Six Monthly Compliance Report of Environmental Clearance

For

Expansion of Viscose Staple Fibre, Sulphuric Acid and Carbon Disulphide

EC-2019

Submitted to:-	Submitted By:-
Ministry of Environment Forest & Climate Change, (WR Office) Bhopal Ministry of Environment Forest & Climate Change, New Delhi Central Pollution Control Board, Zonal Office (Vadodara) 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: -01.10.2019 to 31.03.2020

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

List of Annexure

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1	GIDC offer Allotment Letter	Annexure-1
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Compliance Status Report for "Environmental Clearance" Accorded by the MoEF
For
Grasim Cellulosic Division (GCD), Vilayat Project

-: Introduction: -

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

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

Compliance status on Environmental Clearance

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

Sr. No.	Stipulation	Compliance Status
1	This has reference to your Online proposal no. IA/ GJ / IND2 /58913 /2016, dated 23rd February 2019, for environmental clearance to the above subject.	-
2	The Ministry of Environment, Forest and Climate Change has considered the proposal for environmental clearance to the project for expansion of Viscose Staple Fibre from 2,55,500 TPA to 4,38,000TPA, Sulfuric acid (1,82,500 to 3,46,750TPA) and Carbon- Disulphide (34675 to 65,700 TPA) by M/s Grasim Industries Ltd (Grasim Cellulosic Division) in an area of 222.63 ha at Plot No.1, GIDC Industrial Area, Vilayat, Taluka Vagra, District Bharuch (Gujarat).	Latitude : 21 deg 46'8" and 21 deg 47'11"North Longitude : 72 deg 53'18"and 72 deg 54'49"East
3	The Existing & proposed Production capacity:	Yet production is not started under the EC No. F. No. J-11011/321/2016-IAII (I); issued on 17th October 2019 for the expansion project, following is the production details produce under the EC received in 2007 & 2018 for Viscose Staple Fibre & Sod. Sulphate after receiving EC, CTE & CTO.

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

<table>
<tr><td rowspan="4">4</td><td>Existing land area is 222.63 ha (2226300m2). No additional land will be required for the proposed expansion.</td><td>No additional land is required for the proposed expansion.</td></tr>
<tr><td>The estimated project cost is Rs. 3500 Crores against the previously envisaged Rs. 2560 crores.</td><td>-</td></tr>
<tr><td>Total capital cost earmarked towards environmental control measures is Rs. 420 crores against Rs 150 crores and the recurring cost (operational and maintenance) will be about Rs. 70 crores against Rs 15 crores per annum.</td><td>Separate funds is earmarks on annual basis for Environmental management.
At present capital cost of Rs. 210 crores spent as per the condition given in EC-2007 & EC-2018. Additional cost will be incur for the expansion project.</td></tr>
<tr><td>Total employment will be 1400 persons as regular & 1300 persons on contract after expansion.</td><td>Total employment 1400 persons as regular & 1300 persons on contract will be provided after expansion project work will completed.</td></tr>
<tr><td>5</td><td>There are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. within 10 km. Narmada River flows at 9 km in south south west.</td><td>We have noted & there are no National parks, Wildlife sanctuaries, Biosphere reserves, Tiger/Elephant reserves, Wildlife corridors etc. within 10 km from the project site. Narmada River (estuarine region) is at a distance of 9.0 km in SSW direction from the project site.</td></tr>
<tr><td rowspan="2">6</td><td>Total water requirement is 52,500 m3/day, including fresh water requirement of 38,500m3/day proposed to be met from Gujarat Industrial Development (GIDC) pipeline.</td><td>Yet production is not started under the EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019 for expansion project.
We shall met fresh water requirement through GIDC as being done for existing plant.
In present plant the average Water consumption for last three months (Oct’19-Mar’20) – 13,325 m3/day, sourced from Narmada River, supplied by GIDC, following are the tabulated water Consumption details in Table No.01</td></tr>
<tr><td>
<table>
<tr><th colspan="4">Table No.01</th></tr>
<tr><th rowspan="2">Month</th><th colspan="3">Water Consumption (m3/day)</th></tr>
<tr><th>Average</th><th>Minimum</th><th>Maximum</th></tr>
<tr><td>Oct-19</td><td>13293</td><td>11046</td><td>14618</td></tr>
<tr><td>Nov-19</td><td>13598</td><td>11634</td><td>14763</td></tr>
<tr><td>Dec-19</td><td>14222</td><td>12868</td><td>15914</td></tr>
</table>
</td><td>Following are the GIDC offer cum allotment letter details; Please refer Annexure-01 for GIDC Water Allotment Letter;
<table>
<tr><td>1) Letter No.</td><td>GIDC/POJ/MKT/GRASIM/575 Dated 06th December-2006</td></tr>
<tr><td>Agreement for Water Supply</td><td>15.60 MLD</td></tr>
</table>
</td></tr>
</table>

Jan-20	13778	12625	15777
Feb-20	13654	12314	15611
Mar-20	11406	2559	14967
Avg.	**13325**	-	-

2) Letter No.	**GIDC/SE/CG//BRH/1236 Dated 29th December-2016**
Agreement for Water Supply	**25.00 MLD**

3) Letter No.	**GIDC/BRH/WS/494 Dated 3rd.July,2019**
Agreement for Water Supply	**35.00 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 & discharged from Oct-19 to Mar-20 is 11242 m3/day, please refer following **Table No.02**

We have installed one skid of RO on the one stream of existing plant effluent and getting the recovery as mentioned in below **Table No.03**. RO system related to expansion activities are under progress.

Table No. 02

Month	Effluent Quantity (m3/day)		
	Average	Minimum	Maximum
Oct-19	11051	6944	12065
Nov-19	10873	7363	12755
Dec-19	11559	0	13708
Jan-20	12812	7559	13952
Feb-20	11910	8442	13680
Mar-20	9249	0	12547
Avg.	**11242**	-	-

Table No.03

Month	RO permeate (m3/day)
Oct-19	3275.7
Nov-19	3177.0
Dec-19	2746.0
Jan-20	2695.0
Feb-20	2735.0
Mar-20	3124.0
Average	**2959**

Power requirement after expansion will be 60 MW which will be mt from Captive Power Plant. No DG sets will be required.

Presently we are getting 25MW from captive plant installed under chemical division. The installation of 30MW captive power plant is under progress. Remaining 5MW we will get from the captive power plant of Chemical Division which is in same campus.

7	The project category covered under Category A of item 5(d) 'Manmade fibres manufacturing' of the schedule to the Environment Impact Assessment (EIA) Notification, 2006 under category 'A' and requires appraisal/approval at central level in the Ministry.	Noted
8	Standard Terms of Reference for the project was issued on 24th August, 2018. Public hearing is exempted as the project site is located inside the notified industrial area.	Noted
9	The proposal was considered by the sectorial Expert Appraisal Committee (Industry-2) in the meeting held on 26-28 June 2019, wherein the project proponent and their accredited consultant presented the EIA/EMP report. The committee found the EIA/EMP report complying with the ToR and recommended the project for grant of environmental clearance.	Noted
10	Based on the proposal submitted by the project proponent and recommendations of the EAC (Industry-2), the Ministry of Environment, Forest and Climate Change hereby accords environmental clearance to the project for expansion of Viscose Staple Fibre (2,55,500 to 4,38,000TPA), Sulphuric Acid (1,82,500 to 3,46,750TPA) and carbon- Disulphide (34675 to 65,700 TPA) by M/s Grasim Industries Ltd (Grasim Cellulosic Division) at Plot No. 1, GIDC Industrial Area Vilayat, Tehsil Vagra, District Bharuch (Gujarat), under the provisions of EIA Notification, 2006 and the amendments made therein, subject to the compliance of terms and conditions, as under:	Noted
10	**Terms & Condition**	
(a)	Necessary permission as mandated under Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 , as applicable from time to time, shall be obtained from the state Pollution Control Board.	Yet production is not started under the EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019 for expansion project. Once plant is commission necessary permission under Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981 shall be taken from the state Pollution Control Board.

(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.	Yet production is not started under the EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019 for expansion project. In present plant, the average quantity of effluent treated & discharged from Oct-19 to Mar-20 is 11242 m3/day. (Please refer above **Table No. 02**) We have installed one skid of RO on the one stream of existing plant effluent and getting the average recovery 2959m3/day as mentioned in above in **Table No.03.** RO system for other streams are under progress to receive the desire recovery.
(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.	Yet production is not started under the EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019 for expansion project. Necessary authorization required under the Hazardous and other Wastes (Management and Trans- Boundary Movement) Rules, 2016, Solid Waste management Rules, 2016 shall be taken and we shall adhere the rules.
(d)	To control source and the fugitive emissions, suitable pollution control devices shall be installed to meet the prescribed norms and/or the NAAQS. The gaseous emission shall be dispersed through stack of adequate height as per CPCB/SPCB guidelines.	To control source and the fugitive emissions, suitable pollution control devices will be installed and will be connected with main chimney of 175m height to meet the prescribed norms and/or the NAAQS.
(e)	Solvent management, if any, shall be carried out as follows: (i) Reactor shall be connected to the chilled brine condenser system. (ii) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (iii) The condensers shall have provided with sufficient HTA and residence time so as to achieve more than 98% recovery. (iv) Solvents shall be stored in separate space specified with all safety measures. (v) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (vi) Entire plant shall be flame proof. The solvent storage tanks	At present we are not handling any solvent, when we start to use, we will abide the given condition.

<table>
<tr><td></td><td>shall be provided with breather valve to prevent losses.</td><td></td></tr>
<tr><td rowspan="2">(f)</td><td>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.</td><td>Yet production is not started under the EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019 for expansion project.
Presently average fresh water consumption quantity from Oct-19 to Mar-20 is 13325 m3/day, please refer Table No.04
Necessary authorization for additional quantity of water will be taken from Gujarat Industrial Development (GIDC).</td></tr>
<tr><td colspan="2">Table No.04
<table><tr><th rowspan="2">Month</th><th colspan="3">Water Consumption (m3/day)</th></tr><tr><th>Average</th><th>Minimum</th><th>Maximum</th></tr><tr><td>Oct-19</td><td>13293</td><td>11046</td><td>14618</td></tr><tr><td>Nov-19</td><td>13598</td><td>11634</td><td>14763</td></tr><tr><td>Dec-19</td><td>14222</td><td>12868</td><td>15914</td></tr><tr><td>Jan-20</td><td>13778</td><td>12625</td><td>15777</td></tr><tr><td>Feb-20</td><td>13654</td><td>12314</td><td>15611</td></tr><tr><td>Mar-20</td><td>11406</td><td>2559</td><td>14967</td></tr><tr><td>Avg.</td><td>13325</td><td></td><td></td></tr></table></td></tr>
<tr><td>(g)</td><td>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.</td><td>For existing plant the detailed Rain Harvesting Survey has been carried out & the same will be carried out for expansion project.</td></tr>
<tr><td>(h)</td><td>The storm water from the premises shall be collected and discharged through a separate conveyance system.</td><td>For existing plant hazardous chemicals are stored in tanks, tank farms, drums, carboys, Flame arresters are provided with the Hazardous chemicals carrying vehicles and will store in same way in expansion project.</td></tr>
<tr><td>(i)</td><td>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.</td><td>Hazardous chemicals are stored in tanks, tank farms, drums, carboys, Flame arresters are provided with the Hazardous chemicals carrying vehicles.</td></tr>
</table>

(j)	Process organic residues and spent carbon, if any shall be sent to cement industries. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.	We have applied for amendment of the condition on 24.02.2020 This condition need to amend as ETP inorganic sludge (Gypsum) shall be sent to cement industries/ TSDF/Co-processing unit, Process organic residue & spent carbon and ETP bio (Organic) sludge to be burnt in power plant or sent to TSDF/ Co processing unit. Please refer **Annexure-02** for acknowledgment copy.
(k)	The company shall strictly comply with the rules and guidelines under Manufacture, storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per Motor Vehicle Act (MVA), 1989.	Deputy Controller of Explosive from M/s PESO (PETROLEUM & Explosives Safety Organization), has granted license for storage of 60 KL light diesel oil and storage of 10 KL HSD at 2 location in plant area for DG sets. We have valid factory license from DISH. Copy of factory & Petroleum License copy attached as **Annexure -03** Hazardous waste Rules 2000 is fully complied as per the consent stipulated norm and Unit is complying all the waste defined in CC& A. Hazardous waste is being disposed to M/ 5. BEIL, Dahej TSDF facility and annual hazardous waste disposal details are submitted on GPCB XGN online site and waste disposal online report is attached as **Annexure-04.** Unit has obtained CC&A # AWH 104228 for collection, storage, treatment and disposal of hazardous waste from GPCB dated 21st May 2019 which is valid up to 23rd Mar 2024.
(l)	The company shall undertake waste minimization measures as below; (i) Metering and control of quantities of active ingredients to minimize waste. (ii) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (iv) Use of close Feed system into batch reactors. (v) Venting equipment through Vapour recovery system. (vi) Use of high pressure hoses for equipment clearing to reduce wastewater generation.	The waste minimization measures will be taken as per the condition once the production is started under the issued EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019.

(m)	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.	Presently production is not started under the issued EC No. F. No. J-11011/321/2016-IAII (I); EC issued on 17th October 2019 for expansion project. As per earlier EC issued in 2007 & 2018 to achieve 33% greenbelt, we have developed greenbelt in our factory complex along the boundary wall and open space area. Total 73,000 nos. tree have been planted till Mar-2020. We are planning to plant > 15,000 trees in FY-21 and to cover 33% of total plant area the detail action plan are Tabulated in Table No. 05. We have developed greenbelt along with boundary wall & planted different plant species in campus area. Following are the list of plant species. Plant species were selected as per the directives of CPCB & DFO. Photograph of green belts is attached below.

Table No. 05

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

Existing Plantation Species:

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

The Existing Spices for plantation are Selected by following CPCB guidelines

oposed Plantation Species: Neem (*Azadirachta indica*), Kasood (*Cassia siamea*), Pine/Junglisaru (*Casuarina equisetifolia*), Orchid tree (*Bauhinia blakeana*), Saptparni (*Alstonia scholaris*), Gulmohar (*Delonix regia*), Rain tree (*Samanea saman*), Shisham (*Dalbergia sissoo*), Bel (*Aegle marmelos*), Arjun tree (*Terminalia arjuna*), Cassia fistula (Amaltas), Yellow Gulmohar (*Peltophorum ferrugineum*), Bottle brush (*Callistemon sp*.), Kadamb (*Neolamarckia cadamba*), Semal/Kapok (*Bombax ceiba*), Jamun (*Syzygium cumini*), Apple blossom tree (Cassia javanica), Sausage tree (*Kigelia pinnata*), Basant Rani (*Tabebuia rosea*), Morpankhi (*Thuja occidentalis*), Safeda (*Eucalyptus*), Guh babool (*Acacia farnesiana*), Kaner

	(Nerium indicum), Champa (*Plumeria rubra*), Holy basil (*Ocimum tenuiflorum*), Jarul (*Lagerstroemia speciosa*), *Bougainvillea spectabilis*, Lemon (*Citrus lemon*), Sankuppi (*Clerodendrum inerme*), Lawn Plantation and Shrubbery etc. **Plant species for Odor management :** Neem (*Azadirachta indica*), Saptparni (*Alstonia scholaris*), Guh babool (*Acacia farnesiana*), Morpankhi (*Thuja occidentalis*), Bougainvillea (*Bougainvillea spectabilis*), Lemon (*Citrus lemon*), Kaner (Nerium indicum), Mehndi (*Lawsonia inermis*), Champa (*Plumeria rubra*), Holy basil (*Ocimum tenuiflorum*), Tulsi (*Ocimum sanctum*), Sankuppi (*Clerodendrum inerme*), Jasmine tree (*Plumeria alba*), Jarul (*Lagerstroemia speciosa*), Gurhal (*Hibiscus rosa sinensis*), Bunchgrass (*Vetiveria zizanioides*) etc. **Gaseous emission (SO2 & NOx) tolerant species:** Neem (*Azadirachta indica*), Bel (*Aegle marmelos*), Kasood (*Cassia siamea*), Earleaf Acacia (*Acacia auriculiformis),* Saptparni (*Alstonia scholaris*), Aldu (*Ailanthus excelsa*), Siris (*Albizia lebbeck*), Shisham (*Dalbergia sissoo*), Pipal (*Ficus religiosa*), White fig (*Ficus infectoria*), Maulsari (*Mimusops elengi*), Kaner (Nerium indicum), Jarul (*Lagerstroemia speciosa*) etc.	
		
(n)	At least 0.25% of the total project cost shall be allocated for Corporate Environment Responsibility (CER) and item-wise details along with time bound action shall be prepared and submitted to the Ministry's Regional office.	Detailed plan prepared under the CER with time bound action and submitted to the Ministry's Regional office.

Table No. 06
Action Plan for CER Implementation

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

Note: Total Project Cost : Rs. 3500 Crores
CER @ 0.25% = 8.75 Crores

(o)	For the DG sets, emission limits and the stack height shall be conformity with the extant regulations and the CPCB guidelines. Acoustic enclosures shall be provided	No additional DG set is required for the expansion project, 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.

Name of Agency : M/s. Unistar Pvt. Ltd
Instrument No. UERL/AIR/SMK/52
Instrument No. Stack Monitoring Kit, VSS1**, Serial No.** 467 DTJ 15
Calibration Date: 28.06.2019; **Calibration Expire On :-** 27.06.2020

Table No.07

Month & date of sample	DG Set-1			DG Set-2		
Unit	**Particulate matter (mg/Nm3)**	**Sulphur Dioxide (PPM)**	**Oxide of Nitrogen (PPM)**	**Particulate matter (mg/Nm3)**	**Sulphur Dioxide (PPM)**	**Oxide of Nitrogen (PPM)**
GPCB limit	**150**	**100**	**50**	**150**	**100**	**50**
Oct-19	82	31	39	88	32	44
Nov-19	76	26	35	83	29	41
Dec-19	81	21	29	87	24	31
Jan-20	92	26	35	81	21	33
Feb-20	78	21	33	85	22	32
Mar-20	74	18	32	80	20	30
Min	**74.0**	**18.0**	**29.0**	**80.0**	**20.0**	**30.0**
Max	**92.0**	**26.0**	**35.0**	**87.0**	**24.0**	**33.0**
Avg	**81.3**	**21.5**	**32.3**	**83.3**	**21.8**	**31.5**

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

(s)	Continuous online (24x7) monitoring system for stack emission shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capacity and flow meters in the channel/drain carrying effluent within the premises.	We Shall Comply the condition on commissioning of plant to provide the Continuous online (24x7) monitoring system for stack emission to 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.
(t)	The energy sources for lighting purpose shall preferably LED based.	We Shall Comply the condition on commissioning of plant.
(u)	Transportation of raw materials/products should be carefully performed using GPS enabled vehicles.	We Shall Comply the condition on commissioning of plant.
10.1	**The grant of Environmental Clearance is further subject to compliance of other generic conditions as under:**	
i.	The project authorities must strictly adhere to the stipulations made by the Central Pollution Control Board, State Pollution Control Board(SPCB), State Government and any other statutory authority	We have valid consent for running plant for which we abide the stipulations & shall apply for the expansion projects.
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any	We have received EC for expansion of VSF plant capacity from to 255500 TPA to 438000 along with expansion of CS2 & H2SO4 plants on 17th Oct-19, also for setting up Solvent Spun Cellulosic fibre plant for 100 TPD and CPP of 55 MW.
iii.	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one station each is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated	The location of Ambient Air Quality (AAQ) monitoring stations have been reviewed & there are 4 nos. AAQ monitoring stations installed in consultation with GPCB in nearby 4 villages, at Derol, Vilayat, Sarnar and Argama within 2-3 kms radius.

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

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

Calibration Period: - 18.01.20 – 18.01.21

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

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

Reference Standard : - Sound Level Calibrator**, Sr. No.** 3421624**, Calibration Valid Up to : 22.07.2020**

Table No. 08

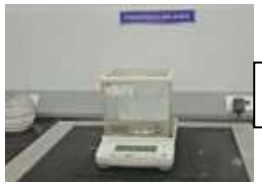
Area	Oct-19		Nov-19		Dec-19		Jan-20		Feb-20		Mar-20	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Norms=>	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**
Main Gate	62	59	64	51	59	51	60	55	58	56	59	52
Material Gate	67	61	67	53	60	49	63	51	60	57	60	58
OHC	65	62	63	62	58	64	59	63	60	59	59	55
Derol	66	54	65	56	56	54	67	62	65	64	61	60
Vilayat	63	54	60	56	64	52	65	56	62	60	62	56
Sarnar	66	54	56	55	62	56	65	55	66	62	64	58
Argama	68	59	57	54	64	59	66	64	63	61	65	60
Min	**62**	**54**	**56**	**51**	**56**	**49**	**59**	**51**	**58**	**56**	**59**	**52**
Max	**68**	**62**	**67**	**62**	**64**	**64**	**67**	**64**	**66**	**64**	**65**	**60**
Avg	**65**	**58**	**62**	**55**	**60**	**55**	**64**	**58**	**62**	**60**	**61**	**57**

vi	The Company shall harvest rainwater from the roof tops of the buildings to recharge ground water, an to utilize the same for different industrial operation within the plant.	We have provided the ground water recharging facility in present plant where roof top water is collected & use to recharge the ground water.
		
vii	Training shall be imparted to all employees on safety and health aspects of chemicals handling.	Trainings shall be imparted to all employees on safety and health aspects of chemicals handling for expansion project.
	Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis.	Pre-employment and routine periodical medical examinations for all employees are undertaken on regular basis.
viii	The company shall also comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	All conditions as prescribed in EC, NOC and CC&A is maintained and monitored regularly. Detailed status of EIA/EMP is attached as **Annexure-05**
ix.	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CSR activities shall be undertaken by involving local villages and administration and other stake holders. Also eco-development measures shall be undertaken for overall improvement of the	We have been undertaking various community development measures in and around 25 Villages and 63,550 nos. Of beneficiaries covered in FY'20. 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.

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

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

Conductivity & TDS Meter



Analytical Balance

Spectro photo Meter

pH Meter

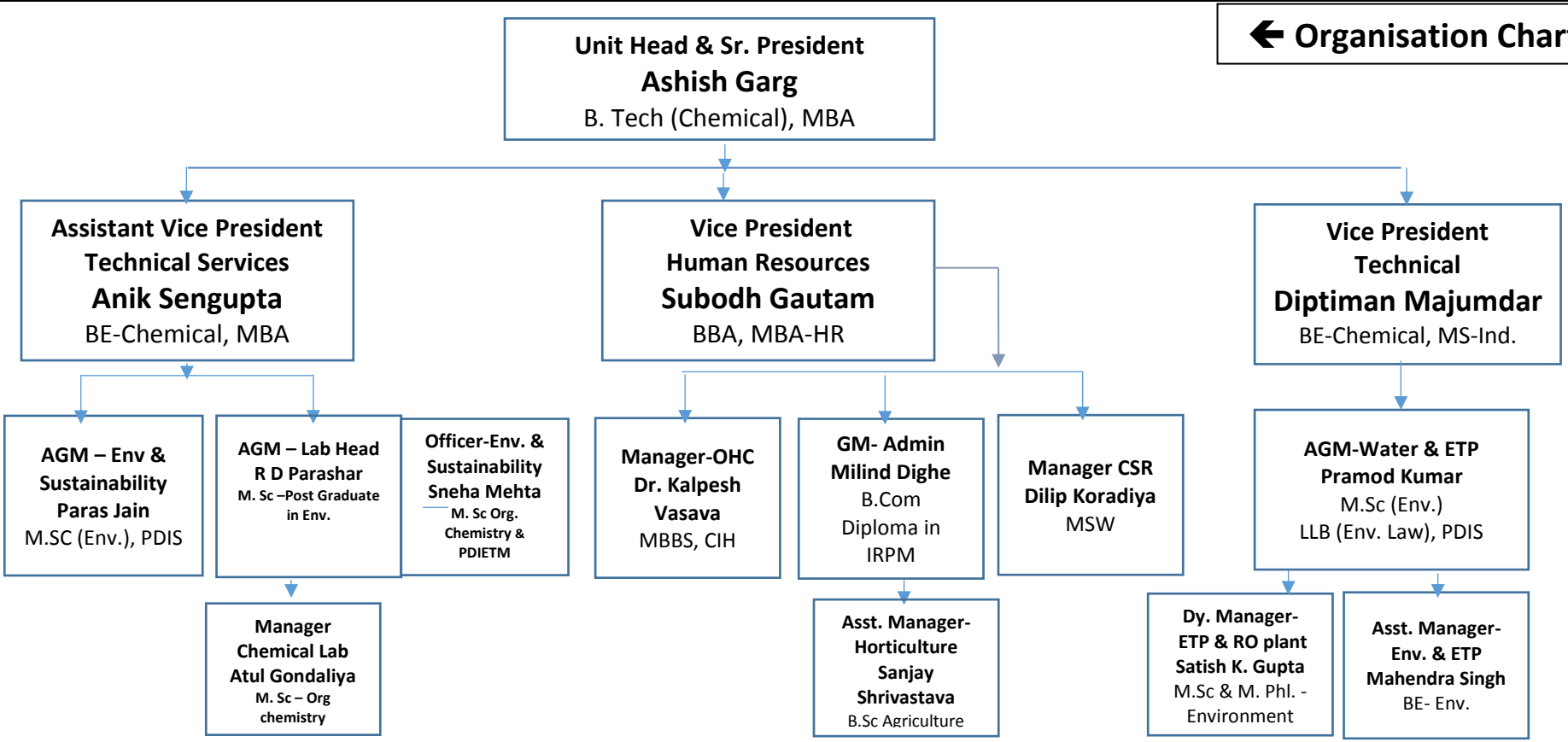
BOD Incubator

COD Digester

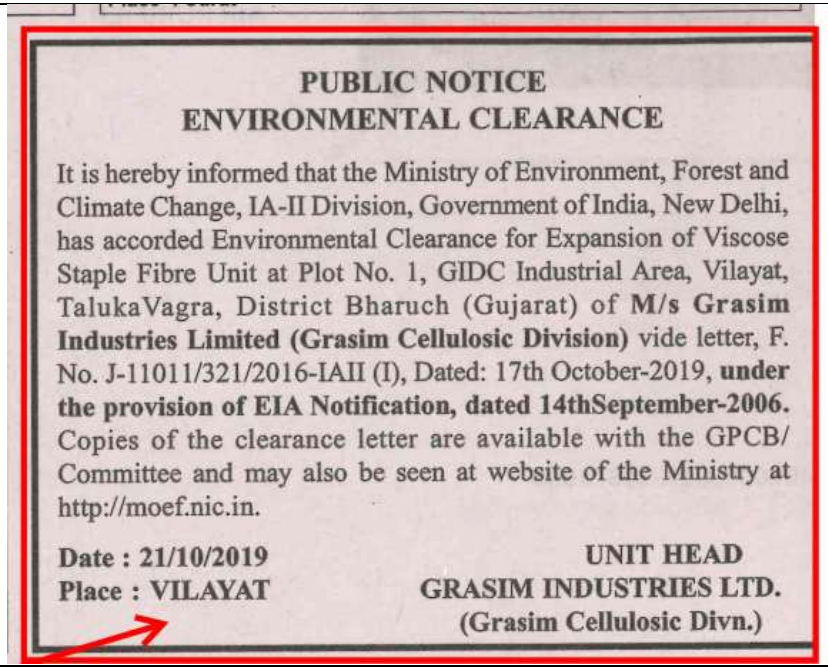
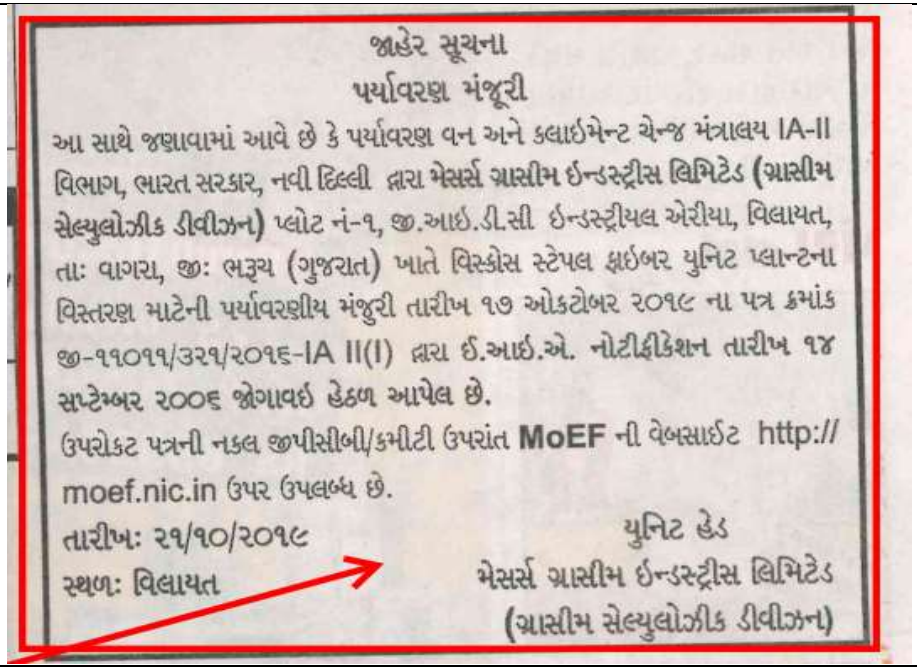
High Volume Sampler

Oven & Muffle Furnace

Available Facilities In Laboratory

	Organisation Chart  	
xii	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.	A copy of the clearance letter submitted to concern Panchayat. Please refer **Annexure-06** for the reference.
xiii	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status	We will submit the six monthly compliance report to the respective Regional Office of MoEFCC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report is posted on the website of the company.

	report shall be posted on the website of the company.	
xiv	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional offices by e-mail	The environmental statement for each financial year ending 31st March in Form-V as is submitted to the State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and also sent to the respective Regional offices by e-mail.
xv	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry at http://moef.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry	EC issued on 17.10.2019, and advertisement released on 24.10.2019 Copy attached as **Annexure-07**
	Name of Paper : - The Times of India, Ahemdabad **Date of Issue: -** 24.10.2019 **In : -** English language	**Name of Paper : -** Divya Bhaskar, Vadodara **Date of Issue: -** 24.10.2019 **In : -** Gujarati language

	 **PUBLIC NOTICE** **ENVIRONMENTAL CLEARANCE** It is hereby informed that the Ministry of Environment, Forest and Climate Change, IA-II Division, Government of India, New Delhi, has accorded Environmental Clearance for Expansion of Viscose Staple Fibre Unit at Plot No. 1, GIDC Industrial Area, Vilayat, TalukaVagra, District Bharuch (Gujarat) of **M/s Grasim Industries Limited (Grasim Cellulosic Division)** vide letter, F. No. J-11011/321/2016-IAII (I), Dated: 17th October-2019, **under the provision of EIA Notification, dated 14thSeptember-2006.** Copies of the clearance letter are available with the GPCB/ Committee and may also be seen at website of the Ministry at http://moef.nic.in. **Date : 21/10/2019** **Place : VILAYAT** **UNIT HEAD** **GRASIM INDUSTRIES LTD.** **(Grasim Cellulosic Divn.)**	 જાહેર સૂચના પર્યાવરણ મંજૂરી આ સાથે જણાવામાં આવે છે કે પર્યાવરણ વન અને કલાઈમેન્ટ ચેન્જ મંત્રાલય IA-II વિભાગ, ભારત સરકાર, નવી દિલ્લી દ્વારા મેસર્સ ગ્રાસીમ ઈન્ડસ્ટ્રીસ લિમિટેડ (ગ્રાસીમ સેલ્યુલોઝીક ડીવીઝન) પ્લોટ નં-૧, જી.આઈ.ડી.સી ઈન્ડસ્ટ્રીયલ એરીયા, વિલાયત, તા: વાગરા, જી: ભરૂચ (ગુજરાત) ખાતે વિસ્કોસ સ્ટેપલ ફાઈબર યુનિટ પ્લાન્ટના વિસ્તરણ માટેની પર્યાવરણીય મંજુરી તારીખ ૧૭ ઓકટોબર ૨૦૧૯ ના પત્ર ક્રમાંક જી-૧૧૦૧૧/૩૨૧/૨૦૧૬-IA II(I) દ્વારા ઈ.આઈ.એ. નોટીફીકેશન તારીખ ૧૪ સપ્ટેમ્બર ૨૦૦૬ જોગાવઈ હેઠળ આપેલ છે. ઉપરોકટ પત્રની નકલ જીપીસીબી/કમીટી ઉપરાંત **MoEF** ની વેબસાઈટ http://moef.nic.in ઉપર ઉપલબ્ધ છે. તારીખ: ૨૧/૧૦/૨૦૧૯ સ્થળ: વિલાયત યુનિટ હેડ મેસર્સ ગ્રાસીમ ઈન્ડસ્ટ્રીસ લિમિટેડ (ગ્રાસીમ સેલ્યુલોઝીક ડીવીઝન)
xvii	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project	We will submitted the desired information on project completion to the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
11	The Ministry may revoke or suspend the clearance, at subsequent stages, if implementation of any of the above conditions is not satisfactory	----
12	The above conditions will be enforced, inter alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention &. Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and rules	Presently we are following terms & conditions GPCB CC&A compliance, Please refer attached detailed CCA Report as **Annexure-A** For the expansion project we shall apply for the consent.

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

For
Grasim Cellulosic Division (GCD), Vilayat Project

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

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

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

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

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

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

For
Grasim Cellulosic Division (GCD), Vilayat Project

Green belt development

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

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

Criteria used for selection of species for greenbelt:

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

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

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

For

Grasim Cellulosic Division (GCD), Vilayat Project

Green belt development

Plant species for Odor management;

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

Gaseous emission (SO_2 & 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.