.5	22.1	19.6	22.2	BDL	BDL	62.1	19.9	18.3	21.3	BDL	BDL	62.4	22.7	20.3	23.5	BDL	BDL

Note: All results are in µg/m3 and till date, the emission level has never exceeded prescribed limits. **(Refer Table No.05)**

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 is compiled by Industry.
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).	Industry has provided relevant noise control measures such as acoustic hoods, silencers, acoustic enclosures at all nose sources. Ambient noise inside the plant and around the plant in nearby villages conforms to the Environment (Protection) Act, 1986 Rules, 1989.

The Noise level (dB) at workroom for last 6 months is tabulated as under Table No. 06

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.** SL 4023 SD**, Calibration Valid Up to: 01.02.2025**

Table No.06 (UOM – dBA)

Area	Oct-23		Nov-23		Dec-23		Jan'24		Feb-24		Mar-24	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
	75	70	75	70	75	70	75	70	75	70	75	70
Main Gate	64.8	58.8	60.2	55.8	61.2	56.2	60.6	55.9	61.2	53.2	61.9	54.8
Material Gate	69.2	64.1	62.7	57.1	63.2	56.9	62.1	57.2	61.6	54.4	62.4	54.9
OHC	65.5	62.5	65.9	53.8	66.3	54.5	64.6	55.8	62.1	53.1	62.6	54.0
Derol	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0
Vilayat	65.0	55.0	65.0	55.0	65.0	55.0	65.0	55.0	65.0	55.0	65.0	55.0
Sarnar	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0
Argama	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0
Min	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0
Max	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0
Avg.	63.5	56.5	62.0	53.8	62.2	53.9	61.8	54.1	61.4	53.0	61.7	53.4

Note: All results are within prescribed limits. **(Refer Table No.06)**

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 already taken up at some locations, nearby locations to reservoir are diverted to fresh water reservoir, following are the tentative details of water saving done through implemented scheme.

Tentative Water Saving through Rain Water Harvesting (Oct-23 to Mar-24)

Reservoir Area-1	Reservoir Area-2	fire house area	Area	Rainfall			Rainwater Harvesting
M2				(MM)	(CM)	(Mtr.)	M3
86400	43200	240	129840	43.1	4.31	0.0431	5596.10

vii.	Training shall be imparted to all employees on safety and health aspects of chemicals handling.	Trainings are imparted regularly to all employees on safety and health aspects of chemicals handling and records maintained.
	Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.	We have established an Occupational Health Center (OHC). Prior to joining Pre-employment checkup is done and on regular interval routine periodical medical examinations for all employees are carried out. Records are maintained at OHC as per the Factories Act.
	Training to all employees on handling of chemicals shall be imparted.	Trainings are imparted to all employees on safety and health aspects of chemicals 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-5**
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 45867 Nos. of beneficiaries covered from Apr-23 to Mar-24. Unit has proposed Eco development plan yearly basis through CSR activities and submitting update on CSR activities 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 developmental measures including community welfare are being done under CSR initiatives as attached in & its expenditure details are in below **Table No.07.**

Table No. 07

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	
2021-2022	1798.71	35.97	42.47	
2022-2023	1497.56	29.95	54.19	
Total=>	**12357.67**	**247.14**	**350.39**	**2.84%**

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.	A Separate Environment Management Cell already exists with technically qualified personnel who are under the direct control of senior executives for Environment Management and monitoring function. Organogram of environment management cell is Enclosed as **Annexure-3.** Detail of testing facility & testing equipment available in environmental laboratory is enclosed as **Annexure-4.**
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 fund is enmarked on annual basis for Environmental management Please refer **Table No.08** for fund Utilization details.

Table No.08

Sl.	Particular	Capex	Opex FY-17	Opex FY-18	Opex FY-19	Opex FY-20	Opex FY-21	Opex FY-22	Opex FY-23	Opex FY-24
1	Effluent treatment Plant	79.00	11.50	10.56	11.0	11.00	13.35	14.85	35.60	38.63
2	Air Pollution Control (Including EDTA & CAP Plant)	350.00	03.50	04.00	3.3	5.17	4.70	14.23	162.85	150.80
3	Green belt development	00.50	00.50	00.55	1.3	0.51	0.13	0.08	1.09	3.83
4	Waste Management	01.50	00.50	00.60	1.6	3.07	2.90	1.78	4.37	2.97
Total Amount (In Crore) =>		**431.00**	**16.00**	**15.71**	**17.20**	**19.75**	**21.08**	**30.94**	**203.91**	**196.23**

xiii.	A copy of the clearance letter shall be sent by the project proponent to concern 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.	We are regularly submitting 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 GPCB. A copy of Environmental Clearance and six-monthly compliance status report is also posted on the website of the company.
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 of MoEF&CC by e-mail	The environmental statement (Form-V) is regularly submitted for each financial year ending 31st March to the Gujarat Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, Copy of the EC Compliance report and Environment Statement is posted on company website. Industry also submits through e-mail, the Environment Statement along with EC compliance report to regional office of MoEF&CC. Environment Statement Form-V for FY-23 is submitted vide

		out letter dated 02.09.2023.
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.
	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
	 TIMES CITY incentive: CM PUBLIC NOTICE ENVIRONMENTAL CLEARANCE Woman, aide break into houses using duplicate key, held Grasim Industries Limited Environment Clearance by MoEF&CC	 ગુજરાત સમાચાર (વડોદરા આવૃત્તિ) 3 દાહોદમાં સ્માર્ટ સિટિ યોજનામાં સિટિ બસ સુવિધા ચાલુ કરાશે નર્મદા જિલ્લામાં નોન-કનેકટીવીટીની સમસ્યા પ્રવાસનના વિકાસમાં અવરોધ આદિત્ય બિરલા ગ્રાસીમ ઇન્ડસ્ટ્રીઝ લિમિટેડ

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 started manufacturing of Viscose Staple fibre in Feb-22, Information given to BSE-NSE regarding completion and commissioning of the plant. Project / plant activities are as under. (1) Amended EC received on 17th Oct 2019, (2) Civil & Civil & another const. work started in Feb-2020. (3) Line commissioned in Feb-2022.
11.	The Ministry may revoke or suspend the clearance, at subsequent stages, if implementation of any of the above conditionsis not satisfactory.	Acknowledged
12.	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	Acknowledged
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	Noted, Industry is complying all the applicable provisions of the Water (Prevention & control of pollution) Act-1977, the Air (Prevention & control of 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.

Note: Copy of the Monthly Environmental Monitoring reports by NABL accredited laboratory for Effluent and Emission for the last month of the compliance period i.e., Mar-24 is enclosed as **Annexure-6** for reference.

Compliance status on Environmental Clearance

MOEF Ref. Letter No.: J-11011/321/2016-IA II (I), Dated 16.08.2018

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), Dated 16.08.2018

General Profile: -

Sr. No.	Stipulation	Compliance Status
1	This has reference to your proposal No. IA/GJ/IND2/58913/2016 dated 18th May, 2018 for amendment in the environment clearance to the above project.	Acknowledged
2.	The Ministry of Environment, Forest and Climate Change has examined the proposal for environmental clearance granted by the Ministry vide letter dated 15th January, 2018 in the favor of M/s. Grasim Industries Ltd (Grasim Cellulosic Division), to the project for expansion of Viscose Staple Fibre Unit (from 127750 TPA to 255500 TPA), Captive Power Plant (from 25 MW to 55 MW) and setting up Solvent Spun Cellulosic Fibre Unit of 36500 TPA at Plot No. 1, GIDC Industrial Area Vilayat, Tehsil Vagra, District Bharuch (Gujarat). The amendment has been sought for revision/modification in the specific conditions of 10(iv) & (v) stipulated therein regarding fuel requirement & the fresh water intake.	Industry is setup 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

Table-1

Products=>	Viscose Staple Fibre	Carbon Di Sulphide	Sulfuric Acid	Sodium Sulphate (Byproduct)	Power Generation	Solvent Spun Cellulosic Fibre (Excel Fibre)
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 – As per EC No. F. No. J-11011/321/2016-IA-II(I) Pt Dated – 16.08.2018	**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**	**36500**
Total Production (Tons) – Oct-23 to Mar-24	210144	17351	116562	126747	27.00	NIL
Total Production (Tons) – Apr-23 to Sep-23	207270	16319	109178	121029	29.71	NIL
Note: 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 & Letter No. SEIAA/GUJ/EC/1(d),4(d)&5(f)/98/2012 dt. 22.03.2012 for use of natural gas in place of charcoal in CS2 plant and 25MW powerplant which is installed by Grasim Chemical. As per the EC No. F. No. J-11011/321/2016-IAII(I) issued on 15.01.2018, remaining 30MW powerplant is installed by us. Kindly refer the Power generation details in above table.						

3.	The proposal was considered by the Expert Appraisal Committee (Industry 2) in the Ministry held on 25-27 June 2018. The Committee after deliberations, has recommended for the proposed amendment in the said environment clearance as under:	
10(iv)	The fuel requirement shall preferably be met through natural gas. However, in case of gas supply constraints and or/not found economic viable, coal having Sulphur content less than 0.5% or the in any case, adequate air pollution measures shall be installed to meet the emission standards prescribed under the Environment (Protection) Rules, 1986.	Due to consistent availability issue & less techno economic viability of natural gas supply, coal having sulphur content less than 0.5% is being used to meet the fuel requirement.
	ETP biomass may be used to meet the fuel requirements for the captive power plant/boilers.	Biomass generated from ETP possess GCV Value ~ 1500, can be burn in CPP available at site, but in CCA (AWH – 117036) dated 20.06.2022 valid upto 23.03.2024, SPCB has granted us permission for disposal of ETP Biomass at common TSDF site/co-processing.
	In any case, adequate air pollution measures shall be installed to meet the emission standards prescribed under the Environment (Protection) Rules, 1986.	Electrostatic Precipitator (ESP) along with 125m height stack is installed to meet the emission standards prescribed under the Environment (Protection) Rules, 1986. Emission Monitoring is done by NABL accredited laboratory on monthly basis.

<table>
<tr><td>10(v)</td><td>Treated effluent of 7350 KLD shall be reused/recycled to meet the requirements for different industrial operations and the fresh water demand shall accordingly be restricted to 28,000 KLD</td><td>Industry has installed RO plants for recycling of waste water. The average quantity of effluent treated & recycled from Oct-23 to Mar-24 is 20608 m3/day, please refer Table No.01. Fresh Water consumption for last six months (Oct’23 to Mar’24) restricted to 15500 m3/day.
Table No.01
Waste Water Recycling (m3/day)<table><tr><th>Month</th><th>RO Permeate</th></tr><tr><td>Oct’23</td><td>21966</td></tr><tr><td>Nov’23</td><td>21029</td></tr><tr><td>Dec’23</td><td>22050</td></tr><tr><td>Jan’24</td><td>20371</td></tr><tr><td>Feb’24</td><td>17516</td></tr><tr><td>Mar’24</td><td>20717</td></tr><tr><td>Avg.</td><td>20608</td></tr></table></td></tr>
</table>

4	Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval to the proposed amendment in the environment clearance dated 15th January 2018, as stated in para 3 above, to the project for expansion of Viscose Staple Fibre Unit, Captive Power Plant and setting up Solvent Spun Cellulosic Fibre Unit by M/s. Grasim Industries Ltd (Grasim Cellulosic Division) at plot No. 1, GIDC Industrial Area Vilayat, Tehsil Vagra, District Bharuch (Gujarat).	Acknowledged
5	All other terms and conditions stipulated in the environment clearance dated 15th January 208 shall remain unchanged.	Acknowledged

Six Monthly Compliance Report of Environmental Clearance
For

Environment Clearance - EC No. F. No. J-11011/321/2016-IAII (I); dated 17.10.2019

Environment Clearance - MOEF Ref. Letter No.: J-11011/321/2016-IA II (I), dated 16.08.2018

Environment Clearance - MOEF Ref. Letter No.: J-11011/321/2016-IA II(I)Pt, dated 15.01.2018

Environment Clearance - MOEF Ref. Letter No.: J-11011/463/2007-IA II (I), dated 20.12.2007

Submitted to: -	**Submitted By: -**
1. Ministry of Environment Forest & Climate Change, (WR Office) Bhopal 2. Ministry of Environment Forest & Climate Change, 407, Aaranya Bhavan, Sector-10, Gandhinagar 3. Central Pollution Control Board, Zonal Office (Vadodara) 4. 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: 01.10.2023 to 31.03.2024

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	Brief Details of the CAP technology	Annexure-1
2	Existing plant species and proposed plant species for greenbelt development	Annexure-2
3	Structure of Environment Management Cell	Annexure-3
4	List of testing facilities available at Environmental Laboratory	Annexure-4
5	Environment Monitoring Program	Annexure-5
6	Environmental Monitoring Reports	Annexure-6

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 the latest plant in the Pulp & Fibre business, commissioned in Apr-2014 which produces both grey VSF and specialty fibre. This plant is also producing specialty grade fibre.
4. The Company's main production is Viscose Staple Fibre, Sodium Sulphate, 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) 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 has been established.
8. Continuous Emission Monitoring System is 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 on Environmental Clearance

MOEF Ref. Letter No.: F. No. J-11011/321/2016-IAII (I); EC issued on 17.10.2019

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

<table>
<tr><th>Sr. No.</th><th>Stipulation</th><th>Compliance Status</th></tr>
<tr><td>1</td><td>This has reference to your Online proposal no. IA/ GJ / IND2 /58913 /2016, dated 23rd February 2019, for environmental clearance to the above subject.</td><td>Acknowledged</td></tr>
<tr><td>2</td><td>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).</td><td>Industry is setup 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</td></tr>
<tr><td>3</td><td>The details of existing / proposed products are as under: -</td><td></td></tr>
<tr><td></td><td>
<table>
<tr><th>Sr. No.</th><th>Name of Products (Unit)</th><th>Existing Capacity (as per EC dated 20th Dec 2007)</th><th>Granted Capacity (as per EC dated 15th Jan 2018)</th><th>Project proposed / Additional Capacity</th><th>Total Capacity after Expansion</th></tr>
<tr><td>1</td><td colspan="5">Viscose Staple Fibre (TPA)</td></tr>
<tr><td></td><td>Existing</td><td>127750</td><td>127750</td><td>No Change</td><td rowspan="4">438000</td></tr>
<tr><td></td><td>De-bottlenecking</td><td>-</td><td>36500</td><td>No Change</td></tr>
<tr><td></td><td>New Machine</td><td>-</td><td>91250</td><td>182250</td></tr>
<tr><td></td><td>Total</td><td>127750</td><td>255500</td><td>182250</td></tr>
<tr><td>2</td><td>Solvent Spun</td><td>Nil</td><td>36500</td><td>Nil</td><td>36500</td></tr>
</table>
</td><td>Details of the production during reporting period is as under;

Note: 25MW powerplant which is the part of EC No. J-11011/463/2007-IA II (I), dated 20-12-2007 has been transferred to Grasim Chemical Division.

Balance capacity i.e. 30MW powerplant is installed by Industry Kindly refer the power generation details in above table.
*30MW powerplant commissioned in Feb-2022.</td></tr>
</table>

	Cellulosic Fibre (Excel Fibre) TPA				
Associated Activities*					
3	Sulphuric Acid (TPA)	102200	182500	164250	346750 (182500– 164250)
4	Carbon-Disulphide (TPA)	23725	34675	31025	65700 (34675+31-25)
5	Sodium Sulphate (by product) TPA	83038	166076 – 210788	182500	348576 – 393288 (166076 – 210788+182500)
6	Captive Power Plant (MW)	25	55	Nil	55
***EC is not required as per EIA Notification 2006; as amended from time to time					

Products=>	Viscose Staple Fibre	Carbon Di Sulphide	Sulfuric Acid	Sodium Sulphate (Byproduct)	Solvent Spun Cellulosic Fibre (Excel Fibre)	Power Generation
EC Amendment -EC No. F. No. J-11011/321/2016-IAII(I), EC issued on 17th Oct'2019	**438000**	**65700**	**346750**	**348576 - 393288**	**36500**	**55MW**
Total Production (Tons) – Oct-23 to Mar-24	210144	17351	116562	126747	Nil	27.00
Total Production (Tons) – Apr-23 to Sep-23	207270	16319	109178	121029	Nil	29.71
***30MW powerplant commissioned in Feb-2022**						

4	Existing land area is 222.63 ha (2226300m2). No additional land will be required for the proposed expansion.	No additional land is required for the proposed expansion.
	The estimated project cost is Rs. 3500 Crores against the previously envisaged Rs. 2560 crores.	Estimated Project cost is Rs. 3500 crores.
	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.	Separate funds are earmarked on annual basis for Environmental management. At present capital cost of approx. Rs. 210 crores is already spent as per the condition given in EC-2007 & EC-2018. Approx. Rs. 430 crores has been spent for environment control measures till FY 23. Further approx. Rs. 115 crores are planned to be spent in FY 24. Capex-Opex details are tabulated in **Table No. 01**.

Table No. 01

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	Opex FY-22	Opex FY-23	Opex FY-24
1	Effluent Treatment	79.00	11.50	10.56	11.00	11.00	13.35	14.85	35.60	38.63
2	Air Pollution Control (Including H2S Scrubbing Plant & CAP Plant)	350.00	03.50	04.00	03.30	05.17	14.35	14.23	162.85	150.80
3	Green Belt Development	00.50	00.50	00.55	01.30	0.51	0.13	0.08	1.09	3.83
4	Waste Management	01.50	00.50	00.60	01.60	3.07	2.90	1.78	4.37	2.97
Total Amount (In Crore) =>		**431.00**	**16.00**	**15.71**	**17.20**	**19.75**	**30.73**	**30.94**	**203.91**	**196.23**

	Total employment will be 1400 persons as regular & 1300 persons on contract after expansion.	Noted and complied the condition.
5	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.	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.
6	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.	Fresh water requirement met through GIDC pipeline. Water consumption for last six months (Oct'23 to Dec'24) is 15500 m^3/day, sourced from Narmada River and supplied by GIDC. Water Consumption details are tabulated in **Table No.02.**

Table No.02

Water Consumption (m3/day)

Month	Average
Oct-23	18278
Nov-23	15205
Dec-23	16480
Jan-24	14271
Feb-24	14765
Mar-24	13999
Avg.	15500

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
	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.	The average quantity of effluent treated & recycled back to VSF Plant from Oct-23 to Mar-24 is 20608 m3/day. Kindly find effluent discharge & waste water recycling data for reporting period in **Table No. 03 & Table No. 04** respectively**.** Based on the increase in the effluent generation quantity due to increase in production, recycling increased to 20608 m3/day.	

		Table No.03 Effluent Discharge (m3/day)		**Table No.04 Waste Water Recycling (m3/day)**	
		Month	Av**erage**	**Month**	**RO Permeate**
		Oct-23	13976	Oct-23	21966
		Nov-23	12134	Nov-23	21029
		Dec-23	13147	Dec-23	22050
		Jan-24	11766	Jan-24	20371
		Feb-24	12403	Feb-24	17516
		Mar-24	10138	Mar-24	20717
		Avg.	**12261**	**Avg.**	**20608**
	Power requirement after expansion will be 60 MW which will be met from Captive Power Plant. No DG sets will be required.	Presently 25MW is sourced from captive plant installed under chemical division. Remaining 30MW captive power plant is installed by us and 5 MW from renewable energy source.			

7	The project/activity is 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.	Acknowledged
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.	Acknowledged
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 theEIA/EMP report complying with the ToR and recommended the project for grant of environmental clearance.	Acknowledged
10	Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project for expansion of 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, Taluka Vagra, District Bharuch (Gujarat), under the provisions of EIA Notification, 2006, subject to the compliance of terms and conditions, as below: -	Acknowledged
(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.	Industry has obtained Consent to Establish and Consent to Operate from GPCB and renewal of the same will be done time to time under 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.	Industry has installed RO plants for recycling of waste water. The average quantity of treated effluent recycled back to VSF Plant during Oct-23 to Mar- 24 is 20608 m3/day. (Please refer above **Table No. 04**). Treated effluent is discharged through GIDC common pipeline into deep sea after recovery of water from the effluent.
(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.	Necessary authorization as per the Hazardous and other Wastes (Management and Trans- Boundary Movement) Rules, 2016 is taken from Gujarat Pollution Control Board, Gandhinagar vide the CCA/CTO, reference No.- GPCB/BRCH-B/CCA-70(7)B/ID-36507/675889, Dated – 22.06.2022 and abiding all the conditions as per given in the CCA.
(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.	Industry has 175-meter-tall stack designed as per CPCB/SPCB guidelines for proper dispersion of gasses from manufacturing process. To arrest fugitive emission various controls are provided such as shutters at Spinning Machine, waste water transfer to ETP through pipelines and covered drains, scrubber systems and waste gas recovery plants. i.e. H2S Scrubbing Plant and Carbon Adsorption Plant for CS2 recovery.
(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. Entire plant shall be flame proof. The solvent storage tanksshall be provided with breather valve to prevent losses	Industry currently not handling any solvent. As and when solvent is used in process we shall abide the prescribed conditions.

(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 Oct-23 to Mar- 24 is 15500 m3/day (Please refer above **Table No.02)** Necessary authorization for required quantity of water is taken from Gujarat Industrial Development (GIDC) vide their letter No. GIDC/BRH/WS/494 Dated 3rd.July,2019.
(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 in all applicable areas. Industry is not using ground water for 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, drums, carboys. Earthing has been provided to tanks. Flame arresters made compulsory for vehicles carrying Hazardous chemicals.
(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.	Industry has applied for amendment in the condition vide our submission dated 24.02.2020. This condition needs to be amended as ETP Inorganic Sludge (Gypsum) shall be sent to Cement Industry/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. Industry is following CCA issued by GPCB for utilization/ disposal of hazardous waste.
(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.	Industry is strictly complying the rules and guidelines under the Manufacture, storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. Industry has ensured compliance of provisions made under the Motor Vehicle Act (MVA), 1989 for hazardous chemical transportation. Industry has obtained license for storage of 60 KL light diesel oil and storage of 10 KL HSD at 2 locations in plant area for DG sets from Deputy Controller of Explosive from M/s PESO (PETROLEUM & Explosives Safety Organization). Industry has factory license No. 17564 valid up to

<table>
<tr><td></td><td></td><td>31.12.2026 issued by DISH.</td></tr>
<tr><td rowspan="7">(l)</td><td>The company shall undertake waste minimization measures as below;</td><td>The waste minimization measures are taken as below;</td></tr>
<tr><td>(i) Metering and control of quantities of active ingredients to minimize waste</td><td>Industry has strict monitoring and control over usages of ingredients / raw materials to minimize the generation of waste.</td></tr>
<tr><td>(ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.</td><td>Industry has installed H2S Scrubbing Plant for abatement H2S from Spinning offgases of VSF manufacturing. Sulphur is recovered during this process and reutilized as Raw Material for production of Sulphuric Acid and CS2.</td></tr>
<tr><td>(iii) Use of automated filling to minimize spillage</td><td>Industry has adopted automated filling /shifting of chemicals / raw material and avoided manual intervention wherever possible to minimize the spillage.</td></tr>
<tr><td>(iv) Use of close Feed system into batch reactors.</td><td>Close feeding system is provided for chemicals / raw materials at point of use to minimize the waste generation.</td></tr>
<tr><td>(v) Venting equipment through Vapour recovery system.</td><td>Industry has installed CAP Plant for recovery of CS2 from Spinning off gases. Scrubbers are provided at vents of chemical storage tank to recover the vapors.</td></tr>
<tr><td>(vi) Use of high-pressure hoses for equipment clearing to reduce wastewater generation.</td><td>Industry has adopted 3R principle to reduce the waste water generation. High pressure hoses are also used for the cleaning of equipment.</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, plantation has been done along with periphery of plant, road sides and open area. Total 1,32,500 nos. trees have been planted till Mar-2024. Existing plantation details and proposed plan is tabulated in Table No.5
<table>
<tr><th colspan="4">Table No. 05</th></tr>
<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>
</table></td></tr>
</table>

2	2018-19	**25**	**15,000 Plants**
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	**20,000 Plant**
7	2023-24 (Till Sep'23)	25	**15,000 Plant**
Total=>		**210**	**1,32,500 Plants**

Details of existing plant species and proposed plant species along with Plant species for odor management, Gaseous emission (SO2 & NOx) tolerant species is enclosed as **Annexure-2.** Plant species are selected as per the directives of CPCB & DFO. Photograph of the existing green belts is attached below.

GLIMPS OF PLANTATION

(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.	Total Project cost is Rs 3500 Crore and accordingly Rs. 8.75 Crores (0.25% of Project cost) is allocated for Corporate Environment Responsibility (CER). Based on the OM issued by MOEF Impact assessment Division– F. No, 22-65/2017-IA.III, dated 30th September 2020, we have invested Rs. 173.67 Crore for the installation of H2S Scrubbing Plant for H2S abatement & Odour control and CAPplant for CS2 recovery. Investment of Rs. 173.67 Crore is done for the betterment of Environment in and around plant as well as the

		environment of surrounding villages. Installation of H2S Scrubbing Plant and CAP plant has brought down the CS2 and H2S emission much below the regulatory norms. These are most advanced close-loop technologies to recover and recycle CS2. Industry has significantly reduced its emissions and achieve >90% recovery in terms of Sulphur and recycle it back to the process. Through Installation of above two Best Available Technologies Industry has been achieved the EUBAT emission norms which is far below the regulatory norms.
(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 to DG set for controlling the noise pollution.	DG sets are installed for emergency power supply during power failure. Appropriate stack height of 30 m is provided and emission from DG set is meeting the CPCB norms for the existing DG sets. Summary of test results is tabulated in Table No.6

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: 21.06.2023; **Calibration Expire On: -** 20.06.2024

Table No.06

Month	DG Set-1			DG Set-2		
Unit	**PM (mg/Nm3)**	**SO2 (PPM)**	**NOX (PPM)**	**PM (mg/Nm3)**	**SO2 (PPM)**	**NOX (PPM)**
GPCB limit	**150**	**100**	**50**	**150**	**100**	**50**
Oct-23	68.0	6.0	35.0	80.0	8.0	32.0
Nov-23	79.0	8.0	39.0	64.0	6.0	36.0
Dec-23	86.0	6.0	35.0	79.0	6.0	34.0
Jan-24	73.1	8.0	37.0	84.0	6.0	31.0
Feb-24	82.6	6.0	39.0	67.0	5.0	36.0
Mar-24	68.4	5.0	33.0	79.0	6.0	38.0
Min	**68.4**	**5.0**	**33.0**	**64.0**	**5.0**	**31.0**
Max	**86.0**	**8.0**	**39.0**	**84.0**	**6.0**	**38.0**
Average	**77.8**	**6.6**	**36.6**	**74.6**	**5.8**	**35.0**

Note: All values are well below the prescribed norms

<table>
<tr><td>(p)</td><td>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.</td><td>To protect the possible fire hazards during manufacturing process in material handling robust firefighting system is provided.</td></tr>
<tr><td>(q)</td><td>Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.</td><td>Industry has established an Occupational Health Center (OHC) and conducts health surveillance of the workers on a regular interval. Records are maintained at OHC as per the Factories Act.</td></tr>
<tr><td>(r)</td><td>Storage of raw materials shall be either stored in silos or in covered areas to prevent dust pollution and another fugitive emissions.</td><td>Raw materials are stored in the silos / covered areas only to prevent dust pollution and other fugitive emissions.</td></tr>
<tr><td>(s)</td><td>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.</td><td>Continuous online (24x7) monitoring system for stack emission are installed for measurement gas discharge and the pollutants concentration, date transmission with CPCB and SPCB server are under progress.
Industry has installed flow meter at pipeline carrying treated effluent to GIDC pumping station. Industry has also provided TOC meter at treated effluent discharge pipeline instead of web camera for continuous monitoring.</td></tr>
<tr><td>(t)</td><td>The energy sources for lighting purpose shall preferably LED based.</td><td>LED based lighting are preferred in the newly commissioned plant.
LED & Solar LED Lights installed in the period (Oct’23 to Mar’24) is as below:
<table>
<tr><td>LED Light Installed</td><td>1170 Nos</td></tr>
<tr><td>LED Solar Street light Installed</td><td>-</td></tr>
</table></td></tr>
<tr><td>(u)</td><td>Transportation of raw materials/products should be carefully performed using GPS enabled vehicles.</td><td>Transportation of raw materials/products is being carried out in GPS enabled vehicles.</td></tr>
<tr><td>10.1</td><td colspan="2">The grant of Environmental Clearance is further subject to compliance of other generic conditions as under:</td></tr>
<tr><td>i.</td><td>The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board (SPCB), State Government and/or any other statutory authority.</td><td>Industry has ensured compliance of all stipulations made by GPCB, State Government and other regulatory authorities. Strict compliance to regulatory provisions is ensured all the time.</td></tr>
</table>

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, prior approval will be taken in case of any future expansion / modification.
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	Four Ambient Air Quality Monitoring Station (AAQMS) are installed in consultation with GPCB in nearby villages at Derol, Vilayat, Sarnar and Argama. These AAQMS are covering all four directions and location where maximum ground level concentrations is anticipated.
iv.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 shall be complied with.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16th November, 2009 is compiled by Industry.
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)	Industry has provided relevant noise control measures such as acoustic hoods, silencers, acoustic enclosures at all nose sources. Ambient noise inside the plant and around the plant in nearby villages conforms to the Environment (Protection) Act, 1986 Rules, 1989.

The Noise level (dB) at workroom for last 6 months is tabulated as under Table No. 07:

Sound Level Meter: - SL 4023 SD

Reference Standard: - Sound Level Calibrator**, Sr. No.** 3421624**, Calibration Valid Up to: 01.02.2025**

Table no. 07 (UOM – dBA)

Area	Oct-23		Nov-23		Dec-23		Jan'24		Feb-24		Mar-24	
	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	64.8	58.8	60.2	55.8	61.2	56.2	60.6	55.9	61.2	53.2	61.9	54.8
Material Gate	69.2	64.1	62.7	57.1	63.2	56.9	62.1	57.2	61.6	54.4	62.4	54.9
OHC	65.5	62.5	65.9	53.8	66.3	54.5	64.6	55.8	62.1	53.1	62.6	54.0
Derol	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0

Vilayat	65.0	55.0	65.0	55.0	65.0	55.0	65.0	55.0	65.0	55.0	65.0	55.0
Sarnar	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0	55.0	45.0
Argama	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0	50.0	40.0
Min	**50.0**	**40.0**	**50.0**	**40.0**	**50.0**	**40.0**	**50.0**	**40.0**	**50.0**	**40.0**	**50.0**	**40.0**
Max	**75.0**	**70.0**	**75.0**	**70.0**	**75.0**	**70.0**	**75.0**	**70.0**	**75.0**	**70.0**	**75.0**	**70.0**
Avg.	**63.5**	**56.5**	**62.0**	**53.8**	**62.2**	**53.9**	**61.8**	**54.1**	**61.4**	**53.0**	**61.7**	**53.4**

Note: All values are well below the prescribed norms.

vi	The Company shall harvest rainwater from the roof tops of the buildings to recharge ground water, and to utilize the same for different industrial operation within the plant.	Survey has been carried out for roof top rain water harvesting. The Job has been already taken up at locations nearby to reservoir, rain water from the roof tops is diverted to fresh water reservoir. Following are the tentative details of water saving done through implementation of Rainwater harvesting scheme.

Tentative Water Saving through Rain Water Harvesting (Oct-23 to Mar-24)

Reservoir Area-1	Reservoir Area-2	fire house area	Area	Rainfall			Rain Water Harvesting
M2				(MM)	(CM)	(Mtr.)	M3
86400	43200	240	129840	43.1	4.31	0.0431	5596.10

vii	Training shall be imparted to all employees on safety and health aspects of chemicals handling.	Regular trainings are imparted to all employees on safety and health aspects of chemicals handling.
	Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.	We have established an Occupational Health Center (OHC). Prior to joining, pre-employment checkup is done and routine periodical medical examinations for all employees are carried out on regular intervals. Records for the same are maintained at OHC as per the Factories Act. Health surveillance finding revels that no one suffering from any occupational health related disease. Details regarding tests conducted and numbers of employee covered is summarized in **Table No. 08.**

Table No. 08

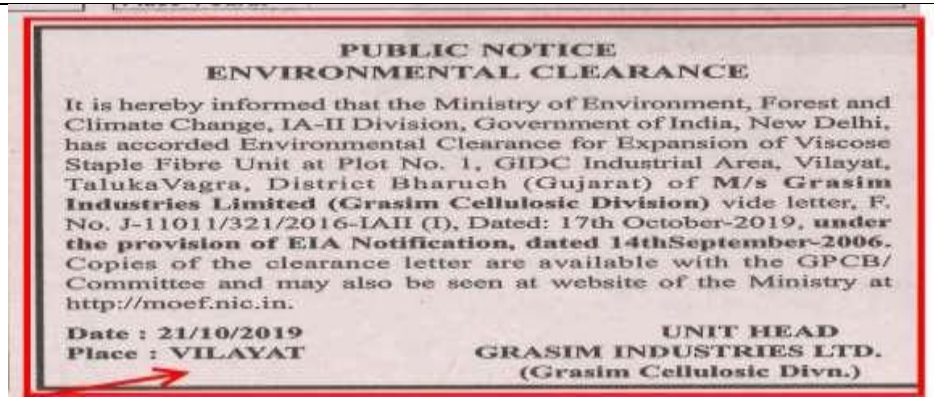
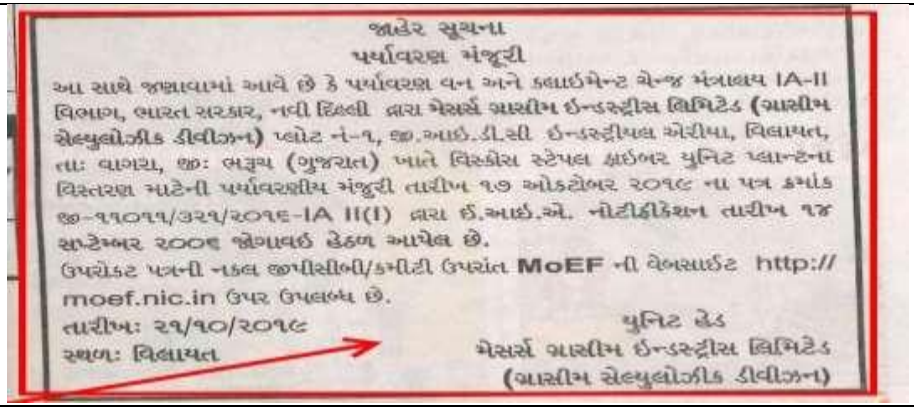
Spirometry (FY-24)

Name of Dept.	Total Employees	FVC (litres)	FEV 1	FEV 1/ FVC %	PEF Litres/Sec	Conclusion
Admin Department (SCM, Purchase, Account, Legal, IT Dept.)	**92**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	

Process Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC, Civil)	**750**	0	0	0	0	Approx. 0% is deviation from normal
%		0	0	0	0	
Technical Cell, WCM, Customer Focus, Electrical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**130**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	
Mechanical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**290**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	
QC & QA Instrumentation Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**132**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	
P&A (HR, Security & Services, ER, CSR, Horticulture, Workshop) Dept.	**30**	0	0	0	0	Approx. 0% deviation from normal
%		0	0	0	0	

Circulatory system (FY- 24)						**Vision**		**ENT**
Employees	**Total Employees**	**Pulse**	**ECG**	**Blood Pressure**	**Hemat Hb**	**Distant Vision**	**Color Blindness**	**Audiometry**
Admin Department (SCM, Purchase, Account, Legal, IT Dept.)	**92**	0	0	3	0	0	0	3
%		0	0	3.26	0	0	0	3.26
Process Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC, Civil)	**750**	6	3	18	3	4	25	7
%		0.8	0.4	2.4	0.4	0.5	3.33	0.9
Technical Cell, WCM, Customer Focus, Electrical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**130**	1	2	5	1	0	4	1
%		0.76	1.5	3.8	0.76	0	3	0.76
Mechanical Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**290**	2	1	8	1	1	12	5
%		0.68	0.34	2.75	0.34	0.34	4.13	1.72
QC & QA Instrumentation Dept. (Auxiliary, viscose, spinning, CS2/Acid, WTP/ETP/STP, EC)	**132**	0	1	2	0	7	5	1
%		0	0.75	1.5	0	5.3	3.78	0.75
P&A (HR, Security & Services, ER, CSR, HORTICULTURE, Workshop) Dept.	**30**	0	0	0	1	0	0	1
%		0	0	0	3.33	0	0	3.33

<table>
<tr><td>viii</td><td>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 and public hearing shall be implemented.</td><td>All conditions as prescribed in EC, NOC and CC&A are maintained and monitored regularly. Detailed status of EIA/EMP is attached as Annexure-5. Public hearing exempted by EAC as mentioned in serial no. 8 of the Environment Clearance. However, Industry has taken steps for environment management and risk mitigation measures.</td></tr>
<tr><td>ix.</td><td>The company shall undertake all measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villagers, administration and other stake holders. Also, eco-development measures shall be undertaken for overall improvement of the environment.</td><td>Industry has undertaken various community development measures in 25 Villages wherein 45867 nos. of beneficiaries were covered from Apr-23 to Mar-24. Unit has proposed Eco development plan on yearly basis through CSR activities. Updates of CSR activities are being submitted to GPCB in Environment Statement annually.</td></tr>
<tr><td>x</td><td>A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.</td><td>A Separate Environment Management Cell already exists with technically qualified personnel who are under the direct control of senior executives for Environment Management and monitoring function. Organogram of environment management cell is Enclosed as Annexure-3. Detail of testing facility & testing equipment available inenvironmental laboratory is enclosed as Annexure-4</td></tr>
<tr><td>xii</td><td>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.</td><td>A copy of the clearance letter submitted to concern six Gram Panchayats vide our letter dated 25.10.2019.</td></tr>
<tr><td>xiii</td><td>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.</td><td>We have submitted the six-monthly compliance report to the MoEFCC Regional Office Bhopal and Gandhinagar, CPCB Zonal Office, Vadodara and GPCB. A copy of Environmental Clearance and six-monthly compliance status report is also posted on the website of the company.
<table>
<tr><th>Compliance Period</th><th>Date of Report Submission</th></tr>
<tr><td>Oct-22 to Mar-23</td><td>23.11.2023</td></tr>
</table>
</td></tr>
</table>

xiv	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional offices of MoEF&CC by e-mail.	The environmental statement, Form-V for each financial year is regularly being submitted to the GPCB & E-mailed to Regional office of MoEF&CC, Bhopal. The same is also posted on the company website along with the status of compliance of environmental clearance conditions.
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	Environment Clearance is issued on 17.10.2019, and advertisement released on 24.10.2019 in two local newspapers. Please refer copy of the advertisement enclosed below. Industry has shared Information to Regional office of MoEF&CC, Bhopal vide letter dated 25.10.2019.
	Name of Paper: - The Times of India, Ahmedabad **Date of Issue: -** 21.10.2019 **In: -** English language	**Name of Paper: -** Divya Bhaskar, Vadodara **Date of Issue: -** 21.10.2019 **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 ક્લાઈમેન્ટ ચેન્જ મંત્રાલય IA-II વિભાગ, ભારત સરકાર, નવી દિલ્હી 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 મંજૂરી તારીખ ૧૭ ઓકટોબર ૨૦૧૯ ના પત્ર ક્રમાંક જી-૧૧૦૧૧/૩૨૧/૨૦૧૬-IA II(I) દ્વારા ઈ.આઈ.એ. નોટીફીકેશન તારીખ ૧૪ સપ્ટેમ્બર ૨૦૦૬ જોગવાઈ હેઠળ આપેલ છે. ઉપરોકત 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)

11	The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and project proponent shall implement all the said conditions in a time bound manner. The ministry may revoke or suspend the environment clearance, if implementation of any of the above condition is not found satisfactory.	Acknowledged
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 read with subsequent amendment therein.	Noted, Industry is complying all the applicable provisions of the Water (Prevention & control of pollution) Act-1977, the Air (Prevention & control of 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.

Note: Copy of the Monthly Environmental Monitoring reports by NABL accredited laboratory for Effluent and Emission for the last month of the compliance period i.e. Mar-24 is enclosed as **Annexure-6** for reference.

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Annexures

Annexure-1

Brief of CAP Technology

Grasim Vilayat has installed state-of-the-art closed-loop technologies to recover and recycle CS2, which is the key raw material for viscose manufacturing process. With these technologies, the site is able to significantly reduce its emissions and achieve 90-95% recovery in terms of Sulphur and recycle it back to the process. CAP is more efficient system for the recovery of CS2 than CS2 recovery through genosorb. In this system H2S gas is recovered in the form of Sulphur in EDTA plant and the exhaust gas stream is move forward to the CAP plant for the CS2 recovery.

Brief on process technology:

1. The washing tower system

The gas contains CS2 and traces of H2S, which enter from the lower side of the washing tower. After being sprayed and scrubbed by lye of all layers and cooled by cooling water, it shall come out from the top and enter the temperature reducing heat exchanger with demister to eliminate the drops in the waste gas and reduce the temperature of the waste gas. Then the waste gas shall enter the adsorber through waste gas blower. The main function of caustic scrubbing is to remove the H2S in waste gas, its reaction equation is:

$H2S + 2NaOH \rightarrow Na2S + 2H2O$

Also, another function of the washing tower is to cooling down the exhaust gas temperature.

2. Adsorption system

There are 8 steps for adsorber operation: gas intake, all valves turn-off, inert gas (nitrogen) intake, desorption, pressure relief, drying, cooling air exhausting.

3. Condensate System

During the desorption, the steam and CS2 from the adsorber will condense out partly when going through the evaporator, and then it will enter to the two condensers. The condensed CS2 and water will enter into the specific gravity separator (S.G. separator). From the exhaust tank to separate and withdrawal the water. Then condensed CS2 will enter through a volume meter then to the CS2 storage tank.

Annexure-2

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.

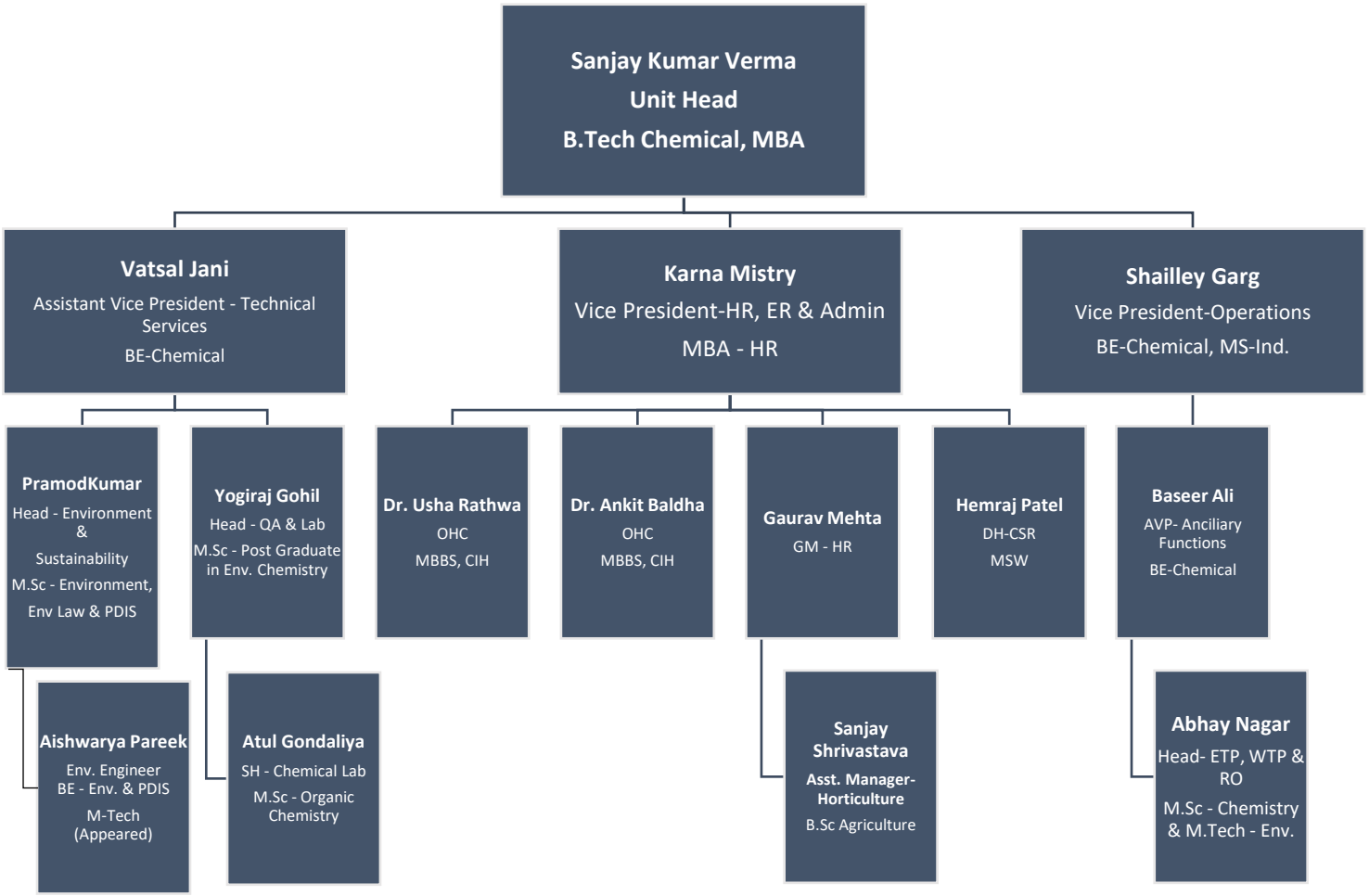
Gaseous emission (SO2 & NOx) tolerant species:

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. 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.

Above plant species are selected based on CPCB Guidelines for development of Green Belt March 2000.

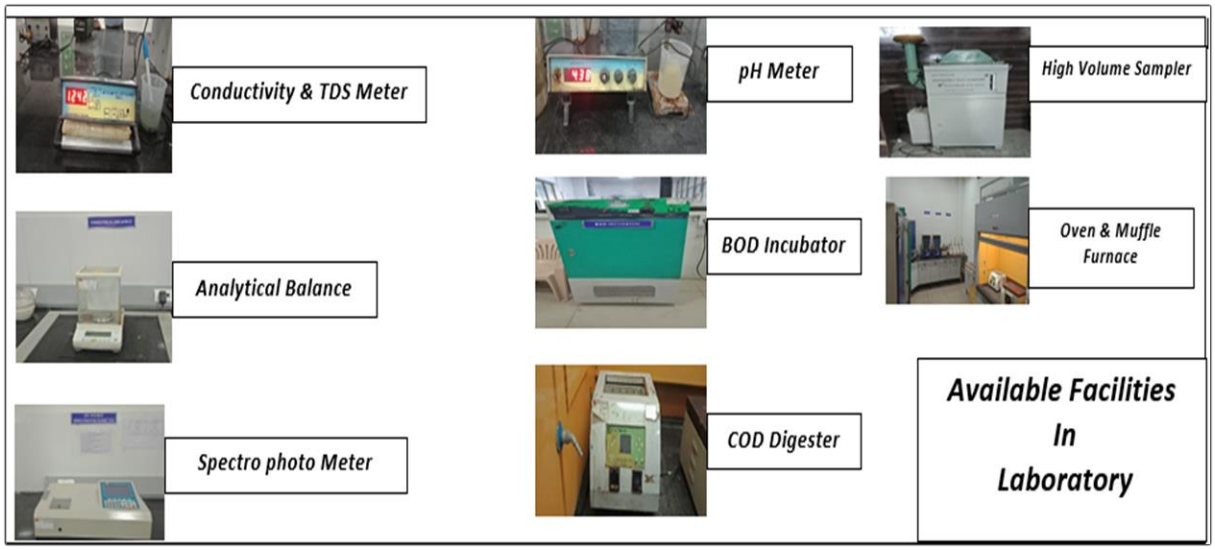
ANNEXURE-3

Organisation Chart of Environment Management Cell



Annexure-4

List of testing facilities available at Environmental 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

Annexure-5

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. Three guard /polishing pond constructed, each pond having capacity of 25000 m3. Total holding capacity is 75,000 m3, which is suitable for storage of treated effluent more than 48 hrs. Treated effluent is discharged into sea through GIDC pipeline.
5. Water conservation measures are taken and achieved very less discharge of treated effluent. (Data are available in EC Compliance report).

- **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 around 15,000 tree every year which will be continued to cover > 33% area as green belt.

Annexure-06

Environment Monitoring Reports

(Effluent & Emission)

UniStar
Environment and Research Labs Pvt. Ltd.

White House
Near G.I.D.C. Office, Char Rasta,
Vapi - 396 195. Gujarat, India.
Phone : +91 260 2433966 / 2425610
Email : response@uerl.in Website : www.uerl.in

TC-7753

MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (31.03.2023 to 22.09.2024) | QCI-NABET Accredited EIA & GW Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001 : 2015 Certified Company | ISO 45001 : 2018 Certified Company

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003511F			
Test Report No.:	**URA/24/03/D/A-022**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/022	**Service Request Date**	22/03/2024
Sample ID No.:	URA/ID/A-24/03/022	**Field Data Sheet No.**	URA/FDS/A-24/03/022
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024
Sampling Procedure:	As per CPCB Guidelines		

Location of Sampling / Monitoring:	**Near ETP (MCC Room)**									
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:**	30	^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:**	53	%

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/02	Respirable Dust Sampler	RDS:SR.No.160203106	31/07/2023	30/07/2024
UERL/AIR/FPS/08	Fine Particulate Sampler	FPS:SR.No.160402021	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.25
2.	Flow Rate of PM_{10}	m^3/min	1.11
3.	Volume of Air Sampled for PM_{10}	m^3	1615.1
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Particulate Matter $PM_{2.5}$	µg/m^3	20.2	**60**	IS 5182 (Part 24)
2.	Particulate Matter PM_{10}	µg/m3	55.4	**100**	IS: 5182 (Part 23)
3.	Sulphur Dioxide	µg/m3	18.6	**80**	IS: 5182 (Part 2)
4.	Nitrogen Dioxide	µg/m3	22.0	**80**	IS: 5182 (Part 6)
5.	Ozone	µg/m3	8.6	**180**	IS: 5182 (Part 9)
6.	Ammonia (NH_3)	µg/m3	BDL (MDL: 5.0)	**400**	IS: 5182 (Part 25)
7.	Carbon Monoxide (CO)	mg/m3	BDL (MDL: 1.0)	**2.0**	IS: 5182 (Part 10)
8.	Lead (Pb)	µg/m3	BDL (MDL: 0.5)	**1.0**	IS: 5182 (Part 22)
9.	Benzene	µg/m3	BDL (MDL: 1.0)	**5.0**	IS: 5182 (Part11)
10.	Benzo(a)Pyrene (BAP)	ng/m3	BDL (MDL: 0.1)	**1.0**	IS: 5182 (Part 12)
11.	Nickel	ng/m3	BDL (MDL: 1.0)	**20**	IS: 5182 (Part 26)
12.	Arsenic	ng/m3	BDL (MDL: 1.0)	**6.0**	IS: 5182 (Part 22)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

Regd. Office : 215, Royal Arcade, Near G.I.D.C.Office, Char Rasta,Vapi-396 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003511F			
Test Report No.:	**URA/24/03/D/A-022**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/022	**Service Request Date**	22/03/2024
Sample ID No.:	URA/ID/A-24/03/022	**Field Data Sheet No.**	URA/FDS/A-24/03/022
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024
Sampling Procedure:	As per CPCB Guidelines		
Location of Sampling / Monitoring:	**Near ETP (MCC Room)**		
Environmental Conditions during Sampling:	Temp.:	Min.: 24 ^{0}C	Max.: 39 ^{0}C **Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.: 31 %	Max.: 72 % **Avg.:** 53 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/02	Respirable Dust Sampler	RDS:SR.No.160203106	31/07/2023	30/07/2024
UERL/AIR/FPS/08	Fine Particulate Sampler	FPS:SR.No.160402021	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.25
2.	Flow Rate of PM_{10}	m^3/min	1.11
3.	Volume of Air Sampled for PM_{10}	m^3	1615.1
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrogen Sulphide (H_2S)	µg/m3	BDL (MDL: 6.0)	**150**	IS 5182 (Part 07)
2.	Carbon Disulphide (CS_2)	µg/m3	BDL (MDL: 5.0)	**100**	IS 5182 (Part 20)
3.	Chlorine (Cl_2)	µg/m3	BDL (MDL: 2.0)	-	IS: 5182 (Part 19)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

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TEST REPORT
(AMBIENT AIR MONITORING)

Test Report No.:	**URA/24/03/D/A-022**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/022	**Service Request Date**	22/03/2024
Sample ID No.:	URA/ID/A-24/03/022	**Field Data Sheet No.**	URA/FDS/A-24/03/022
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024
Sampling Procedure:	As per CPCB Guidelines		

Location of Sampling / Monitoring:	**Near ETP (MCC Room)**									
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:**	30	^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:**	53	%

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/02	Respirable Dust Sampler	RDS:SR.No.160203106	31/07/2023	30/07/2024
UERL/AIR/FPS/08	Fine Particulate Sampler	FPS:SR.No.160402021	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.25
2.	Flow Rate of PM_{10}	m^3/min	1.11
3.	Volume of Air Sampled for PM_{10}	m^3	1615.1
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrochloric Acid (HCl)	µg/m^3	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

Regd. Office : 215, Royal Arcade, Near G.I.D.C.Office, Char Rasta,Vapi-396 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003512F									
Test Report No.:	**URA/24/03/D/A-023**	**Report Issue Date**	29/03/2024						
Service Request form No.:	URA/SRF/03/023	**Service Request Date**	22/03/2024						
Sample ID No.:	URA/ID/A-24/03/023	**Field Data Sheet No.**	URA/FDS/A-24/03/023						
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)								
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024						
Sampling Procedure:	As per CPCB Guidelines								
Location of Sampling / Monitoring:	**Near E.R. Office**								
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:**	30 ^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:**	53 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	RDS:SR.No.160203118	31/07/2023	30/07/2024
UERL/AIR/FPS/06	Fine Particulate Sampler	FPS:SR.No.160802033	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.29
2.	Flow Rate of PM_{10}	m^3/min	1.06
3.	Volume of Air Sampled for PM_{10}	m^3	1544.8
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Particulate Matter $PM_{2.5}$	µg/m^3	18.5	**60**	IS 5182 (Part 24)
2.	Particulate Matter PM_{10}	µg/m^3	50.6	**100**	IS: 5182 (Part 23)
3.	Sulphur Dioxide	µg/m^3	21.6	**80**	IS: 5182 (Part 2)
4.	Nitrogen Dioxide	µg/m^3	23.8	**80**	IS: 5182 (Part 6)
5.	Ozone	µg/m3	10.0	**180**	IS: 5182 (Part 9)
6.	Ammonia (NH_3)	µg/m3	BDL (MDL: 5.0)	**400**	IS: 5182 (Part 25)
7.	Carbon Monoxide (CO)	mg/m3	BDL (MDL: 1.0)	**2.0**	IS: 5182 (Part 10)
8.	Lead (Pb)	µg/m3	BDL (MDL: 0.5)	**1.0**	IS: 5182 (Part 22)
9.	Benzene	µg/m3	BDL (MDL: 1.0)	**5.0**	IS: 5182 (Part11)
10.	Benzo(a)Pyrene (BAP)	ng/m3	BDL (MDL: 0.1)	**1.0**	IS: 5182 (Part 12)
11.	Nickel	ng/m3	BDL (MDL: 1.0)	**20**	IS: 5182 (Part 26)
12.	Arsenic	ng/m3	BDL (MDL: 1.0)	**6.0**	IS: 5182 (Part 22)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003512F									
Test Report No.:	**URA/24/03/D/A-023**	**Report Issue Date**	29/03/2024						
Service Request form No.:	URA/SRF/03/023	**Service Request Date**	22/03/2024						
Sample ID No.:	URA/ID/A-24/03/023	**Field Data Sheet No.**	URA/FDS/A-24/03/023						
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)								
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024						
Sampling Procedure:	As per CPCB Guidelines								
Location of Sampling / Monitoring:	**Near E.R. Office**								
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:**	30 ^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:**	53 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	RDS:SR.No.160203118	31/07/2023	30/07/2024
UERL/AIR/FPS/06	Fine Particulate Sampler	FPS:SR.No.160802033	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.29
2.	Flow Rate of PM_{10}	m^3/min	1.06
3.	Volume of Air Sampled for PM_{10}	m^3	1544.8
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrogen Sulphide (H_2S)	µg/m^3	BDL (MDL: 6.0)	**150**	IS 5182 (Part 07)
2.	Carbon Disulphide (CS_2)	µg/m^3	BDL (MDL: 5.0)	**100**	IS 5182 (Part 20)
3.	Chlorine (Cl_2)	µg/m^3	BDL (MDL: 2.0)	-	IS: 5182 (Part 19)

Remarks: Sampling Duration (24 Hrs)
Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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TEST REPORT
(AMBIENT AIR MONITORING)

Test Report No.:	**URA/24/03/D/A-023**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/023	**Service Request Date**	22/03/2024
Sample ID No.:	URA/ID/A-24/03/023	**Field Data Sheet No.**	URA/FDS/A-24/03/023
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024
Sampling Procedure:	As per CPCB Guidelines		

Location of Sampling / Monitoring:	**Near E.R. Office**									
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:**	30	^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:**	53	%

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	RDS:SR.No.160203118	31/07/2023	30/07/2024
UERL/AIR/FPS/06	Fine Particulate Sampler	FPS:SR.No.160802033	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.29
2.	Flow Rate of PM_{10}	m^3/min	1.06
3.	Volume of Air Sampled for PM_{10}	m^3	1544.8
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrochloric Acid (HCl)	µg/m^3	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

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TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003513F								
Test Report No.:	**URA/24/03/D/A-024**		**Report Issue Date**	29/03/2024				
Service Request form No.:	URA/SRF/03/024		**Service Request Date**	22/03/2024				
Sample ID No.:	URA/ID/A-24/03/024		**Field Data Sheet No.**	URA/FDS/A-24/03/024				
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	22/03/2024		Date of Testing	23/03/2024				
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Near AILC (Anhydrous Aluminum Chloride Plant)**							
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:** 53 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013	31/07/2023	30/07/2024
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.21
2.	Flow Rate of PM_{10}	m^3/min	1.12
3.	Volume of Air Sampled for PM_{10}	m^3	1626.9
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Particulate Matter $PM_{2.5}$	µg/m^3	22.7	**60**	IS 5182 (Part 24)
2.	Particulate Matter PM_{10}	µg/m^3	55.8	**100**	IS: 5182 (Part 23)
3.	Sulphur Dioxide	µg/m^3	19.6	**80**	IS: 5182 (Part 2)
4.	Nitrogen Dioxide	µg/m^3	21.5	**80**	IS: 5182 (Part 6)
5.	Ozone	µg/m3	7.4	**180**	IS: 5182 (Part 9)
6.	Ammonia (NH_3)	µg/m3	BDL (MDL: 5.0)	**400**	IS: 5182 (Part 25)
7.	Carbon Monoxide (CO)	mg/m3	BDL (MDL: 1.0)	**2.0**	IS: 5182 (Part 10)
8.	Lead (Pb)	µg/m3	BDL (MDL: 0.5)	**1.0**	IS: 5182 (Part 22)
9.	Benzene	µg/m3	BDL (MDL: 1.0)	**5.0**	IS: 5182 (Part11)
10.	Benzo(a)Pyrene (BAP)	ng/m3	BDL (MDL: 0.1)	**1.0**	IS: 5182 (Part 12)
11.	Nickel	ng/m3	BDL (MDL: 1.0)	**20**	IS: 5182 (Part 26)
12.	Arsenic	ng/m3	BDL (MDL: 1.0)	**6.0**	IS: 5182 (Part 22)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003513F									
Test Report No.:	**URA/24/03/D/A-024**		**Report Issue Date**		29/03/2024				
Service Request form No.:	URA/SRF/03/024		**Service Request Date**		22/03/2024				
Sample ID No.:	URA/ID/A-24/03/024		**Field Data Sheet No.**		URA/FDS/A-24/03/024				
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)								
Dates of Sampling :	22/03/2024		Date of Testing		23/03/2024				
Sampling Procedure:	As per CPCB Guidelines								
Location of Sampling / Monitoring:	**Near AILC (Anhydrous Aluminum Chloride Plant)**								
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:**	30 ^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:**	53 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013	31/07/2023	30/07/2024
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.21
2.	Flow Rate of PM_{10}	m^3/min	1.12
3.	Volume of Air Sampled for PM_{10}	m^3	1626.9
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrogen Sulphide (H_2S)	µg/m^3	BDL (MDL: 6.0)	**150**	IS 5182 (Part 07)
2.	Carbon Disulphide (CS_2)	µg/m^3	BDL (MDL: 5.0)	**100**	IS 5182 (Part 20)
3.	Chlorine (Cl_2)	µg/m^3	BDL (MDL: 2.0)	-	IS: 5182 (Part 19)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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TEST REPORT
(AMBIENT AIR MONITORING)

Test Report No.:	**URA/24/03/D/A-024**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/024	**Service Request Date**	22/03/2024
Sample ID No.:	URA/ID/A-24/03/024	**Field Data Sheet No.**	URA/FDS/A-24/03/024
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024
Sampling Procedure:	As per CPCB Guidelines		

Location of Sampling / Monitoring:	**Near AILC (Anhydrous Aluminum Chloride Plant)**								
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:**	30 ^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:**	53 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013	31/07/2023	30/07/2024
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.21
2.	Flow Rate of PM_{10}	m^3/min	1.12
3.	Volume of Air Sampled for PM_{10}	m^3	1626.9
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrochloric Acid (HCl)	µg/m^3	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

Regd. Office : 215, Royal Arcade, Near G.I.D.C.Office, Char Rasta,Vapi-396 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

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TC-7753

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TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003514F								
Test Report No.:	**URA/24/03/D/A-025**	**Report Issue Date**	29/03/2024					
Service Request form No.:	URA/SRF/03/025	**Service Request Date**	22/03/2024					
Sample ID No.:	URA/ID/A-24/03/025	**Field Data Sheet No.**	URA/FDS/A-24/03/025					
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024					
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Near Gate No. 2, Security Gate (Punching Machine Area)**							
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:** 53 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/19	Respirable Dust Sampler	1796 DTD 2013	31/07/2023	30/07/2024
UERL/AIR/FPS/22	Fine Particulate Sampler	195 DTK 2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.24
2.	Flow Rate of PM_{10}	m^3/min	1.08
3.	Volume of Air Sampled for PM_{10}	m^3	1570.8
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Particulate Matter $PM_{2.5}$	µg/m^3	18.5	**60**	IS 5182 (Part 24)
2.	Particulate Matter PM_{10}	µg/m^3	56.5	**100**	IS: 5182 (Part 23)
3.	Sulphur Dioxide	µg/m^3	21.6	**80**	IS: 5182 (Part 2)
4.	Nitrogen Dioxide	µg/m^3	24.3	**80**	IS: 5182 (Part 6)
5.	Ozone	µg/m3	12.3	**180**	IS: 5182 (Part 9)
6.	Ammonia (NH_3)	µg/m3	BDL (MDL: 5.0)	**400**	IS: 5182 (Part 25)
7.	Carbon Monoxide (CO)	mg/m3	BDL (MDL: 1.0)	**2.0**	IS: 5182 (Part 10)
8.	Lead (Pb)	µg/m3	BDL (MDL: 0.5)	**1.0**	IS: 5182 (Part 22)
9.	Benzene	µg/m3	BDL (MDL: 1.0)	**5.0**	IS: 5182 (Part11)
10.	Benzo(a)Pyrene (BAP)	ng/m3	BDL (MDL: 0.1)	**1.0**	IS: 5182 (Part 12)
11.	Nickel	ng/m3	BDL (MDL: 1.0)	**20**	IS: 5182 (Part 26)
12.	Arsenic	ng/m3	BDL (MDL: 1.0)	**6.0**	IS: 5182 (Part 22)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

Regd. Office : 215, Royal Arcade, Near G.I.D.C.Office, Char Rasta,Vapi-396 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003514F			
Test Report No.:	**URA/24/03/D/A-025**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/025	**Service Request Date**	22/03/2024
Sample ID No.:	URA/ID/A-24/03/025	**Field Data Sheet No.**	URA/FDS/A-24/03/025
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024
Sampling Procedure:	As per CPCB Guidelines		
Location of Sampling / Monitoring:	**Near Gate No. 2, Security Gate (Punching Machine Area)**		
Environmental Conditions during Sampling:	Temp.: Min.: 24 ^{0}C Max.: 39 ^{0}C **Avg.:** 30 ^{0}C		
	Rel. Humidity: Min.: 31 % Max.: 72 % **Avg.:** 53 %		

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/19	Respirable Dust Sampler	1796 DTD 2013	31/07/2023	30/07/2024
UERL/AIR/FPS/22	Fine Particulate Sampler	195 DTK 2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.24
2.	Flow Rate of PM_{10}	m^3/min	1.08
3.	Volume of Air Sampled for PM_{10}	m^3	1570.8
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.3

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrogen Sulphide (H_2S)	µg/m^3	BDL (MDL: 6.0)	**150**	IS 5182 (Part 07)
2.	Carbon Disulphide (CS_2)	µg/m^3	BDL (MDL: 5.0)	**100**	IS 5182 (Part 20)
3.	Chlorine (Cl_2)	µg/m^3	BDL (MDL: 2.0)	-	IS: 5182 (Part 19)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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TEST REPORT
(AMBIENT AIR MONITORING)

Test Report No.:	**URA/24/03/D/A-025**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/025	**Service Request Date**	22/03/2024
Sample ID No.:	URA/ID/A-24/03/025	**Field Data Sheet No.**	URA/FDS/A-24/03/025
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	22/03/2024	Date of Testing	23/03/2024
Sampling Procedure:	As per CPCB Guidelines		

Location of Sampling / Monitoring:	**Near Gate No. 2, Security Gate (Punching Machine Area)**									
Environmental Conditions during Sampling:	Temp.:	Min.:	24	^{0}C	Max.:	39	^{0}C	**Avg.:**	30	^{0}C
	Rel. Humidity:	Min.:	31	%	Max.:	72	%	**Avg.:**	53	%

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/19	Respirable Dust Sampler	1796 DTD 2013	31/07/2023	30/07/2024
UERL/AIR/FPS/22	Fine Particulate Sampler	195 DTK 2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.20
2.	Flow Rate of PM_{10}	m^3/min	1.11
3.	Volume of Air Sampled for PM_{10}	m^3	1611.7
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrochloric Acid (HCl)	µg/m^3	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07

Remarks: Sampling Duration (24 Hrs)
Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003515F								
Test Report No.:	**URA/24/03/D/A-026**			**Report Issue Date**		29/03/2024		
Service Request form No.:	URA/SRF/03/026			**Service Request Date**		23/03/2024		
Sample ID No.:	URA/ID/A-24/03/026			**Field Data Sheet No.**		URA/FDS/A-24/03/026		
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024			Date of Testing		25/03/2024		
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Derol**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22 ^{0}C	Max.:	38 ^{0}C	**Avg.:**	30 ^{0}C	
	Rel. Humidity:	Min.:	38 %	Max.:	91 %	**Avg.:**	61 %	

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/02	Respirable Dust Sampler	RDS:SR.No.160203106	31/07/2023	30/07/2024
UERL/AIR/FPS/08	Fine Particulate Sampler	FPS:SR.No.160402021	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.20
2.	Flow Rate of PM_{10}	m^3/min	1.11
3.	Volume of Air Sampled for PM_{10}	m^3	1611.7
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Particulate Matter $PM_{2.5}$	µg/m^3	19.8	**60**	IS 5182 (Part 24)
2.	Particulate Matter PM_{10}	µg/m^3	50.5	**100**	IS: 5182 (Part 23)
3.	Sulphur Dioxide	µg/m^3	23.1	**80**	IS: 5182 (Part 2)
4.	Nitrogen Dioxide	µg/m^3	26.7	**80**	IS: 5182 (Part 6)
5.	Ozone	µg/m3	6.8	**180**	IS: 5182 (Part 9)
6.	Ammonia (NH_3)	µg/m3	BDL (MDL: 5.0)	**400**	IS: 5182 (Part 25)
7.	Carbon Monoxide (CO)	mg/m3	BDL (MDL: 1.0)	**2.0**	IS: 5182 (Part 10)
8.	Lead (Pb)	µg/m3	BDL (MDL: 0.5)	**1.0**	IS: 5182 (Part 22)
9.	Benzene	µg/m3	BDL (MDL: 1.0)	**5.0**	IS: 5182 (Part11)
10.	Benzo(a)Pyrene (BAP)	ng/m3	BDL (MDL: 0.1)	**1.0**	IS: 5182 (Part 12)
11.	Nickel	ng/m3	BDL (MDL: 1.0)	**20**	IS: 5182 (Part 26)
12.	Arsenic	ng/m3	BDL (MDL: 1.0)	**6.0**	IS: 5182 (Part 22)

Remarks: Sampling Duration (24 Hrs)
Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003515F								
Test Report No.:	**URA/24/03/D/A-026**		**Report Issue Date**	29/03/2024				
Service Request form No.:	URA/SRF/03/026		**Service Request Date**	23/03/2024				
Sample ID No.:	URA/ID/A-24/03/026		**Field Data Sheet No.**	URA/FDS/A-24/03/026				
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024		Date of Testing	25/03/2024				
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Derol**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/02	Respirable Dust Sampler	RDS:SR.No.160203106	31/07/2023	30/07/2024
UERL/AIR/FPS/08	Fine Particulate Sampler	FPS:SR.No.160402021	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.20
2.	Flow Rate of PM_{10}	m^3/min	1.11
3.	Volume of Air Sampled for PM_{10}	m^3	1611.7
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrogen Sulphide (H_2S)	µg/m^3	BDL (MDL: 6.0)	**150**	IS 5182 (Part 07)
2.	Carbon Disulphide (CS_2)	µg/m^3	BDL (MDL: 5.0)	**100**	IS 5182 (Part 20)
3.	Chlorine (Cl_2)	µg/m^3	BDL (MDL: 2.0)	-	IS: 5182 (Part 19)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

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TEST REPORT
(AMBIENT AIR MONITORING)

Test Report No.:	**URA/24/03/D/A-026**		**Report Issue Date**			29/03/2024		
Service Request form No.:	URA/SRF/03/026		**Service Request Date**			23/03/2024		
Sample ID No.:	URA/ID/A-24/03/026		**Field Data Sheet No.**			URA/FDS/A-24/03/026		
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024		Date of Testing			25/03/2024		
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Derol**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/02	Respirable Dust Sampler	RDS:SR.No.160203106	31/07/2023	30/07/2024
UERL/AIR/FPS/08	Fine Particulate Sampler	FPS:SR.No.160402021	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.18
2.	Flow Rate of PM_{10}	m^3/min	1.06
3.	Volume of Air Sampled for PM_{10}	m^3	1537.8
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrochloric Acid (HCl)	µg/m^3	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07

Remarks: Sampling Duration (24 Hrs)
Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003516F								
Test Report No.:	**URA/24/03/D/A-027**			**Report Issue Date**		29/03/2024		
Service Request form No.:	URA/SRF/03/027			**Service Request Date**		23/03/2024		
Sample ID No.:	URA/ID/A-24/03/027			**Field Data Sheet No.**		URA/FDS/A-24/03/027		
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024			Date of Testing		25/03/2024		
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Sarnar**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22 ^{0}C	Max.:	38 ^{0}C	**Avg.:**	30 ^{0}C	
	Rel. Humidity:	Min.:	38 %	Max.:	91 %	**Avg.:**	61 %	

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	RDS:SR.No.160203118	31/07/2023	30/07/2024
UERL/AIR/FPS/06	Fine Particulate Sampler	FPS:SR.No.160802033	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.18
2.	Flow Rate of PM_{10}	m^3/min	1.06
3.	Volume of Air Sampled for PM_{10}	m^3	1537.8
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Particulate Matter $PM_{2.5}$	µg/m^3	20.6	**60**	IS 5182 (Part 24)
2.	Particulate Matter PM_{10}	µg/m^3	55.3	**100**	IS: 5182 (Part 23)
3.	Sulphur Dioxide	µg/m^3	19.8	**80**	IS: 5182 (Part 2)
4.	Nitrogen Dioxide	µg/m^3	21.9	**80**	IS: 5182 (Part 6)
5.	Ozone	µg/m3	BDL (MDL: 5.0)	**180**	IS: 5182 (Part 9)
6.	Ammonia (NH_3)	µg/m3	BDL (MDL: 5.0)	**400**	IS: 5182 (Part 25)
7.	Carbon Monoxide (CO)	mg/m3	BDL (MDL: 1.0)	**2.0**	IS: 5182 (Part 10)
8.	Lead (Pb)	µg/m3	BDL (MDL: 0.5)	**1.0**	IS: 5182 (Part 22)
9.	Benzene	µg/m3	BDL (MDL: 1.0)	**5.0**	IS: 5182 (Part11)
10.	Benzo(a)Pyrene (BAP)	ng/m3	BDL (MDL: 0.1)	**1.0**	IS: 5182 (Part 12)
11.	Nickel	ng/m3	BDL (MDL: 1.0)	**20**	IS: 5182 (Part 26)
12.	Arsenic	ng/m3	BDL (MDL: 1.0)	**6.0**	IS: 5182 (Part 22)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003516F			
Test Report No.:	**URA/24/03/D/A-027**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/027	**Service Request Date**	23/03/2024
Sample ID No.:	URA/ID/A-24/03/027	**Field Data Sheet No.**	URA/FDS/A-24/03/027
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	23/03/2024	Date of Testing	25/03/2024
Sampling Procedure:	As per CPCB Guidelines		

Location of Sampling / Monitoring:	**Village Sarnar**								
Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:**	30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:**	61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	RDS:SR.No.160203118	31/07/2023	30/07/2024
UERL/AIR/FPS/06	Fine Particulate Sampler	FPS:SR.No.160802033	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.18
2.	Flow Rate of PM_{10}	m^3/min	1.06
3.	Volume of Air Sampled for PM_{10}	m^3	1537.8
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrogen Sulphide (H_2S)	µg/m^3	BDL (MDL: 6.0)	**150**	IS 5182 (Part 07)
2.	Carbon Disulphide (CS_2)	µg/m^3	BDL (MDL: 5.0)	**100**	IS 5182 (Part 20)
3.	Chlorine (Cl_2)	µg/m^3	BDL (MDL: 2.0)	-	IS: 5182 (Part 19)

Remarks: Sampling Duration (24 Hrs)
Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (31.03.2023 to 22.09.2024) | QCI-NABET Accredited EIA & GW Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001 : 2015 Certified Company | ISO 45001 : 2018 Certified Company

TEST REPORT
(AMBIENT AIR MONITORING)

Test Report No.:	**URA/24/03/D/A-027**	**Report Issue Date**	29/03/2024
Service Request form No.:	URA/SRF/03/027	**Service Request Date**	23/03/2024
Sample ID No.:	URA/ID/A-24/03/027	**Field Data Sheet No.**	URA/FDS/A-24/03/027
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Dates of Sampling :	23/03/2024	Date of Testing	25/03/2024
Sampling Procedure:	As per CPCB Guidelines		
Location of Sampling / Monitoring:	**Village Sarnar**		

Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/03	Respirable Dust Sampler	RDS:SR.No.160203118	31/07/2023	30/07/2024
UERL/AIR/FPS/06	Fine Particulate Sampler	FPS:SR.No.160802033	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.16
2.	Flow Rate of PM_{10}	m^3/min	1.08
3.	Volume of Air Sampled for PM_{10}	m^3	1565.6
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrochloric Acid (HCl)	µg/m^3	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003517F								
Test Report No.:	**URA/24/03/D/A-028**		**Report Issue Date**	29/03/2024				
Service Request form No.:	URA/SRF/03/028		**Service Request Date**	23/03/2024				
Sample ID No.:	URA/ID/A-24/03/028		**Field Data Sheet No.**	URA/FDS/A-24/03/028				
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024		Date of Testing	25/03/2024				
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Argama**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013	31/07/2023	30/07/2024
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.16
2.	Flow Rate of PM_{10}	m^3/min	1.08
3.	Volume of Air Sampled for PM_{10}	m^3	1565.6
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Particulate Matter $PM_{2.5}$	µg/m^3	15.7	**60**	IS 5182 (Part 24)
2.	Particulate Matter PM_{10}	µg/m^3	50.1	**100**	IS: 5182 (Part 23)
3.	Sulphur Dioxide	µg/m^3	23.2	**80**	IS: 5182 (Part 2)
4.	Nitrogen Dioxide	µg/m^3	27.2	**80**	IS: 5182 (Part 6)
5.	Ozone	µg/m3	7.2	**180**	IS: 5182 (Part 9)
6.	Ammonia (NH_3)	µg/m3	BDL (MDL: 5.0)	**400**	IS: 5182 (Part 25)
7.	Carbon Monoxide (CO)	mg/m3	BDL (MDL: 1.0)	**2.0**	IS: 5182 (Part 10)
8.	Lead (Pb)	µg/m3	BDL (MDL: 0.5)	**1.0**	IS: 5182 (Part 22)
9.	Benzene	µg/m3	BDL (MDL: 1.0)	**5.0**	IS: 5182 (Part11)
10.	Benzo(a)Pyrene (BAP)	ng/m3	BDL (MDL: 0.1)	**1.0**	IS: 5182 (Part 12)
11.	Nickel	ng/m3	BDL (MDL: 1.0)	**20**	IS: 5182 (Part 26)
12.	Arsenic	ng/m3	BDL (MDL: 1.0)	**6.0**	IS: 5182 (Part 22)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003517F								
Test Report No.:	**URA/24/03/D/A-028**		**Report Issue Date**	29/03/2024				
Service Request form No.:	URA/SRF/03/028		**Service Request Date**	23/03/2024				
Sample ID No.:	URA/ID/A-24/03/028		**Field Data Sheet No.**	URA/FDS/A-24/03/028				
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024		Date of Testing	25/03/2024				
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Argama**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013	31/07/2023	30/07/2024
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.16
2.	Flow Rate of PM_{10}	m^3/min	1.08
3.	Volume of Air Sampled for PM_{10}	m^3	1565.6
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			NAME OF GROUP – ATMOSPHERIC POLLUTION		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrogen Sulphide (H_2S)	µg/m^3	BDL (MDL: 6.0)	**150**	IS 5182 (Part 07)
2.	Carbon Disulphide (CS_2)	µg/m^3	BDL (MDL: 5.0)	**100**	IS 5182 (Part 20)
3.	Chlorine (Cl_2)	µg/m^3	BDL (MDL: 2.0)	-	IS: 5182 (Part 19)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT
(AMBIENT AIR MONITORING)

Test Report No.:	**URA/24/03/D/A-028**		**Report Issue Date**			29/03/2024		
Service Request form No.:	URA/SRF/03/028		**Service Request Date**			23/03/2024		
Sample ID No.:	URA/ID/A-24/03/028		**Field Data Sheet No.**			URA/FDS/A-24/03/028		
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024		Date of Testing			25/03/2024		
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Argama**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/25	Respirable Dust Sampler	1744-DTA-2013	31/07/2023	30/07/2024
UERL/AIR/FPS/51	Fine Particulate Sampler	137-DTD-2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.17
2.	Flow Rate of PM_{10}	m^3/min	1.04
3.	Volume of Air Sampled for PM_{10}	m^3	1508.2
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrochloric Acid (HCl)	µg/m^3	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07

Remarks: Sampling Duration (24 Hrs)
Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003518F								
Test Report No.:	**URA/24/03/D/A-029**		**Report Issue Date**		29/03/2024			
Service Request form No.:	URA/SRF/03/029		**Service Request Date**		23/03/2024			
Sample ID No.:	URA/ID/A-24/03/029		**Field Data Sheet No.**		URA/FDS/A-24/03/029			
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024		Date of Testing		25/03/2024			
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Vilayat**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/19	Respirable Dust Sampler	1796 DTD 2013	31/07/2023	30/07/2024
UERL/AIR/FPS/22	Fine Particulate Sampler	195 DTK 2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.17
2.	Flow Rate of PM_{10}	m^3/min	1.04
3.	Volume of Air Sampled for PM_{10}	m^3	1508.2
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Particulate Matter $PM_{2.5}$	µg/m^3	21.9	**60**	IS 5182 (Part 24)
2.	Particulate Matter PM_{10}	µg/m^3	56.6	**100**	IS: 5182 (Part 23)
3.	Sulphur Dioxide	µg/m^3	21.4	**80**	IS: 5182 (Part 2)
4.	Nitrogen Dioxide	µg/m^3	24.5	**80**	IS: 5182 (Part 6)
5.	Ozone	µg/m3	BDL (MDL: 5.0)	**180**	IS: 5182 (Part 9)
6.	Ammonia (NH_3)	µg/m3	BDL (MDL: 5.0)	**400**	IS: 5182 (Part 25)
7.	Carbon Monoxide (CO)	mg/m3	BDL (MDL: 1.0)	**2.0**	IS: 5182 (Part 10)
8.	Lead (Pb)	µg/m3	BDL (MDL: 0.5)	**1.0**	IS: 5182 (Part 22)
9.	Benzene	µg/m3	BDL (MDL: 1.0)	**5.0**	IS: 5182 (Part11)
10.	Benzo(a)Pyrene (BAP)	ng/m3	BDL (MDL: 0.1)	**1.0**	IS: 5182 (Part 12)
11.	Nickel	ng/m3	BDL (MDL: 1.0)	**20**	IS: 5182 (Part 26)
12.	Arsenic	ng/m3	BDL (MDL: 1.0)	**6.0**	IS: 5182 (Part 22)

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT
(AMBIENT AIR MONITORING)

ULR - TC775324000003518F								
Test Report No.:	**URA/24/03/D/A-029**		**Report Issue Date**		29/03/2024			
Service Request form No.:	URA/SRF/03/029		**Service Request Date**		23/03/2024			
Sample ID No.:	URA/ID/A-24/03/029		**Field Data Sheet No.**		URA/FDS/A-24/03/029			
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024		Date of Testing		25/03/2024			
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Vilayat**							
Environmental Conditions during Sampling:	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/19	Respirable Dust Sampler	1796 DTD 2013	31/07/2023	30/07/2024
UERL/AIR/FPS/22	Fine Particulate Sampler	195 DTK 2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.17
2.	Flow Rate of PM_{10}	m^3/min	1.04
3.	Volume of Air Sampled for PM_{10}	m^3	1508.2
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.2

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 °C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrogen Sulphide (H_2S)	µg/m^3	BDL (MDL: 6.0)	**150**	IS 5182 (Part 07)
2.	Carbon Disulphide (CS_2)	µg/m^3	BDL (MDL: 5.0)	**100**	IS 5182 (Part 20)
3.	Chlorine (Cl_2)	µg/m^3	BDL (MDL: 2.0)	-	IS: 5182 (Part 19)

Remarks: Sampling Duration (24 Hrs)
Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

****** End of Report *******

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

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TEST REPORT
(AMBIENT AIR MONITORING)

Test Report No.:	**URA/24/03/D/A-029**		**Report Issue Date**			29/03/2024		
Service Request form No.:	URA/SRF/03/029		**Service Request Date**			23/03/2024		
Sample ID No.:	URA/ID/A-24/03/029		**Field Data Sheet No.**			URA/FDS/A-24/03/029		
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)							
Dates of Sampling :	23/03/2024		Date of Testing			25/03/2024		
Sampling Procedure:	As per CPCB Guidelines							
Location of Sampling / Monitoring:	**Village Vilayat**							
Environmental Conditions during Sampling :	Temp.:	Min.:	22	^{0}C	Max.:	38	^{0}C	**Avg.:** 30 ^{0}C
	Rel. Humidity:	Min.:	38	%	Max.:	91	%	**Avg.:** 61 %

➢ **Details of Master Instrument Used for Monitoring**

Instrument Id No.	Instrument Name	Serial Number	Cali. Date	Next Cali. Date
UERL/AIR/RDS/19	Respirable Dust Sampler	1796 DTD 2013	31/07/2023	30/07/2024
UERL/AIR/FPS/22	Fine Particulate Sampler	195 DTK 2013	31/07/2023	30/07/2024

➢ **General Sampling / Monitoring Observation as per CPCB Guideline**

Sr. No.	Description	Unit of measurement	Observation
1.	Monitoring Duration	h	24.02
2.	Flow Rate of PM_{10}	m^3/min	1.08
3.	Volume of Air Sampled for PM_{10}	m^3	1556.5
4.	Volume of Air Sampled for $PM_{2.5}$	m^3	24.1

➢ **Environmental Conditions during testing:** Temp.: 25 ± 5 ^{o}C, Relative Humidity: 40 to 52%

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit**	**Result**	**Permissible Limit (As per NAAQMS)**	**Test Method**
1.	Hydrochloric Acid (HCl)	µg/m^3	BDL (MDL: 5.0)	-	UERL/AIR/SOP/07

Remarks: Sampling Duration (24 Hrs)

Opinion & Interpretation (if required): BDL= Below Detection Limit, **MDL =** Minimum Detection Limit.

******** End of Report *********

Checked By:
Nikunj D. Patel
(Chemist)

Authorized By:
Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

Regd. Office : 215, Royal Arcade, Near G.I.D.C.Office, Char Rasta,Vapi-396 195, Gujarat, India.
Extended Work Office : G.I.D.C., Dahej-II, Bharuch, Gujarat.
CIN:U73100GJ2007PTC051463

TEST REPORT

(STACK MONITORING)

ULR - TC775324000003525F			
Test Report No.	**URA/24/03/D/S-001**	**Report Issue Date:**	29/03/2024
Service Request form No.	URA/SRF/03/001	**Service Request Date**	22/03/2024
Sample ID No.	URA/ID/S-24/03/001	**Field Data Sheet No.:**	URA/FDS/S-24/03/001
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Date of Sampling	22/03/2024	Date of Testing	23/03/2024
Stack Sampling Attached to	**Rayon Plant**		
Air Pollution Control Device	H2S & CS2 Recovery plant		
Fuel Used	-		

➢ **Details of Instrument Used for Monitoring**

Instrument Id No.	**UERL/AIR/HS/03**		
Inst. Name:	**Handy Sampler**	Serial Number:	**91-I-19**
Cali. Date:	**02/02/2024**	Next Cali. Due On:	**01/02/2025**

➢ **General Stack Observation**

Sr. No.	**Description**	**Unit**	**Observation**
1.	Stack Height	m	175
2.	Stack Area	m^2	12.8760

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit of measurement**	**Result**	**Permissible Limit**	**Test Method**
1.	Carbon Disulphide as CS_2	Kg/ton of fiber	12.1	**<95**	IS: 11255 (Part 04)
2.	Hydrogen Sulphide as H_2S	Kg/ton of fiber	3.8	**<30**	IS: 11255 (Part 04)

Remarks:
Opinion & Interpretation (if required):

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager – Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT

(STACK MONITORING)

ULR - TC775324000003526F			
Test Report No.	**URA/24/03/D/S-002**	**Report Issue Date:**	29/03/2024
Service Request form No.	URA/SRF/03/002	**Service Request Date**	22/03/2024
Sample ID No.	URA/ID/S-24/03/002	**Field Data Sheet No.:**	URA/FDS/S-24/03/002
Name & Add. Of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Date of Sampling	22/03/2024	Date of Testing	23/03/2024
Stack Sampling Attached to	**Acid Plant 1**		
Air Pollution Control Device	Alkali Scrubber		
Fuel Used	-		

➢ **Details of Instrument Used for Monitoring**

Instrument Id No.	**UERL-D/AIR/SMK/01**		
Inst. Name:	**Stack Monitoring Kit, VSS1**	Serial Number:	**467 DTJ 15**
Cali. Date:	**21/06/2023**	Next Cali. Due On:	**20/06/2024**

➢ **General Stack Observation**

Sr. No.	Description	Unit	Observation
1.	Stack Height	m	50
2.	Stack Area	m^2	6.1544
3.	Ambient Temperature	^0C	30
4.	Flue Gas Temperature	^0C	90
5.	Exit Gas Velocity	m/s	2.5
6.	Exit Gas Flow	m^3/h	55389.6

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit of measurement**	**Result**	**Permissible Limit**	**Test Method**
1.	Sulphur Dioxide	Kg/ton of acid	0.98	<1.5	IS: 11255 (Part 02)
2.	Acid Mist	mg/Nm^3	8.2	50	SA EPA Method

Remarks:
Opinion & Interpretation (if required):

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager – Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT

(STACK MONITORING)

ULR - TC775324000003527F			
Test Report No.	**URA/24/03/D/S-003**	**Report Issue Date:**	29/03/2024
Service Request form No.	URA/SRF/03/003	**Service Request Date**	22/03/2024
Sample ID No.	URA/ID/S-24/03/003	**Field Data Sheet No.:**	URA/FDS/S-24/03/003
Name & Add. Of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Date of Sampling	22/03/2024	Date of Testing	23/03/2024
Stack Sampling Attached to	**Acid Plant 2**		
Air Pollution Control Device	Alkali Scrubber		
Fuel Used	-		

➢ **Details of Instrument Used for Monitoring**

Instrument Id No.	**UERL-D/AIR/SMK/01**		
Inst. Name:	**Stack Monitoring Kit, VSS1**	Serial Number:	**467 DTJ 15**
Cali. Date:	**21/06/2023**	Next Cali. Due On:	**20/06/2024**

➢ **General Stack Observation**

Sr. No.	Description	Unit	Observation
1.	Stack Height	m	50
2.	Stack Area	m^2	6.1544
3.	Ambient Temperature	^0C	30
4.	Flue Gas Temperature	^0C	91
5.	Exit Gas Velocity	m/s	2.6
6.	Exit Gas Flow	m^3/h	57605.2

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit of measurement**	**Result**	**Permissible Limit**	**Test Method**
1.	Sulphur Dioxide	Kg/ton of acid	1.04	<1.5	IS: 11255 (Part 02)
2.	Acid Mist	mg/Nm^3	10.6	50	SA EPA Method

Remarks:
Opinion & Interpretation (if required):

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager – Operations)

TEST REPORT
(STACK MONITORING)

ULR - TC775324000003528F			
Test Report No.	**URA/24/03/D/S-004**	**Report Issue Date:**	29/03/2024
Service Request form No.	URA/SRF/03/004	**Service Request Date**	22/03/2024
Sample ID No.	URA/ID/S-24/03/004	**Field Data Sheet No.:**	URA/FDS/S-24/03/004
Name & Add. Of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Date of Sampling	22/03/2024	Date of Testing	23/03/2024
Stack Sampling Attached to	**CS_2 Plant**		
Air Pollution Control Device	SRU		
Fuel Used	-		

➢ **Details of Instrument Used for Monitoring**

Instrument Id No.	**UERL/AIR/HS/04**		
Inst. Name:	**Handy Sampler**	Serial Number:	**92-I-19**
Cali. Date:	**02/02/2024**	Next Cali. Due On:	**01/02/2025**

➢ **General Stack Observation**

Sr. No.	Description	Unit	Observation
1.	Stack Height	m	100
2.	Stack Area	m^2	0.8
3.	Ambient Temperature	^0C	31

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit of measurement**	**Result**	**Permissible Limit**	**Test Method**
1.	Carbon Disulphide as CS_2	mg/m^3	BDL (MDL:5.0)	**180**	IS: 11255 (Part 04)
2.	Hydrogen Sulphide as H_2S	mg/m^3	BDL (MDL:5.0)	**45**	IS: 11255 (Part 04)
3.	Sulphur Dioxide	ppm	76	--	IS: 11255 (Part 02)

Remarks:
Opinion & Interpretation (if required):

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT

(STACK MONITORING)

ULR - TC775324000003525F			
Test Report No.	**URA/24/03/D/S-001**	**Report Issue Date:**	29/03/2024
Service Request form No.	URA/SRF/03/001	**Service Request Date**	22/03/2024
Sample ID No.	URA/ID/S-24/03/001	**Field Data Sheet No.:**	URA/FDS/S-24/03/001
Name & Add. of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Date of Sampling	22/03/2024	Date of Testing	23/03/2024
Stack Sampling Attached to	**Rayon Plant**		
Air Pollution Control Device	H2S & CS2 Recovery plant		
Fuel Used	-		

➢ **Details of Instrument Used for Monitoring**

Instrument Id No.	**UERL/AIR/HS/03**		
Inst. Name:	**Handy Sampler**	Serial Number:	**91-I-19**
Cali. Date:	**02/02/2024**	Next Cali. Due On:	**01/02/2025**

➢ **General Stack Observation**

Sr. No.	**Description**	**Unit**	**Observation**
1.	Stack Height	m	175
2.	Stack Area	m^2	12.8760

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit of measurement**	**Result**	**Permissible Limit**	**Test Method**
1.	Carbon Disulphide as CS_2	Kg/ton of fiber	12.1	**<95**	IS: 11255 (Part 04)
2.	Hydrogen Sulphide as H_2S	Kg/ton of fiber	3.8	**<30**	IS: 11255 (Part 04)

Remarks:
Opinion & Interpretation (if required):

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager – Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT

(STACK MONITORING)

ULR - TC775324000003526F			
Test Report No.	**URA/24/03/D/S-002**	**Report Issue Date:**	29/03/2024
Service Request form No.	URA/SRF/03/002	**Service Request Date**	22/03/2024
Sample ID No.	URA/ID/S-24/03/002	**Field Data Sheet No.:**	URA/FDS/S-24/03/002
Name & Add. Of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Date of Sampling	22/03/2024	Date of Testing	23/03/2024
Stack Sampling Attached to	**Acid Plant 1**		
Air Pollution Control Device	Alkali Scrubber		
Fuel Used	-		

➢ **Details of Instrument Used for Monitoring**

Instrument Id No.	**UERL-D/AIR/SMK/01**		
Inst. Name:	**Stack Monitoring Kit, VSS1**	Serial Number:	**467 DTJ 15**
Cali. Date:	**21/06/2023**	Next Cali. Due On:	**20/06/2024**

➢ **General Stack Observation**

Sr. No.	Description	Unit	Observation
1.	Stack Height	m	50
2.	Stack Area	m^2	6.1544
3.	Ambient Temperature	^0C	30
4.	Flue Gas Temperature	^0C	90
5.	Exit Gas Velocity	m/s	2.5
6.	Exit Gas Flow	m^3/h	55389.6

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit of measurement**	**Result**	**Permissible Limit**	**Test Method**
1.	Sulphur Dioxide	Kg/ton of acid	0.98	<1.5	IS: 11255 (Part 02)
2.	Acid Mist	mg/Nm^3	8.2	50	SA EPA Method

Remarks:
Opinion & Interpretation (if required):

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager – Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT

(STACK MONITORING)

ULR - TC775324000003527F			
Test Report No.	**URA/24/03/D/S-003**	**Report Issue Date:**	29/03/2024
Service Request form No.	URA/SRF/03/003	**Service Request Date**	22/03/2024
Sample ID No.	URA/ID/S-24/03/003	**Field Data Sheet No.:**	URA/FDS/S-24/03/003
Name & Add. Of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Date of Sampling	22/03/2024	Date of Testing	23/03/2024
Stack Sampling Attached to	**Acid Plant 2**		
Air Pollution Control Device	Alkali Scrubber		
Fuel Used	-		

➢ **Details of Instrument Used for Monitoring**

Instrument Id No.	**UERL-D/AIR/SMK/01**		
Inst. Name:	**Stack Monitoring Kit, VSS1**	Serial Number:	**467 DTJ 15**
Cali. Date:	**21/06/2023**	Next Cali. Due On:	**20/06/2024**

➢ **General Stack Observation**

Sr. No.	Description	Unit	Observation
1.	Stack Height	m	50
2.	Stack Area	m^2	6.1544
3.	Ambient Temperature	^0C	30
4.	Flue Gas Temperature	^0C	91
5.	Exit Gas Velocity	m/s	2.6
6.	Exit Gas Flow	m^3/h	57605.2

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit of measurement**	**Result**	**Permissible Limit**	**Test Method**
1.	Sulphur Dioxide	Kg/ton of acid	1.04	<1.5	IS: 11255 (Part 02)
2.	Acid Mist	mg/Nm^3	10.6	50	SA EPA Method

Remarks:
Opinion & Interpretation (if required):

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager – Operations)

TEST REPORT
(STACK MONITORING)

ULR - TC775324000003528F			
Test Report No.	**URA/24/03/D/S-004**	**Report Issue Date:**	29/03/2024
Service Request form No.	URA/SRF/03/004	**Service Request Date**	22/03/2024
Sample ID No.	URA/ID/S-24/03/004	**Field Data Sheet No.:**	URA/FDS/S-24/03/004
Name & Add. Of Customer	**M/s. Grasim Industries Limited** Grasim Cellulosic Division, Plot No. 1, GIDC, Vilayat Industrial Estate, District – Bharuch, Gujarat, Pin Code – 392012 (India)		
Date of Sampling	22/03/2024	Date of Testing	23/03/2024
Stack Sampling Attached to	**CS_2 Plant**		
Air Pollution Control Device	SRU		
Fuel Used	-		

➢ **Details of Instrument Used for Monitoring**

Instrument Id No.	**UERL/AIR/HS/04**		
Inst. Name:	**Handy Sampler**	Serial Number:	**92-I-19**
Cali. Date:	**02/02/2024**	Next Cali. Due On:	**01/02/2025**

➢ **General Stack Observation**

Sr. No.	Description	Unit	Observation
1.	Stack Height	m	100
2.	Stack Area	m^2	0.8
3.	Ambient Temperature	^0C	31

➢ **Test Parameter Results**

DISCIPLINE – CHEMICAL TESTING			**NAME OF GROUP – ATMOSPHERIC POLLUTION**		
Sr. No.	**Test Parameter**	**Unit of measurement**	**Result**	**Permissible Limit**	**Test Method**
1.	Carbon Disulphide as CS_2	mg/m^3	BDL (MDL:5.0)	**180**	IS: 11255 (Part 04)
2.	Hydrogen Sulphide as H_2S	mg/m^3	BDL (MDL:5.0)	**45**	IS: 11255 (Part 04)
3.	Sulphur Dioxide	ppm	76	--	IS: 11255 (Part 02)

Remarks:
Opinion & Interpretation (if required):

******** End of Report *********

Checked By:

Nikunj D. Patel
(Chemist)

Authorized By:

Jaivik S. Tandel
(Manager - Operations)

Note: This report is subject to Terms and Conditions mentioned overleaf.

TEST REPORT

ULR No.	**TC775324000003378F**	Report No.	**URC /24/03/0428**
Name & Address of Customer	**M/s. GRASIM INDUSTRIES LTD.** Plot No. 1, GIDC, Vilayat Industrial Estate, Dist. Bharuch, Gujarat, Pin – 392012(India)	Date of Report	**27/03/2024**
		Customer's Ref.	--
Sample Details	**ETP Outlet Water Sample**	Location	--
Sample Qty.	**10 Lit.**	Appearance	**Colourless**
Sampling Date	**19/03/2024**	Sample Received Date	**20/03/2024**
Test Started Date	**20/03/2024**	Test Completion Date	**26/03/2024**
Sampled By	**Client.**	Sampling Method	--
UERL Lab ID. No.	**24/03/0428**		

TEST RESULTS:

DISCIPLINE: Chemical Testing			**NAME OF GROUP: Pollution & Environment**		
Sr. No.	**Parameters**	**Test Method**	**Permissible Limits (GPCB)**	**Unit of Measurement**	**Results**
PHYSIO-CHEMICAL PARAMETERS					
1.	pH @ 25 ° C	IS 3025(Part 11):2022	**6.0 – 9.0**	--	7.59
2.	Total Dissolved Solids	APHA 23rd Ed., 2017 2540-C	--	mg/L	5984
3.	Total Suspended Solids	APHA 23rd Ed., 2017 2540 D	**100**	mg/L	24
4.	Temperature	IS 3025(Part 9):1984	**Shall not exceed more than 5 ^{0}C above received water temperature**	^{0}C	30.5
GENERAL CHEMICAL PARAMETERS					
5.	Oil & Grease	IS 3025(Part 39):2021	**10**	mg/L	BDL(MDL:2.0)
6.	Fluoride	APHA 23rd Ed.,2017,4500 F, D	**15**	mg/L	2.0
7.	Sulphide	APHA 23rd Ed.,2017,4500 S^{-2} F	**5**	mg/L	0.6
8.	TKN	APHA 23rd Ed.,2017,4500 NORG, B	**50**	mg/L	6.7
9.	Ammonical Nitrogen	APHA 23rd Ed.,2017,4500 NH_3-B&C	**50**	mg/L	2.8
10.	Copper	APHA 23rd Ed.,2017,3111-B,	**3**	mg/L	BDL(MDL:0.05)
11.	Zinc	APHA 23rd Ed.,2017,3111-B,	**15**	mg/L	0.263
12.	COD	IS 3025(Part 58):2006	**250**	mg/L	72.5
13.	BOD (3 days at 27 ^{0}C)	IS 3025(Part 44):1993	**100**	mg/L	20
14.	Arsenic	APHA 23rd Ed.,2017,3114-C	**0.2**	mg/L	BDL(MDL:0.01)
15.	Mercury	APHA 23rd Ed.,2017,3112-B	**0.01**	mg/L	BDL(MDL:0.001)
Note: BDL= Below Detection Limit, **MDL** = Minimum Detection Limit, **Remarks: --**					
Opinion & Interpretation (If required): --					

Note: This report is subject to Terms and Conditions mentioned overleaf.

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TEST REPORT

ULR No.	**TC775324000003378F**	Report No.	**URC /24/03/0428**
Name & Address of Customer	**M/s. GRASIM INDUSTRIES LTD.** Plot No. 1, GIDC, Vilayat Industrial Estate, Dist. Bharuch, Gujarat, Pin – 392012(India)	Date of Report	**27/03/2024**
		Customer's Ref.	--
Sample Details	**ETP Outlet Water Sample**	Location	--
Sample Qty.	**10 Lit.**	Appearance	**Colourless**
Sampling Date	**19/03/2024**	Sample Received Date	**20/03/2024**
Test Started Date	**20/03/2024**	Test Completion Date	**26/03/2024**
Sampled By	**Client.**	Sampling Method	--
UERL Lab ID. No.	**24/03/0428**		

TEST RESULTS:

DISCIPLINE: Chemical Testing			**NAME OF GROUP: Pollution & Environment**		
Sr. No.	**Parameters**	**Test Method**	**Permissible Limits (GPCB)**	**Unit of Measurement**	**Results**
GENERAL CHEMICAL PARAMETERS					
16.	Lead	APHA 23rd Ed.,2017,3111-B,	**0.1**	mg/L	BDL(MDL:0.01)
17.	Cadmium	APHA 23rd Ed.,2017,3111-B,	**0.05**	mg/L	0.028
18.	Hexavalent Chromium	APHA 23rd Ed.,2017,3500CrB	**0.1**	mg/L	BDL(MDL:0.05)
19.	Nickel	APHA 23rd Ed.,2017,3111-B,	**3**	mg/L	0.186
20.	Phenolic Compound	IS 3025(Part 43):2020	**5**	mg/L	BDL(MDL:0.1)
21.	Iron	APHA 23rd Ed.,2017,3111-B,	**3**	mg/L	1.132
22.	Nitrate Nitrogen	APHA 23rd Ed.,2017,4500 NO3-B	**50**	mg/L	BDL(MDL:0.1)
23.	Total Residual Chlorine	APHA 23rd Ed.: 2017 4500-Cl, G	**1**	mg/L	BDL(MDL:0.1)
24.	Manganese	APHA 23rd Ed.,2017,3500 Mn B	**2**	mg/L	0.164
25.	Cyanide	IS 3025(Part 27):1986	**0.2**	mg/L	BDL(MDL:0.05)
26.	Selenium	APHA 23rd Ed., 2017 -3114-C,	**0.05**	mg/L	BDL(MDL:0.05)
27.	Vanadium	APHA 23rd Ed.2017-3500 – V	**0.2**	mg/L	BDL(MDL:0.5)
Note: BDL= Below Detection Limit, **MDL** = Minimum Detection Limit, **Remarks: --**					
Opinion & Interpretation (If required): --					

******** End of Report *********

Checked By
N. C. P.
Nilesh C. Patel
(Sr. Chemist)

Authorized By
(N. B. T.)
(Nitin B. Tandel)
(Technical Manager)

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MoEF&CC (GOI) Recognized Environmental Laboratory under the EPA-1986 (31.03.2023 to 22.09.2024) | QCI-NABET Accredited EIA & GW Consultant Organization | GPCB Recognized Environmental Auditor (Schedule-II) | ISO 9001 : 2015 Certified Company | ISO 45001 : 2018 Certified Company

TEST REPORT

ULR No.	**TC775324000003378F**	Report No.	**URC /24/03/0428**
Name & Address of Customer	**M/s. GRASIM INDUSTRIES LTD.** Plot No. 1, GIDC, Vilayat Industrial Estate, Dist. Bharuch, Gujarat, Pin – 392012(India)	Date of Report	**27/03/2024**
		Customer's Ref.	--
Sample Details	**ETP Outlet Water Sample**	Location	--
Sample Qty.	**10 Lit.**	Appearance	**Colourless**
Sampling Date	**19/03/2024**	Sample Received Date	**20/03/2024**
Test Started Date	**20/03/2024**	Test Completion Date	**26/03/2024**
Sampled By	**Client.**	Sampling Method	--
UERL Lab ID. No.	**24/03/0428**		

TEST RESULTS:

DISCIPLINE: Chemical Testing			**NAME OF GROUP: Pollution & Environment**		
Sr. No.	**Parameters**	**Test Method**	**Permissible Limits (GPCB)**	**Unit of Measurement**	**Results**
Toxicity Test					
28.	Bioassay method for evaluation of toxicity using fish (90% survival of fish after 96 hrs in 100% effluent)	IS 6582 (Part 1): 1971	**90 % survival of fish after 96 hrs.**	%	90 % survival of fish after 96 hrs.
29.	Measurement of toxicity factor using zebra fish (dimensionless toxicity test)	IS:6582(part-II):2001	--	%	90 % survival of fish after 96 hrs.
Note: BDL= Below Detection Limit, **MDL** = Minimum Detection Limit, **Remarks: --**					
Opinion & Interpretation (If required): --					

******** End of Report *********

Checked By
N. C. P.
Nilesh C. Patel
(Sr. Chemist)

Authorized By
(N. B. T.)
(Nitin B. Tandel)
(Technical Manager)

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TEST REPORT

ULR No.	---	Report No.	**URC /24/03/0428**
Name & Address of Customer	**M/s. GRASIM INDUSTRIES LTD.** Plot No. 1, GIDC, Vilayat Industrial Estate, Dist. Bharuch, Gujarat, Pin – 392012(India)	Date of Report	**27/03/2024**
		Customer's Ref.	--
Sample Details	**ETP Outlet Water Sample**	Location	--
Sample Qty.	**10 Lit.**	Appearance	**Turbid Colour**
Sampling Date	**19/03/2024**	Sample Received Date	**20/03/2024**
Test Started Date	**20/03/2024**	Test Completion Date	**26/03/2024**
Sampled By	**Client.**	Sampling Method	--
UERL Lab ID. No.	**24/03/0428**		

TEST RESULTS:

DISCIPLINE: Chemical Testing			**NAME OF GROUP: Pollution & Environment**		
Sr. No.	**Parameters**	**Test Method**	**Permissible Limits (GPCB)**	**Unit of Measurement**	**Results**
GENERAL CHEMICAL PARAMETERS					
1.	Trivalent Chromium	By Calculation	**2**	mg/L	BDL(MDL:0.05)
Note: BDL= Below Detection Limit, **MDL** = Minimum Detection Limit, **Remarks: --**					
Opinion & Interpretation (If required): --					

******** End of Report *********

Checked By
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Nilesh C. Patel
(Sr. Chemist)

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TEST REPORT

ULR No.	**TC775324000003379F**	Report No.	**URC /24/03/0429**
Name & Address of Customer	**M/s. GRASIM INDUSTRIES LTD.** Plot No. 1, GIDC, Vilayat Industrial Estate, Dist. Bharuch, Gujarat, Pin – 392012(India)	Date of Report	**27/03/2024**
		Customer's Ref.	--
Sample Details	**STP Outlet Water Sample**	Location	--
Sample Qty.	**2 Lit.**	Appearance	**Colourless**
Sampling Date	**19/03/2024**	Sample Received Date	**20/03/2024**
Test Started Date	**20/03/2024**	Test Completion Date	**26/03/2024**
Sampled By	**Client.**	Sampling Method	--
UERL Lab ID. No.	**24/03/0429**		

TEST RESULTS:

DISCIPLINE: Chemical Testing			**NAME OF GROUP: Pollution & Environment**		
Sr. No.	**Parameters**	**Test Method**	**Permissible Limits (GPCB)**	**Unit of Measurement**	**Results**
PHYSIO-CHEMICAL PARAMETERS					
1.	pH @ 25 ° C	IS 3025(Part 11):2022	--	--	7.27
2.	Total Suspended Solids	APHA 23rd Ed.,2017,2540 -D	**<30**	mg/L	BDL(MDL:4.0)
GENERAL CHEMICAL PARAMETERS					
1.	Biochemical Oxygen Demand (BOD) (5 days at 20 ^{0}C)	APHA 23rd Ed,2017,5210-B 5-6	**<20**	mg/L	4
2.	Residual Free Chlorine	APHA 23rd Ed.,2017,4500-Cl-G	**0.5 (min.)**	mg/L	0.60
Note: -- **Remarks: --**					
Opinion & Interpretation (If required):--					

******** End of Report *********

Checked By
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