

**REPORT OF COMMITTEE  
ON INSPECTION-CUM-MONITORING OF  
GRASIM INDUSTRIES LTD - UNIT-  
M/s. INDIAN RAYON, VERAVAL.**

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IN COMPLIANCE OF ORDER DATED 09.09.2020 OF  
HON'BLE NATIONAL GREEN TRIBUNAL, PRINCIPAL  
BENCH, NEW DELHI IN THE MATTER OF OA NO. 160/2020  
(EARLIER OA NO. 114/2015 (WZ))  
PROTECTION OF ENVIRONMENT & PUBLIC SERVICE  
COMMITTEE Vs INDIAN RAYON & ORS.

FOR SUBMISSION TO

**HON'BLE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

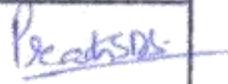
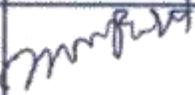
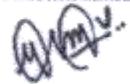
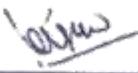
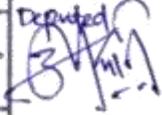
FEBRUARY 2021

**REPORT OF COMMITTEE IN COMPLIANCE OF ORDER OF HON'BLE NGT,  
IN THE MATTER OF OA NO. 160 OF 2020  
(EARLIER OA NO. 114/2015 (WZ))**

**PROTECTION OF ENVIRONMENT & PUBLIC SERVICE  
COMMITTEE Vs INDIAN RAYON & ORS.**

**COMMITTEE MEMBERS**

**COMMITTEE MEMBERS**

Sr. No.	Name of Committee Member	Signature
01	Shri Pratik Bharne, Scientist 'E', CPCB, Regional Directorate, Vadodara	
02	Mr. M. V. Patel Unit Head, Junagadh Unit, GPCB, Gandhinagar	
03	Mr. M. R. Macwana Regional Officer, Regional Office, GPCB, Junagadh	
04	Mr. Kishor N. Vaghamshi Dy. Environmental Engineer, DoEF, GCZMA	
05	Dr. Anirudh Ram S. Jaiswar Principal Scientist, CSIR-NIO, Mumbai	Superannuated. 
06	Ms. Saryu Zankar Sub-Divisional Magistrate, Veraval.	

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**REPORT OF COMMITTEE ON INSPECTION-CUM-MONITORING OF  
M/S GRASIM INDUSTRIES LTD.-UNIT- M/s INDIAN RAYON,  
VERAVAL, DIST- GIR SOMNATH, GUJRAT.**

**(IN COMPLIANCE OF ORDER DATED 09.09.2020 OF HON'BLE NATIONAL GREEN  
TRIBUNAL, PRINCIPAL BENCH, NEW DELHI**

**IN THE MATTER OF OA NO. 160/2020 (EARLIER OA NO. 114/2015 (WZ))  
PROTECTION OF ENVIRONMENT & PUBLIC SERVICE COMMITTEE Vs INDIAN  
RAYON & ORS)**

**1.0 PREAMBLE:**

Protection of Environment and Public Service Committee has filed an application on 08.09.2015 before Hon'ble National Green Tribunal, Western Zone Bench, Pune regarding pollution of Devaka River and Arabian Sea due to discharge of hazardous effluents, sludge and other solid waste by Grasim Industries Ltd.; Unit - Indian Rayon – *Erstwhile* a unit of Aditya Birla Nuvo Ltd. The matter was before Hon'ble NGT, Western Zone as Original Application No. 114/2015 (WZ) which further proceeded before Hon'ble NGT, Principal Bench as Original Application No. 160/2020.

Hon'ble NGT passed an order on 09.09.2020 (**Annexure-I**) and constituted a joint committee to visit the plant and the site of disposal of the effluents and look into the compliance of relevant parameters and furnish its report to the Tribunal.

Relevant portion of the order of Hon'ble NGT is reproduced below:

*“ 5. ....without expressing any final view on the rival aspects, it is necessary to ascertain the latest status on the ground by appointing an independent Committee..... ”*

*“ 6..... we constitute a joint Committee comprising CPCB, State PCB, Gujarat CZMA, nominee of CSIR-National Institute of Oceanography, Goa and the District Magistrate, Gir Somnath. The State PCB will be nodal agency for coordination and compliance. The joint Committee may visit the plant and the site of disposal of the effluents within one month, look into the compliance of relevant parameters and furnish its report to this Tribunal within three months*

by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF. It will be open to the applicant to furnish its view point to the Committee through the State PCB within two weeks from today.....”

## 2.0 CONSTITUTION OF THE JOINT COMMITTEE:

In compliance to the order (para 6), six member joint committee constituted with following members for inspection of the GRASIM INDUSTRIES LTD. UNIT- M/s INDIAN RAYON, Veraval-

Sr. No.	Name & Designation of Member	Authority/ Institute
1.	Mr. Pratik D. Bharne Scientist E, CPCB, Regional Directorate, Vadodara	Central Pollution Control Board (CPCB)
2.	Mr. M.V. Patel Unit Head, Junagadh Unit, GPCB, Gandhinagar	Gujarat Pollution Control Board (GPCB)
3.	Mr. M.R. Macwana Regional Officer, Regional Office, GPCB, Junagadh	Gujarat Pollution Control Board (GPCB)
4.	Mr. Kishor N. Vaghamshi Dy. Environmental Engineer, DoEF, GCZMA, Gandhinagar	Gujarat Coastal Zone Management Authority (GCZMA)
5.	Dr. Anirudh Ram S. Jaiswar Principal Scientist, CSIR-NIO, Mumbai	CSIR-National Institute of Oceanography (CSIR-NIO)
6.	Ms. Saryu Zankar Sub-Divisional Magistrate, Veraval	District Magistrate, Gir Somnath

### **3.0 APPROACH & ACTIVITIES CARRIED OUT BY THE COMMITTEE**

Hon'ble NGT in the order mentioned that the Applicant can submit his viewpoints to the committee. Accordingly, Applicant- Protection of Environment & Public Service Committee submitted its representation (**Annexure-II**) to GPCB Regional Office, Junagadh on 29.09.2020. The applicant has raised issues on violation of terms and conditions of Environmental Clearances and CRZ clearance. The applicant has also claimed that the industry is deliberately polluting the nearby environment by contaminating air and water. The applicant's viewpoints are summarized along with comments and observations of the committee in **Table- 6.1**.

The committee adopted following approach for the compliance of the order-

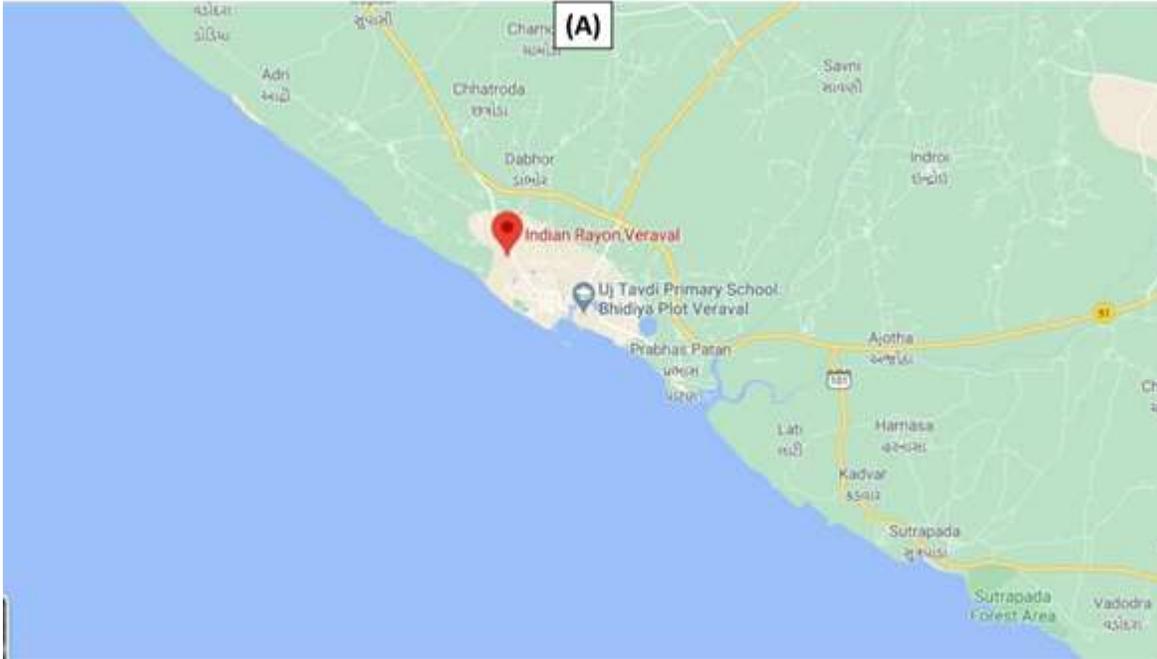
- **Inspection-cum-monitoring at Respondent Industry** - Inspection-cum-monitoring carried out at M/s GRASIM INDUSTRIES LTD.-UNIT- M/s INDIAN RAYON, Veraval on 16.10.2020 and 17.10.2020 to inspect the compliance of the relevant parameters as per order and as per representation received from the Applicant (on 29.09.2020).
- **Monitoring** - The committee took help of GPCB officials, Regional Office, Junagadh for carrying out sampling of STP, ETP, Stacks (Source Emission) attached to various plants- (Chlor-Alkali, Power, Rayon) & Noise and subsequent analysis of samples carried out at Regional Laboratory, GPCB, Rajkot.
- Information/Data collection and discussions with Industry Representatives
- Inside and surrounding area visit of the Industry
- Report preparation based on above.

### **4.0 ABOUT THE INDUSTRY**

The respondent Industry- GRASIM INDUSTRIES LTD.-UNIT- M/s INDIAN RAYON is situated at Plot/Phase No. – 1502, 1507, 1511, 1516, 1493, At. Veraval, Ta. Veraval, Dist. Gir Somnath, Gujarat. The industry was established in 1963. The industry is engaged in production of Viscose Filament Yarn (VFY), Sodium Sulphate, Sulphuric acid, Sodium Sulphide, Carbon disulphide,

Caustic Soda lye, Chlorine, Hydrochloric acid, Sodium Hypochlorite, Compressed Hydrogen and Captive Power Plant (CPP) (Thermal).

The location of the Industry, Veraval town area, river Devaka and the Sea are shown in **Figure 1 (A-D)**.





**Figure 1. (A-D)** Google earth images showing locations of industry, town area, River Devaka & the Arabian Sea.

#### 4.1 CONSENTS & ENVIRONMENTAL CLEARANCES-

Grasim Industries Ltd.; Unit - Indian Rayon – *Erstwhile* a unit of Aditya Birla Nuvo Ltd. possesses Consolidated Consent for Authorization (CCA) from Gujarat Pollution Control Board (GPCB) which is valid up to 23.12.2023. The copy of CCA is attached as **Annexure-III**.

**Table 4.1 Production capacity of the industry as per CCA issued by GPCB**

Sr No.	Product(s)	Quantity (MT/Month)
01	Viscose Filament Yarn	1950
02	Sodium Sulphate	2050
03	Sulphuric acid	3600
04	Sodium Sulphide (100%)	100
05	Carbon disulphide	1000
06	Caustic Soda lye (100%)	12000
07	Chlorine (100%)	10560
08	Hydrochloric acid (100%)	1800
09	Sodium Hypochlorite (100%)	3750
10	Compressed Hydrogen	650,000 Nm <sup>3</sup>
11	Captive Power Plant (thermal)	34.5 MW

The industry has obtained Environmental Clearance (EC) from Ministry of Environment, Forest & Climate Change (MoEF & CC), Govt. of India, New Delhi for installation, operation and expansion of Viscose Filament Yarn, Caustic Soda Plant, SSY Plant and Marine Pipeline Project. Summary of Environmental Clearances and Consents from MoEF & CC and GPCB respectively are provided at **Annexure-IV (Summary of Clearances & Consents)**.

The production detail for the financial year 2019-20 (submitted to the GPCB as form V – Environmental Statement Report) and period from April 2020 to Sept 2020 are provided at **Annexure-V (Mfg. Process and Production Data)**. It is observed from the production details that in last six months there was no production of Sodium Sulphide (100%) and CS<sub>2</sub> except CS<sub>2</sub>

production in July, 2020. During the lockdown period industry has manufactured chlor-Alkali products due to the requirement of disinfectants. The production of Viscose Filament Yarn in the current financial year (2020-2021) has been started from May 2020 and Sodium Sulphate & Sulphuric acid from June 2020.

The industry started its production from the year 1963 with production of Viscose Filament Yarn (FFY) and its raw materials- Carbon Sulfide (CS<sub>2</sub>) and Sulphuric Acid (H<sub>2</sub>SO<sub>4</sub>). It subsequently added other products and capacities as shown in following **Table 4.2**.

**Table 4.2 Timeline showing production commencement year**

NAME OF PRODUCT	YEAR
VFY, CS <sub>2</sub> , H <sub>2</sub> SO <sub>4</sub>	November 1963
Sodium Sulphate	December 1972
Caustic Lye, Chlorine, HCl, Sod. Hypochlorite	20 <sup>th</sup> March 1997
Compressed H <sub>2</sub> Gas	10 <sup>th</sup> September 1997
Caustic Soda Flakes	31 <sup>st</sup> January 1998
CPP	Dec. 1996 & Sep 2006

(Source- M/s GRASIM INDUSTRIES LTD.; UNIT - INDIAN RAYON)

## **4.2 ENVIRONMENT MANAGEMENT SYSTEM AT M/S GRASIM INDUSTRIES LTD.; UNIT - INDIAN RAYON**

### **4.2.1 Wastewater Management:**

The industry has provided Effluent Treatment Plant (ETP) for the treatment of effluent generated from different sources. Effluent from different processing plants is conveyed to ETP through 5 channels *viz.* D1, D2, D3, D4 & D5. During inspection ETP was observed in operation. D1 channel carries effluent from power plant, caustic plant, DM Plant, Old rayon plant and Spin Bath plant. D2 & D3 carry effluent from Rayon plants, Spin Bath plant and spinning sections. Effluents from these channels are dosed with lime and sent to Zinc Clarifiers (2 nos. *viz.* Old zinc clarifier and

New Zinc Clarifiers). D4 channel carries waste water from New Rayon plant. D5 channel is reserved for RO reject water.

The ETP consist of Lime Preparation Tank (2 Nos.), Lime Storage Tank (1 Nos.), Homogenizer (1 Nos.), Zinc Clarifier (2 Nos.), Holding Tank (1 Nos.), Polyelectrolyte Preparation Tank (2 Nos.), Sludge Thickener (1 Nos.), Mixing Chamber (2 Nos.), Centrifuge/Belt Press (5/1 Nos.), Sludge Drying Bed (3 Nos.), Suspended Solid Clarifier (SSCF) (2 Nos.), Effluent Pit (2 Nos.), Treated Effluent Pit (2 Nos.), Guard Pond (1 Nos.) & Marine Pumping Station (1 Nos.). The flow diagram of the ETP is attached as **Annexure-VI (ETP Details)**.

Effluent from clarifiers is channeled to the holding tank after polyelectrolyte dosing in the mixing chamber. This treated effluent is led to guard-pond and before that acid dosing is done if required. Final treated effluent is then led to Marine pit -1 and Marine pit -2 from where it is pumped to marine pipeline for disposal of treated trade effluent in the Arabian Sea by diffuser system at point suggested by CSIR-NIO into deep Sea. The total length of the marine outfall pipeline with diffuser system is 1.5 km (on-shore-0.51 KM, OffShore-0.990 KM) and reportedly 77 times dilution is available at diffuser point in deep sea. The respondent industry has installed online pH, TSS, TOC, Temperature & Magnetic flow meters to monitor trade effluent discharge. The pipeline is in operation since 20<sup>th</sup> November 2009. The Coordinates of LandFall Point (LFP) are Latitude 20° 54' 56" N & Longitude 70° 20' 50" E and Co-ordinates of diffuser points are Latitude 20° 54' 34.5" N & Longitude 70° 20' 23.4" E.

The industry has provided Sewage Treatment Plant (STPs) for the sewage generated from Plant and its colonies-Adityanagar and Raysil Height. Unit has provided STP of 500 KLPD capacity. The STP consists of two air diffusers, clarifier, chlorination, dechlorination, filtration (sand and activated charcoal), rechlorination and finally stored in a 100 KL capacity storage tank. The treated sewage is used for plantation/green belt development through a dedicated distribution pipeline network. The photographs of the ETP (Image No. 1 to 8) & STPs (Image 9 & 10) are provided in **Annexure – XVII (Photographs)**.

#### **4.2.2 Air Pollution Control Management:**

The industry has provided air pollution control measures (APCM) for the control of air pollution from plants/processes/flue gas stacks. The air pollutants generated from the operation of various plant /process are-

- Particulate Matter (PM), oxides of Nitrogen (NO<sub>x</sub>), oxides of Sulphur (SO<sub>2</sub>) from boiler and power plant (thermal) operation.
- Particulate Matter, SO<sub>2</sub>, Acid mist, CS<sub>2</sub>, H<sub>2</sub>S, HCl vapour and Mist and Chlorine from manufacturing processes.

The details of the air pollution control system installed at each plant/process are provided at **Annexure-VII (APCM)**.

#### **4.2.3 Hazardous Waste Management**

The industry generates Hazardous wastes, viz., Sulphur Sludge (acidic), Used oil/Burnt oil & LDO/FO Sludge, Discarded container, Cellulose Waste (organic biodegradable), Spent Catalyst from H<sub>2</sub>SO<sub>4</sub> plant, Toxic metal containing waste (spent resin from DM plant), Oily cotton waste, Exhaust membrane, e-waste, Lead acid Battery and other scrap. The quantum of generation of hazardous & other waste and its disposal for the year 2019-20 are provided at **Annexure-VIII (Haz Waste)**.

The unit is sending hazardous waste to GPCB authorized recyclers/users and Common facilities through an online manifest system developed by GPCB. During inspection hazardous waste was found stored on-site Hazardous waste storage facility with cement concrete flooring and covered shed with spillage collection system in around 3,871 m<sup>2</sup> area. The unit has provided a display board for indication of hazardous waste. The area comprises of Empty drum and container shed (12 m x 26 m), one shed for scrap bins (11.45 m x 15 m) and eight compartments of 5.55 m X 15 m each and one compartment of 6 m X 15 m dimension. During inspection e-waste, discarded containers, cellulosic waste and used oil was stored in dedicated marked area (Photographs taken during the visit are provided as **Image 11 to 13, Annexure - XVII (Photographs)**). The unit is a member of common TSDF site (Saurashtra Enviro Private Project Limited, Bhachau, Dist. Kutch (Gujarat)) for Integrated Common Hazardous Waste Management (CTSDF) *i.e.* disposal of incinerable and landfillable solid waste.

As per information submitted by industry, approx. 85-95 MT per day Fly Ash is generated due to Power Plant operations and is stored in 4 storage silos in plant premises with aggregate 75,000 MT storage capacity. The fly ash transportation through Bulker was observed during the visit (Photographs taken during the visit are provided as **Image No. -14 & 15, Annexure - XVII Photograph**). Approx 32,159 MT fly ash generated during FY 2019-2020, sent to M/s Ultra-Tech Cement Ltd (Gujarat Cement Works – Kovaya), M/s Ambuja Cement Ltd. & M/s Gujarat Sidhee Cements Ltd. The compliance report submitted to MoEF & CC is attached as **Annexure-IX (Fly ash Compliance Report)**.

## **5.0 DETAILS OF MONITORING DURING COMMITTEE VISIT ON 16.10.2020**

Monitoring of STP, ETP, Stacks (Source Emission) attached to various plants (Chlor-Alkali, Power, Rayon) and Noise were carried out on 16.10.2020. The committee took help of staff/officials of GPCB, Regional Office, Junagadh for carrying out sampling of STP, ETP, Source emission monitoring & Noise monitoring and subsequent analysis of samples were carried out at Regional Laboratory, GPCB, Rajkot.

Source Emission monitoring carried out for the stacks at-

- Boiler No. 1 & 2 (Old Power Plant)
- Boiler No. 3 (New Power Plant)
- New Sulphuric Acid Plant
- Old Rayon plant
- New Rayon plant
- Caustic Chlorine Plant (Hypo Plant)
- Caustic Chlorine Plant (HCL Plant)

the noise monitoring carried out during the day and night time at following four locations-

- Outside Main Gate, Indian Rayon (east direction of industry)
- Outside Junagadh Gate, Indian Rayon (north- east direction of industry)
- Guest House, Aditya Nagar, Residential Colony in south-west direction of industry)
- Rabariwada, Residential Area, in south direction of industry

The analysis results are given in **Table 5.1, 5.2, 5.3 & 5.4**.

**Table 5.1: Analysis results of sampling at Effluent Treatment Plant (ETP)**

Sr. No.	Parameters	Unit	Inlet 1 to ETP	Inlet 2 to ETP	Outlet of New Zn Clarifier	Outlet of Old Zn Clarifier	ETP Outlet	GPCB Limit
1	pH	---	2.36	1.62	7.64	7.46	6.39	5.5 to 9.0
2	Colour (pt. Co. scale)	Units	5	10	5	5	5	100
3	Suspended Solids	mg/L	56	32	8	14	22	100
4	Oil and Grease	mg/L	BDL	BDL	BDL	BDL	BDL	10
5	BOD (5 Days at 20°C)	mg/L	128	85	34.5	54	44	100
6	COD	mg/L	380	258	149	232	150	250
7	Zinc	mg/L	50	52	0.4	0.4	0.2	15

**Table 5.2: Analysis results of sampling at Sewage Treatment Plant (STP)**

Sr. No.	Parameters	Unit	GPCB Limit	STP Outlet
1	Total Suspended Solids (TSS)	mg/l	30	12
2	BOD (3 Days at 27°C)	mg/l	20	24
3	Residual Chlorine	mg/l	Min. 0.5	0.89

**Table 5.3: Analysis results of Source Emission Monitoring (Flue gas and Process gases)**

Sr. No.	Stack Attached to	Parameter(s)		
		PM (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (ppm)	NO <sub>x</sub> (ppm)
1	Boiler No. 1 & 2 (Old Power Plant)	78	56.49	0.266
	<b>GPCB Norms</b>	<b>100</b>	<b>229</b> (600 mg/Nm <sup>3</sup> )	<b>319</b> (600 mg/Nm <sup>3</sup> )
2	Boiler No. 3 (New Power Plant)	42.55	105	0.217
	<b>GPCB Norms</b>	<b>50</b>	<b>229</b> (600 mg/Nm <sup>3</sup> )	<b>159</b> (300 mg/Nm <sup>3</sup> )
		<b>SO<sub>2</sub> (Kg/Ton of 100% Acid Production)</b>		<b>Acid Mist (mg/Nm<sup>3</sup>)</b>
3	New Sulphuric Acid Plant	0.14		20
	<b>GPCB Norms</b>	<b>2</b>		<b>50</b>
		<b>CS<sub>2</sub> (Kg/MT of Yarn production)</b>		<b>H<sub>2</sub>S (mg/Nm<sup>3</sup>)</b>
4	Old Rayon plant	177.74		21.25
5	New Rayon plant	183.45		29.75
	<b>GPCB Norms</b>	<b>225</b>		<b>45</b>
		<b>Cl<sub>2</sub> (mg/Nm<sup>3</sup>)</b>		
6	Caustic Chlorine Plant (Hypo Plant)	0.49		
	<b>GPCB Norm</b>	<b>15</b>		
		<b>HCl (mg/Nm<sup>3</sup>)</b>		
7	Caustic Chlorine Plant (HCL Plant)	2.06		
	<b>GPCB Limit</b>	<b>35</b>		

**Table 5.4: Results of Noise Monitoring in and around the Industry**

NOISE MONITORING RESULTS					
		Day Time*		Night Time*	
Sr. No.	Location	Prescribed Limit*	Measured Value dB(A) Leq	Prescribed Limit*	Measured Value dB(A) Leq
1	Outside Main Gate, Indian Rayon ( Industrial)	75	69.5	70	63.9
2	Rabariwada (Residential)	55	53.9	45	43.2
3	Outside Junagadh Gate, Indian Rayon ( Industrial)	75	71.4	70	61.2
4	Guest House, Aditynagar Colony, Indian Rayon Premise (Residential)	55	53.4	45	48.1

\*Day time: 6.00 a.m. to 10.00 p.m, Night time: 10.00 p.m. to 6.00 a.m.

dB (A)- a unit to measure noise,

dB(A) Leq denotes the time weighted average of the level of sound in decibels, on scale A which is relatable to human hearing.

## **6.0 OBSERVATIONS & FINDINGS:**

- As per Hon'ble NGT order dated 09.09.2020, it was directed to the joint Committee to visit the plant and the site of disposal of the effluents and look into the compliance of relevant parameters. Accordingly, the committee visited the plant and carried out monitoring of ETP, STP and various stacks attached to different plants as described in “5.0 Details of monitoring during committee visit on 16.10.2020” of this report.

- During inspection on 16.10.2020, the Old & New Rayon Plant, New Sulphuric acid Plant, Caustic Chlorine Plant, Hydrochloric acid plant and Power Plant (Old & New - Boilers) were found in operation whereas Old sulphuric acid, Carbon disulphide and Sodium Sulphide Plants were not in operation during inspection.
- It is evident from analysis results of effluent samples taken from out let of ETP (which was discharging to the Sea through Marine Pipeline of 1.5 km length), all the monitored parameters are complying with the norms prescribed by GPCB (**Table: 5.1**).

Analysis results of sewage sample (STP) indicates that parameters monitored at the outlet of STP (which is used for plantation) are complying with the norms prescribed by GPCB except BOD which marginally exceeds the norm (**Table: 5.2**).

Analysis results of Source emission monitoring of different stacks implies that all the monitored parameters are complying with the norms prescribed by GPCB (**Table: 5.3**).

It is observed from the noise monitoring results that the measured values of noise, during the day time are within the norms prescribed at two residential locations and two industrial locations whereas the measured values are at night are also within norms except one residential area i.e. Guest house, Adityanagar, Grasim Industries Ltd premises.

- The industry has installed marine pipeline for disposal of treated effluent in the Arabian Sea for which they have conducted **Rapid Marine Assessment** through Council Of Scientific And Industrial Research–Central Salt And Marine Chemicals Research Institute (CSIR–CSMCRI), Bhavnagar in the Month of May-2008 to screen suitable discharge point in the Arabian Sea. After getting the study report, Industry has received Environment Clearances from MoEF, New Delhi based on the recommendation of Gujarat Coastal Zone Management Authority (GCZMA), for laying proposed pipeline in the Sea.
- The industry has acquired requisite clearances for laying marine pipeline from regulatory bodies viz. i) Gujarat Coastal Zone Management Authority (GCZMA) for CRZ Clearance, ii) Gujarat Maritime Board, iii) District Collectorate, and iv) Nagarpalika. Summary of existing

statutory approvals/authorizations from concerned Government Body/ Regulatory Agencies is annexed as **Annexure-IV (Summary of Clearances & Consents)**.

- As per EC conditions, the CSIR-National Institute of Oceanography (CSIR-NIO) is monitoring coastal environment and diffuser efficiency on yearly basis and submitting reports to concerned regulatory bodies. As per latest report entitled “Monitoring of Coastal Environment and Evaluation of diffuser efficiency of Grasim Industries Ltd. – Unit Indian Rayon at Veraval (2019), (NIO/SP-13/2020, SSP3281):

- a. Ecological conditions of the coastal water off Veraval is not disturbed due to discharge of effluent since November 2009.

- b. Bioassay conducted for the treated trade effluent of the Respondent at 100% concentration is non-toxic to test organisms.

- c. Combined results of dye study, water quality and modeling indicated that the diffusers of present disposal are working efficiently and there is no evidence of spread of elevated concentration of environmental parameters around the discharge point.

- The industry also possess other licence/permissions like

- i) Factory Registration & License under Factories Act, 1948,

- ii) Petroleum Storage License under Petroleum (Amendment) Rules 2011,

- iii) License for storage of compressed gas under Static and Mobile Pressure Vessels (Unfired) (Amendment) Rules, 2018,

- iv) Cylinder Storage license under Gas Cylinders Rules, 2016,

- v) Public Liability Insurance under The Public Liability Insurance act, 1991,

- vi) License as per provision of Central Motor Vehicle Rules, 1989 for transportation of hazardous material.

- The committee referred the representation/viewpoints given by Applicant to GPCB on 29.09.2020 as per Hon’ble NGT order. The view points are regarding violations of terms and conditions of ToR, Environmental Clearances, CRZ Clearances leading air pollution, water pollution, sea pollution, river pollution, land pollution etc. due to release of dust & hazardous substances & gases into the air, discharge of polluted water into sea & river, unscientific handling of coal, use of prohibited lignite as fuel in boilers, dumping of fly ash on open spaces, inadequate

plantation of tree, non-development of 33.50% of green belt, huge traffic in the area causing air pollution and transportation of material in open trucks, unscientific handling & storage of hazardous waste causing adverse impact on air, non-installation of pollution control systems, non-installation of online monitoring systems, non-installation advance technology of Distributed control Systems (DCS) & Emergency Shutdown Systems (ESD), non-installation of gas detection System, non-compliance to the sustainable development etc.

The comments, observations and finding of the committee related to the representations/viewpoints are given in **Table 6.1**.

**TABLE 6.1 Committee’s Comments, Observations related to representation/ viewpoints of the Applicant.**

<b>Sr. No.</b>	<b>Applicant’s Representations/ View Points</b>	<b>Committee’s Comments/ Field Observations</b>
1.	<p>Non-installation of Advanced control systems <i>i.e.</i> DCS, ECS &amp; PLD etc. and no online monitoring and non-display of information to the public. The industry has not installed</p> <p>i) the stack for burning of toxic gases and it is directly released into the air through stacks installed at boilers.</p> <p>ii) online monitoring system for SO<sub>2</sub> and NO<sub>x</sub>.</p>	<p>The industry has installed DCS, SCADA &amp; PLC systems for process plants for the operations.</p> <p>The Industry has provided 3 stacks for boilers and provided 4 stacks for the process after air pollution control systems. The air pollution control system details are attached as <b>Annexure VII (APCM)</b>.</p> <p>The industry has installed Online Monitoring System (OCEMS) for both effluent and emission and the same is linked with the CPCB server. The details of online monitoring systems (OCEMS) along with the monitoring of parameters (PM, SO<sub>2</sub>, NO<sub>x</sub> for boilers and Cl, HCl for process stack.) are given in <b>Annexure-X (OCEMS)</b>.</p>

	<p>iii) online pH meter, flow meter, TOC analysers and sulphide &amp; sulphur analysers and there is direct discharge by avoiding guard ponds.</p>	<p>The ambient air quality data for one location- Rayon Admin building (inside the plant) is displayed at the digital display on the main gate for the public (<b>Image 16, Annexure - XVII - Photograph</b>).</p> <p>The industry has installed online analyzers (OCEMS) as per conditions mentioned in EC to install Marine Pipeline for disposal of trade effluent. OCEMS installed for pH, TOC, TSS, Flow rate <b>Annexure-X (OCEMS)</b>. At the time of inspection, the values noted are-</p> <p>Effluent flow: 228.8 lpm,  Effluent temp: 36.44 °C  pH: 7.45  TU/TS: 33.7 mg/l  TOC: 92.80 mg/l,</p> <p>During inspection proper channelization of trade effluent through Guard Pond was observed (<b>Image 7, Annexure - XVII - Photograph</b>).</p>
<p>2.</p>	<p>The sewage generated from the plant and its worker's colony is directly connected to the municipal sewer line and there is no such treatment in the STP as the STP installed is just scrap skeleton and it is not in operation.</p>	<p>The industry has established two residential colonies- Aditya Nagar adjoining to the plant (in south west direction) and another colony namely Raysil Heights which is away from the plant in east direction.</p> <p>The sewage generated from colonies- Adityanagar, Raysil heights and industrial premises is treated in Sewage Treatment Plant (STP) installed (capacity 500 m<sup>3</sup>/day) in the premise of the industry.</p>

		<p>The sewage from worker colony which is not the property of the industry, as informed, is discharged into the sewer line of Veraval-Patan Municipality.</p> <p>The STP consists of two air diffusers clarifier, chlorinator, dechlorination tank, filters (sand and activated charcoal), and 100 kl capacity storage tank. The treated sewage is used for plantation/green belt development through a dedicated distribution pipeline network.</p> <p>During the visit, the STP was found in operation and a sample was collected from the outlet of the STP and analyzed for parameters- TSS, BOD &amp; Residual Chlorine. The analysis results (<b>Table 5.2</b>) of the sample show BOD (24 mg/l) slightly exceeds the norm (20 mg/l). The other parameters- TSS &amp; Residual Chlorine are within the norms.</p>
3.	<p>The air pollution control system attached to various plants/units are not in scientific operation and causing release of pollutants.</p>	<p>Pollutants released from process and boiler operations were measured by collecting samples of gases released in the environment <i>i.e.</i> from boiler stacks and process stacks.</p> <p>It is evident from Analysis Results of the samples collected during inspection that the concentration of pollutants are within permissible limits as prescribed by GPCB (<b>Table 5.3</b>).</p> <p>It was informed by industry that they are following maintenance schedule as per technical requirement of the each Air Pollution Control System (APCS).</p>

		<p>The industry has also installed an Online Monitoring System for Emission and the same is linked with CPCB server (<b>Annexure – X OCEMS</b>).</p>																				
<p>4.</p>	<p>The quantity of total water requirement increased from 12938 m<sup>3</sup>/day to 17939 m<sup>3</sup>/day after expansion is totally false. Additional water sourced from Umrethi dam (3000 m<sup>3</sup>/day) is much higher than this and there is no recycled treated effluent. There are no flow meters installed to catch this quantity.</p> <p>The industry is extracting fresh water more than 20000 m<sup>3</sup>/day and also extracting ground water.</p>	<p>In the EC or CCA, the permission for quantity of water consumption/ or effluent discharges are mentioned with maximum quantity for full production and installed capacities of the plant.</p> <p>Current source of fresh-water is Hiran Dam. The industry has buried bore-wells and there is no groundwater extraction. The industry maintains a record for utilization of freshwater.</p> <p>The industry is maintaining records for water usage, effluent discharge and energy meters for the equipment involved in water sourcing/effluent discharge (<b>Annexure-XI</b>).</p> <p>Freshwater consumption (in KLPD) during Apr-2020 to Oct-2020 were as below:</p> <table border="1"> <thead> <tr> <th>Month</th> <th>Min</th> <th>Max</th> <th>Avg</th> </tr> </thead> <tbody> <tr> <td>Apr 2020</td> <td>1679</td> <td>4304</td> <td>2815</td> </tr> <tr> <td>May2020</td> <td>3198</td> <td>4305</td> <td>3734</td> </tr> <tr> <td>Jun2020</td> <td>3859</td> <td>9376</td> <td>7330</td> </tr> <tr> <td>Jul2020</td> <td>7387</td> <td>8879</td> <td>8185</td> </tr> </tbody> </table>	Month	Min	Max	Avg	Apr 2020	1679	4304	2815	May2020	3198	4305	3734	Jun2020	3859	9376	7330	Jul2020	7387	8879	8185
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<b>Aug2020</b>	6686	8612	7872
<b>Sep2020</b>	8106	9827	8908
<b>Oct2020</b>	8868	12288	10462

Water consumption during Apr-2020 to Oct-2020 in domestic, industrial & allied activities and waste water generation as summarized as:

<b>Month</b>	<b>WC*! (cooling)</b>	<b>WC (Domesti c)</b>	<b>WC (Process)</b>	<b>WWD</b>
<b>Apr</b>	14	8	62	76
<b>May</b>	19	11	84	80
<b>Jun</b>	37	22	160	118
<b>Jul</b>	43	25	185	178
<b>Aug</b>	41	24	178	215
<b>Sep</b>	45	26	195	182
<b>Oct</b>	55	32	236	213

\* WC - Water consumption, WWD - Wastewater/effluent discharge.

		<p>The values are reported in Million liters/Month.</p> <p>Kindly refer <b>Annexure-XI</b> for detailed information.</p> <p>As per information provided, the average consumption of water 8,200 KL/Day (Since April 2020) and as per the Environment Audit Report for the 2019-2020, average industrial water consumption- 12,661.86 KLPD Therefore, industrial water consumption is within consented limit i.e. 13,070 KL/Day (Refer CCA at <b>Annexure-III</b>).</p> <p>Effluent is discharged to the deep sea through marine pipeline and treated sewage is used for gardening.</p> <p>The industry has installed flow meters for water consumption and effluent discharge. The flow rate, pH and temp data of effluent discharge can be seen from <b>Image 6</b> provided at <b>Annexure - XVII Photographs</b>.</p> <p>The industry is going to establish a sea water desalination plant for an alternative source of water for which CTE is obtained from GPCB and CRZ clearance application is under process with GCZMA.</p>
5.	<p>The effluent discharge from various units is 12540 m<sup>3</sup>/day and whereas recycled water through ETP is only 2000 m<sup>3</sup>/day as disclosed in EIA (at page No. 359, 360 &amp; 361).</p>	<p>The industry has obtained EC for disposal of treated effluent (15000 m<sup>3</sup>/day) into deep sea through marine pipeline (<b>Annexure- XII EC</b>).</p> <p>The industry possesses consent for generation of 11,372 KLPD industrial wastewater (<b>Annexure – III CCA</b>) for discharge to the deep sea through marine pipeline with diffuser system after treatment. Average treated effluent discharge during Sep 2020 was approx. 6000 KLPD</p>

	<p>The industry is violating the principle of 3R with impunity by not reducing the fresh water demand, also by not reusing and also by not scientific treatment.</p>	<p>(<b>Annexure – XI</b>). As per Environment Audit Report 2019-20 average treated effluent discharge was 8084.84 KLPD.</p> <p>It is mentioned in EC (condition-9.0) which read as “<i>As proposed, effluent recycling RO plant shall be installed to produce 2000 m<sup>3</sup>/day recycle water.....</i>”.</p> <p>Accordingly, the industry has installed RO Plant of 500 m<sup>3</sup>/day and it was in operation during inspection. The industry uses treated sewage for gardening.</p> <p>It is further informed that for the remaining quantity (1500 m<sup>3</sup>/day) of effluent recycling is proposed along with phase-2 &amp; 3 of expansion of the production as mentioned in the EC compliance Report (<b>Section-A, Point-iii, Page-2 in Annexure–XIII EC Compliance</b>).</p> <p>It is evident from i) CCA obtained by the industry from GPCB, ii) EC issued by MoEF&amp;CC and iii) Production data that the industry is yet to achieve production capacity expansion, effluent generation and effluent recycling as proposed in the EC.</p>
<p>6.</p>	<p>The effluent treatment in ETP is in manner and polluted effluent is discharged into deep sea to keep these violations beyond the knowledge of common citizens and there is death of fishes in bulk quantity. Instead of</p>	<p>The industry is generating effluent having inlet BOD: 180 mg/l, COD: 380 mg/l, Zn:52 mg/l as per the monitoring carried out on 16.10.2020. The industry has taken permission to discharge the treated effluent to the deep sea. The industry has installed OCEMS and data is transmitted to CPCB/GPCB server.</p> <p>Also annual monitoring is carried out by CSIR-NIO as per EC condition and as per latest report (2019) it is mentioned</p>

	<p>discharging of so called treated water in deep, same can be used by Municipal Corporation and local authority or for fire station, trees &amp; gardening etc. but this is not done to overcome the pollution.</p>	<p>that along with coastal water monitoring, CSIR-NIO also checks the quality effluent quality and toxicity (bioassay) test of the effluent of the said industry. Results of several years of monitoring indicates that the final effluent meets the criteria consented by the GPCB. There has been no fish kill episode reported in GPCB records since 2009 due to discharge of treated trade effluent by industry.</p> <p>Analysis results describing attributes of treated effluent are mentioned in <b>Table 5.1</b>.</p>
7.	<p>The Marine pipeline with diffuser system is discharging more than 15000 m<sup>3</sup>/day which is beyond the permissible limits. It is also mentioned by the applicant that the quantity of treated effluent discharged to the deep is more than 10540 m<sup>3</sup>/day which is against the permissible limit.</p>	<p>During March 2019 monitoring by CSIR-NIO, efficiency of diffuser was also assessed through dye study. It was found that effluent discharge from industry reaches the diffuser within stipulated time and there was no indication of leakage of marine pipeline. If the effluent is discharged beyond the capacity of pipe, the pipeline will rupture from several places and partial quantity of effluent will reach the diffuser, which was not observed during dye study.</p> <p>The industry possesses consent for generation of 11,372 KLPD industrial wastewater (<b>Annexure – III CCA</b>) for discharge to deep sea through marine pipeline with diffuser system after treatment. Average treated effluent discharge during Sep 2020 was approx. 6000 KLPD (<b>Annexure – XI</b>). As per Environment Audit Report 2019-20 average treated effluent discharge was 8084.84 KLPD.</p>
8.	<p>There is treatment of sewage and so called use as make up water for cooling</p>	<p>Refer, point-2 above in this Table.</p>

	<p>tower &amp; plantation inside the premises is absolutely false episode.</p>	
9.	<p>The waste of Cellulose, sulphuric sludge, (Fly ash, Process sludge, coal ash, charcoal slurry is dumped in the open area belongs to government lands &amp; in river. There is no disposal through TSDF, cement plant, brick plant, GPCB approved vendors or Group plant etc.</p> <p>Storage of hazardous &amp; other chemicals are in excess than the permission, in an illegal manner.</p>	<p>The joint committee has visited surrounding area adjoining industry premises but no such disposal or indications that the industry has disposed waste on open land.</p> <p>Kindly, refer sub-section <b>4.2.3</b> of this report for storage, disposal of hazardous &amp; non hazardous waste, fly ash/coal ash etc.</p> <p>Waste generation and its disposal from Audit Report against Authorization quantity and Form-4 submitted as per HOW (M&amp;TM ) Rules 2016. It is observed that quantity is less than permissible quantity.</p>
10.	<p>The low quality coal &amp; prohibited lignite from Africa, Indonesia and local unauthorised traders is procured. But GPCB, MoEF, State SEIAA &amp; DOE is intentionally neglecting to this serious issue. There is no test report is prepared for this coal and</p>	<p>The industry has informed that feeding of lignite has been stopped since 17.10.2019 and left over quantity (105 MT) fed on 14.12. 2019.</p> <p>As per data submitted by the industry, stock of Coal is approx. 5,337 MT on 16.10.2020. Currently, the industry is utilizing Coal of Indonesian and/or South African origin. The industry is permitted to utilize coal &amp; lignite, as per CCA as fuel in boilers.</p>

	<p>lignite used in boiler. There is huge air pollution by use of such fuel and from its emission and further rain water is contaminating in this coal &amp; lignite which further contaminating river due to unscientific storage. Caused serious damage to the soil in the vicinity of the project by unscientific handling of coal by open storage and contaminating storm water, open storage of fly ash, chemicals spillage etc</p>	<p>The sample purchase order of coal, coal analysis Report and Coal storage and Handling area details provided by the industry are annexed at <b>Annexure- XIV</b>.</p> <p>The unit has provided 23 covered bays (22 bays of 36 m x 22 m and 1 of 36 m x 5.5 m across approx 9700 m2 area) of 30,000 MT capacity for storage of Coal. During inspection 7 sheds were under maintenance.</p> <p>The photographs taken during the visit at Coal storage and handling area are given in <b>Annexure- XVII Photograph as Image 17 &amp; 21</b>.</p> <p>During the committee visit, source emission monitoring was carried out at stacks attached to coal fired boilers and it is observed that emissions of pollutants are within consented limits. The analysis results are given in <b>Table- 5.3</b>.</p> <p>The industry has also installed OCEMS for continuous monitoring of stack and the same is linked with CPCB server (<b>Annexure X OCEMS</b>).</p>
11.	<p>As per Financial Reports submitted to the Ministry of Corporate Affairs etc., the production of various yarns and chemicals are much higher than the permissible quantity and the same needs to be verified by this</p>	<p>The industry has provided Monthly Production data which is provided as <b>Annexure – V (Mfg. Process and Production data)</b>.</p> <p>It is observed from data provided by the industry and that provided in Environmental Audit Report 2019-20, the production of consented products was found within the permissible quantity given in the consent issued by GPCB.</p>

	committee with scientific details.	
12.	<p>Dumping fly ash at public places and spreading dust around the city while transporting the material.</p> <p>Unit has blatantly violated the CPCB provisions &amp; guidelines for storage of boiler ash and it is stored in open space causing an air borne water regime during the rainy season by flowing along with the storm water. There is direct exposure of ash &amp; dust.</p>	<p>The industry has commissioned 4 (four) storage silos for fly ash and fly ash is sent to Ultra-Tech cement &amp; other cement plants for cement manufacturing. During inspection fly ash transportation through bulker (Closed containers) was observed. Fly ash was not observed stored in open. Kindly refer sub-section <b>4.2.3</b> of this report for further details.</p> <p>The committee has not observed dumping of fly ash at public places. Raw material and final product transporting trucks parked in a dedicated parking area near the factory exit gate towards National Highway was observed. The trucks were properly covered to avoid escape of material, wherever necessary (<b>Image 23 to 25, Annexure XVII - Photographs</b>).</p>
13.	<p>The industry has made encroachment into the Devaka River and there is requirement of a safe buffer zone with the river and safe belt of almost more than 20 mtrs. width is encroached. There is no marking of flood line for Devaka River.</p>	<p>Along the river, the industry has constructed a boundary wall at approx distance 3.50 meter from the river path and there is a pedestrian path along the river. The industry was established in 1963. There were no such guidelines for the buffer zone when the industry was established.</p> <p>The committee has also visited the area around the boundary wall up to the temple through the pedestrian path and it is free for movement for anybody.</p>

		Municipality/district administration and irrigation department needs to ascertain the facts about the encroachment and marking of the flood line.
14.	Industry is directly dumping solid waste and sludge into the Devaka river	<p>No such disposal or sign of disposal of solid waste and sludge were observed during the inspection along the river path flowing by the industry.</p> <p>The solid waste dumped /spread in the river is from Veraval town (<b>Image 33 &amp; 34, Annexure XVII - Photographs</b>).</p>
15.	The industry is directly discharging effluents into the Devaka River through gutter connected to river from plant.	<p>A natural drain is passing outside the premises of the industry. Natural drain and surrounding areas are under ownership of Grasim Industries Ltd (<b>Figure 1D</b>). This natural drain carries domestic waste from residential colonies and commercial complexes of Veraval city (<i>viz.</i> Tagore Nagar, Gayatri Nagar, Shakti Nagar, Bihari Nagar, Sripal Society, Teacher Colony, Marketing Yard , Mochi Nagar, Hudco Society) situated on the upstream of the drain. Inside the plant premise signs of neither illegal water discharge nor solid waste discharge were observed around the natural drain. There was no direct discharge of domestic sewage generated from industry or its residential colony. The industry had laid down marine pipeline for discharge of treated trade effluent.</p>
16.	Due to sharing of boundaries with the residential area and no buffer zone, there is effect	<p>Industry was established in the year 1963 and residential development in the vicinity progressed later. This indicates, there is no proper planning of revenue area under</p>

	<p>on the resident and huge obstacle to the traffic on National Highway-8 (NH-8).</p>	<p>Gram Panchayat/ Municipality for Town planning and residential development.</p> <p>The industry has two gates i.e. main/ entry gate and Junagadh gate which opens on Highway. The industry has recently modified Junagadh gate (towards National Highway) to avoid direct exit on the road.</p> <p>There might be traffic congestion during peak hours.</p>
17.	<p>The transportation of hazardous chemicals is done with carelessness and there are number of accidents for leakages of hazardous chemicals and gases in the vicinity of the industries.</p>	<p>There are no such incidents reported as per GPCB record since the last five years.</p>
18.	<p>There are number of incidents of CS<sub>2</sub> and H<sub>2</sub>S gas leakage, but GPCB and District health &amp; safety department have not taken any action.</p>	<p>There are no such incidents as per GPCB records since last five years.</p>
19.	<p>Not installed firefighting system as per norms.</p>	<p>Sh. S.M. Consultants have carried out third party safety audit of the industry for the year 2018-19. The audit is carried out to review the documents, compliance of procedures, statuettes, <i>etc.</i> as per the scope mentioned in IS:14489 and Gujarat Factory Rules, 1963.</p>

		<p>It is informed that the industry has provided 969 nos. of portable fire extinguishers of different types which are maintained as per BIS standards.</p> <p>The unit has installed fixed/automatic fire fighting system by installing water sprinklers on Chlorine bullet and CS<sub>2</sub> tank. . As per safety audit report conducted by Sh. S. M. Consultants, the industry is found to be complied with 66 &amp; 66A of Gujarat Factories Act 1963. (Fire Safety)</p>
20.	Not developed the green belt of 33% and there is no 10-meter-wide periphery green belt around the plant boundary.	The industry has submitted plantation program details and map highlighting plantation area. The details are provided in <b>Annexure - XV (Green Belt Map)</b> .
21.	Not complying towards the CSR & ESR policies and funds are misused for their own benefits under the garb of CSR & ESR policy.	It is informed that the industry is conducting social activities through Indian Rayon – Jan Seva Trust, Veraval and half yearly supplementing report with “Compliance Status Report ECs accorded by MoEF & CC”. The details are provided in as supplement in EC compliance Report ( <b>Annexure-XIII EC Compliance</b> ) submitted by the industry for the term ending Jun 2020. The industry has also provided statement of expenditure towards CSR activities ( <b>Annexure-XVI CSR</b> ).
22.	Undertaken number of modifications in the existing plant without obtaining prior permissions from the concern departments and	The industry has obtained Consent to Establish (CTE) from GPCB before any modification in consented plants and/or installation of new plant.

	there is substantial change in the scope of the project.	In addition, they have obtained clearances from concerned regulatory authorities prior applying for CTE ( <b>Annexure – IV Summary of Clearances</b> ).
23.	The industry has not installed the ambient air quality monitoring stations as per the GPCB directions.	<p>The industry has installed 3 CAAQMS (Continuous Ambient Air Quality Monitoring Station) at locations as detailed below:</p> <ol style="list-style-type: none"> <li>1. On terrace of the Rayon ADM building,</li> <li>2. On terrace of the Caustic ADM building and</li> <li>3. On terrace of the guest house.</li> </ol> <p>The online results of CAAQMS installed on Rayon ADM building are relayed on electronic display kept towards road side of main entrance for public display (<b>Annexure X OCEMS</b>).</p>
24.	The industry has not installed the noise control systems and there is no such measures and there is huge noise pollution in the vicinity of the project causing birds & human habitants	<p>It is informed by the industry that noise monitoring carried out periodically at various places including the boundaries of the industry and residential area and has maintained noise data.</p> <p>Precautions are taken for controlling noise such as installation of acoustic enclosure panel at Ash compressors, Silencer fitting at Vent line.</p> <p>Kindly refer to <b>Table 5.4</b> of this report, for details of Noise monitoring carried out on 16.10.2020 and monitoring results.</p> <p>It is observed from the noise monitoring results that the measured values of noise, during the day time are within</p>

		<p>the norms prescribed at two residential locations and two industrial locations whereas the measured values are at night are also within norms except one residential area i.e. Guest house, Adityanagar, Indian Rayon premises.</p> <p>Also, precautions taken by the respondent to control noise in Power Plant and allied activity is provided at <b>Annexure-XIV (Coal Handling pp - 33)</b>.</p>
25.	<p>It is mandatory to obtain the CRZ Clearance for the MoEFCC under the CRZ Notification-1991 &amp; 2011. But there is no such clearance obtained by Respondent No. 1 from MoEFCC till date.</p> <p>The Recommendation of GCZMA vide its Order dated 06.10.2008 &amp; 12.02.2009 for treated effluent disposal pipeline cannot be considered as CRZ clearance granted to the project under challenge. The Project is situated at the sangam of Devaka River and Arabian sea and this section is clearly affected by the CRZ area but GCZMA</p>	<p>As per information given by the unit, the industry was established in year of 1963 <i>i.e.</i> well before the enforcement of CRZ Rules (1991). Hence, CRZ Rules was not applicable at the time of establishment.</p> <p>Earlier, the unit was discharging their effluent into the sea creak through an open channel and was being mixed with Devka river and carried in to open sea. Thereafter, the unit obtained CRZ clearance from MoEF &amp; CC for installation of marine pipeline along with pumping station for disposal of treated effluent in the year of 2008 (dt 20.10.2008) and obtained consent to establish from GPCB and installed marine pipeline which is in use since 2009 (dt 07.12.2009) after getting consent to operate for the disposal of treated trade effluent.</p> <p>The industry is going to establish Sea Water Desalination Plant for an alternative source of water for which CTE is obtained from GPCB and CRZ clearance application is under process with GCZMA.</p> <p>Thus, the industry has taken CRZ clearance for the project where it is applicable i.e. marine pipeline along with</p>

	<p>has intentionally neglected to mark this area to provide the benefits of non-CRZ to the industry. It is totally false on part of MoEFCC to state that the Arabian Sea is at 700 Mtrs.</p>	<p>pumping station and its CRZ clearance application is under process with GCZMA for Sea Water Desalination Plant. GCZMA has not neglected any section/area to provide the benefits of non-CRZ to the industry.</p> <p>The industry possesses valid EC and CRZ clearance (for marine pipeline &amp; pumping station) from concerned regulatory authorities (<b>Annexure-IV Summary of Clearances &amp; Consents</b>).</p>
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## 7.0 Recommendations:

Base on the inspection-cum-monitoring following are recommended:

- Analysis results of STP sampling shows BOD marginally exceeds the standards and therefore industry should improve its STP operation to meet the prescribed norms.
- It is advisable to improve/beautify surrounding area of natural drain including stone pitching along the natural drain in the premises of the industry in consultation with concerned authorities
- The industry should expedite the work related to recycling of wastewater to the maximum extent.
- Municipality should restrict throwing/dumping of solid waste into the Devka river and clean periodically with awareness among the citizens.

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ANNEXURE I

HON'BLE NGT ORDER IN THE MATTER OF OA  
NO. 160/2020 DATED 09.09.2020

Item No. 10

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH, NEW DELHI**

(By Video Conferencing)

Original Application No. 160/2020  
(Earlier O.A. No. 114/2015 (WZ))

Protection of Environment and  
Public Service Committee

Applicant(s)

Versus

Indian Rayon & Ors.

Respondent(s)

Date of hearing: 09.09.2020

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE S. P. WANGDI, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Applicant(s): Mr. Nitin Lonkar, Advocate  
Respondent(s): Mr. Rajat Jariwal, Advocate for R-1  
Mr. Parth Bhatt, Advocate for R-8  
Mr. Anirudh S. Kulkarni, Advocate for CPCB

**ORDER**

1. This application was filed on 08.09.2015 with a grievance of violation of environmental norms by Respondent No. 1, Indian Rayon (A unit of Aditya Birla Nuvo Ltd.) at Junagadh-Veravel, District Gir Somnath, Gujarat. According to the applicant, the damage is done to Deveka River at Gir Somnath. The company was discharging hazardous chemicals into the sea as well as the river. The unit was generating electricity for which Environmental Clearance (EC) was granted on 22.06.2015, inspite of opposition of the inhabitants. There is dumping of fly ash at public places and there is also air pollution.

2. Considering the application, the Tribunal issued notice to the respondents which included the State of Gujarat, Central Pollution Control Board (CPCB), State PCB, Ministry of Environment, Forest and Climate Change (MoEF&CC), District Collector, Coastal Zone Management Authority (CZMA) and Water Resources Department of Gujarat. The matter has been pending consideration in the last five years. The project proponent, CPCB, State PCB and MoEF&CC have filed their respective affidavits, among other affidavits, to the effect that the environmental norms are complied with.

3. On 27.07.2020, a Bench of this Tribunal observed that no untreated sewage be discharged into a water body which may be complied with by the concerned statutory authorities. The Bench also directed the matter to be placed before the Principal Bench.

4. We have accordingly perused the record and heard learned Counsel for the parties.

5. We are of the view that since the pleadings have been filed long back, without expressing any final view on the rival aspects, it is necessary to ascertain the latest status on the ground by appointing an independent Committee.

6. Accordingly, we constitute a joint Committee comprising CPCB, State PCB, Gujarat CZMA, nominee of National Institute of Oceanography, Goa and the District Magistrate, Gir Somnath. The State PCB will be nodal agency for coordination and compliance. The joint Committee may visit the plant and the site of disposal of the effluents within one month, look into the compliance of relevant parameters and furnish its report to this Tribunal within three months by e-mail

at judicial-ngt@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF. It will be open to the applicant to furnish its view point to the Committee through the State PCB within two weeks from today.

A copy of this order be forwarded to CPCB, State PCB, Gujarat CZMA, nominee of National Institute of Oceanography, Goa and the District Magistrate, Gir Somnath, by e-mail for compliance.

List for further consideration on 05.02.2021.

Adarsh Kumar Goel, CP

S. P. Wangdi, JM

Dr. Nagin Nanda, EM

September 09, 2020  
Original Application No. 160/2020  
DV

ANNEXURE II

APPLICANT'S REPRESENTATION TO THE GPCB  
DATED 29.09.2020

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

Original Application No. 160/2020 (PB)

(Earlier O.A. No. 114/2015 (WZ))

**IN THE MATTER OF:**

PROTECTION OF ENVIRONMENT AND

PUBLIC SERVICE COMMITTEE .....APPLICANT(S)

VERSUS

INDIAN RAYON & ORS. ....RESPONDENT(S)

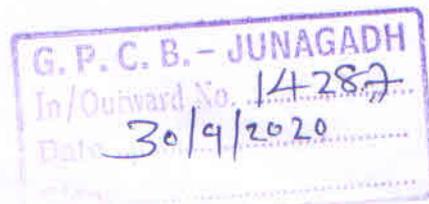
AFFIDAVIT FOR COMMENTS CUM VIEW POINTS ON  
BEHALF OF THE ORIGINAL APPLICANT

I, Mr. Bhagvanbhai S/o Bhanabhi Solankti Aged:  
Adult, Occupation: Ex-Army men & Farmer, R/o: Village-  
Lodhava, Taluka-Sutrapada, District-Gir Somnath,  
Gujarat-362275, authorised signatory on behalf of  
"Protection of Environment and Public Service Committee  
do hereby solemnly affirm and state on oath as follows:

1. I state that, the Applicant "Protection of Environment  
and Public Service Committee" is the public spirited



*[Handwritten Signature]*



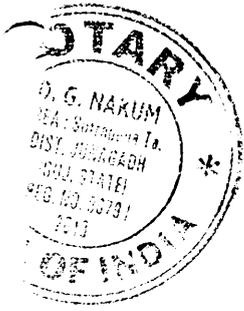


organisation reporting the public importance issues to the court of law.

2. I state that, the Applicant has filed Original Application No. 114/2015 before Hon'ble NGT WZ Pune, wherein pleading was completed and matter was listed for hearing vide Order dated 18.07.2016.
3. I state that, the Original Application is dealing with the violations of terms and conditions of ToR, Environmental Clearances, Consents, CRZ Clearances leading air pollution, water pollution, sea pollution, river pollution, land pollution etc. (due to release of dust & hazardous substances & gases into the air, discharge of polluted water into sea & river, unscientific handling of coal, use of prohibited lignite as fuel in boilers, dumping of fly ash on open spaces, inadequate plantation of tree, non-development of 33.5% of green belt, huge traffic in the area causing air pollution and transportation of material in open trucks, unscientific handling & storage of hazardous waste causing adverse impact on air, non-installation of pollution control systems, non-installation of online monitoring systems, non-installation advance

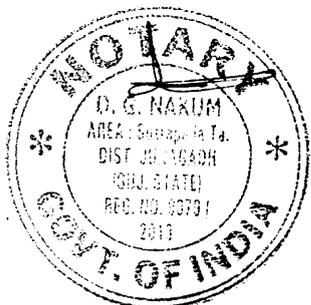
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technology of Distributed control Systems (DCS) & Emergency Shutdown Systems (ESD), non-installation of gas detection System, non-compliance to the sustainable development etc.)

4. I state that, this Original Application No. 114/2015 (WZ) is transferred from Western Zone Pune to the Principal Bench Delhi vide Order dated 27.07.2020 and Numbered as Original Application No. 160/2020 (PB).
5. I state that, the Hon'ble Tribunal (PB) after transfer of the Original Application vide Order dated 09.09.2020 constituted the Joint Committee comprising of CPCB, State PCB, Gujarat CZMA, National Institute of Oceanography, Goa and the District Magistrate, Gir Somnath and given liberty to this Original Applicant to furnish his view points to the committee through GPCB. Therefore this affidavit for comments cum view points for ready reference of the committee.
6. **NON-INSTALLATION OF ADVANCED CONTROL SYSTEM I.E. DCS, ESD & PLC ETC AND NO ONLINE MONITORING & NON-DISPLAY OF INFORMATION TO PUBLIC:**



*[Handwritten Signature]*



- A. I state that, the Respondent No. 1-M/s. Indian Rayon has admitted that their (plant is operational since 50 years and Environment enactments are enforced thereafter in India mandating online monitoring of environmental parameters to maintain the ecological balance of area and to have sustainable development.)
- B. I state that, it was mandatory on part of the Respondent No. 1 to install vary advance technology for controlling the operations in scientific manner time to time, but the Respondent No. 1 has not installed such technology and operating various units in manual mode and same manual operations of plants their units are undertaken to overcome the pollutants release by way of air & water pollution.
- C. I state that, the Respondent No. 1 is not using & installation of advance Distributed Control System (DCS) and Emergency Shutdown System (ESD) for pollution control & environment protection.
- D. I state that, the Respondent No. 1-PP is using very old process flow in this project and no advance technology is used for pollution control.



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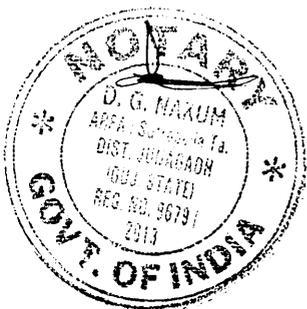


E. I state that, the Respondent No. 1-PP have not made upgradation of technology for protection of environment and pollution control by way of installation air & water quality monitoring instrumentation system.

F. Therefore it is necessary that, the Respondent No. 1-PP must submit the logbook records from central control of DCS server for all environmental parameters including their alarms history, set points & its change history, control loops history, auto-manual operation history, incident & accident reporting, shut down history, total production history, total raw material history etc. for all units from the plant to the committee.)

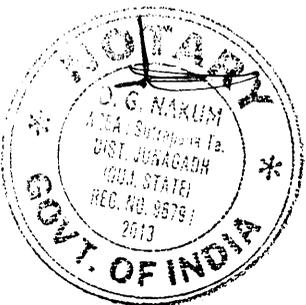
**7. VIOLATION OF TERMS AND CONDITIONS OF TOR DATED 23.04.2014 AND ENVIRONMENT CLEARANCE DATED 22.06.2015:**

A. I state that, the sewage generated from the **plant and its workers** colony is directly connected to the Municipal sewer line and there is no such treatment in the STP. As the STP installed is just scrap skeleton and it is not in operation.





- B.** I state that, the Respondent No. 2 has filed absolutely false and misleading monitoring report dated 13.12.2014 after the imposition of condition No. 5 (i) in ToR dated 23.04.2014. One best example of false statement is that, the Respondent No. 1-PP has received number of show cause notices and closure directions from GPCB between the periods from 2008 to 2015. But Respondent No. 1-PP has completely lying in item-1 of the table on page no. 5 and item-8 at page no. 18/19 of said monitoring report.
- C.** I state that, the Respondent No. 1-PP were directed in Para-4 of Tor dated 23.04.2014 to install various units to control the process and prevent the pollution, however PP is not operating these units in scientific manner and it can be seen from their DCS control system logbook.
- D.** I state that, the (ESP provided to coal fired boiler to control particulate emissions, Fluidized bed combustion, boiler & lime dosing system provided to control SO<sub>2</sub> emissions. (Bagfilter & cyclone separator installed in boiler house to control particulate emissions. Bagfilter provided in coal crusher plant.

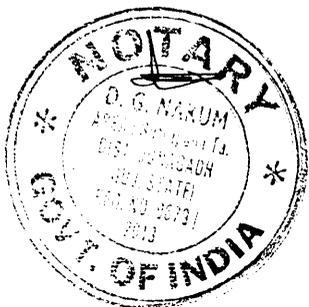


*J. G. NAKUM*

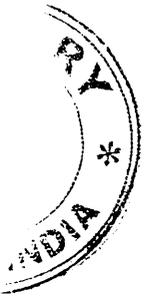


Threestage scrubbing system with chilled caustic provided in Sodium Hypochlorite plant. Bubble cap tray followed by packed bed scrubber provided to hydrochloric acid plant. Alkali scrubber provided in sulphuric acid plant. Alkali scrubbers installed in Rayon Plant to control hydrogen sulphide emissions. Water scrubber provided in Sodium sulphate plant. Sodium Sulphite Recovery Unit is not in scientific operation and causing release of various pollutants.

- E.** I state that, the quantity of total water requirement increased from 12938 m<sup>3</sup>/day to 17938 m<sup>3</sup>/day after expansion is totally false. Additional water sourced from Umrethi dam (3000 m<sup>3</sup>/day) is much higher than this and there is no recycled treated effluent. There is no flow meters installed to catch this quantity.
- F.** I state that, the effluent treatment in ETP is in unscientific manner and polluted effluent is discharged into deep sea to keep these violations beyond the knowledge of common citizens and there is death of fishes in bulk quantity. Instead of



*[Handwritten signature]*



discharging of so called treated water in deep, same can be used by Municipal Corporation and local authority for fire station, trees & gardening etc. but this is not done to overcome the pollution.

- G.** I state that, the Marine pipeline with diffuser system is discharging more than 15000 m<sup>3</sup>/day which is beyond the permissible limits.
- H.** I state that, there is treatment of sewage and so called use as make up water for cooling tower & plantation inside the premises is absolutely false episode.
- I.** I state that, the waste of Cellulose, sulphuric sludge, Fly ash, Process sludge, coal ash, charcoal churry is dumped in the open area belongs to government lands & in river. further I state that, there is no disposal thought CTSDF, cement plant, brick plant, GPCB approved vendors or Group plant etc. .
- J.** I state that, the low quality coal & prohibited lignite from Africa, Indonesia and local unauthorised traders is procured. But GPCB, MoEF, State SEIAA & DOE is intentionally neglecting to this serious issue. There is no test report is prepared for this coal and lignite used

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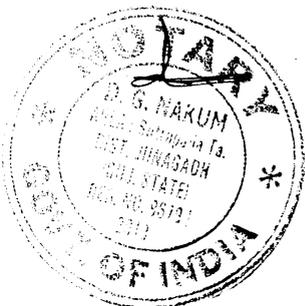




in boiler. There is huge air pollution by use of such fuel and from its emission and further rain water is contaminating in this coal & lignite which further contaminating river due to unscientific storage.

**K.** I state that, the permissible production of various yarn and chemicals form the respondent No. 1-PP is as below, but after going through their financial Reports, Reports submitted to ministry of corporate affairs etc. is much higher than this quantity and also production details logged into the control system production history. And same needs to be verified by this committee with scientific details.

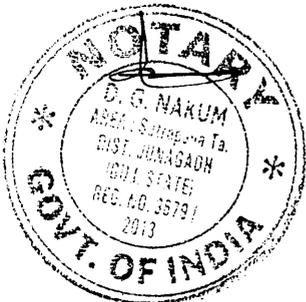
S.N.	Products	Total Quantity(MTPM)
1	Viscose Filament Yarn	2400
2	Captive Power Plant	54.5 MW
3	Sodium Sulphate	2350
4	Sodium Sulphite	3000
5	Liquid SO <sub>2</sub>	1500
6	Sulphuric Acid	3600
7	Carbon Disulphide	1000
8	Caustic soda Lye (100 %)	12000
9	Chlorine (100 %)	10560



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10	Compressed Hydrogen	650000 Nm <sup>3</sup>
11	Sodium Sulphide, (Na <sub>2</sub> S)	100
12	HCl	1800
13	Sodium Hypochlorite (100%)	3750

- L.** I state that, the Respondent No. 1 is doing storage of hazardous & other chemicals in excess the permission in illegal manner.
- M.** I state that, the effluent discharge from various units is 12540 M3/day and whereas recycled water through ETP is only 2000 M3/day as disclosed in EIA at page No. 359, 360 & 361.
- N.** I state that, the quantity of treated effluent discharged to the deep is more than 10540 M3/day. Which is against the permissible limit.
- O.** I state that, the Respondent No. 1 is (dumping fly ash at public places and spreading dust around the city while transporting its.)
- P.** I state that, the Respondent No. 1 has (not installed online monitoring system for SO<sub>2</sub> and NOX.)
- Q.** I state that, the Respondent No. 1 has made encroachment into the Devaka River and there is

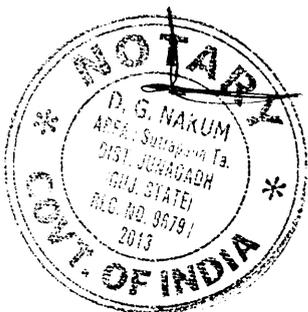


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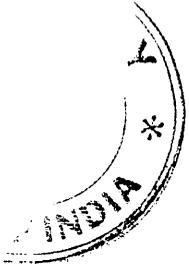


requirement of safe buffer zone with the river and safe belt of almost more than 20 Mtrs. width is encroached. There is/no marking of flood line for Devaka River.)

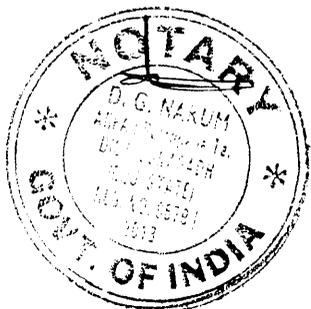
- R.** I state that, the Respondent No. 1 is (directly dumping solid waste into the Devaka River.)
- S.** I state that, the Respondent No. 1 is directly discharging sludge into the Devaka River.
- T.** I state that, the Respondent No. 1 is directly discharging effluents into the Devaka River though gutter connected to river from plant.
- U.** I state that, the Respondent No. 1 is sharing boundaries with the residential area causing adverse effect on them.
- V.** I state that, the Respondent No. 1 is creating huge (obstacle to the traffic to the National Highway NH-8. There is no buffer zone.)
- W.** I state that, the Respondent No. 1 has not installed the stack for burning of toxic gases and it is directly released into the air through stacks installed at boilers.)



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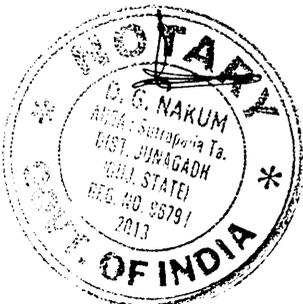
- X.** I state that, the transportation of hazardous chemicals is done with carelessness and there are number of accidents for leakages of hazardous chemicals and gases in the vicinity of the industries.
- Y.** I state that, there are number of incidents of CS<sub>2</sub> and H<sub>2</sub>S gas leakage. But (GPCB and District health & safety department have not taken any action.)
- Z.** I state that, the Respondent No. 1 is (extracting fresh water more than 20000 M<sup>3</sup>/day and also extracting ground water.)
- AA.** I state that, the respondent No. 1 is violating the principle of 3R with impunity by not reducing the fresh water demand, also by not reusing and also by not scientific treatment.
- BB.** I state that, the respondent No. 1 has (not installed online pH meter, flow meter, TOC analysers and sulphide& sulphur analysers and there is direct discharge by avoiding guard ponds.)
- CC.** I state that, the respondent No. 1 has blatantly violated the CPCB provisions & guidelines for storage of boiler ash and it is stored in open space causing air borne, water regime during the rainy season by



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flowing alongwith the storm water. There is direct exposure of ash & dust.

- DD.** I state that, the respondent No. 1 has not installed fire fighting system as per norms.
- EE.** I state that, the respondent No. 1 has not developed the green belt of 33% and there is no 10 meter wide periphery green belt around the plant boundary.
- FF.** I state that, the respondent No. 1 has not complying towards the CSR & ESR policies and funds are misused for their own benefits under the garb of CSR & ESR policy.
- GG.** I state that, the respondent No. 1 has undertaken number of modifications in the existing plant without obtaining prior permissions from the concern departments and there is substantial change in the scope of the project.
- HH.** I state that, the respondent No. 1 has not installed the ambient air quality monitoring stations as per the GPCB directions.
- II.** I state that, the respondent No. 1 has not installed the noise control systems and there is no such measures



*ECCCCCB.B.*

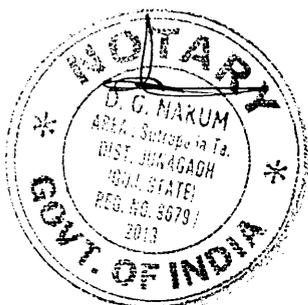
and there is huge noise pollution in the vicinity of the project causing birds & human habitants.

**JJ.** I state that, the respondent No. 1 has caused serious damage to the soil in the vicinity of the project by (unscientific handling of coal by open storage and contaminating storm water, open storage of fly ash, chemicals spillage etc.)

**KK.** Therefore, Respondent No. 1-PP has violated the environmental norms with impunity causing substantial damage to the environment, ecology, human habitations, river, coastal line, bio-diversity etc. with active aid of MOEFCC, EAC, GPCB, and GCZMA and making money at the cost of Mother Nature.

**8. VIOLATION OF TERMS AND CONDITIONS OF CONSENTS AND VARIOUS SHOW CAUSE NOTICES, DIRECTIONS ISSUED BY GPCB:**

**A.** I state that, the Respondent No. 1-PP has violated the provisions of Air Act, Water Act, Hazardous waste handling rules etc. with impunity which is evident from the number of show cause notices issued to him.



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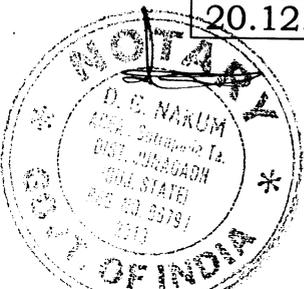


**B.** I state that, the GPCB has visited the Indian Rayon on Various occasions & on every visit various observations were made by the board regarding the Pollution which was ignored by the Industry. The below chart will illustrate the visit of the GPCB at the site of industry:-

<b>Sr. No.</b>	<b>Date of Visit</b>
1.	12.08.2015
2.	09.09.2015
3.	07.10.2015
4.	15.10.2015
5.	16.01.2016
6.	04.03.2016
7.	27.04.2016
8.	27.06.2016
9.	30.06.2016
10.	18.10.2016
11.	08.11.2016
12.	25.02.2017
13.	18.03.2017
14.	06.04.2017

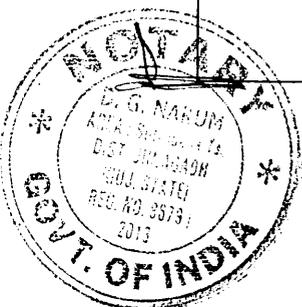
**C.** I state that, there are also various directions issued by the GPCB u/s. 31A of Air Act & 33A of Water Act which were never complied by the Industry till today (Industry is in complete violation of environmental norms.

<b>Inspection Date</b>	<b>Type</b>	<b>Date</b>	<b>Observation</b>	<b>Violation of Condition</b>
20.12.2014	Show	17.04.2015	You have not	You have not



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	Cause Notice		provided online monitoring system for SOX and NOX parameter for Boiler	started the upgradation of EMS system as per CPEI action plan.
29.01.2015	Show Cause Notice	17.04.2015	Coal was lying in open area and not stored in coal storage area	Fugitive emission observed.
20.03.2015	Direction u/s. 31A of Air Act & 33A of Water Act	27.03.2015	Various directions were issued.	
14.10.2013	Show Cause	11.06.2014	During visit, minor fugitive emissions is observed in coal handling system near Boiler No.4	This indicates that you have failed to fulfill the conditions mentioned in the consent Order. Consequently, you have rendered yourself liable to be prosecuted under the provisions of the above mentioned Sections-Acts.
28.08.2012	Show Cause Notice	06.11.2012	1. Provided ETP units and APCM are found in operation. 2. Analysis report of the sample collected from the final outlet of ETP shows BOD+133 mg/l. COD 144 mg L which are	



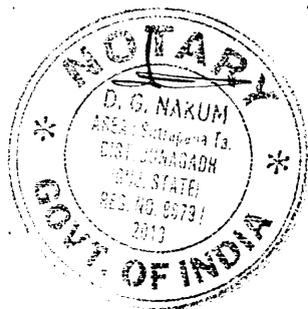
*E. G. NARUM*

			higher than the permissible limits of the board.	
27.04.2012	Direction u/s. 31A of Air Act	02.05.2012	Various directions.	
15.12.2010	Show Cause Notice	07.09.2011	Failed to take corrective measures for the Odour during inspection odour of CS2 and other is felt within the premises.	Violation of Air Act
09.07.2011	Direction u/s. 31A of Air Act	04.08.2011	Various directions	
23.06.2011	Direction u/s. 31A of Air Act	22.07.2011	Various directions	
01.06.2011	Show Cause Notice	07.06.2011	Bad Odour around area	

**D.** I state that, the violations committed has cause irreparable damage to the environment, ecology, marine life, river, area, health, public property and bio-diversity.

**9. NO GREEN BELT DEVELOPMENT AS PER CPCB NORMS AND EC CONDITIONS:**

**A.** I state that, the Respondent No. 1 himself has admitted in EC dated 22.06.2015 that the total plant



*[Handwritten Signature]*



area is 176 Acres and further to develop the green belt of 59 Acres to the tune of 33.5% which is CPCB norms.

- B.** I state that, the Respondent No. 1 in his affidavit dated 05.11.2015 in item No. 5.11 have made totally false statement that there is plantation of 107667 trees in the project and green belt of 59 acres is developed. (In actual there is no green belt to the tune of 10 Acres and plantation to the tune of 10000 trees.) Which is much less than the 59 Acres and 107667 trees as undertaken. Tree plantation is carried out to maintain the ecological balance of the area as the trees are best absorbers of CO & CO<sub>2</sub>.
- C.** I state that, the area of 49962.96 Sq. Fts. developed by Respondent No.1 as lawn is not considered as Green Belt as per the CPCB standards.
- D.** I state that, the further falsehood of the respondent No.1 is that they have made social forestry of 48440 sampling through one Jan Seva Trust. But no such details are provided by the Respondent No.1 where such plantation is made and what are the sampling.



*D. G. NARAYAN*

Therefore there is no development of Green belt & tree plantation as per the CPCB norms.

**10. VIOLATION OF TERMS AND CONDITIONS OF CRZ CLEARANCE:**

- A.** It is mandatory to obtain the CRZ Clearance for the MoEFCC under the CRZ Notificaiton-1991 & 2011. But there is no such clearance obtained by Respondent No. 1 from MoEFCC till date.
- B.** I state that, the Recommendation of GCZMA vide its Order dated 06.10.2008 & 12.02.2009 for treated effluent disposal pipeline cannot be considered as CRZ clearance granted to the Project under challenge.
- C.** I state that, the major part of the project is affected by the CRZ area, but Respondent No. 1 has manipulated he CRZ plans at its preparation stage.
- D.** I state that, the project is situated at the sangam of Devaka River and Arabian Sea and this section is clearly affected by the CRZ area but GCZMA has intentionally neglected to mark this area to provide the benefits of non-CRZ to this Respondent No. 1.



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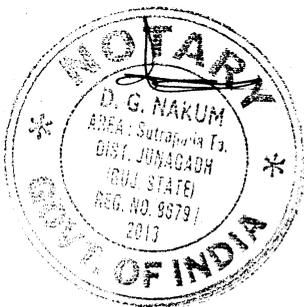


**E.** It is totally false on part of MoEFCC to state that the Arabian Sea is at 700 Mtrs.

**11.** I state that, the environment clearance granted to the Respondent No. 1-PP are without following due procedure of the law and without considering the objections of the locals, impact on eco-systems. Therefore such environment clearances are illegal.

**12.** I state that, there was huge blast in the factory in past causing release of CS<sub>2</sub> and District Collector was ordered the evacuation of the entire Veraval City.

**13.** Also various residents in the locality affected by the pollution of the Respondent No. 1 industry has filed complaints which are annexed herewith. These are very serious complaints which will demonstrate that the life and livelihood of the local residents is directly affected by the pollution of the industry. The Local Authority is under the influence of Respondent No. 1 industry and has never take any action against the Industry rather they have acted against the interest of public at large. As this can be seen from the fact that present applicant sought information pertaining to the



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VIA \*

complaints filed by the various residents against the polluting Industry of respondent no. 1, such information was not made available to the Original Applicant.

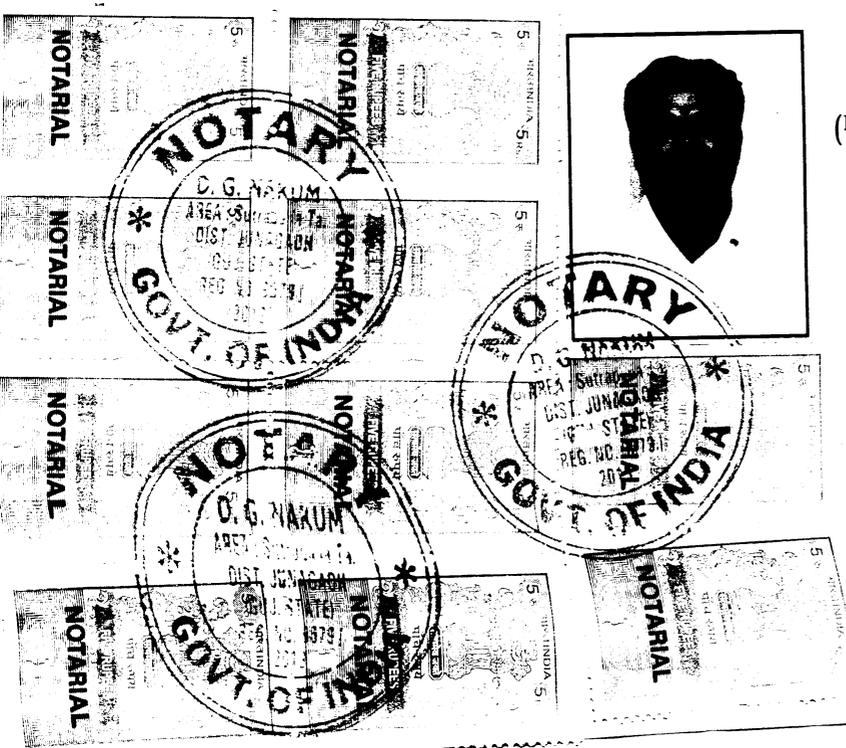
14. I state that, in support of my contentions I am filing the copy of Original Application, affidavit of GPCB, supplementary counter affidavit of this Applicant and other complaints received from local residents.

15. Therefore, Committee may kindly consider this view points on behalf of the Original Applicant in the interest of environment protection.

Whatever stated above is true and correct to the best of my knowledge, belief and information, hence, to verify the same I have signed hereunder at Sutrapada.

Date: 29.09.2020

29 SEP 2020  
2509  
33  
02



(For Protection of Environment & public service committee)

**Original Applicant**

Solemnly Affirmed/ Declared Sworn Before me

**D. G. NAKUM**  
Notary (Govt. of India)  
At. Sutrapada, Dist. Junagadh  
Gujarat State-INDIA

29 SEP 2020

## ANNEXURE III

CONSOLIDATED CONSENT & AUTHORIZATION  
(CCA) ISSUED BY GPCB TO THE INDUSTRY



# GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

Sector-10-A, Gandhinagar 382 010

Phone : (079) 23222425

(079) 23232152

Fax : (079) 23232156

Website : www.gpcb.gov.in

In exercise of the power conferred under section-25 of the Water (Prevention and Control of Pollution) Act-1974, under section-21 of the Air (Prevention and Control of Pollution) Act-1981 and Authorization under rule 6 (2) of the Hazardous and Other Waste (Management & Transboundary Movement) Rules 2016 framed under the Environment Protection Act- 1986.

And whereas Board has received Consolidated Consent Application Letter No.132206--- dated 02.02.2018 for the Consolidated Consent and Authorization (CC&A) of this Board under the provisions/rules of the aforesaid acts. Consents & Authorization are hereby granted as under:

## CONSENTS AND AUTHORIZATION:

(Under the provisions/Rules of the aforesaid environmental Acts)

No. GPCB/ID-17239/CCA/JNG-1 (27)/

Dated:-

To,

Grasim Industries Limited, Unit - Indian Rayon

Plot / Phase No. 1502, 1507, 1511, 1516, 1493

Veraval-362266, (Gujarat)

TAL- Veraval, DIST – Gir Somnath

1. Consent order Number.AWH -92560 Date of issue: 23/04/2018
2. The consent is valid up to 31.12.2023 for the use of outlet for the discharge of treated effluent and an emission due to operation of industrial plant for manufacture of the following items / products.

Sr. No	Name of Products & By Products	Quantity in MT/month
1	Viscose Filament Yarn	1950
2	Sodium Sulphate	2050
3	Sulphuric Acid	3600
4	Sodium Sulphide (100%)	100
5	Carbon di sulphide	1000
6	Caustic Soda Lye (100%)	12000
7	Chlorine (100%)	10560
8	Hydrochloric Acid (100%)	1800
9	Sodium Hypo chlorite (100%)	3750

10	Compressed Hydrogen	650000 Nm <sup>3</sup>
11	Captive Power (Thermal)	34.5 MW

3. **CONDITION UNDER THE WATER ACT:**

3.1 The water consumption and waste water generation shall be as under.

	Water Consumption	Waste water generation
Industrial	13,070 KL/Day	11,372 KL/Day
Domestic	1448 KL/Day	388 KL/Day

3.2 Quantity of the industrial effluent shall not exceed 11372 Kl/Day.

3.3 The quantity of sewage effluent from the factory shall not exceed 388 Kl/Day

3.4 In case RO is running during water Shortage RO, Reject water quantity 12180 kl/day

3.4 Trade Effluent :

3.4.1 The quality of the treated effluent as per GPCB norms mentioned in column No.2

PARAMETERS	GPCB NORMS
pH	5.5 to 9.0
Temperature	45°C
Colour (pt.co.scale)	100 units
Suspended Solids	100 mg/L
Oil and Grease	10 mg/L
BOD (5 days at 20°C)	100 mg/L
COD	250 mg/L
Zinc	15.00 mg/L

If the COD of the treated effluent is more than 250 Mg/L , industry is required to identify chemicals causing the same in case these are to be toxic as defined in the hazardous chemical rules-1989 (schedule-I) industry shall have to install tertiary treatment system within the month from date of such directions.

3.4.2 The permissible limit of COD in condition No.3.4.1 above has been fixed on the following grounds:

- (A) Grasim Industries Limited, Unit - Indian Rayon is an integrated plant manufactures various products such as sulphuric acid, caustic soda, power and sulphuric acid etc. along with viscose filament yarn.
- (B) Plants other than viscose filament yarn products effluent which would have less BOD in effluent compare to effluent to give benefits of dilutions to the effluent generated.
- (C) Standards for viscose filament yarn as laid down in Govt. of Gujarat Gazette dt. 11-9-97 on p.no.209/14 for Ind. Specific Standards doe BOD is 30 mg/L.

3.4.3 The effluent conforming to the above standards shall be discharged in to sea through close Marine Pipeline.

3.5 All the conditions stipulated by Ministry of Environment & Forests ,Government of India vide letter No.11-80/2008-IA -III dtd.20/10/2008 shall be strictly implemented for laying a pipe line for disposed of treated effluent in the coastal environmental of Arabian Sea off Veraval Coast



## GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN

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- 3.6 All the conditions stipulated by Ministry of Environment & Forests, Government of India their letter No. F No-J-11011/382/2008-IA II (I) dt: 02\08\2011 shall be strictly implemented.
- 3.7 All the conditions stipulated Ministry of Environment & Forests, Government of India their letter No. F No-J-11011/445/2008-IA II (I) dt: 18\07\2008 shall be strictly implemented.
- 3.8 All the conditions stipulated by Forests & Environment Department of, Government of Gujarat their letter No.ENV-10/2008-1177 -E dtd.06/10/2008 shall be strictly implemented for proposed treated effluent disposal pipe line.
- 3.9 All the conditions stipulated by Ministry of Environment, Forests & Climate Change, Government of India their per Letter No. J-11011/343/2013-IA II (I) dated 22<sup>nd</sup> June, 2015 shall be strictly implemented.
- 3.10 All the effluent treatment units shall be operated and maintained efficiently so that the treated effluent always conforms to the specifications referred in condition no.3.41 above
- 3.11 Domestic Sewage Treatment sewage shall be disposed off through septic tank / soak pit system or it shall be treated along with industrial effluent or it shall be treated separately to conform to the following standards and shall discharged at ;

Parameters	GPCB Limit
BOD	Less than 20 mg/l
Suspended solids	less than 30 mg/l
Residual Chlorine	minimum 0.5 ppm

The Quantity of sewage effluent from the factory shall not exceed 388 Kl/day and treated sewage shall be used for greenbelt development

- 3.12 In order to enable the Board to perform its functions of ascertaining the standards of effluent laid down by it for the discharge of the effluent under the condition no.3.41 of this order are complied with by the Company while causing discharge of effluent, the applicant shall have to submit every month the analysis report of the samples of effluent to be collected and analyzed by one of the laboratories recognized by the State Board.
- 3.13 The Environmental Management Unit / Cell shall be set up to ensure implementation on and monitoring of environmental safeguards and other conditions stipulated by statutory authorities. The Environmental Management Cell / Unit shall directly report to the Chief Executive of the organization and shall work as a focal point for internalizing environmental issues. These cells/units also coordinate the exercise of environmental audit and preparation of environmental statements.

- 3.14 The Environmental Audit shall be carried out yearly and the environmental statements pertaining to the previous year shall be submitting to this State Board latest by 30<sup>th</sup> September every year.
- 3.15 The Board reserves the right to review and/or revoke the consent and/or make variations in he conditions, which the Board deems fit in accordance with Section 27 of the Act.
- 3.16 In case of change of ownership / management the name and address of the new owners/partners/directors/proprietor should immediately be intimated to the Board.
- 3.17 The consent to operate the industrial plant shall lapse if at any time the any conditions of this consent order are not complied with OR any parameters of the liquid effluent are not within the tolerance limit specified in the condition no.3.4.1 above.
- 3.18 Industry shall have to obtain CRZ clearance if applicable & submit to this Board.
- 3.19 The applicant shall also comply with the General Conditions as per Annexure-I enclosed.

**PENALTY PROVISIONS:** If the applicant fails to comply with the conditions and other directives issued by this Board as laid down in this order, the applicant is liable for prosecution under Section 43 & 44 and other penal provisions of the Act and shall on conviction, be liable for punishment and imprisonment as provided in the said Act.

4. **CONDITIONS UNDER THE AIR ACT:**

- 4.1 The following shall be used as fuel.

Sr.No.	Boiler/ DG Set/ Flaker Unit	Name of Fuel Used	Quantity
1.	Boiler No.1 & 2 (Old Power Plant)	Coal cum Lignite	8.5 MT/Hr for each boiler
2.	Boiler No.3 (New Power Plant)	Coal cum Lignite	14.MT/hr
3	Boiler No.4	HCV Coal	3.5 MT/hr
4.	Boiler No. 4 and Captive Power Plant	Agro waste cum Briquette	5400 MT/Year
5.	D.G. Sets- 2270 KVA-6 Nos.	F.O.	7 KL/day for each DG set
6	D.G. Sets -1450 KVA- 2Nos.	L.D.O.	5 KL/day for each DG set
7	D.G. Set -1500 KVA-1 No.	L.D.O.	5 KL/day
8	Caustic Soda Flaking Unit	Hydrogen	375 M <sup>3</sup> / MT

Total Fuel Consumption of Coal Cum Lignite shall not be more than 299520 MT/Y.



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4.2 The applicant shall install & operate a comprehensive control system so as to achieve standards.

4.2.1 The emission shall conform to the following specifications:

### (A) FOR BOILER STACK

PARAMETER	SOURCE	TOLERANCE LIMIT
Particulate Matter	Stack Attached To Boiler-4	150 mg/Nm <sup>3</sup>
Oxides of Nitrogen	Stack Attached To Boiler-4	50 ppm
Oxides of Sulphur	Stack Attached To Boiler-4	100 ppm

### (B) FOR PROCESS STACK

PARAMETER	SOURCE	TOLERANCE LIMIT
Particulate Matter	Stack Attached to Coal Crushing Unit & Flaker Unit	150 mg/Nm <sup>3</sup>
SO <sub>2</sub>	Stack Attached to Old & New Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ) Plant	2 Kg/Ton of 100% Acid Production
Acid Mist	Stack Attached to Old & New Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ) Plant	50 mg/Nm <sup>3</sup>
CS <sub>2</sub>	Stack Attached to Rayon Plant (Old & New)	225 Kg/ MT of Yarn Production
H <sub>2</sub> s	Stack Attached to Rayon Plant (Old & New)	45 mg/Nm <sup>3</sup>
HCL Vapour & Mist	Stack Attached to Hydro Chloric Acid Plant (HCL) In Caustic Soda Plant	35 mg/Nm <sup>3</sup>
Chlorine	Stack Attached to Hypo Plant In Caustic Soda Plant	15 mg/Nm <sup>3</sup>

(C) FOR POWER PLANT

Old Power Plant - Boiler No. 1 & 2

PARAMETER	SOURCE	TOLERANCE LIMIT
Particulate Matter	Stack Attached To Power Plant Boiler (1&2)	100 mg/Nm <sup>3</sup>
Oxides Of Nitrogen	Stack Attached To Power Plant Boiler (1&2)	319 ppm
Oxides Of Sulphur	Stack Attached To Power Plant Boiler (1&2 and 3)	229 ppm

New Power Plant - Boiler No. 3

PARAMETER	SOURCE	TOLERANCE LIMIT
Particulate Matter	Stack Attached To Power Plant Boiler (3)	50 mg/Nm <sup>3</sup>
Oxides Of Nitrogen	Stack Attached To Power Plant Boiler (3)	159 ppm
Oxides Of Sulphur	Stack Attached To Power Plant Boiler (3)	229 ppm

4.3 The height of stack shall be as under:

Sr. No.	Stack attached to	Stack Height in Meter
1	Old and New Rayon Plant	52.5
2	Old and New sulfuric Acid Plant	30
3	Caustic Chlorine Plant (Hypo Plant)	34
4	Caustic Chlorine Plant (HCL Plant)	34
5	Old and New Caustic Flaker Unit	34
6	Power Plant Boiler No.1 & 2	122
7	Power Plant Boiler No 3	122
8	Boiler No.4	31
9	Coal Crushing Unit	52
10	D.G. Sets- 2270 KVA-6 Nos.	40
11	D.G. Sets -1450 KVA- 2Nos.	11
12	D.G. Set -1500 KVA-1 No.	30

4.4 Industry shall have to comply following in pursuant to notification issued by GOI on 22-12-98.

(A) Uncontrolled Emission Quantities (EQ) of CS<sub>2</sub> shall not exceed

FOR VFY

EQ = 225 KG/OF CS<sub>2</sub>/T OF FIBER

(B) STACK HEIGHT:



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- (a) A minimum of 80% total emission estimated above shall pass through stack having height calculated for formula described under at (b). If calculated stack height is less than 30 mt, a minimum height 30 mt shall be provided.

(b) STACK HEIGHT IN METER

$$H = 11 Q^{0.41} - 3 VS D/U$$

WHERE Q = CS2 EMISSION RATE, KG/HR.

VS=STACK EXIT VELOCITY -m/sec.

D= DIAMETER OF STACK -METER

U= ANNUAL AVERAGE WIND SPEED AT TOP OF STACK - m/sec.

(C) IN CASE OF MULTIPLE STACK

- (1) All stack carrying CS2 emission shall be same height based on maximum emission rate.
- (2) Number of stack shall be increased from the existing number. However, the number of stack may be reduced. The existing stack may be rebuilt and if stack are to be relocated, condition no.3 below applies.
- (3) Spacing among the stacks (x) at the minimum shall be 3.0 H (in mt.) if the distance, X between two stack is less than 3.0 H (in mt.) emission both stack shall be calculated considering all emission is going through one stack.

(D) AMBIENT AIR QUALITY MONITORING

Industry shall install three air quality monitoring station for CS2 and H2S measurement in consultation with this board to ensure following ambient air norms on 24 hour average basis.

CS2= 100  $\mu$ g/M3

H2S= 150  $\mu$ g /M3

- 4.5 The concentration of the following parameters in the ambient air within the premises of the industry shall not exceed the limits specified hereunder.

PARAMETERS	PERMISSIBLE LIMIT, $\mu$ g / m <sup>3</sup>
Particulate Matter (Size Less than 10 $\mu$ n) or PM <sub>10</sub>	100
Particulate Matter (Size Less	60

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than 2.5 µm) PM <sub>2.5</sub>	
Sulphur Dioxide (SO <sub>2</sub> )	80
Nitrogen Dioxide (NO <sub>2</sub> )	80
HCl	200
Cl <sub>2</sub>	100

- 4.6 The applicant shall provide portholes, ladder, platform etc. at chimney(s) for monitoring the air emissions and the same shall be open for inspection to/and for use of Board's staff. The chimney(s) vents attached to various sources of emission shall be designed by number(s) such as S-1, S-2, etc. and these shall be painted / displayed to facilitate identification.
- 4.7 The applicant shall operate air pollution control equipment very efficiently and continuously so that the gases emission always conforms to the standards specified in condition No.4.2.1 and 4.5 above.
- 4.8 The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standards in respect of noise to less than 75 dB(a) during day time and 70 dB(A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
- 4.9 The consent to operate the industrial plant shall lapse if at any time any conditions of this consent order are not complied with OR parameters of the gaseous emission are not within the tolerance limits specified in the condition no. 4.2.1 and 4.5 above.
- 4.10 The applicant shall at his own cost get samples of emissions collected and analyzed from an approved laboratory once in three months for the parameters indicated in condition no. 4.2.1 & 4.5. and shall submit in duplicate the report there of to the Board by the 10<sup>th</sup> of the succeeding month. The applicant shall also maintain records of the analytical results properly and shall keep these records/charts open for inspection.

**PENALTY PROVISIONS:** - If the applicant fails to comply with the conditions of this order and other directives issued by the Board he is liable for prosecution under Section 37, 38, 39 and other penal provisions of the Act.

**5. AUTHORIZATION FOR THE MANAGEMENT & HANDLING OF HAZARDOUS WASTES Form-2 (See rule 6 (2) Form for grant of authorization for occupier or operator handling hazardous waste.**

- 5.1 M/s. Grasim Industries Limited Unit - Indian Rayon, is hereby granted an authorization to operate facility for following hazardous waste on the premises situated at Plot / Phase No. 1502, 1507, 1511, 1516, 1493, Veraval-362266, (Gujarat), TAL- Veraval, DIST – Gir Somnath.

Outward No: 4538



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Sr. No	Type of Waste & Nature	Quantity/ Year	Schedule-I Process No.	Facility
1	Sulphur Sludge (Acidic)	70 MT	17.1	Collection, Storage, Transportation, Disposal by Secured Land filling at CTSDF of SEPPL, Bhachau, Dist. Kutch
2	Used Oil/Burnt Oil & LDO/FO Sludge	60 MT	5.1	Collection, Storage, Transportation, Disposal by selling to registered reprocess
3	Discarded Container	3000 nos	33.3	Collection, Storage, Transportation, Disposal by selling to authorized recycler
4	Cellulose waste ( organic Bio degradable )	130 MT	23.1	Collection, Storage, Transportation, Disposal by co-incineration in cement kiln of ULC, Kovaya, Dist, Amerli & also being send for disposal by Stabilization & direct landfill to CTSDF of SEPPL, Bhachau, Dist. Kutch
5	Spent catalyst from H2SO4 Plant ( Solid )	5 MT	17.2	Collection, Storage, Transportation, Disposal by Solidification & Stabilization at CTSDF of SEPPL, Bhachau, Dist. Kutch
6	Toxic metal containing waste i.e. Spent Resin from DM Plant ( Solid)	2,5 MT	34.2	Collection, Storage, Transportation, Disposal by incineration at CTSDF, of SEPPL, Bhachau, Dist. Kutch
7	Oily Cotton Waste	1.5 MT	5.2	Collection, Storage, Transportation, Disposal by incineration at CTSDF of SEPPL, Bhachau, Dist. Kutch
8	Exhaust Membrane	2.5 MT	36.1	Collection, Storage, Transportation, Disposal by incineration at CTSDF, of SEPPL, Bhachau, Dist. Kutch

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9.	E-Waste	7.5 MT	18	E-Waste is to be sold to the Authorized Recycler
10	Lead Acid Battery plates and other Led Scrap not covered under Batteries Rules-2001	40 MT	17	Lead Acid Batteries are to be sold to the GPCB approved recyclers

- 5.2 The authorization is granted to operate a facility for collection, storage, within factory premises, transportation, incineration and ultimate disposal of Hazardous wastes at CTSDf developed by Saurashtra Enviro Private Project Limited, Bhachau, Dist. Kutch (Gujarat).
- 5.3 The authorization shall be in force for a period of Five Years from the date of application.
- 5.4 The authorization is subject to the conditions slated below and such other conditions as may be specified in the rules from time to time under the Environment (Protection) Act-1986.

**SPECIFIC CONDITIONS:**

- 5.5 Toxic Metal containing waste should be disposed only after & Encapsulation and compliance of toxicity test.
- 5.6 Cellulose waste shall be disposed by Co-incineration in the cement kiln of UCL, Kovaya Amerli & unit shall maintained separate record of it.
- 5.7 Unit shall carry out analysis of ETP waste every month & Submit its report to the board specifically with reference to zinc concentration and if it is found beyond prescribed limit, it shall be disposed of at CTSDf of SEPPL, Bhachau, Dist. Kutch.
- 5.8 Unit shall comply condition of EC issued by MOEF Dated 18.07.2008

**5.10 TERMS AND CONDITIONS OF AUTHORIZATION**

- a) The applicant shall comply with the provisions of the Environment (Protection) Act – 1986 and the rules made there under.
- b) The authorization shall be produced for inspection at the request of an officer authorized by the Gujarat Pollution Control Board.
- c) The persons authorized shall not rent, lend, sell transfer of otherwise transport the hazardous wastes without obtaining prior permission of the Gujarat Pollution Control Board.
- d) Any unauthorized change in personnel, equipment or working conditions as mentioned in the authorization order by the persons authorized shall constitute a breach of this authorization.
- e) It is the duty of the authorized person to take prior permission of the Gujarat Pollution Control Board to close down the facility.
- f) An application for the renewal of an authorization shall be made as laid down in rule 5.
- g) Industry shall have to manage waste oil, discarded containers etc as per Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016 and shall Authorization/ Submit details for all the applicable waste.
- h) Industry shall submit annual report within 15 days and subsequently by 30<sup>th</sup> June every year.

Outward No: 453902/03/18/00000



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### 6 GENERAL CONDITIONS: -

- 6.1 Any change in personnel, equipment or working conditions as mentioned in the consents form / order should immediately be intimated to this Board.
- 6.2 Applicant shall also comply with the general conditions given in Annexure. I
- 6.3 The waste generator shall be totally responsible for (I.E., collection, storage, Encapsulation, incineration, Treatment, transportation and ultimate disposal of waste generated
- 6.4 Records of waste generation , its management and annual return shall be submitted to Gujarat pollution Control Board in Form -IV by 30th June of every year
- 6.5 In case of any accident, details of the same shall be submitted in Form-11 to Gujarat Pollution Control Board.
- 6.6 As per "Public Liability Insurance Act-91" Company shall get Insurance Policy, if applicable
- 6.7 Empty drums and containers of toxic & hazardous material shall be treated accordingly and after making sure that no traces of toxic and hazards are left out then and only then, they shall be stored safely. Records of the same shall be maintained and forwarded to Gujarat Pollution Control Board regularly
- 6.8 In no case any kind of solid waste shall be imported without prior approval of appropriate authority
- 6.9 In Case of Transport of Hazardous waste to a facility for (I.E., treatment ,storage & Disposal ) existing in a state other then the state where Hazardous waste are generated, the occupier shall obtain NOC from the state Pollution Control Board, Committee concerned state or Union territory and administration where the facility exist.
- 6.10 Unit shall take all concrete measures to show tangible results in waste generation reduction voidance, reuse and recycle .Action taken in this regards shall be submitted within the three months along with form-IV.
- 6.11 Industry shall have to display relevant information with regard to Hazardous waste as indicated in the Hon. Supreme Court's Order in W.P. No. 657 of 1995 dated 14<sup>th</sup> Oct 2003.
- 6.12 Industry shall have to display on line data outside the main factory gate with regard to quantity and nature of Hazardous Chemicals being handled in the plant including waste water & air emissions & Solid Hazardous waste generated within the factory premises

Outward No: 4539/2015/2015

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- 6.13 Whenever due to accident or other unforeseen act or ever, such emissions occur or is apprehended to occur in excess of standards laid down such information shall be forthwith reported to Board, concerned Police Station, Office of Directorate of Health Service, Department of Explosives, Inspectorate of Factories and local body. In case of failure of pollution control equipments, the production process connected to it shall be stopped. Remedial actions/measures shall be implemented immediately to bring entire situation normal.

This document is digitally signed by  
  
(Chirag Bhimani)  
Unit Head

COPY TO: Regional Officer, G. P. C. Board, Junagadh- For compliance monitoring and submission of monitoring report for compliance of the conditions

Outward No: 453902, 03/05/2018

## ANNEXURE IV

# SUMMARY OF CLEARANCES OBTAINED FROM REGULATORY AUTHORITIES

**Summary of Environmental Clearances and Consents  
from MoEF& CC & GPCB**

Sr. No.	Particulars	Date of Issue	Date of Validity
1.	<p><b>Environmental Clearance for Expansion of VFY &amp; CSP</b></p> <p>No.J-11011/445/2008-IA II (I) dated 18<sup>th</sup>July, 2008 for Expansion of Viscose Filament Yarn from 1300 MT to 1650 MTPM &amp; Caustic Soda Plant from 200 TPD to 400 TPD</p>	18 <sup>th</sup> July 2008	-
2.	<p><b>Environmental Clearance for SSY Plant</b></p> <p>Amendment from MoEF in the Environmental Clearance No.J-11011/445/2008-IA II (I) dated 18<sup>th</sup>July, 2008 for commissioning of New &amp; Superior Spool Technology for Manufacturing of Viscose Filament Yarn within the existing production capacity of 1650 MTPM</p>	02 <sup>nd</sup> Aug 2011	-
3.	<p><b>Environmental Clearance for Marine Pipeline Project</b></p> <p>Letter No. 11-80/2008-IA.III dated 20.10.2008 by MoEF&amp;CC, Letter No. ENV-10-2008-1177-E dated 12.02.2009 by GCZMA and Letter No. 11-80/2008-IA.III (Part - II) dated 07.12.2009 by MoEF&amp;CC for Marine Pipeline Project.</p>	20 <sup>th</sup> Oct 2008	-
4.	<p><b>Environmental Clearance for Expansion of VFY &amp; CPP</b></p> <p>No.J-11011/343/2013-IA II (I) dated 22<sup>nd</sup> June 2015 for Expansion of Viscose Filament Yarn from 1650 MT to 2400 MTPM &amp; Captive Power Plant from 34.5 to 54.5 MW</p>	22 <sup>nd</sup> June 2015	22 <sup>nd</sup> June 2022
5.	<p><b>Consent to Establish (CTE)</b></p> <p>Amendment in CTE/NOC from Gujarat Pollution Control Board for Expansion of production Capacity of Viscose Filament Yarn &amp; other products as prescribed in Environmental Clearance of Expansion Project Vide Order No. GPCB/CCA/JNG-1(21)/ID17239/332587 dated 10.11.2015 and corrigendum in Amendment vide Order No. GPCB/CCA/JNG-1(23)/ID17239/342712 dated 25.01.2016</p>	25 <sup>th</sup> Jan 2016	22 <sup>nd</sup> June 2022
6.	<p><b>Consolidate Consent &amp; Authorization (CC&amp;A)</b></p> <p>Renewal of CC&amp;A by Gujarat Pollution Control Board, Gandhinagar, vide letter No. GPCB/CCA/JNG-1(27)/ID-17239/453902 dated 03<sup>th</sup> May 2018.</p>	03 <sup>rd</sup> May 2018	31 <sup>st</sup> Dec 2023

## ANNEXURE V

### MANUFACTURING PROCESS AND PRODUCTION DATA

## **Manufacturing Process for different Products**

### **M/s Grasim Industries Pvt Ltd- Unit- M/s India Rayon Veraval**

#### **Product Manufacturing Practice followed by the Industry:**

The industry is engaged in manufacturing of Rayon filament yarn from cellulosic pulp. The process involves following major parts:

#### **❖ Rayon Division:**

- a) Viscose Preparation Section
- b) Spin bath Preparation Section
- c) Spinning Section
- d) After Treatment Section
- e) Textile Section

#### **❖ Caustic Soda Plant:**

- a) Brine Purification Section
- b) Cell House
- c) Catholyte and Anolyte Handling
- d) Chlorine Liquefaction
- e) Caustic Evaporation and Flaking
- f) HCL Synthesis
- g) Waste Air De-Chlorination

#### **❖ Power Plant**

#### **❖ Description of Manufacturing Process in Rayon Division:**

##### **a) Viscose Preparation Section**

The Rayon grade pulp in the form of sheets and caustic soda solutions are taken in the steeping system for mixing of pulp in caustic solutions and to make slurry in Slurry Mixer to blend different batches of slurry thoroughly to get uniform Alkali Cellulose mat and excess caustic is removed. The alkali cellulose is shredded get uniform size and led to the maturing drum through a conveyer for the oxidation of alkali cellulose. Alkali Cellulose, Carbon-di-sulphate and Caustic solution are allowed to react in the Xanthomate under standardized process conditions and then, taken to dissolver. In the dissolver, uniform viscose is made under controlled temperature and agitation. The industry has improved power consumption efficiency of dissolver by installing grinder which reduced dissolving time from 3 h to 1 h. The viscose thus formed is filtered in the different stages and ripened for a specified time. Viscose is deaerated in flash deaerator (working under vacuums) to control viscose temperature and aging of viscose, to maintain desired Ripening Index. Filtration is necessary to remove the impurities before viscose is sent to spinning. Viscose is stored in the Viscose Spinning Tanks. Rayon grade caustic is made-up of required concentration and stored for supplying to the plant. Liquid caustic from the storage tank is taken into different caustic preparation tanks for the use in the

process. Press lye (from press) is returned to steep lye preparation tank and some quantity of it is dialyzed with the help of dialyzer to remove hemi cellulose.

#### **b) Spin Bath Preparation Section**

Spin bath is an auxiliary unit to spinning in a Rayon industry. Spin bath is used to derive yarn from viscose. Spin bath solution is prepared from sulphuric acid and Zinc.

#### **c) Spinning Section**

This section is dedicated to derive yarn from viscose using spinning machine, spent spin bath is returned to spin bath preparation section and raw cakes are led to after-treatment section.

#### **d) After Treatment Section**

The raw cake produced in the spinning section are washed to remove acidity, impurities, deposited dust/dirt by soft, water, sodium sulphide, caustic bleach and soft finishing agent. The cakes are then hydro extracted to remove physical moisture and then dried to remove excess moisture using hot air.

#### **e) Textile Section**

The cakes received from the after-treatment section are brought to the conning/reeling machines to prepare yarn cones and packaged.

#### **❖ Caustic Soda Plant**

Caustic soda lye (32%), chlorine gas and hydrogen are simultaneously produced from Bipolar Membrane Cells. Chlorine and Hydrogen are channelled to respective sections for purification.

#### **a) Brine Purification Section**

Saturated salt solution often referred to as brine solution is prepared by adding fresh salt to the lean brine coming from the cell house (Recycle Process). The brine solution contains impurities such as calcium, magnesium and sulphate. These impurities are removed in two stages, namely primary and secondary purification. Primary purification is done by chemical treatment using soda ash, and sodium hydroxide to remove calcium and magnesium impurities to ppm levels. In secondary purification, the impurities are removed to the ppb by passing the brine through Ion Exchange Resin beds. The brine solution obtained after these processes is of high quality, which is suitable for feeding to the electrolyser cells.

#### **b) Cell House**

The purified brine from the brine sections is fed to the bipolar membrane cells. The brine solution is electrolyzed by applying D.C. current. Sodium chloride gets dissociated into sodium ions and chloride ions. Membrane is used as separator in between cathode and anode in cells. At the anodic side, hydrogen gas is produced along with caustic soda lye. The caustic soda produced is of 32% concentration.

### **c) Catholyte & Anolyte Handling**

Catholyte consists of 32% lye and hydrogen gas. Hydrogen gas is cooled and filtered to obtain dry hydrogen gas. Hydrogen gas is used either to produce HCl or used as fuel for burners in caustic soda flaking unit or sold. Anolyte consists of lean brine and chlorine gas. Chlorine gas is cooled and passed to chlorine handling unit for further processing. Lean brine is neutralized, DE chlorinated and sent back to the saturators as a brine make-up.

### **d) Chlorine Liquefaction**

Chlorine gas cooled in the Anolyte handling section is dried in drying tower using sulphuric acid. Dried chlorine gas is compressed in compressor house and liquefied in liquefier using Freon gas as refrigeration media. Liquid chlorine is passed to the liquid chlorine storage tanks for further selling it after filling in toners.

### **e) Caustic Evaporation & Flaking**

32% Caustic soda lye from cell house is enriched to 48% lye in triple effect evaporation unit for selling. Alternatively, this can also be converted to flakes in flakers unit.

### **f) HCl Synthesis**

Burning hydrogen and chlorine in graphite furnace chamber produces HCl gas. The HCl gas so produced is scrubbed in water to produce 30% Hydrochloric Acid.

### **g) Waste Air De-chlorination**

All chlorine bearing waste streams from the plant are scrubbed in dilute caustic soda lye solution to produce sodium hypo chlorine.

### **❖ Power Plant:**

#### **Process Description of Power Generation**

Initially coal is in big blocks, which are stored in the storage yard. From there it is sent into the crushing plant through a conveyer belt. Here it is crushed into small pieces and sent to the boiler through a conveyer belt.

Coal and/or lignite are burnt in Circulation Fluidized Bed Combustion (CFBC) boiler to generate steam, which then drives the turbine coupled with alternator. The turbine generates power at 18 MW & 16.5 MW plant, respectively.

The spent steam from turbine is condensed in condenser by circulating cooling water. This condensed steam is then sent back to the boiler in closed cycle along with make-up quantity that may be required. The condenser circulating cooling water is also in closed circuit and is cooled by air fans; hence, there is no liquid discharge of any kind into the atmosphere.

**PRODUCTION DETAILS OF CONSENTED PRODUCTS  
DURING PAST 6 MONTHS (APRIL 2020-SEP 2020)**

<b>Product</b>	<b>CCA Qty. (MTM)</b>	<b>Apr 2020</b>	<b>May 2020</b>	<b>Jun 2020</b>	<b>Jul 2020</b>	<b>Aug 2020</b>	<b>Sep 2020</b>
Viscose Filament Yarn	1950	0	205.15	382.31	559.01	503.02	686.47
Sodium Sulphate	2050	0	0	113.20	276.55	279.10	280.55
Sulphuric acid	3600	0	0	625	1762	1663	1837
Sodium Sulphide (100%)	100	0	0	0	0	0	0
CS <sub>2</sub>	1000	0	0	0	70.56	0	0
Caustic Soda Lye (100%)	12000	1849.77	4606.28	5656.29	6470.59	5237.57	5839.81
Chlorine (100%)	10560	1493.5	3744.9	4622.71	5341.41	4349.25	4457.02
Hydrochloric acid (100%)	1800	163.07	387.70	509.37	484.46	387.02	764.277
Sodium Hypochlorite (100%)	3750	18.29	49.05	55.59	64.99	59.01	71.92
Compressed Hydrogen	650000 Nm <sup>3</sup>	66420	133754	108518	47957	90684	24264
Captive Power* (Thermal)	34.5 MW	0.174	0.411	0.572	0.680	0.584	0.675

\* mentioned in per day

01c



GRASIM/ ENV/ / 2020  
July 23, 2020

To  
**The Member Secretary,**  
 Gujarat Pollution Control Board,  
 Paryavaran Bhavan, Sector 10 - A,  
Gandhinagar – 382 043

4621

Respected Sir,

**Sub.: Submission of Environmental Statement Report for the Financial Year 2019 - 20**

We are submitting herewith Environmental Statement Report of Indian Rayon for the Financial Year ending on 31<sup>st</sup> March, 2020 in the revised format of Form V (Rule 14) of Environment (Protection) (Second Amendment), Rule 1992.

Hope, you will find the same in order.

Thanking You,

Yours faithfully,

**For Grasim Industries Limited; Unit – Indian Rayon, Veraval**

**Harendra Singh Dagur**  
Unit Head & President

Cc:  
**The Regional Officer**  
 Gujarat Pollution Control Board  
 Pankaj Vikas Bunglow,  
 Opposite Saint Annes Church,  
 Station Road Junagadh – 362 001

4622

**Association of Manmade Fiber Industry of India**  
 Resham Bhavan, 5<sup>th</sup> Floor,  
 78 Veer Nariman Road,  
 Churchgate,  
Mumbai – 400 020

4623



**Grasim Industries Limited**  
Unit – Indian Rayon

Veraval 362266, Dist. Gir Somnath, Gujarat, India

## FORM - V

[See Rule 14 of Environmental (Protection) Rules, 1986]

### ENVIRONMENTAL STATEMENT FOR FINANCIAL YEAR ENDING THE 31<sup>st</sup> MARCH 2020

#### PART - A

1	Name and address of the owner/occupier of the industry operation or process	Harendra Singh Dagur Unit Head & President Grasim Industries Limited; Unit - Indian Rayon Junagadh - Veraval Road, Veraval - 362266
2	Industry category Primary: (STC Code) Secondary: (STC Code)	Red
3	Production Capacity	Details are attached as <u>Annexure - I</u>
4	Year of Establishment	1963
5	Date of the last Environmental Statement submitted	25 <sup>th</sup> September 2019

#### PART - B

##### Water and Raw Material Consumption

##### Average Water Consumption in m<sup>3</sup>/day

S. No.		Average Water Consumption, m <sup>3</sup> /day	
		During the current Financial Year (2018-19)	During the current Financial Year (2019-20)
1	Process	8075.19	9317.126
2	Cooling	1880.53	2105.942
3	Domestic	1106.19	1238.794
	<b>TOTAL</b>	<b>11061.91</b>	<b>12661.863</b>

Name of Products	Process Water Consumption per unit of product output, (m <sup>3</sup> /T)	
	During the current Financial Year (2018-19)	During the current Financial Year (2019-20)
Viscose Filament Yarn (VFY)	129.94	140.17
Caustic Soda Plant (CSP)	4.05	3.93
Sulphuric Acid Plant (H <sub>2</sub> SO <sub>4</sub> )	0.54	0.51
Carbon Di Sulphide (CS <sub>2</sub> )	5.94	7.39

\* The above figure includes water consumption in Captive Power Plant

*Name of Raw Material	Name of Product	Consumption of Raw Material per Unit output	
		During the current Financial Year (2018-19)	During the current Financial Year (2019-20)
Wood Pulp	VFY	1.081	1.078
Caustic Soda	VFY	0.651	0.663
Sulphur	H <sub>2</sub> SO <sub>4</sub>	0.329	0.329
Sulphur	CS <sub>2</sub>	0.903	0.903
Charcoal	CS <sub>2</sub>	0.332	0.345
Salt	Caustic	1.639	1.67

\* Industry may use codes if disclosing details of raw materials would violate Obligations otherwise all industries must name the raw materials used.

### PART - C

Pollution discharged to environment/ unit of output. (Parameters as specified in the Consent issued) of output

Pollutants	Quantity of Pollutants Discharged (Mass/day)	Concentrations of Pollutants in Discharges (Mass/Volume)	Percentage of variation from Prescribed Standards with Reasons
(a) Water	(Details are attached as <u>Annexure- II</u> )		
(b) Air			

### PART - D

As specified under Hazardous waste and Other Waste (Management, & Trans boundary Movement) Rules, 2016.

S. No.	Hazardous Waste	Total Quantity (MT)	
		During the current Financial Year (2018-19)	During the current Financial Year (2019 - 20)
1	From Process	(Details are attached as <u>Annexure - III</u> )	
2	From Pollution Control Facilities (Sulphur sludge)		
3	Resin		
4	Vanadium Pentoxide		

### PART - E

(Solid wastes)

S. No.		Total Quantity	
		During the current Financial Year (2018 - 19)	During the current Financial Year (2019 - 20)
A	From Process	(Details are attached as <u>Annexure - III</u> )	
B	From pollution control facilities		
C			
	1.Quantity recycled or re-utilized within the unit		
	2.Sold		
	3.Disposed		

**PART – F**

Please specify the characterizations (In terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes)

(Details are attached as **Annexure-IV**)

**PART – G**

Impact of the pollution abatement measures taken on conservation of natural resources on the cost of production:

(Details are attached as **Annexure V - A & V - B**)

**PART – H**

Additional measures/ investment proposal for environmental protection including abatement of pollution, prevention of pollution.

(Details are attached as **Annexure-VI**)

**PART – I**

*Any other particulars for improvement in the quality of the environment:*

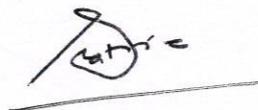
(Details are attached as **Annexure-VII**)



(Signature of a person carrying out an Industry, operation or process)

Date: 23.07.2020

Name : **Harendra Singh Dagur**  
Designation : Unit Head & President  
Address : Grasim Industries Limited; Unit - Indian Rayon  
Veraval - 362266



**Production Capacity**

<b>S. No.</b>	<b>Name of Products</b>	<b>Capacity as per GPCB Consent MT/ Month</b>	<b>Average Actual Production 2019-20 MT/ Month</b>
1	Viscose Filament Yarn	1950	1659
2	Sulphuric Acid	3600	2796
3	Carbon di Sulphide	1000	553
4	Sodium Sulphate	2050	1013
5	Sodium Sulphide (100%)	100	39
6	Caustic Soda Lye (100%)	12000	6728
7	Chlorine (100%)	10560	5292
8	Hydrochloric Acid (100%)	1800	704
9	Sodium Hypo chlorite (100%)	3750	62
10	Compressed Hydrogen Nm <sup>3</sup>	650000	71393
11	Captive Power (Thermal) MW	34.5	29.02

## PART - C

**Pollution Discharged to Environment per unit of output**  
(Parameters as specified in the Consent issued)

S. No.	Pollutants	Quantity of Pollutants Discharged (Kg/ day)	Concentration of pollutants in discharges (Mass/ volume) mg/l	% of variation from prescribed Standards with reasons.
<b>A</b>	<b>Water Pollution</b>			
1	B.O.D	404.24	50	The limits of various pollutants are quite lower than the specified limits
2	C.O.D	1439.10	178	
3	Suspended solids	452.75	56	
4	Oil & Grease	21.02	2.6	
5	Zinc	3.78	0.468	
6	Bio-Assay test	100 % survival	100 % survival	
Note: 1. Values were calculated on the basis of around 8084.85 m <sup>3</sup> /day Effluent discharge 2. Calculations have been done on Annual Average Concentration				
S. No.	Pollutants	Quantity of Pollutants Discharged (Kg/ day)	Concentration of pollutants in discharges (Mass/ volume) mg/l or ppm	% of variation from prescribed Standards with reasons.
<b>B</b>	<b>Air Pollution</b>			
1	Sulphur Di Oxide from both Acid Plant	59.370	0.56 (Kg/ton of 100% acid)	The limits of various pollutants are quite lower than the specified limits
2	Carbon Di Sulphide from both Rayon Stack	8487.178	155.1 Kg per ton of Fiber	
3	Hydrogen Sulphide from both Rayon Stack	1057.699	18.8	
4	Chlorine Stack	0.001	0.207	
5	HCl Stack	0.082	4.38	
6	Total Particulate matter from Boiler No. - 4	43.890	59.1	
7	SOx from Boiler -4	53.781	72	
8	NOx from Boiler -4	3.260	4.4	
9	Total Particulate matter from Old Power Plant	107.726	47.1	
10	SOx from Boiler - 1 & 2 of Old Power Plant	245.315	111	
11	NOx from Boiler - 1 & 2 Old of Power Plant	15.436	6.6	
12	Total Particulate matter from New Power Plant	75.041	37.5	
13	SOx from Boiler - 3 of New Power Plant	242.740	128	
14	NOx from Boiler - 3 of New Power Plant	7.597	3.8	
Note: Calculations have been done on Annual Average Concentration.				

**PART - D****Hazardous Waste - As specified under Hazardous and Other Waste (Management & Trans boundary Movement) Rules, 2016**

S. No.	Description	Total Quantity MT	
		(2018-19)	(2019-20)
1	Sulphur Sludge	53.47	23.380
2	Resin	0.00	0.00
3	Vanadium Pentoxide	0.545	1.152
4	Used Oil/ Burnt Oil/ LDO Sludge	24.09	66.252
5	Discarded Container	28.29	112.017
6	E-Waste	16.38	14.882
7	Cellulose Waste + Oily Cotton Waste	15.06	24.751
8	Lead Scrap & Lead Acid Batteries	73.75	6.792

**PART - E****Solid Wastes**

S. No.	Description	Total Quantity MT	
		(2018-19)	(2019-20)
<b>A</b>	<b>From Process</b>		
1	Fly Ash	28178.89	32444.6
2	Coal Ash	7883.15	9840.13
3	Viscose	42.92	55.38
4	Alkali Cellulose	10.40	10.95
5	De-ashing Hard Mass	66.01	57.30
6	De-ashing Charcoal	63.99	63.47
7	Sulphur Sludge	63.79	27.245
8	Process Sludge	2226.76	2225.069
<b>B</b>	<b>From Pollution Control Facility</b>		Nil
<b>C</b>	<b>Quantity Recycled/ Sold/ Reutilized</b>		
	<b>Recycled</b>		
1	Sulphur Sludge	10.32	3.865
	<b>Sold /Disposed</b>		
1	Fly Ash	28178.89	32444.6
2	Coal Ash	7883.15	9840.13
3	LDO/ Used Oil/ Burnt Oil	24.09	68.068
4	Discarded Drums	28.29	110.960
	<b>Disposed</b>		
1	Viscose	42.92	55.38
2	Alkali Cellulose	10.42	10.95
3	De-ashing Hard Mass	66.01	57.30
4	De-ashing Charcoal	63.99	63.47
5	Process Sludge	2226.76	2225.069
6	E-Waste	16.38	9.010
7	Cellulose Waste + Oily Cotton Waste	15.06	22.370
8	Lead Scrap & Lead Acid Batteries	73.75	7.210

**PART –F****Characteristics of Hazardous /Solid Waste****Analysis of Waste Sulphur Sludge**

S. No.	Composition	Percentage
1	Sulphur	0.1-1
2	V. M	10-12
3	Ash	60-70
4	Moisture	10-12

**Solid Waste**

S. No	Solid Waste	Composition	Percentage
1	Coal Ash	Moisture	16 -22
		Ash	68-78
		Fixed Carbon	04 -08
2	Fly Ash	Moisture	72
		Ash	25
		Fixed Carbon	3
3	Viscose	Cellulose	8.70-8.80
		Caustic Soda	5.7-5.80
		Moisture	85.5
4	Alkali Cellulose	Cellulose	33-34
		Caustic Soda	15-15.50
		Moisture	50.2
5	De-ashing Hard Mass	Sulphur	2-4
		Ash	36.1
		V.M.	17.2
		Fixed Carbon	46.7
6	De-ashing Charcoal	Moisture	7-24
		Sulphur	2 - 4
		Ash	5-9
		Fixed Carbon	83-96
		V.M	11-18

**Disposal Practice**

- The above-mentioned waste is in the form of sludge is stored in the R.C.C Pits (total 3 numbers) 1, 2 each of 354 m<sup>3</sup> & 3<sup>rd</sup> pit is having 200 m<sup>3</sup> Capacity having impervious lining (LDPE) with leachate collection System connected to Effluent Treatment Plant.
- We have renewed the Membership of M/s Saurashtra Enviro Private Project Limited, Bhachau on 27.12.2017 for sending Spent Catalyst, Resin, Sulphur Sludge, Cellulose Waste, exhaust membrane and Oily Cotton Waste.  
We have disposed 23.380 MT of Sulphur Sludge and 22.370 MT of Cellulose Waste + oily cotton Waste to SEPPL, Bhachau, 9.010 MT of E-Waste to GPCB Authorized Recycler, 7.210 MT of Lead Acid Batteries were sent to SPCB approved recycler i.e. M/s Wiptech Peripherals Pvt. Ltd., 68.068 MT Used Oil & Waste Oil and 110.960 MT of discarded containers to GPCB approved recyclers.

**PART - G****Table showing Impact of Pollution Abatement measures taken on Conservation of Natural Resources**

S. No.	Particulars	Pollutant	Pollution Control System	Pollution Level		GPCB Level
				Before Pollution Control System	After Pollution Control System	
<b>A Air Pollution Control</b>						
1	Boiler House	PM	Bag Filter & Cyclone Separator (Five No. Modules - 900 Nos. of Bags)	1000 -1200 mg/Nm <sup>3</sup>	< 150 mg/Nm <sup>3</sup>	150 mg/Nm <sup>3</sup>
2	Acid Plant (SCSA)	SO <sub>2</sub>	Alkali Scrubber	11 - 12 Kg/ MT of 100 % H <sub>2</sub> SO <sub>4</sub>	1.2 - 1.9 Kg/ MT of 100 % H <sub>2</sub> SO <sub>4</sub>	2 Kg/ MT of 100 % H <sub>2</sub> SO <sub>4</sub>
3	Acid Plant (DCDA)	SO <sub>2</sub>	Alkali Scrubber	> 2 Kg/ MT of 100 % H <sub>2</sub> SO <sub>4</sub>	1.2 - 1.8 Kg/ MT of 100 % H <sub>2</sub> SO <sub>4</sub>	2 Kg/ MT of 100 % H <sub>2</sub> SO <sub>4</sub>
4	Captive Power Plant	PM	ESP / Filtration Column	58 g/Nm <sup>3</sup>	<100 / <50 mg/Nm <sup>3</sup>	100 / 50 mg/Nm <sup>3</sup>
<b>B Water Pollution Control</b>						
1	Effluent Treatment Plant	pH	Lime preparation & auto dozing, Clarifier thickener, Centrifuge, Belt Press, sludge drying beds Polyelectrolyte.	1.2 - 10.5	5.5 -9.0	5.5 -9.0
		S.S.		100 -330 mg/L	30- 95 mg/L	100 mg/L

From the above table, it is evident that the installation and operation of Pollution abatement measures have resulted in keeping pollutants level well within the limits specified by GPCB keeping the Environment clean.

**Details of Pollutants into the Environment and Pollution Control Technology  
Adopted**

S. No.	Pollutants	Pollution Control Technology /System Adopted
<b>1</b>	<b>Water (Outlet Effluent)</b>	
a.	pH	Auto Control Valves for addition of milk of lime/ dilute Sulphuric Acid to maintain the effluent quality in the range of pH 5.5 to 9.0 and online pH recorder at the outlet of the treated effluent to measure the pH on continuous basis.
b.	Suspended Solid & Zinc	Effluent Treatment System consisting of 2 No. of Clarifier for removal of Suspended Solids, System to add Polyelectrolyte for maintaining effective settling of Suspended Solids, 2 Nos. of Zinc Clarifiers for removal of Zinc and 5 No. Centrifuge /Belt Press for dewatering of Sludge.
c.	Colour ,COD & BOD	By adding Coagulants & Flocculants in Mixing Chamber
<b>2</b>	<b>Air (Stack)</b>	
a.	PM, RSPM & SPM	Cyclone Separators, Bag Filters, Electrostatic precipitators, Filtration Columns, Opacity meters and Dust Suppression System with Air fog Nozzles. Online Continuous Emission Analyzer have been installed for parameter PM and data has been transmitted to GPCB/CPCB.
b.	SO <sub>x</sub> & NO <sub>x</sub>	Lime dosing system and CFBC boilers to maintain low combustion temp in the furnace. Online Continuous Emission Analyzer have been installed for parameter SO <sub>2</sub> & NO <sub>x</sub> and data has been transmitted to GPCB/CPCB.
c.	CS <sub>2</sub> and H <sub>2</sub> S	Alkali Scrubber for recovery of H <sub>2</sub> S and CS <sub>2</sub> emission and generation of Sodium Sulphide as salable by-product in CS <sub>2</sub> Plant and H <sub>2</sub> S and CS <sub>2</sub> emissions control by continuous supply of humidified air through Air Washers and exhausting dilute gases through 2 Nos. of Process Stacks. Online Continuous Emission Analyzer have been installed for parameter CS <sub>2</sub> & H <sub>2</sub> S.
d.	Chlorine and HCl	Multistage Alkali Scrubber for recovery of Waste/ Chlorinated Gases as Sodium Hypochlorite by product in Caustic Soda Plant and Bubble Cap tray followed by packed bed scrubber with DM water. On – line Chlorine monitors at 24 locations hooked with DCS. Online Continuous Emission Analyzer have been installed for parameter HCl & Cl <sub>2</sub> and data has been transmitted to GPCB/CPCB.
e.	SO <sub>2</sub>	Alkali Scrubber for removal of traces of SO <sub>2</sub> emission from Sulphuric Acid Plant. Online Continuous Emission Analyzer have been installed for parameter SO <sub>2</sub> .

**Annexure – V- B**

**Impact of the Pollution Abatement measures taken on the Cost of Production for the FY 2019-20**

S. No	Items	Cost (All figures in Lacs)
1	Total cost of installation of various water and Air Pollution Control Equipment.	3970.73
2	Interest on Investment (9.5 % per Year)	377.22
3	Depreciation @ 10.0 % per year.	397.07
4	Total operational cost of various Pollution Control Equipment/ Year.	1417.78
5	Total expenses / Year (Operating Cost + Interest + Depreciation)	2192.07
6	Total Viscose Filament Yarn Production during the year ended 31 <sup>st</sup> March 2020	19902.818
7	Total expenses per ton of Yarn	Rs. 11013.86/- per Ton of Yarn

PART – H

**Additional Measures/ Investment Proposed for Environmental Protection**  
**including Abatement of Pollution, Prevention of Pollution**

It is ensured that Effluent Treatment Plant and other Pollution Control facilities are effectively operated round the clock. Further, we have taken additional preventive measures. The brief of the System is stated below:

1. A comprehensive Environment Audit is being carried out by M/s Darshan Engineering College, Rajkot in last Financial Year. The recommendations of the auditors are implemented.
2. A comprehensive Marine Audit is being carried out by M/s National Institute of Oceanography, Mumbai annually.
3. Quarterly monitoring of our unit is being carried out by the M/s Kadam Environmental Consultants.
4. Corporate Commitment to the Environment Protection by adopting initiative through Sustainability Vision 2020. We have engaged extensively in transforming our business into sustainable entity. In pursuit to this, exclusive training program has been organized to shape the comprehension of its internal stakeholder. Owing to this, we could evident the reflection of sustainable culture in the routine Environmental Management.
5. We have adopted Aditya Birla Sustainability Framework for Safety System in VFY, CSP & CPP as the part of which we have:
  - Implemented 14 Safety Sustainability Standards to maintain and improve workplace safety culture.
  - Implemented Process Safety Management System to prevent process incidents and to prevent unexpected releases of toxic, reactive or flammable liquids and gases from processes of highly hazardous processes.
6. Indian Rayon has Approached towards Business Excellence for improving the systems and standards through ISO-9001-2015, ISO-14001-2015, ISO-45001-2018, ISO-50001-2011 & SA-8000-2014.
7. Polyelectrolyte dosing is done in Clarifiers to ensure zinc levels in effluent.
8. Sulphur recovery system is working to reduce Sulphur sludge.
9. Use of High-quality lime started to reduce lime and lime sludge.
10. Dry fog-based Dust suppression system (114 Nos. Nozzles) provided in Coal Handling plant to control of sub-micron particle of dust and also water sprinkler provided in Coal yard to suppress coal dust.
11. To improve the ambient air quality, 26 nos. of Rain Guns provided for suppression of Coal Dust in Coal Storage & Handling Unit.

12. Disposal of Plastic Waste exhausted lead batteries, Bio-medical & e-waste to Authorized re-cyclers.
13. Disposal of Used oil, Burnt Oil, LDO sludge, & discarded Containers to authorized re-cyclers.
14. Industry has renewed its Membership of M/s Saurashtra Enviro Private Project Limited, Bhachau on 27.12.2017 for sending Spent Catalyst, Resin, Sulphur Sludge, Cellulose Waste, Exhaust Membrane and Oily Cotton Waste.
15. Industry has also taken Membership of M/s Ginnar Bio-Medical Waste Services, Junagadh for environment friendly disposal of Bio-Medical Waste.
16. We have reduced Chlorine inventory at site by 70 MT as per guideline of World Chlorine Council by direct pumping of liquid Chlorine in tonners which resulted in to increase in Plant Safety. We have installed GPS (Global Positioning System) Tracking System in the 34 Nos. of Chlorine carrying vehicles & 8 Nos. of Hydrogen carrying vehicles to stop accidents due to speed or to avoid any environmental release in the atmosphere.
17. We have also installed 36 Nos. of Chlorine Sensors in our Caustic Soda Plant which are inter-connected to the Distributed Control System through which whole lot of manufacturing process are carried out.
18. 12 Nos. of hydrogen sensors are hooked up with DCS for onsite monitoring around the hydrogen handling area of caustic soda plant
19. Periodical Review of EMS including Compliance of Environmental Laws through Periodic Management Review & monthly EHS inspection of all the sections throughout the Plant Premises.
20. Safety Audit by external agency M/s SM Consultants, Ahmedabad in March 2019 as it is conducted in alternate years.
21. In this financial year, Industry has implemented Five Nos. of Energy Conservation Schemes in Caustic Soda Plant with total investment of Rs. 545.25 Lacs with an Electricity Saving 25.265 Lakhs KWH.
22. In this financial year, Industry has implemented Power Plant Ten Nos. of Energy Conservation Schemes in Power Plant with total investment of Rs. 1277.25 Lacs which resulted in savings of 12.801 Lacs KWH and 11480 MT of Steam.
23. In this financial year, Industry has implemented Four Nos. of Energy Conservation Schemes in Rayon Plant with total investment of Rs. 47.86 Lacs with Conservation of 15.446 lac KWH.
24. During this financial year, Industry has conducted a Stratification Study to ensure all the locations for its Continuous Ambient Air Quality Monitoring Stations are apt as per the location and layout of the plant.

## Part – I

### Any other particulars for improving the Quality of the Environment

1. Effluent generated from different processes in company is treated in Effluent Treatment Plant to meet stipulated standards before discharge from factory outlet through Marine Pipeline with diffuser system into deep sea.
2. Industry has Installed Sewage Treatment Plant capacity of 500 m<sup>3</sup>/day and used as source of make-up Water for cooling Towers & Plantation.
3. Industry has well equipped online continuous monitoring system to encapsulate pollutant concentration, emanates from processes.
4. **Online Continuous Effluent Monitoring System:**
  - Latest version of CPCB approved, Online Continuous Effluent Monitoring System for pH, TSS, Temperature & Flow have been installed in our ETP and the online data has been transmitted to GPCB/CPCB server since 19.08.2015.
  - We have installed TOC Meter for treated effluent water.
5. **Online Continuous Emission Monitoring System:**
  - Latest version CPCB approved, Continuous Emission Monitoring System for Parameter Cl<sub>2</sub>, HCl were installed in Chlor-Alkali Plant and monitoring results has been transmitted to GPCB & CPCB server since 21.05.2015 and 12.08.2015 respectively.
  - Online Continuous Emission Monitoring System for parameter Particulate matter has been installed in Power Plant and data is being transmitted to GPCB & CPCB server since 19.08.2015.
  - Online continuous Emission Monitoring system for Parameter PM, SO<sub>2</sub>, NO<sub>x</sub> has been installed and data transmission to GPCB/CPCB has been carried out.
  - Online Continuous Emission Monitoring System for parameter SO<sub>2</sub> has been installed for both Sulphuric Acid Plant.
  - Online Continuous Emission Monitoring System for parameter CS<sub>2</sub> & H<sub>2</sub>S in Rayon Plant has been installed.
6. **Online Continuous Ambient Air Quality Monitoring System:**

Three No. of Online Continuous Ambient Air Quality Monitoring Systems have been installed and online data has been transmitted to GPCB server.
7. Industry is regularly analyzing the treated effluent water samples for the Bioassay Test to maintain Marine Ecology.
8. Indian Rayon lays high emphasis on Environmental improvement program like tree planting in its premises & surrounding areas. It has improved aesthetic beauty in all areas & also working as good interceptor for fugitive dust & noise. Greenbelt has been developed to cover more than 33.5% of the total area of the existing project. Regular monitoring regarding the health of trees is

being carried out to maintain good survival rate. Jan Seva Trust has received Certificate from Social Forestry Department (Govt. of Gujarat) for actively participating in People Awareness towards Tree Plantation Campaign taken by the Govt. at the Taluka Level. Also patches of gardens are developed inside of the plant premises wherever the open space is available to improve the plant beautification.

9. "Earth day - 22nd April, Environment day - 5th June" are celebrated with enthusiasm in which Elocution, Essay Writing, Poster making and slogan competition pertaining to Environment is held for employee and School Students.
10. Business Excellence is used as a tool for better housekeeping, good maintenance practice and assist in control of pollution. Also, we have implemented 5" S' programme in all the departments of the factory which is useful in minimizing waste.
11. Regular monitoring of ambient air quality by recognized third party Auditor and in-house monitoring
12. The industry has installed 3 Nos. of H<sub>2</sub>S monitors & Three Nos. of CS<sub>2</sub> monitors within CS<sub>2</sub> Plant to indicate the ambient concentration of CS<sub>2</sub> & H<sub>2</sub>S gas.
13. We are regularly carrying out monitoring of GHG emissions and keeping track of our carbon footprint.
14. The quantity of Fly Ash generated from Power Plant is around 100-110 MT/day. We are also providing 100% fly ash to Group Cement Plant and Ambuja Cement.
15. Indian Rayon has been awarded the prestigious Golden Peacock Environment Management Award 2014 by Institute of Directors, New Delhi for outstanding achievement in Environment Management. We have also received National Award for Prevention of Pollution titled - The Rajiv Gandhi Environment Award for Prevention of Pollution 2008-2009.

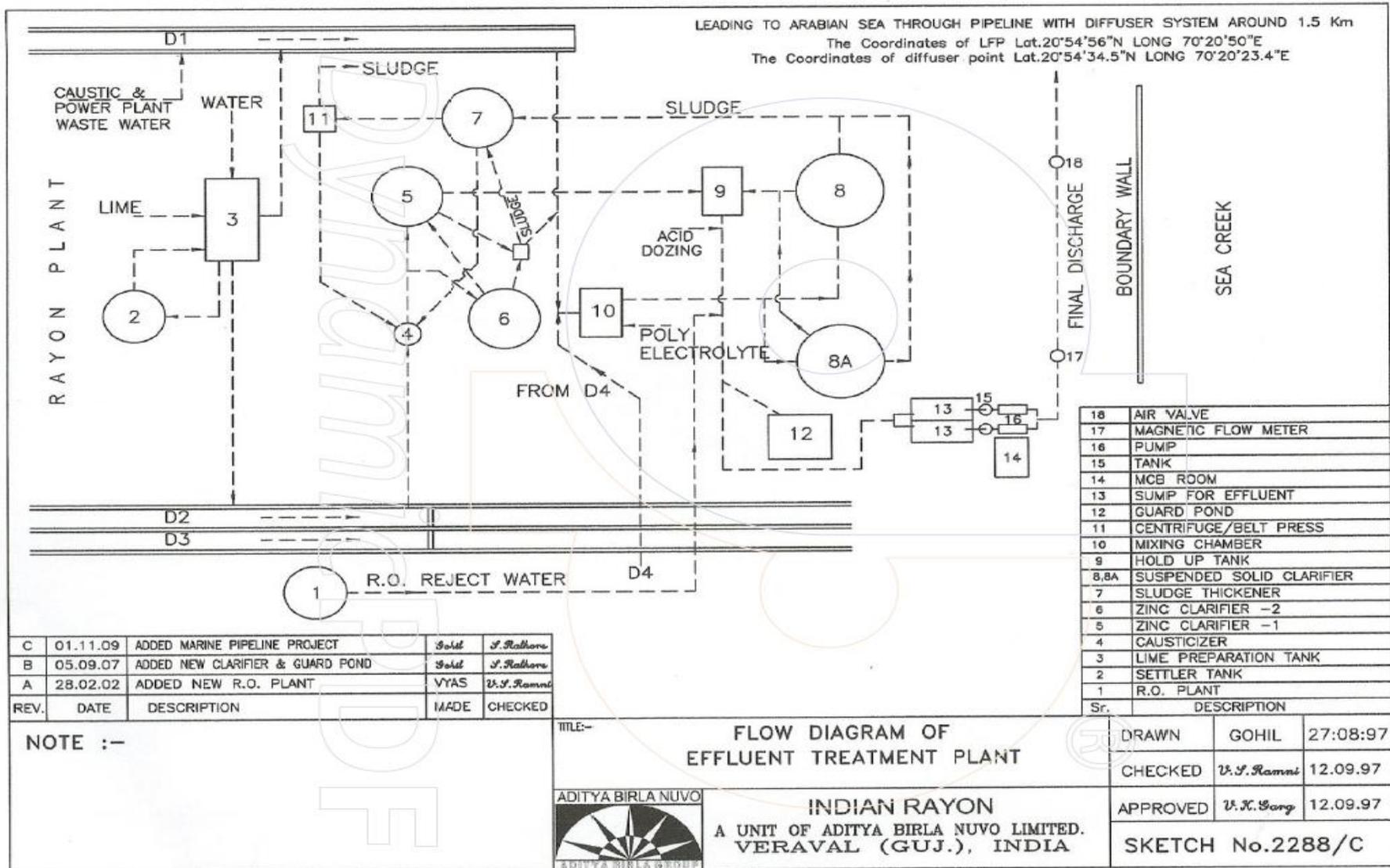
## ANNEXURE VI

# EFFLUENT TREATMENT PLANT: DESIGN & TECHNICAL DETAILS

## DETAILS OF TRADE EFFLUENT TREATMENT & DISPOSAL

### DETAILS OF EQUIPMENT IN ETP

Sr. No.	Name of Unit	No. of Unit	Dimension of Unit (m)
1.	Lime Preparation Tank	2	3.4 m × 2.1 m × 1.96 m
2.	Lime Storage Tank	1	2.5 m dia. × 6.0 m ht
3.	Homogenizer	1	2.3 m dia. × 3.0 m ht
4.	Zinc Clarifier	2	12.0 m dia × 2.13 m ht
5.	Holding Tank	1	9.0 m × 9.0 m × 2.0 m
6.	Polyelectrolyte Preparation Tank	2	1.0 m × 1.0 m × 1.0 m 0.56 m dia. × 1.0 m ht
7.	Sludge Thickener	1	11.3 m dia. × 2.0 m SWD
8.	Mixing Chamber	2	8.5 m × 5.9 m × 2.45 m 3.6 m × 2.6 m × 1.8 m
9.	Centrifuge/Belt Press	5/1	-
10.	Sludge Drying Bed	3	3.66 m × 3.05 m × 0.7 m
11.	Suspended Solid Clarifier (SSCF)	2	30.0 m dia × 3.0 SWD
12.	Effluent Pit	2	10.0 m × 3.5 m × 1.6 m
13.	Treated Effluent Pit	2	10.0 m × 3.5 m × 1.6 m
14.	Guard Pond	1	45.0 m × 30.0 m × 3.0 m
15.	Marine Pumping Station	1	-



**ETP Flow Diagram**

ETP SAMPLES ANALYSIS RESULTS								
Date of Sampling:				16.10.2020				
Sr. No.	Parameters	Unit	Inlet 1 to ETP	Inlet 2 to ETP	New Zn Clarifier	Old Zn Clarifier	ETP Outlet	GPCB Limit
1	pH	---	2.36	1.62	7.64	7.46	6.39	5.5 to 9.0
2	Temperature	°C						45
3	Colour (pt. Co. scale)	Units	5	10	5	5	5	100
4	Suspended Solids	mg/L	56	32	8	14	22	100
5	Oil and Grease	mg/L	BDL	BDL	BDL	BDL	BDL	10
6	BOD (5 Days at 20°C)	mg/L	128	85	34.5	54	44	100
7	COD	mg/L	380	258	149	232	150	250
8	Zinc	mg/L	50	52	0.4	0.4	0.2	15

## ANNEXURE VII

### AIR POLLUTION CONTROL MEASURES

## **DETAILS OF AIR POLLUTION CONTROL MEASURES**

### **Air Management - Caustic Soda Plant**

#### **Sodium Hypochlorite Plant**

- The waste chlorine gas from the manufacturing of caustic soda is de-chlorinated by the three-stage scrubbing system.
- All the waste chlorine gases emitted are stripped in chilled circulating caustic in three tower system wherein even traces of chlorine gases are absorbed.
- The industry is getting sodium hypochlorite as a co-product from this system.
- Online Continuous Emission Monitoring System for parameter  $\text{Cl}_2$  is installed and data is being transmitted to GPCB/CPCB since 21.05.2015 & 12.08.2015 respectively

#### **Hydrochloric Acid Plant**

- Bubble cap tray followed by packed bed scrubber with DM water as media to scrub HCl gas mist & Vapor.
- Reduced Chlorine Inventory at site by 70 MT
- The industry has installed total 36 online chlorine monitors at 36 locations hooked up with DCS within caustic soda plant to indicate the ambient concentration of Chlorine gas and online hydrogen monitors at 12 locations hooked up with DCS within caustic soda plant.
- Online Continuous Emission Monitoring System for parameter HCl is installed and data is being transmitted to GPCB/CPCB since 21.05.2015 & 12.08.2015 respectively.

### **Air Management – Viscose Filament Yarn**

#### **Sulfuric Acid Plant I & II**

- Industry has two sulfuric acid plants, one with DCDA and other with SCSA process.
- In both acid plants, the industry has provided alkali scrubbers to keep exhaust gases free from pollutants.
- The gases emissions from the absorption tower are scrubbed with caustic lye i.e. dialyzer reject from viscose preparation area.
- Industry has installed acid mist eliminator in both plants
- Online Monitoring System for parameter  $\text{SO}_2$  have been installed for DCDA plant & Purchase order for the same has been placed for SCSA Plant.

#### **Carbon Di Sulphide Plant**

- Gases emitting out from process stack of this plant contains  $\text{CS}_2$  and  $\text{H}_2\text{S}$ .  $\text{CS}_2$  is recovered by cooling with help of the series of condensers and  $\text{H}_2\text{S}$  is scrubbed by caustic soda with the help of two stage absorption systems in series to produce sodium Sulphide.

- This Na<sub>2</sub>S is used in after treatment department for de-sulfuring from the yarn and sold to other industries.
- Fogging Generating System ODC-50 at CS<sub>2</sub> plant for neutralization of odour in and around the plant.

### **Sodium Sulphate Plant**

- The removal of this excess sodium sulphate affected by adiabatic cooling of spin bath under vacuum.
- The crystallized Glauber salt is dissolved in slurry and evaporated and dried to produce anhydrous sodium sulphate.
- Water scrubber in Sodium Sulphate plant to control Sodium Sulphate aerosols emitting to atmosphere.

### **Rayon Sections**

- During the regeneration process of cellulose from viscose in spinning machine CS<sub>2</sub> and H<sub>2</sub>S will be liberated.
- The liberated CS<sub>2</sub> & H<sub>2</sub>S will be extracted through powerful exhaust system & discharged through chimney.
- CS<sub>2</sub> & H<sub>2</sub>S emission from the process stack of these sections are controlled by constant humid air supply from air washers.
- VFY unit is fully equipped with 9 Nos. exhaust fan and 8 nos. air washers for constant fresh air supply.
- Purchase order has been placed for Online Monitoring System for parameter CS<sub>2</sub> & H<sub>2</sub>S.

### **Work Environment**

- The shutters of the spinning machine closed throughout the spinning period except during doffing, it is strictly followed in practice to maintain work environment & to prevent dispersion of gases in shop environment.

### **Air Management – Power Plant & Boiler House**

#### **Power Plant & Boiler House**

1. In coal fired Boilers and Coal Crushing unit, Bag filters have been installed to control particulate emission. Thermax supplied the system & equipment
2. Power Plant is equipped with ESP and opacity meter which is connected to our DCS for continuous monitoring of PM
3. Bag filters in Coal crushing unit
4. Dry fog-based Dust suppression system (114 Nos. Nozzles) provided in Coal Handling plant to control of sub-micron particle of dust
5. Water sprinkler system in coal yard to control particulate emissions
6. Water sprinkler system in ash pond area to control particulate emissions

7. Online Continuous Emission Monitoring System (CEMS) have been provided for parameter PM and data has been transmitted to GPCB / CPCB since 19.08.2015. CEMS for SO<sub>x</sub> & NO<sub>x</sub> have been received and installation is under progress.

### DETAILS OF FLUE GAS & PROCESS GAS STACK

**Details of Flue Gas Stacks:**

Sr. No.	Stack Attached to	Stack Height (m)	Parameter	Permissible Limit
1.	Boiler No. 1 & 2 (Old Power Plant)	122	PM	100 mg/Nm <sup>3</sup>
			SO <sub>x</sub>	229 ppm
			NO <sub>x</sub>	319 ppm
2.	Boiler No. 3 (New Power Plant)	122	PM	50 mg/Nm <sup>3</sup>
			SO <sub>x</sub>	229 ppm
			NO <sub>x</sub>	159 ppm
3.	Boiler No. 4	31	PM	150 mg/Nm <sup>3</sup>
			SO <sub>x</sub>	50 ppm
			NO <sub>x</sub>	100 ppm

**Details of Process Gas Stacks:**

Sr. No.	Stack Attached to	Stack Height (m)	Parameter	Permissible Limit
1.	Old and New Rayon Plant	52.5	CS <sub>2</sub>	225 kg/MT of Yarn Production
			H <sub>2</sub> S	45 mg/Nm <sup>3</sup>
2.	Old and New Sulphuric Acid Plant	30	SO <sub>2</sub>	kg/Ton of 100% Acid Production
			Acid Mist	50 mg/Nm <sup>3</sup>

3.	Caustic Chlorine Plant (Hypo Plant)	34	Cl <sub>2</sub>	50 mg/Nm <sup>3</sup>
4.	Caustic Chlorine Plant (HCL Plant)	34	HCl	50 mg/Nm <sup>3</sup>
5.	Old and New Caustic Flaker Unit	34	PM	50 mg/Nm <sup>3</sup>
6.	Coal Crusher Unit	52	PM	50 mg/Nm <sup>3</sup>

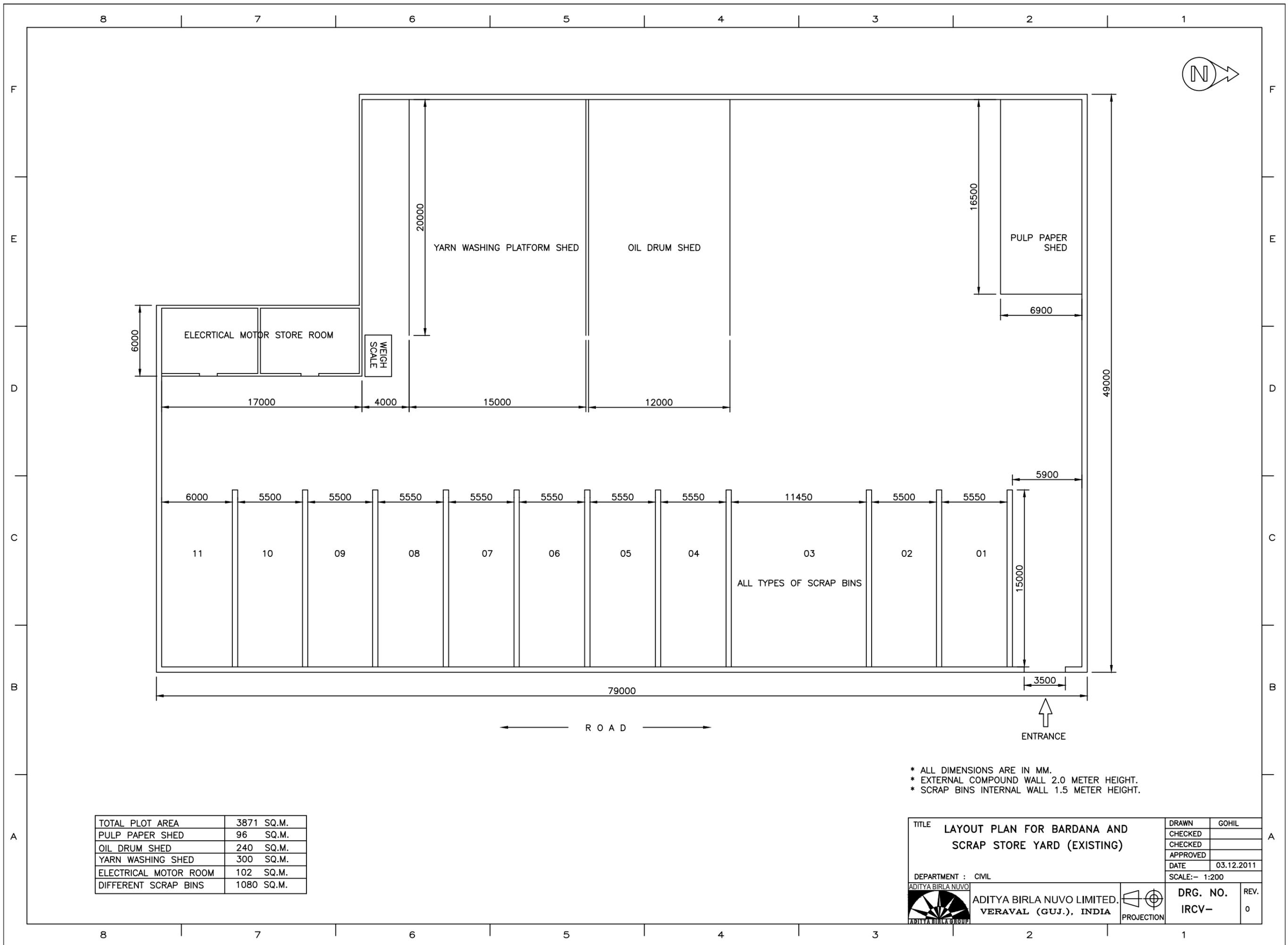
## ANNEXURE VIII

DETAILS OF HAZARDOUS & OTHER WASTE:  
GENERATION, STORAGE, HANDLING &  
DISPOSAL

### **Hazardous Waste Data**

**Details of hazardous waste disposal from 1.04.2020 to 16.10.2020**

<b>Waste</b>	<b>Waste Disposal ( IN MT)</b>	<b>Name of the party</b>
Sulphur Sludge	0	---
Spent Catalyst	0	---
Cellulose Waste	18.50	Detox India Pvt Ltd, Bhachau
Containers	18.76	Reliance Barrel Supply Co, Ahmedabad
Used/Burnt/Transformer/LD /Furnace Oil	15.020	Jai Ambe Thin Chem,
Spent Resin	0	----
Oily cotton waste	0.330	SEPPL, Bhachau
Lead Acid Batteries/ Lead Scrap	0	----
E-waste	3.51	Green Tech recycling, Ahmedabad
Membrane	0	----



\* ALL DIMENSIONS ARE IN MM.  
 \* EXTERNAL COMPOUND WALL 2.0 METER HEIGHT.  
 \* SCRAP BINS INTERNAL WALL 1.5 METER HEIGHT.

TOTAL PLOT AREA	3871 SQ.M.
PULP PAPER SHED	96 SQ.M.
OIL DRUM SHED	240 SQ.M.
YARN WASHING SHED	300 SQ.M.
ELECTRICAL MOTOR ROOM	102 SQ.M.
DIFFERENT SCRAP BINS	1080 SQ.M.

<b>TITLE</b> LAYOUT PLAN FOR BARDANA AND SCRAP STORE YARD (EXISTING)		DRAWN GOHIL
DEPARTMENT : CIVIL		CHECKED _____
ADITYA BIRLA NUVO LIMITED, VERAVAL (GUJ.), INDIA		CHECKED _____
		APPROVED _____
PROJECTION		DATE 03.12.2011
DRG. NO. IRCV-		SCALE:- 1:200
REV. 0		

ADITYA BIRLA



o/c

GRASIM/ ENV/ /2020  
June 20, 2020

To  
**The Member Secretary,**  
Gujarat Pollution Control Board,  
Paryavaran Bhavan,  
Sector 10-A,  
**Gandhinagar - 382043**

4274

Respected Sir,

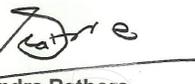
**Sub.: Submission of Form - 4 (See rules 6(5), 13(8), 16(6) and 20 (2)), under the EPA-1986, Amended vide G.S.R No. 395 (E), dated 04<sup>th</sup> April 2016 as the MoEF & CC has issued the Hazardous and Other Waste (Management and Transboundary Movement) Rules - 2016**

With reference to your CC & A No. AWH - 54395 dated 28.05.2013 (Renewed consent no. AWH - 92560 dated 23.04.2018 Valid till 31.12.2023) and Hazardous and Other Waste (Management & Transboundary Movement) Rules - 2016, we are furnishing herewith the details of Management of Hazardous Waste for the period of **1<sup>st</sup> April - 2019 to 31<sup>st</sup> March - 2020** in the prescribed **Form - 4** (See rules 6(5), 13(8), 16(6) and 20 (2)).

Hope, you will find the same in order.

Thanking You,  
Yours faithfully,

**For Grasim Industries Limited, Unit Indian Rayon**

  
**Shalendra Rathore**  
Deputy General Manager  
Environment & Sustainability

Encl.: As above

Cc: **The Regional Officer,**  
Gujarat Pollution Control Board,  
Pankaj Vikas Bunglow,  
Opposite Saint Annes Church,  
Station Road, **Junagadh -362001**

4275



**Grasim Industries Limited**  
**Unit - Indian Rayon**

Veraval 362266, Dist. Gir Somnath, Gujarat, India  
T : +91 2876 248401/ 245711

E : indian\_rayon@adityabirla.com | W : www.grasim.com | CN : 117124MP1947PI000410

## FORM 4

[See rules 6(5), 13(8), 16(6) and 20 (2)]

## FORM FOR FILING ANNUAL RETURNS

[To be submitted to State Pollution Control Board by 30th day of June of every year for the preceding period April to March]

1.	Name and address of facility	Grasim Industries Limited, Unit Indian Rayon. Junagadh - Veraval Road Veraval - 362266 (Gujarat)
2.	Authorization No. and Date of issue	<b>AWH - 54395 dated 28.05.2013</b> <b>(Renewed consent no. AWH - 92560 dated 23.04.2018, valid till 31.12.2023)</b>
3.	Name of the authorized person and full address with telephone, fax number and e-mail	Harendra Singh Dagur Unit Head Junagadh - Veraval Road, Veraval - 362266 (Gujarat) Office No: 02876248034
4.	Production during the year (product wise), wherever applicable	Production Details for the year 2019-20 is marked and enclosed as <b>Annexure - I.</b>
<b>Part A To be filled by Hazardous Waste Generators</b>		
1.	Total Quantity of Waste Generated Category Wise	Hazardous Waste Generation, Storage and Disposal during the year 2019-20 is marked and enclosed as <b>Annexure - II.</b>  Details & Drawing of Hazardous Waste Storage arrangement at our Unit are marked and enclosed as <b>Annexure-III.</b>
2.	Quantity Dispatched (i) to disposal facility (ii) to recycler or co-processors or pre-processor (iii) others	Hazardous waste is being sent to Authorized CTSDf and Recycler/GPCB approved Re-processor based on the characteristics of waste.  Details of Hazardous waste disposed through Authorized CTSDf/GPCB approved vendor during the year 2019-20. Kindly refer <b>Annexure - II.</b>  Details of Manifest form of Hazardous waste are attached as <b>Annexure-IV.</b>
3.	Quantity utilized in-house, if any	Nil
4.	Quantity in storage at the end of the year	Kindly Refer <b>Annexure - II</b>
<b>Part B To be filled by Treatment, Storage and Disposal Facility Operators</b>		
1.	Total quantity received	Not Applicable
2.	Quantity in stock at the beginning of the year	
3.	Quantity treated	
4.	Quantity disposed in landfills as such and after treatment	
5.	Quantity incinerated (if applicable) -	
6.	Quantity processed other than specified above	
7.	Quantity in storage at the end of the year	

Part C To be filled by Recyclers or Co-Processors or Other Users	
1.	Quantity of waste received during the year
	(i) domestic sources
	(ii) imported (if applicable)
2.	Quantity in stock at the beginning of the year
3.	Quantity recycled or co-processed or used
4.	Quantity of products dispatched (wherever applicable)
5.	Quantity of waste generated -
6.	Quantity of waste disposed -
7.	Quantity re-exported (wherever applicable)-
8.	Quantity in storage at the end of the year -

Not Applicable

Date : 20.06.2020

Place : Veraval

Signature:



Name : Shailendra Rathore

Designation : Deputy General Manager  
Environment & Sustainability

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## Month wise Production Details in MT

Month	Viscose Filament Yarn, MT	Refined Carbon Di Sulphide, MT	Sulfuric Acid (98.5%), MT	Caustic Soda Lye (100%), MT	Liquid Chlorine (100%), MT	Compressed Hydrogen, Nm <sup>3</sup>	Sodium Sulphate, MT	Sodium Sulphide (100%), MT	Sodium Hypochlorite (on 100% Cl <sub>2</sub> ), MT	Hydrochloric Acid (100%), MT
April-19	1738.048	656.000	3087.500	6562.10	5132.4	43413	1036	45.000	46.08	728.100
May-19	1732.377	685.000	3221.000	6531.32	4861.80	6831	1099	45.200	56.87	971.338
June-19	1626.776	558.000	3001.000	6420.936	5022.000	3830	1036	41.300	47.727	733.297
July-19	1783.181	622.000	3105.500	7334.902	5735.700	0	1046	39.300	58.823	800.381
Aug-19	1709.674	660.000	3131.500	7257.154	5787.9	123523	1036	50.300	52.449	699.625
Sep-19	1600.649	581.000	3014.500	6855.523	5744.700	130296	1002	40.300	52.955	389.597
Oct-19	1591.297	529.000	3125.000	7446.718	6078.600	102174	1070	45.450	63.117	566.18
Nov-19	1543.325	409.000	2969.500	7215.311	5835.600	135812	1068	28.800	69.808	612.415
Dec-19	1750.007	475.000	2566.500	7252.757	5625.000	123951	1090	33.700	87.365	815.797
Jan-20	1754.816	512.000	3140.000	7160.843	5282.700	8916.960	987.950	38.800	83.110	1042.331
Feb-20	1651.016	498.000	1429.500	5149.428	4080	66019.80	933.400	33.600	64.443	475.261
Mar-20	1421.652	445.000	1765.000	5551.670	4317.800	111948	749.000	29.900	56.892	614.7158

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## Annexure - II

**Type and Quantity of Hazardous wastes**

Particulars	LDO / Used Oil / Burnt Oil, MT	Discarded Drums, MT	Lead Scrap & Lead Acid Batteries, MT	e-Waste, MT
<b>Category as per Schedule I &amp; CCA</b>	<b>5.1</b>	<b>33.3</b>	<b>17</b>	<b>18</b>
1. Opening Balance as on 01/04/2019	1.816	4.854	0.418	Nil
2. Generation	157.282	19.930	6.792	14.882
3. Sold to Authorized Recycler	159.098	24.154	7.210	9.010
4. Closing Balance 31/03/2020	Nil	Nil	Nil	5.872
Particulars	Sulphur Sludge, MT	Resin, MT	Cellulose Waste, MT	Spent Catalyst (V <sub>2</sub> O <sub>5</sub> ), MT
<b>Category as per Schedule I &amp; CCA</b>	<b>17.1</b>	<b>34.2</b>	<b>23.1</b>	<b>17.2</b>
1. Opening Balance as on 01/04/2019	Nil	Nil	Nil	Nil
2. Generation	27.245	Nil	24.751	1.152
3. Sent to CTSDFs SEPPL	23.380	Nil	22.370	Nil
4. Closing Balance 31/03/2020	3.865	Nil	2.381	1.152
Particulars	Oily Cotton Waste, MT			
<b>Category as per Schedule I &amp; CCA</b>	<b>5.2</b>			
1. Opening Balance as on 01/04/2019	0.364			
2. Generation	0.681			
3. Sent to CTSDFs SEPPL	Nil			
4. Closing Balance 31/03/2020	1.045			

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**Description of Storage:**

**1. Sulphur Sludge**

12-13 MT month Sulphur sludge is produced per month. Out of which 6-7 Tons is being recovered as raw material and is sent back to the main process of Sulphuric acid manufacturing. Remaining Quantity 5-6 Tonnes (approx.) per month is stored in an identified and approved site with impervious lining. These are sent to Common Treatment Stabilization Disposal Facilities at Saurashtra Enviro Private Project Limited, Bhachau.

**2. Used Oil /Burnt Oil /LDO Sludge**

These are being stored in an identified area at Bardana yard with proper shed. The accumulated wastes are sold to the GPCB approved recyclers.

**3. Vanadium Pentoxide and Resin**

Vanadium Pentoxide and Resin keeping in tightly closed container, stored in a cool, dry, ventilated & protected area under covered shed to avoid physical damage. These are sent to a Common Treatment Stabilization Disposal Facilities Saurashtra Enviro Private Project Limited, Bhachau.

**4. Cellulose Waste (Bio-degradable Waste)**

The Cellulose wastes are stored & protected at proper shed. Our industry generates cellulose waste in a minor quantity, which is biodegradable (Capable of decomposing rapidly under natural conditions). The Alkali Cellulose and Solid Viscose wastes are obtained from Viscose section of the plant.

**5. E-waste**

The E-Waste is kept in store room of IT Department and E-waste is being sold to the GPCB approved vendor.

**6. Oily Cotton Waste**

This waste is stored at Bardana Yard & being sent to CTSDF Site of Saurashtra Enviro Private Projects Limited, Bhachau Dist. Kutch.

**7. Lead Acid Batteries**

Lead Scrap is stored at Bardana Yard and the accumulated wastes are sold to the GPCB approved recyclers.

# ANNEXURE IX

## FLY-ASH DISPOSAL DETAILS

ADITYA BIRLA



GRASIM/ENV/ /2020  
23<sup>rd</sup> of April 2020

To *f. 31*  
**The Advisor**  
Ministry of Environment, Forests & Climate Change,  
Indira Paryavaran Bhawan, Jor Bagh Road,  
**New Delhi – 110 003**

Dear Sir,

Sub.: **Submission of Fly Ash Compliance Report for the year 2019 - 20**

Ref.: **Fly Ash MoEF Notifications dated 14<sup>th</sup> Sept - 1999, 27<sup>th</sup> Aug – 2003, 3<sup>rd</sup> Nov – 2009 & 25<sup>th</sup> January 2016**

We are enclosing herewith Fly Ash Compliance Report of our Unit for the financial year 2019 – 20 along with duly filled Proforma and its annexures for your kind reference and record.

Thanking you,  
Yours faithfully,

**For Grasim Industries Limited; Unit - Indian Rayon**

*Rathore*  
**Shailendra Rathore**  
**Deputy General Manager,**  
**Environment & sustainability**

Encl.: As above

CC: The Member Secretary *f. 32* - By Regd.

Central Pollution Control Board,  
Parivesh Bhawan, CBD-cum-Office Complex  
East Arjun Nagar, **Delhi – 110 032**

CC: The Member Secretary *f. 33* - By Regd.

Gujarat Pollution Control Board, Paryavaran Bhavan  
Sector-10/A, **Gandhinagar – 382 043**

CC: Regional Office West Zone *f. 34* - By Regd.

Ministry of Environment & Forests, Govt. of India,  
Kendriya Paryavaran Bhavan, Link Road No.3, E-5,  
Ravi Shankar Nagar, **Bhopal – 462 016**

CC: The Regional Officer *f. 35* - By Regd.

Gujarat Pollution Control Board  
Pankaj Vikas Bunglow, Opposite Saint Annes Church  
Station Road, **Junagadh – 362 001**

CC: Central Pollution Control Board *f. 36* - By Regd.

Zonal Office (West), Parivesh Bhawan,  
Atmajyoti Ashram Rd, Opp. VMC Ward Office No. 10,  
Subhanpura, **Vadodara - 390023**

**Raysil**  
The fashion yarn

**Grasim Industries Limited**  
**Unit – Indian Rayon**

Veraval 362266, Dist. Gir Somnath, Gujarat, India  
T : +91 2876 248401/ 245711

**Fly Ash MoEF Notifications 14<sup>th</sup> Sept - 1999, 27<sup>th</sup> Aug – 2003, 3<sup>rd</sup> Nov – 2009  
& 25<sup>th</sup> January 2016  
Statutory Compliance Report for the Period 01.04.2019 to 31.03.2020**

S. No	Item					
1	Name of the Thermal Power Station	<b>Grasim Industries Limited. Unit - Indian Rayon</b>				
2	Full Address including pin Code	Veraval - 362266 District-Gir-Somnath Gujarat				
3	E-mail address	s.rathore@adityabirla.com				
4	Name of the Nodal officer (Not below the rank of the DGM/ Dy. CE/or equivalent dealing with ash management and designation)	Harendra Singh Dagur Unit Head				
5	Telephone Number	02876-248034				
6	Fax No	-				
7	Capacity of the Thermal Power station (MW)	34.5				
8	Details of Number of Units and capacity of each Unit	Two 1x16.5 MW & 1x18 MW				
9	Coal/ Lignite Consumption for the Year 2019 – 20 in (Million Tonnes)	(0.27 Million Tonnes) 273471 MT				
<b>A Ash Generation in 2019 - 20 (in tonnes)</b>						
10	Bottom Ash (Dry Basis)	7987				
11	Fly ash (Dry Basis)	32159				
	Total A (10 & 11)	40146				
<b>B Ash Utilized (in Tonnes)</b>						
12	Ash Pond Disposal	40146				
13	Ash Yard	--				
14	Ash Dump	--				
	Total B (12 & 14)	40146				
<b>C Ash utilization in 2019 - 20 (in tonnes)</b>						
	Purpose for which ash is utilized	Target (as per action plan)	From ESP Dry ash	From Pond ash	From Bottom Ash	Total
15	Ash Pond dyke raising	-	-	-	-	-
16	Cement Industry	35000	32159	-	-	32159
17	Land fill	8000			7987	7987
18	Own Brick unit	-	-	-	-	-
19	Outside brick units other than Brick kilns	-	-	-	-	-
20	Brick kilns	-	-	-	-	-
21	Inhouse ash-based products (other than bricks)	-	-	-	-	-
22	Ash based products (outside)	-	-	-	-	-
23	Road & fly over Embankments	-	-	-	-	-
24	Back filling of mines	-	-	-	-	-
25	Agriculture	-	-	-	-	-
26	Ready Mix concrete	-	-	-	-	-
27	Asbestos	-	-	-	-	-
28	Exports	-	-	-	-	-
29	Others (Please specify) to Municipality for Land filling	-	-	-	-	-
	<b>Total C (15 to 29)</b>	<b>43000</b>	<b>32159</b>	<b>-</b>	<b>7987</b>	<b>40146</b>

<b>D Reasons for variations from targets</b>				
1	We have ingress into horizon of Sustainable Development Principle in line with Aditya Birla Group Sustainable Model with three accentuated components viz. Responsible Stewardship, Stakeholder Engagement and Future Proofing. In pursuit to Responsible Stewardship, Aditya Birla Group Sustainable Framework Documents prowess and empowering our unit to surface our operations and compliance level to meet international standards. It entails in improved and robust Fly Ash compliance, where fly ash is being reused in Cement Making and we almost eliminate the Land Fill as mode of disposal for Fly Ash. Moreover, consumption of good quality coal / Lignite has helped us achieve the target for Ash Generation for 2019 - 20 i.e. 40146 MT.			
2	This will ensure complete utilization of fly ash.			
<b>E Remedial Measures taken</b>				
1	We are complying guidelines of Fly Ash Notification.			
<b>F Quantity in ash Pond</b>				
30	Estimated Quantity of Pond ash available in active ash pond as on 31.03.2020 (MT)	No availability of pond ash in active ash pond.  However, Silo accounts 392.09 MT of fly ash as storage during end of FY'20 and it is to be sent for Cement Making. In line with Fly Ash Management Rules, 2016, inventory of fly ash is being uploaded in our Unit Website. Link is provided below:  <a href="http://www.adityabirlanuvo.com/Environment_Clearance.php">http://www.adityabirlanuvo.com/Environment_Clearance.php</a> <a href="http://www.grasim.com/sustainability.aspx">http://www.grasim.com/sustainability.aspx</a>		
<b>G Ash pond details</b>				
		Forest areas	Non forest area	Total
31	Total area earmarked for ash pond (ha)	NA		
32	Ash ponds already filled up & reclaimed (ha)	NA		
33	Ash ponds already filled up, but, yet to be reclaimed (ha)	NA		
34	Ash pond in use (ha)(Active Ash pond)	NA		
35	Area earmarked for ash pond but ash pond yet to be constructed ha	NA		
<b>H Dry ash Collection facilities</b>				
36	Dry Fly ash collection facility available	Yes/No	Since beginning four units	
37	If yes, for how many units Dry fly ash Storage		1200 MT	
38	Daily ash generation TPD	Capacity of Storage as on 31.03.2020 (Tonnes)	Capacity Proposed if any in 2020 - 2021 (Tonnes)	
	85 - 95 MT	75000	-	
<b>I Capital Expenditure (Rs. In Lacs)</b>				
	Item	Expenditure in 2019 - 20 (Rs. In Lacs)	Budgetary provision in 2020 - 2021 (Rs. In Lacs)	
39	Dry fly ash / Bottom Ash collection, Storage & Transportation	5.00	10.00	
40				
<b>J Dispute Settlement committee</b>				

41	No of meetings held in 2019 – 20 (If no meetings held reason for the same)	We are providing 100% fly ash to cement plant of our group units and other cement units since December- 2015 and the trend continued for the year 2019 - 20.		
<b>K Provision regarding supply to the brick kilns</b>				
42	Whether thermal power station is maintaining month wise records of ash made available to each brick kiln	We are providing 100% fly ash to cement plant of our group units and other cement units.		
43	If yes how many brick kilns have been supplied with fly ash	-		
<b>L Mode of Transport for ash (Strike out whichever not applicable)</b>				
44	Fly Ash	• Special container truck Note: Bulker Trucks are used to transfer ash		
45	Wet ash			
<b>M Promotional Measures</b>				
		No of meetings, workshops and exhibitions held during 2018 - 19	Amount spent in 2019 - 20 (Rs in Lakhs)	Out lay for 2020 - 21 (Rs in Lakhs)
46	Exhibition	-	-	-
47	Seminars	-	-	-
48	Workshops	-	-	-
49	Advertisements in New Papers	-	-	-
50	Advertisements in TV	-	-	-
51	Advertisements in Radio	-	-	-
52	Other (please specify)	Five nos. of meetings were held with Ultratech Cement, Ambuja Cement & Gujarat Sidhee Cement.	-	-
	Total M (46 to 52)	-	-	-
<b>N Administrative measures taken</b>				
S. No.	Administrative measures taken	Outcome		
53	Meeting with brick Manufacture	As & When Required		
54	Meeting with state government /agencies	Quarterly		
55	Any other measure (please specify)	-		

Signature

Name: Shailendra Rathore

Designation: Deputy General Manager, Environment & Sustainability

Date: 23.04.2020

### Annexure-I

Name of Brick Units/Brick Kiln to which fly ash supplied between 01.04.2019 – 31.03.2020

S. No	Name of units and address	Telephone No	Quantity supplied (Tonnes)
A. Brick Kilns			
1	-	-	-
	Sub Total A:		
B. Brick units			
1	-	-	-
	-	-	-
	Sub Total B:	-	-
	Grand Total:	-	-

### Annexure-II

Name of Cement Units to which fly ash supplied between 01.04.2019 – 31.03.2020

S. No	Name of units and address	Telephone No	Quantity Supplied (Tonnes)
1	M/s. Ultra Tech Cement Limited Gujarat Cement works, P.O Kovaya –365541, Tal: Rajula, Amerli Dist (Gujarat)	02794283081	19388.25
2	M/s. Ambuja Cement Limited P.O Ambujanagar Tal: Kodinar, Dist. Gir Somnath, KODINAR – 362715 (Gujarat)	18002091005	11406.67
3	M/s. Gujarat Sidhee Cement Limited Sidheegram, PO - Prashnavada BO., Via Sutrapada SO (Taluka), Gir Somnath Dist.	0285286534	1363.8

### Annexure-III

Name of Road Projects to which fly ash supplied between 01.04.2019 – 31.03.2020

S. No	Name of Road Projects	Telephone No	Quantity supplied (Tonnes)
1	-	-	-
	Total:	-	-

### Annexure-IV

Name of Hydropower Projects to which fly ash supplied between 01.04.2019 – 31.03.2020

S. No	Name of Hydro power Projects	Quantity supplied (Tonnes)
1	-	-
	Total:	-

### Annexure-V

Name of abandoned mines where fly ash is back filled between 01.04.2019 – 31.03.2020

S. No	Name of the mines	Opencast /underground	Quantity utilized for back filling (Tonnes)
1	-	-	-
	Total:	-	-

### Annexure-VI

Country to which fly was exported in between 01.04.2019 – 31.03.2020

S. No	Name of the country	Quantity (Tonnes)
1	-	-
	Total:	-

Guidelines for filling up the Compliance Report

S. No	Item	How to fill up
1	3	If there is no e-mail address the entry should be nil
2	8	No of units should be represented as follows 2x100 MW, 1x500 MW, 3x110 MW
3	c	Target: The figures should be as indicated to the Ministry Originally. No change should be made. Put (-) if the utilization is nil
4	17	Land fill, should not include ash ponds disposal
5	24	Back filling of mines, Applicable only if the concerned authority as fill for back filling identifies the mine. This should not include ash slurry pumped into cavities of quarries which have been converted into ash pond by raising bands.
6		Total B & Total C should add up to Total A
7	D & E	If required use additional Sheet
8	28	The figures should be in million tonnes, cubic meters should not be used. The figures should not include ash pond area already reclaimed
9	29	Total area as per land use plan approved by competent authority. Forest area is the Forestland as per Forest (Conservation) Act, which was acquired for dumping ash/ash pond. Area should be hectares and not any other unit.
10	39 & 40	Maintenance expenditure should not be included
11		Provide information wherever applicable as per annexure

**Note:**

1 The period 2018-2019 means period between 01.04.2019 to 31.03.2020

2. The information on brick kilns/units should be annual basis for each unit. Month wise figures will not be accepted.

**PURCHASE ORDER**  
(Domestic PO)



Page : 1/5

Format No : GCF:MATL:7.4.1.1.1-3

**Company**

ULTRATECH CEMENT LIMITED  
(UNIT: GUJARAT CEMENT WORKS)  
P.O.: KOVAYA;TAL:RAJULA CITY  
DIST: AMRELI (GUJARAT) - 365541  
INDIA

Phone : 02794-283624/075/081

Fax : 02794-283087

Contact: MANISH AGRAWAL

Email :manishkumar.a@adityabirla.com

**Vendor Code** : 407194  
GRASIM INDUSTRIES LIMITED  
UNIT : INDIAN RAYON,  
VERAVAL-JUNAGADH ROAD  
VERAVAL - 362266  
INDIA  
Phone : 02876-248501  
Fax :  
Email : ajit.m@adityabirla.com  
Mobile : 9824062617  
Contact : MR.AJIT MAHESHWARI

**Purchase Order** :GW/GWA/7642003293

**Document Date** : 04.12.2018

**Validity Period** : 01.12.2018-30.11.2019

Dear Sirs,

We are pleased to place our order on you for the following materials /services subject to terms & conditions and instructions specified here.

Item	Indent No Date	Material Code Material Description	Item Qty	UoM	Item Price INR	Disnt %	Net Value (INR) (Inc Dis & Oth)
10	50556001 04.12.2018	FLYASHDRYE FLYASH DRY	25000.000	MT	230.00		5750000.00
20	50556001 04.12.2018	FLYASHDRYE FLYASH DRY	5000.000	MT	230.00		1150000.00
Total value of PO in INR(Excluding Duties and Taxes ) :							6,900,000.00

**Rupees Sixty Nine Lakhs**

**TERMS & CONDITIONS**

Central GST	:	2.5 %
State GST	:	2.5 %
Freight	:	EXTRA
Packing & Forwarding	:	NIL
Handling Charges	:	NIL
Incoterms	:	EXW / VERAVAL
Dispatch Mode	:	By Road
Delivery Address	:	ULTRATECH CEMENT LIMITED UNIT: GUJARAT CEMENT WORKS P.O.: KOVAYA;TAL:RAJULA CITY DIST: AMRELI (GUJARAT) - 365541
Delivery Period	:	30.11.2019
Packing Instruction	:	
Insurance	:	Our Account
Payment Terms	:	Within 7 Days After Receipt Of Material

**GST DETAILS**

GSTIN No : 24AAACL6442L1ZG

Regd Off : Ahura Centre , 2nd Floor , B Wing , Mahakali Caves Road , Andheri(east) , Mumbai-400093. Cin :L26940mh2000plc128420



Income Tax PAN Number : AAACL6442L  
 Vendor's PAN No : AAACG4464B  
 Vendor's GSTIN No : 24AAACG4464B5Z0  
 Terms & Conditions: -

1. MATERIAL SPECIFICATIONS: The scope of supply covers supply of Fly ash on " As is where basis " in Bowser from All Units by M/s. Modi Freight Carriers (Line Item 10) & M/s Krishna Roadlines (Line Item 20).

2. QUANTITY: 30,000 MTs  
 Allotted 25,000 MT for Line item 10 and Allotted 5,000 MT for Line item 20.

The above mentioned quantity is our tentative requirement and should not be considered as firm committed order quantity. The order shall be continued only and only if you supply the materials of quality as per specifications mentioned, on regular basis. In case of your failure to supply the material as per specifications given, the order shall be cancelled immediately. In such case of cancellation of order, the unexecuted/balance quantity shall be considered as cancelled. No claim from you shall be entertained by us on any ground in case of cancellation of order.

3. Rate: You will be paid @ Rs.230/- PMT towards administrative charges & material cost from all units - UTCL GCW Quota.

4. GST extra as applicable.  
 5. Inspection at GCW Stores.  
 6. Delivery: As and when required

7. Weighment: Weighment will be done at your Weighbridge. Your weighment will be final for billing/invoicing purpose.

8. Transportation: We will arrange transportation through our authorized transporter in Bowser from All Units by M/s. Modi Freight Carriers (Line Item 10) & M/s Krishna Roadlines (Line Item 20).

9. BILLING & PAYMENT: You will supply the material on a continuous basis till validity period and order quantity is not completed. You shall raise your invoice on monthly basis, based on the material received by us up to cut off date. Please ensure that the GST payment should not be crossed next month except for maximum one day. For e.g. if your invoicing cycle is every 7 days, the fourth bill (invoice) should be made for supply up to 29th /30th and invoice with GST should be made by 30th/31st of every month so there should not be revenue loss to the Govt. You will have raised your bills on monthly basis and 100% payment will be released within 07 days on submission of the bills.

#### 10. VALIDITY:

This order shall remain valid up to 30.11.2019, subject to termination by UltraTech Cement Ltd.(UltraTech) on 15 (Fifteen) days' notice. After expiry of the contract, it may be renewed again on the terms mutually agreed upon then. However, in case of non-performance / violation of any terms and conditions of this contract, then contract can be cancelled immediately without any notice.

11. TERMINATION: This purchase order may be terminated by either party giving prior notice to the other in writing without assigning any reasons. However, if at any time during the currency of the contract, we observe repeated defaults, unsatisfactory performance, breach of any terms and conditions of the contract or your non-compliance with any statutory requirements or any changes in production process, we reserve the right to terminate the contract forthwith and such termination shall be effective immediately on our issuing letter of the termination thereof. Such termination shall not create any claim for damages or any liabilities for ourselves.

Regd Off : Ahura Centre , 2nd Floor , B Wing , Mahakali Caves Road , Andheri(east) , Mumbai-400093. Cin :L26940mh2000plc128420



Termination of contract shall be without prejudice to the rights and obligations of either party prior to the termination.

12. FORCE MAJEURE: Neither party shall be responsible for any loss to the other party whereby they are unable to fulfill full or part of any terms and conditions in the order or prevented or delayed from fulfilling the conditions due to force majeure situations which shall include civil disturbances, floods, strikes fires, Government action, war, hostilities (whether declared or not), riots earthquakes and acts of Gods etc.

13. ENVIRONMENTAL OBLIGATIONS:

You shall ensure that the environmental laws applicable for transportation are abided. This includes:

- a) There should be no spillage of material during transit.
- b) The vehicle should be road worthy and comply with the pollution control requirements as shall be applicable.

13. ARBITRATION:

In case of any dispute arising due to difference of opinion in interpretation of any clause or terms and conditions or meaning of the word or language the decision of our Group Executive President (Manufacturing & Projects) shall be treated as final and binding on both parties.

14. JURISDICTION:

In case of any legal matters, the jurisdiction shall be Amreli Court.

15. GOVT. RULES & REGULATIONS:

You shall strictly follow all Government Rules and Regulations. We shall not be responsible for any violations of such provisions by you or your employees at any time. You shall keep us indemnified in this regard at all times.

16. Please return duplicate copy hereof duly signed in token of your acceptance. If we do not receive duplication copy with your confirmation within five days, we will consider that the terms and conditions are acceptable to you without any deviation.

Note: In Case the GST Credit is disallowed to buyer due to non-compliance of selling dealer, then the entire liability with interest and penalty will be recovered.

**ORDER ACCEPTANCE:**

You will provide order acceptance within 7 working days from date of receipt of Order by sending duplicate copy duly stamped and signed by you (i.e. scan by email / hard copy by mail), failing which the Order will be treated as accepted by you

**ACCIDENT/DAMAGES COMPENSATION :**

In case the accident involving the suppliers vehicle is caused due to negligence or otherwise either by the suppliers employee or by any workforce engaged by the supplier, then the supplier shall bear all costs incurred by UTCL for such incidents and UTCL shall proceed against the supplier for damages.

**PRODUCT HARMFUL EFFECTS:**

Along with the material supply you shall also provide information on harmful effects of product supplied by you on environment and safety aspects during handling.

**VAT CLAUSE:**

In case the VAT credit is disallowed to buyer due to non-compliance of selling dealer, then the entire liability with interest and penalty will be recovered from seller.

**CENVAT INVOICE CLAUSE:**

In case the Excise Invoice/Service Tax Invoice is not received by us within 6 months from the date of such invoice due to any reason being attributable on your (supplier/service provider) part, the excise duty or service tax charged in such invoice will not be paid to you. And in case, the advance payment is made to you including taxes on the basis of proforma invoice, then the tax collected by you on the proforma invoice shall be reimbursed to us.

**GST:**

You will raise the Tax Invoice in the format prescribed as per GST Laws along with prescribed documents for movements of goods and ensure to upload the required data timely in GSTR-1 and GSTR-3.

If GST is payable under reverse charge by UltraTech, then same should be mentioned on Invoice by you.

In case of any advance payment, you shall raise the necessary document and ensure the compliances as required under GST Law.

In case of any loss to UltraTech on account of non-compliance from your end e.g. incorrect declaration, failure/delay in deposit, failure/delay in upload of transaction, confiscation of goods by Govt. due to improper documents during movement etc. the same shall be recovered from you along with interest/penalty, if any.

Where ever applicable, UTCL shall deduct tax at source under the GST Laws at the rates prescribed.

On the implementation of GST, you will pass on the direct/indirect benefits accruing to you. This would include benefit pertaining to input tax, reduction in your cost of input material due to GST, reduction in effective tax rates etc.

**TEST CERTIFICATE:**

You will ensure that material is accompanied by all relevant certificate, failing which the material may be liable for rejection

**CONFIDENTIALITY TERMS: -**

"Confidential Information" means and includes, all information of any nature ( including without limitation, documents, drawings, models, apparatus, sketches, designs, specifications and list furnished to the Recipient by the Disclosing Party and any tangible embodiments of the Disclosing Party's Confidentiality Information created by the Recipient, which a Party may have or acquire before or after the Purchase Order Date and during the contractual period, however conveyed (whether in writing, verbally, in a machine-readable format, or by any other means, and whether directly or indirectly), which relates to the business, products, price, developments, personnel, suppliers and customers of a Party and its Affiliates (whether or not designated as Confidential Information by the disclosing Party), and all information designated as confidential or which ought reasonably to be considered confidential;

Confidentiality under the clause shall be survived upon the expiry or termination of the Purchase Order. In case of violation of confidentiality agreement, Purchase Order shall be terminated at the option of the Disclosing Party. Recipient shall indemnify the Disclosing Party for the liquidated damages caused to the Disclosing Party, without prejudice to the right to claim penalty before the competent court.

We require order acknowledgement immediately.

Regd Off : Ahura Centre , 2nd Floor , B Wing , Mahakali Caves Road , Andheri(east) , Mumbai-400093. Cin :L26940mh2000plc128420



For **ULTRATECH CEMENT LIMITED**  
(UNIT: GUJARAT CEMENT WORKS)

YOGESH KUMAR BHATT  
SR. VICE PRESIDENT(F&C)

GOPIKA P. TIWARI  
COO & EXECUTIVE PRESIDENT

**Ambuja Cement**      **Ambuja Cements Limited**  
( Unit: AMBUJANAGAR )

**Address** : P. O. Ambujanagar  
Tal. Kodinar, Dist. Gir Somnath  
KODINAR , PIN :362715,

**GSTN No.** : 24AAACG0569P1ZD  
**PAN No** : AAACG0569P

**Cont. Person:**  
**Tel. No.** :  
**Fax No.** :  
**E-Mail** :

**Vendor Code :** 910032702  
**GRASIM INDUSTRIES LIMITED**UNIT INDIAN RAYON,  
JUNAGADH VERNAL ROAD  
VERAVAL,,PIN:362266  
Gujarat,India

**GSTN No:** 24AAACG4464B5Z0  
**PAN No :** AAACG4464B  
**Tel No :** 02876-248653  
**FAX No :**  
**E-Mail :** ajit.m@adityabirla.com  
**Contact:** AJIT MAHESHWARI

**Purchase Order**

**SAP PO No/Plant** 2800784689/NE02  
**PO Date :** 31.12.2019  
**PO Type :** REV (Revenue)  
**Issuing Authority :** West Cist - Raw Mat  
**Vendor's Ref/Qtn No :**

**Created by:** MAYUR PANDYA  
**Please Quote the GSTN Number, PO No., Line Item No, Name of the Works/Unit and the Contact Person in all correspondences (including the Delivery Challan/Invoice ) Please provide copy of valid MSMED certificate along with the copy of invoice and other documents.**

With reference to your quotation and subsequent negotiations, we are pleased to place this Purchase Order on you for the supply of following items/services subject to terms and conditions stated below and printed overleaf/attached with this purchase order

PO Item No / PR No / Dept	Item Code	Description & Specification	Delivery Date	Taxes/Duties Value	Qty	UOM	Price in INR	Total Discount	Amount in INR
00001	1080000000041	FLY ASH - DRY HSN Code:26219000 FLY ASH - DRY	31.12.2020	Central GST 2.5% State GST 2.5%	5,000.000	TO	250.00 PER 1 TO	INR 0.00	1,250,000.00

Gross Price after Disc in INR 1,250,000.00

**Total in INR** Twelve Lakh Fifty Thousand Only 1,250,000.00

**Header Information :**

As per agreement 2760001924

Weighment considered as per Ambuja weighbridge for transportation charges and for Material party's challin weight.

**Important Terms & Conditions :**

Please submit Tax Invoice on supply of Material/Service with prerequisite statutory information within the stipulated time as mentioned in the relevant provisions of The Central Goods and Services Tax Act, 2017 and allied Acts and Rules made theirunder.In case the invoice is issued beyond the stipulated time as per GST Act, then the Company will not be liable to reimburse any such taxes and duties paid under GST Act. Further, the Supplier of Goods/ Services indemnifies the Company from and against any loss/extra cost incurred by the Company on account of default by the Supplier or any of its third party in any statutory compliance of the GST Act.

Please quote the purchase order number & PO Line Item No in all your challan, bills & correspondence with us.

Please provide copy of valid MSMED certificate along with the copy of invoice and other documents.

**Data protection clause :**

Any Confidential Information by us/Information shared with Ambuja Cements Limited by you shall always be governed by the Privacy Policy of Ambuja Cements

**Ambuja Cement****Ambuja Cements Limited**  
( Unit: AMBUJANAGAR )Address : P. O. Ambujanagar  
Tal. Kodinar, Dist. Gir Somnath  
KODINAR , PIN :362715,  
Gujarat , IndiaVendor Code : 910032702  
GRASIM INDUSTRIES LIMITED UNIT INDIAN RAYON,  
JUNAGADH VERNAL ROAD  
,  
VERAVAL,, PIN:362266  
Gujarat, India**Purchase Order**SAP PO No./Plant 2800784689/NE02  
PO Date : 31.12.2019  
PO Type : REV(Revenue)  
Issuing Authority : West Clst - Raw Mat  
Vendor's Ref/Qtn No :

Limited as available on our website[amended from time to time, please visit the website for regular updates]and Ambuja Cements Limited shall have the right to its usage in a manner specifically provided under the Privacy Policy and as consented by you as a part of this Agreement/Contract.

**Code of Business Conduct for Suppliers - Our Expectations of Suppliers :**

Our Company is committed to meeting high social, environmental, and OH&S standards and we expect our Suppliers to do likewise. Suppliers must comply with local and national laws and regulations. Furthermore, we expect Suppliers to adhere to the following standards (Standards are based on the United Nations Global Compact principles).

**Health & Safety and Security****Health and Safety**

Suppliers shall provide a safe and healthy work place for their employees and contractors. Suppliers must be compliant with local and national laws and regulations on occupational Health and Safety (H&S), and have the required permits, licenses and permissions granted by local and national authorities. Suppliers must have documented health and safety policies and/or procedures in place together with appropriate safety infrastructure and equipment. Suppliers identified as being moderate to-high risk for H&S shall take action and bring proof of continuous improvement towards a recognized H&S management system in place. When on our sites, Suppliers must comply fully with our applicable policies and directives.

**Security**

Suppliers shall ensure that all necessary security arrangements are in place to protect their employees, contractors performing work at their sites, as well as their assets, especially in areas of conflict. In particular, suppliers are expected to have an actionable crisis management policy in place to be able to respond to emergencies timely and efficiently.

**Working Conditions**

Suppliers shall uphold fair and decent working conditions. Workers shall be paid at least the local industry rate or minimum wage stipulated by national law, whichever is higher, and benefit from social security schemes according to national legal standards. Should there be no legal minimum wage in the country of operation, fair and decent conditions imply suppliers shall pay their workers considering the general level of wages in the country, the cost of living, social security benefits and the relative living standards.

**Freedom of Association and Non-retaliation**

Suppliers shall not interfere with worker's freedom of association. Employee representatives shall not be subject to discrimination or termination of contract in retaliation for exercising employee rights, submitting grievances, participating in union activities, or reporting suspected legal violations.

**Forced Labor**

Suppliers shall not use work that is performed involuntarily under threat of penalty, including forced overtime, human trafficking, debt bondage, forced prison labor, slavery or servitude. Suppliers shall not withhold migrants' workers' identification documents.

**Child Labor**

Suppliers shall not employ children at an age where education is still compulsory. Children under the age of 18 or below the legal minimum age, shall not be employed.

**Ambuja  
Cement****Ambuja Cements Limited**  
( Unit: AMBUJANAGAR )Address : P. O. Ambujanagar  
Tal. Kodinar, Dist. Gir Somnath  
KODINAR , PIN :362715,  
Gujarat , IndiaVendor Code : 910032702  
GRASIM INDUSTRIES LIMITED UNIT INDIAN RAYON,  
JUNAGADH VERNAL ROAD  
VERAVAL,, PIN:362266  
Gujarat, India**Purchase Order**SAP PO No./Plant 2800784689/NE02  
PO Date : 31.12.2019  
PO Type : REV(Revenue)  
Issuing Authority : West Clst - Raw Mat  
Vendor's Ref/Qtn No :**Non-discrimination**

Employment-related decisions shall be based on relevant and objective criteria. Suppliers shall make no distinctions on grounds including, but not limited to: age, disability, gender, sexual orientation, political or other opinion, ethnic or social origin or religion. Employment-related decisions include, but are not limited to: hiring, promotion, lay-off and relocation of workers, training and skills development, health and safety, any policy related to working conditions like working hours and remuneration.

**Environmental Regulatory Compliance**

Suppliers shall respect and comply with environmental regulatory requirements on all levels (local, national and international). In all their activities, they shall be covered by required environmental permits and licenses, and support a precautionary approach to environmental challenges.

**Management of Environmental Impacts**

Suppliers shall systematically manage their environmental impacts with respect, but not limited to: energy, water, waste, chemicals, air pollution and biodiversity and set objectives and targets to reduce such impacts. Suppliers identified as having a high environmental impact shall take action and demonstrate proof of continuous improvement towards having a recognized Environmental Management System in place.

**Bribery and Corruption**

Suppliers shall comply with all applicable anti-corruption laws and regulations and, to this effect, have a zero tolerance policy towards any form of bribery, corruption, extortion and embezzlement. In particular, Suppliers shall not pay bribes or make any other inducement (including kickbacks, facilitation payments, excessive gifts and hospitality, grants or donations) in relation to their business dealings with customers and public officials. Suppliers are expected to perform all business dealings transparently and these dealings shall be accurately reflected on their business books and records. Suppliers shall not hire third parties do something they are not allowed to do themselves, like paying bribes.

**Competition Laws**

Suppliers shall comply with all applicable competition laws in the performance of their contract with our Company and, to this effect, have a zero tolerance policy towards any form of violation of such rules. Suppliers shall not, in particular, attempt to introduce in their contractual agreements with our Company, any conditions that would be in breach of competition laws. Suppliers are also expected to take all necessary precautions in order to avoid the disclosure of any commercially sensitive information about their supply relationship with our Company to third parties and vice versa.

<b>Ambuja Cement</b> <b>Ambuja Cements Limited</b> ( Unit: AMBUJANAGAR ) <b>Address :</b> P. O. Ambujanagar Tal. Kodinar, Dist. Gir Somnath KODINAR , PIN :362715, Gujarat , India	<b>Vendor Code :</b> 910032702 GRASIM INDUSTRIES LIMITED UNIT INDIAN RAYON, JUNAGADH VERNAL ROAD VERAVAL,, PIN:362266 Gujarat, India	<b>Purchase Order</b> SAP PO No/Plant 2800784689/NE02 PO Date : 31.12.2019 PO Type : REV (Revenue) Issuing Authority : West Clst - Raw Mat Vendor's Ref/Qtn No :
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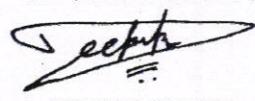
<b>Delivery At:</b> Ambuja Cements Limited, Unit : ( Unit: AMBUJANAGAR ), P. O. Ambujanagar, Tal. Kodinar, Dist. Gir Somnath, KODINAR, PIN:362715, Gujarat, India <b>Incoterms:</b> EXW Veraval <b>Transporter:</b> RAJMOTI ROAD MOVERS, LANKI HEAD OFFICE-DEVLI RD,, KODINAR, Dist: JUNAGADH, PIN:362720, Gujarat, India, PH:9228809282 FAX: E-Mail:rajmoti@yahoo.com	<b>Invoice Instructions :</b> Invoice to be prepared in triplicate in the name of Ambuja Cements Limited-Unit ( Unit: AMBUJANAGAR ) <b>Address :</b> P. O. Ambujanagar, Tal. Kodinar, Dist. Gir Somnath, KODINAR, PIN:362715, Gujarat, India <b>The original Invoice along with copies should be          sent to Mail room /Admin incharge as per address          mentioned above. For any further information in          invoice processing, please write to email -          ptp@oneindiabsc.com or call to tollfree no.          18001037143.</b>	<b>Payment Terms:</b> EN54 : 100 % payment within 15 days <b>Payment Mode:</b>
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**Ethical View Reporting Directive:**  
 In order to further improve upon our impeccable Corporate Governance record, ACL Board has instituted a Ethical View Reporting Policy. In case you come across any unethical behavior of our employees ,kindly contact us at:: Email - acl@ethicalview.com or Toll free helpline - 1800 209 1005 or Fax - +91 (22) 6645 9796 or Post Box No. 25, HO Pune - 411001. or directly to the chairman of the ACL Committee at at the Company's Corporate Office filing an online report at: https://integrity.lafargeholcim.com. Information so received will be kept strictly confidential

**Anti Bribery Corruption Directive:**  
 Ambuja Cements Limited (ACL) desires to engage in a business relationship with suppliers and / or, your sub-contractors / agents that are committed to Sustainable Development. ACL follows a Code of Conduct that demands the highest standards of moral and ethical behaviour in its business dealings. Our intent is to partner with suppliers and / or, your sub-contractors / agents, who have not only set for themselves high standards in sustainability, but have specifically targeted avoidance of bribery and corruption by following an Ethical Code of conduct.

**Bribery and Corruption:**  
 Suppliers and / or, your sub-contractors/agents shall conduct their business ethically and shall NOT subscribe to bribery or corruption in any form. They shall not either directly or indirectly, or request, agree to receive or accept any undue pecuniary or other advantage for the purpose of obtaining, retaining, directing or securing any commercial, contractual, regulatory or personal advantage. It includes any financial or other advantage given or requested for the improper performance of a business activity.

For Ambuja Cements Limited  
 Unit ( Unit: AMBUJANAGAR )



Authorised Signatory  
 (DEEPAK BINDAL-General Manager)

This is an electronically signed document and does not require any physical signature

## PURCHASE ORDER ACCEPTANCE LETTER

Your Ref.: 2800784689/NE02/912e000837

To,  
Purchase Department  
Ambuja Cements Limited  
AMBUJANAGAR  
P. O. Ambujanagar  
Tal. Kodinar, Dist. Gir Somnath  
KODINAR PIN : 362715  
Gujarat ,IN

Sub: Acknowledgement & acceptance of purchase order number 2800784689, dated 31.12.2019.

With reference to our contract, we acknowledge the receipt of Purchase Order No 2800784689, dated 31.12.2019 from M/sAmbuja Cements Limited, AMBUJANAGAR, P. O. Ambujanagar, Tal. Kodinar, Dist. Gir Somnath, KODINAR-362715, IN for the supply of material / providing services.

We have gone through the purchase order rates and terms & conditions, and we accept the same for execution.

We are sending this letter, duly signed with our seal towards acknowledging the receipt and acceptance of your purchase order on us. We will be executing this purchase order in its totality as per all terms & conditions mentioned in it.

Authorized Signatory

M/s.GRASIM INDUSTRIES LIMITED

Seal:

Date:

Sent to:

Ambuja Cements Limited  
AMBUJANAGAR, P. O. Ambujanagar, Tal. Kodinar, Dist. Gir Somnath, KODINAR-362715, IN

Note: Non submission of this Order Acceptance Letter in time will adversely affect your evaluation ratings.

# GUJARAT SIDHEE CEMENT LIMITED SIDHEEGRAM.

Veraval Kodinar Highway 362 276

Annual Rate Contract

**PURCHASE ORDER**

Phone : 02876-268200

Fax : 02876-268540

CIN NO : L26940GJ1973PLC002245 Website : www.mehtagroup.com, E-mail : gscd\_snp@mehtagroup.com

GRASIM INDUSTRIES LIMITED UNIT INDIAN RAYON INDIAN RAYON COMPOUND JUNAGADH VERAVAL HIGHWAY VERAVAL- 362265 GUJARAT INDIA	CST : TIN : GST:24AAACG4464B5Z0  Qtn No:	Purchase Order No : <b>SGPO0015001920 ~ REVENUE</b> Date : <b>23 Nov 2019</b> Shipped to : GUJARAT SIDHEE CEMENT LIMITED, GUJARAT SIDHEE CEMENT LIMITED, Reg. Offi.: Off Veraval Kodinar Highway, PO: Prashnavada BO, Via Sutrapada SO, SIDHEEGRAM - 362275, GUJARAT.  CST NO: 24621300019 G.S.T TIN NO: 24121300019, GST No. : 24AAACG8057G1ZP Reg. No. / E.C.C No.: AAACG8057G-XM-001 PAN : AAACG8057G
Vendor Code : GI002		

Please supply the following materials in accordance with the terms and conditions specified below.

S.No	Item Code / Description	Qty	UOM	WH	Rate / Unit (INR)	Total
	AB0310 - 0050 - FLY ASH - FLY ASH (IRC) -	500.00	TON	OFLYASHYRD	250.00	125000.00
	(Quality : as per Sidhee Standard as attached. Other terms and conditions : 1. Transportation of Fly Ash through bulkers will be arrange by uS. 2. You will issue GST Bill / gate pass in duplicate along with each lorry. 3. Any other discount scheme declared by you is applicable from time to time, which you will communicate to us. 4. You will submit your invoice along with detailed statement. 5. All lorry should be load as per R.T.O (Guj.) gross passing weight only. 6. Weighment : As per GST Bill / Your weigh bridge shall be final. 7. We have authorized M/s. Vijaylaxmi Transport Co. on behalf of GSCL.					0.00

Please supply the following materials in accordance with the terms and conditions specified below.

SGPO0015001920

S.No	Item Code / Description	Qty	UOM	WH	Rate / Unit (INR)	Total
	CGST 2.5%					3125.00
	SGST 2.5%					3125.00
<b>Price Terms</b>	: EXWORKS VERAVAL				Total	131250.00
<b>Transporter</b>	: ANY RELIABLE TRANSPORT					
<b>Delivery Date</b>	: 31 Dec 2019	<b>Payment Terms</b>	: Cheque/RTGS - 100% Payment advance with order			
<b>Period</b>	:	<b>To</b>				
<b>Remarks</b>	: TRIAL ORDER					
<b>PR Requester</b>	: P R BARAD	<b>PR Department</b>	: Q.C/LABORATORY			

Authorized Signatory

## ANNEXURE X

# ONLINE CONTINUOUS EFFLUENT/EMISSION MEASURING SYSTEMS (OCEMS) AT THE INDUSTRY

## **Details of Online Continuous Effluent and Emission Monitoring System (OCEMS)**

### **Online Continuous Effluent Monitoring System:**

- CPCB approved, Online Continuous Effluent Monitoring System for pH, TSS, Temperature & Flow have been installed in their ETP and the online data has been transmitted to GPCB/CPCB server since 19.08.2015.
- They have installed TOC Meter for Treated Effluent.

### **Online Continuous Emission Monitoring System:**

- CPCB approved, Continuous Emission Monitoring System for Parameter Cl<sub>2</sub>, HCl were installed in Chlor-Alkali Plant and monitoring results has been transmitted to GPCB & CPCB server since 21.05.2015 and 12.08.2015 respectively.
- Online Continuous Emission Monitoring System for parameter Particulate matter (PM) has been installed in Power Plant and data is being transmitted to GPCB & CPCB server since 19.08.2015.
- Online Continuous Emission Monitoring System for parameter SO<sub>x</sub>& NO<sub>x</sub> has been installed and online data is being transmitted to CPCB and GPCB.

### **Online Continuous Ambient Air Quality Monitoring System:**

- Three Nos. of Online Continuous Ambient Air Quality Monitoring Systems. (Station 1: Rayon ADM Building on 05.12.2015, Station 2: Caustic ADM Building on 25.03.2016 and Station 3: Guest House on 20.03.2020)
- **Analysis Results of Environmental Parameters of Station 1 have been displayed on digital interface at Main Gate.**

### **OCEMS Compliance Protocol:**

- The industry has filled and submitted the Protocol for Online Continuous Effluents and Emissions Monitoring Systems on June 29th, 2018 to ensure compliance.
- The industry has availed the Remote Calibration facility as per the guidelines for both Effluents and Emissions Monitoring Systems.
- Remote check for all the 4 stacks (i.e. all 4 parameters- SO<sub>2</sub>, NO<sub>x</sub> (Boiler Stack 1 & 2) HCl & Cl<sub>2</sub>) is successfully performed by the CPCB, Delhi on 28.02.2019 & 01.03.2019.

## ANNEXURE XI

### DATA REGARDING FRESHWATER CONSUMPTION, POWER CONSUMPTION & EFFLUENT DISCHARGE

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : APRIL - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	2632	0	105	6194
2	1998	0	205	5590
3	1987	0	248	5288
4	1737	0	194	6248
5	1679	0	186	5673
6	1759	0	154	6773
7	1727	0	147	6272
8	1880	0	126	6213
9	1832	0	142	6320
10	1829	0	131	6414
11	1836	0	155	6369
12	2132	0	166	5797
13	1971	0	143	6517
14	2208	0	158	6748
15	2322	0	183	7329
16	2219	70	182	6016
17	3565	313	232	6490
18	3773	717	204	5765
19	3536	333	212	5481
20	3814	301	225	10153
21	4304	141	272	12000
22	3640	321	283	11888
23	3892	232	276	18303
24	3701	335	236	19376
25	3632	359	256	18153
26	3602	345	208	15469
27	3814	482	214	18231
28	4110	562	268	18548
29	3823	637	173	18089
30	3506	705	247	18126
<b>AVG.</b>	<b>2815</b>	<b>195</b>	<b>198</b>	<b>9861</b>

**Effluent Discharge in the Month April - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.04.2020	39610	76031
01.05.2020	115641	

**Total Water Consumption in the Month April - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
14358	8446	61656	<b>84460</b>

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : MAY - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	4109	621	243	16562
2	3783	506	226	16637
3	3496	539	198	14138
4	3852	272	291	16063
5	3684	217	160	16467
6	3561	172	181	16324
7	3557	170	157	16043
8	3386	99	113	15834
9	3483	99	105	15651
10	3198	113	157	13654
11	3340	92	105	16192
12	3645	120	163	16162
13	3684	112	132	16640
14	3914	160	152	16793
15	3868	162	116	16210
16	4102	154	194	16037
17	3597	130	181	14214
18	3751	288	229	16147
19	3891	378	280	16026
20	3535	370	284	16857
21	4074	344	259	16817
22	4085	348	219	16527
23	3602	268	194	16340
24	3606	206	198	14028
25	3647	199	284	16200
26	3611	252	219	16739
27	3695	208	301	17259
28	3736	252	285	17416
29	4015	245	151	17362
30	3943	223	116	17144
31	4305	219	162	15144
<b>AVG.</b>	<b>3734</b>	<b>243</b>	<b>195</b>	<b>16117</b>

**Effluent Discharge in the Month May - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.05.2020	115641	<b>79968</b>
04.05.2020	125109	
01.06.2020	70500	

**Total Water Consumption in the Month May - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
19678	11576	84501	<b>115755</b>

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : JUNE - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	4015	229	157	17307
2	3877	237	175	15620
3	3859	209	169	17264
4	4318	251	196	18894
5	4557	167	227	17964
6	4713	196	142	18684
7	4494	158	229	16826
8	4591	168	311	27334
9	4980	154	266	30941
10	5750	136	284	41636
11	7052	142	305	34016
12	7831	141	290	39735
13	8719	167	299	46068
14	8218	186	251	41517
15	9346	282	280	44780
16	9376	229	202	50448
17	8391	504	236	50215
18	9133	551	244	50054
19	8640	560	256	52996
20	8748	593	401	55203
21	9350	817	388	53079
22	9016	806	271	54741
23	8817	724	267	54446
24	9182	688	284	54127
25	9176	691	274	54331
26	9031	626	287	55085
27	8956	709	271	54348
28	8148	736	272	54349
29	8842	726	309	55740
30	8764	819	381	54043
<b>AVG.</b>	<b>7330</b>	<b>420</b>	<b>264</b>	<b>41060</b>

**Effluent Discharge in the Month June - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.06.2020	70500	118126
01.07.2020	88626	

**Total Water Consumption in the Month June - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
37381	21989	160520	<b>219890</b>

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : JULY - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	8879	745	323	55131
2	8806	731	332	56289
3	8787	695	280	55886
4	8381	851	554	54158
5	8154	880	710	50862
6	8093	934	684	51773
7	7937	755	649	52845
8	7927	762	547	54910
9	8428	767	347	52836
10	7632	782	568	53169
11	8061	816	644	52413
12	8217	725	388	50428
13	8462	732	383	52792
14	8588	782	280	52206
15	8310	694	286	52737
16	8033	751	268	51607
17	7735	749	202	53694
18	8394	793	213	53940
19	8325	741	209	50988
20	8520	765	302	56516
21	8001	808	289	53418
22	8035	740	354	54358
23	8074	729	295	54269
24	8191	803	311	54209
25	8254	810	238	52650
26	8048	860	274	53401
27	8247	829	291	51570
28	7861	843	294	53917
29	8043	798	324	51649
30	7387	896	482	52369
31	7916	898	327	54334
<b>AVG.</b>	<b>8185</b>	<b>789</b>	<b>376</b>	<b>53268</b>

**Effluent Discharge in the Month July - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.07.2020	88626	178030
01.08.2020	66656	

**Total Water Consumption in the Month July - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
43133	25373	185220	<b>253726</b>

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : AUGUST - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	7676	933	213	50562
2	7842	943	264	52175
3	8217	996	372	55372
4	6892	1068	864	51337
5	6907	1000	1030	52748
6	6686	970	477	53383
7	7613	1055	581	54506
8	8124	996	471	55107
9	7851	1009	335	53254
10	7964	1033	411	54444
11	8024	1040	332	54684
12	7752	1035	308	50167
13	7992	1044	466	54217
14	7560	1170	655	53232
15	7671	1181	628	49824
16	8034	1105	430	52840
17	7883	1332	867	53459
18	8189	1224	450	52803
19	8029	1222	457	53293
20	7977	1255	414	52081
21	7982	1285	594	52028
22	7855	1148	417	50648
23	7728	1017	800	50468
24	7771	1150	522	52587
25	8005	1218	450	52237
26	8136	1191	551	52960
27	8612	1178	609	52597
28	8195	1159	389	52318
29	8408	1315	768	52336
30	8054	1344	1078	51182
31	8404	1166	830	53593
<b>AVG.</b>	<b>7872</b>	<b>1122</b>	<b>549</b>	<b>52659</b>

**Effluent Discharge in the Month August - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.08.2020	66656	215734
01.09.2020	282390	

**Total Water Consumption in the Month August - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
41486	24403	178144	<b>244033</b>

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : SEPTEMBER - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	8417	1208	585	52710
2	8340	1163	599	51126
3	8558	1252	435	52951
4	8923	1216	563	53509
5	8339	1239	550	54230
6	8280	1241	588	53481
7	8833	1257	603	55314
8	8437	1170	535	56741
9	8342	1084	351	56906
10	8356	1051	361	57188
11	8106	1050	321	56476
12	8592	1063	359	56271
13	8290	1082	317	55749
14	8698	1162	332	57295
15	8742	1172	355	57858
16	9421	1462	407	58716
17	9287	1498	427	58738
18	9079	1504	402	60407
19	9140	1456	420	60084
20	8528	1386	618	58094
21	9160	1501	432	57596
22	9311	1520	452	58742
23	8969	1420	488	58429
24	9851	1593	463	60409
25	9420	1364	412	60086
26	9346	1417	459	62222
27	9588	1391	348	60939
28	9827	1521	406	62416
29	9699	1355	398	62931
30	9356	1403	422	66435
<b>AVG.</b>	<b>8908</b>	<b>1307</b>	<b>447</b>	<b>57802</b>

**Effluent Discharge in the Month September - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.09.2020	282390	182036
01.10.2020	464426	

**Total Water Consumption in the Month September - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
45430	26724	195082	<b>267235</b>

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : OCTOBER - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	9426	1551	438	69388
2	8868	1322	373	65187
3	9326	1343	428	65150
4	9838	1436	471	65775
5	9657	1301	528	67839
6	9742	1252	473	72241
7	9995	1269	539	73003
8	9990	1420	478	67115
9	9745	1276	536	67968
10	10436	1433	621	71004
11	10389	1317	471	69829
12	10317	1466	541	73278
13	10005	1380	590	72811
14	11310	1445	655	76341
15	10130	1389	694	76928
16	9664	1417	723	80149
17	9568	1305	623	82286
18	9376	1571	382	83600
19	10614	1340	705	90597
20	10267	1298	605	90815
21	10692	1252	669	93291
22	10894	1308	705	95854
23	10720	1294	550	94562
24	11186	1383	891	95787
25	11611	1337	688	93473
26	11663	1334	833	94892
27	12228	1554	866	97776
28	11704	1376	684	97591
29	11864	1646	779	100188
30	11316	1564	1002	100071
31	11780	1416	896	101026
<b>AVG.</b>	<b>10462</b>	<b>1387</b>	<b>627</b>	<b>82123</b>

**Effluent Discharge in the Month October - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.10.2020	464426	213766
01.11.2020	678192	

**Total Water Consumption in the Month October - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
55135	32432	236754	<b>324321</b>

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : NOVEMBER - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	11422	1383	670	100727
2	11714	1382	620	102668
3	12030	1417	548	102496
4	11911	1503	823	103735
5	12073	1630	749	107067
6	11951	1607	774	109223
7	12025	1802	835	111365
8	11820	1751	914	109161
9	12315	1922	847	110512
10	12391	1841	920	111633
11	12453	1888	1032	113299
12	12552	1690	816	113858
13	12267	1355	707	114684
14	12491	1315	848	115329
15	11714	1231	777	112787
16	11916	1132	668	112350
17	12379	1246	911	116487
18	12061	1228	902	116679
19	11650	1428	796	118617
20	11401	1307	922	118963
21	12431	1238	534	123731
22	11907	1154	795	123856
23	12105	1378	1069	124581
24	12257	1079	984	129760
25	12087	1205	881	129417
26	12630	1247	871	133286
27	12737	1071	917	130461
28	12875	1300	769	130904
29	13069	1334	665	128221
30	13015	1110	715	128348
<b>AVG.</b>	<b>12188</b>	<b>1406</b>	<b>809</b>	<b>116807</b>

**Effluent Discharge in the Month November - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.11.2020	678192	248629
01.12.2020	926821	

**Total Water Consumption in the Month November - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
62160	36565	266924	<b>365649</b>

**GRASIM INDUSTRIES LIMITED.**  
**UNIT : INDIAN RAYON**  
**VERAVAL.**  
**WATER & POWER CONSUMPTION REPORT**

**MONTH : DECEMBER - 2020**

Date	Water Consumption in M <sup>3</sup> /DAY	Power Consumption		Power Consumption in Rayon Plant KWH/DAY
		E.T.P KWH/DAY	Marine pump KWH/DAY	
1	13287	1116	803	127466
2	13334	1292	790	128587
3	12722	1355	792	128093
4	12879	1178	601	130107
5	12357	1117	572	129778
6	12683	1283	572	128896
7	12170	1232	624	128032
8	12591	1212	631	128631
9	12225	1275	790	128405
10	12481	1337	915	128974
11	11869	835	1134	131055
12	11486	1082	879	131323
13	11435	1139	608	132756
14	11924	1236	800	134019
15	11852	1217	552	135678
16	11331	1244	800	137128
17	11752	1283	938	137911
18	12307	1175	621	139772
19	12071	1512	783	141100
20	11923	1200	721	139482
21	11862	1158	681	143711
22	12623	1368	805	143910
23	11788	1291	611	143682
24	11722	1213	880	141829
25	12105	1198	773	141362
26	12003	1171	584	141669
27	12082	1188	669	142732
28	12389	1094	597	145847
29	12904	1283	731	144574
30	12521	1262	595	144324
31	12442	1203	652	144381
<b>AVG.</b>	<b>12230</b>	<b>1218</b>	<b>726</b>	<b>136297</b>

**Effluent Discharge in the Month December - 2020**

Date	Meter Reading at 07:00 hrs.	M <sup>3</sup>
01.12.2020	926821	265304
01.01.2021	192125	

**Total Water Consumption in the Month December - 2020**

Industrial Cooling KL/Month	Domestic Purpose KL/Month	Process Water KL/Month	Total Consumption KL/Month
64450	37912	276758	<b>379120</b>

## ANNEXURE XII

ENVIRONMENTAL CLEARANCE ACCORDED BY  
MINISTRY OF ENVIRONMENT, FOREST &  
CLIMATE CHANGE (MOEF & CC)

F. No. J-11011/343/2013- IA II (I)  
Government of India  
Ministry of Environment, Forests and Climate Change  
(I.A. Division)

Indira Paryavaran Bhawan  
Aliganj, Jorbagh Road,  
New Delhi -110003

E-mail : lk.bokolia@nic.in  
Telefax : 011-24695313  
Dated 22<sup>nd</sup> June, 2015

To,

Dr. Bir Kapoor, Unit Head  
M/s Indian Rayon ( A unit of Aditya Birla Nuvo Ltd.)  
Sy. No. 1502, 1511, 1516 & 1493  
Junagadh-Veraval, Verval,  
District Girsomnath, Gujarat-362266.  
E-mail : [s.rathore@adityabirla.com](mailto:s.rathore@adityabirla.com); [bir.kapoor@adityabirla.com](mailto:bir.kapoor@adityabirla.com); Fax: 2876-243569;

**Subject: Expansion of Viscose Filament Yarn at Veraval, District Gir Somnath, Gujarat by M/s Indian Rayon.- Environmental Clearance reg.**

**Ref. : Your letter no. nil dated 24<sup>th</sup> November, 2014.**

Sir,

This reference to your letter dated 24<sup>th</sup> November, 2014 alongwith project documents including Form I, Terms of References, Pre-feasibility Report, EIA/EMP Report, public hearing report regarding above mentioned project and subsequent submission of Monitoring report dated 30<sup>th</sup> December, 2014 on the above mentioned subject.

2.0 The Ministry of Environment, Forests and Climate Change has examined your application. It is noted that proposal is for expansion of Viscose Filament Yarn at Sy. No. 1502, 1507, 1511, 1516 & 1493, Veraval, District Gir Somnath, Gujarat by M/s Indian Rayon. Total plant area is 176 acres of which greenbelt will be developed in 59 acres. Proposed expansion will be done within the existing plant premises; thus, no additional land is required. It is reported that no national parks/wildlife sanctuaries /biosphere reserve & reserved /protected forest lies within 10 km radius project site. Arabian sea is at 700 m from the plant site. Triveni sangam of the rivers namely Hiran, Kapila, Saraswati is located at 6.5 km from the plant site. The Seasonal River Devka is passing just near the plant site. Cost of the proposed expansion is Rs. 850 crores. Rs. 40 Crore and Rs. 2.0 Crore are earmarked towards capital cost and recurring cost per annum for implementation of EMP. The following products will be manufactured:

S.N.	Products	Existing Quantity (MTPM)	Proposed additional (MTPM)	Total Quantity after expansion (MTPM)
1	Viscose Filament Yarn	1650	750	2400
2	Captive Power Plant	34.5 MW	20 MW	54.5 MW
3	Sodium Sulphate	2050	300	2350
4	Sodium Sulphite	Nil	3000	3000
5	Liquid SO <sub>2</sub>	Nil	1500	1500
6	Sulphuric Acid	3600	No change	3600
7	Carbon Disulphide	1000	No change	1000

8	Caustic soda Lye (100 %)	12000	No change	12000
9	Chlorine (100 %)	10560	No change	10560
10	Compressed Hydrogen	650000 Nm <sup>3</sup>	No change	650000 Nm <sup>3</sup>
11	Sodium Sulphide, (Na <sub>2</sub> S)	100	No Change	100
12	HCl	1800	No change	1800
13	Sodium Hypochlorite (100%)	3750	No Change	3750

3.0 ESP and adequate stack height will be provided to coal fired boiler. Low NOx burner shall be provided in Captive Co-generation Power Plant to reduce the NOx emissions. Fluidized bed combustion boiler & lime dosing system will be provided to control SO<sub>2</sub> emissions. Bagfilter & cyclone separator will be installed in boiler house to control particulate emissions. Bagfilter will be provided in coal crusher plant. Exhaust containing CS<sub>2</sub> and H<sub>2</sub>S gas from rayon plant will be passed through coal scrubber. Scrubber alongwith stack of adequate height will be provided to Sodium Sulphite and Liquid SO<sub>2</sub> plant. Fresh water requirement from the Umrethi Dam will be increased from 12938 m<sup>3</sup>/day to 15938 m<sup>3</sup>/day after expansion. Effluent generation after expansion will be 10540 m<sup>3</sup>/day and treated in the effluent treatment plant (ETP) to meet stipulated standards before discharge from factory outlet through marine pipeline with diffuser system with more than 77 time dilution into deep sea for design discharge of 15000 m<sup>3</sup>/day. Effluent recycling reverse osmosis (RO) plant will be installed to produce 2000 m<sup>3</sup>/day recycle water. Sewage will be treated in the sewage treatment plant (STP). Fly ash will be sent to group cement plant, brick plant & rest of the quantity will be given to the GPCB approved vendors. Process sludge is being stored in identified area and briquettes are formed by use of process sludge, cellulose waste, coal ash, charcoal churry and used in boiler & co-incineration in the Group plant Ultra Tech Rajula. Sulphur sludge will be sent to TSDF site. Waste catalyst will be sent to authorized recycler/re-processors. Waste/spent oil will be handed over to authorized recyclers/re-processors.

4.0 Public hearing/consultation was conducted by the on 4<sup>th</sup> October, 2014.

5.0 All manmade fibers manufacturing including rayon are listed at S.No. 5(d) under category 'A' of Schedule of EIA Notification, 2006 and appraised by the Expert Appraisal Committee (Industry) in the Ministry.

6.0 The proposal was considered by the Expert Appraisal Committee (Industry) in its 16<sup>th</sup> and 34<sup>th</sup> meetings held during 20<sup>th</sup> - 21<sup>st</sup> February, 2014 and 17<sup>th</sup>-19<sup>th</sup> February, 2015 respectively. Project Proponent and the EIA Consultant namely JM EnviroNet Pvt. Ltd., have presented EIA / EMP report as per the TOR. EAC has found the EIA / EMP Report and additional information to be satisfactory and in full consonance with the presented TORs. The Committee recommended the proposal for environmental clearance.

7.0 Based on the information submitted by the project proponent, the Ministry of Environment and Forests hereby accords environmental clearance to above project under the provisions of EIA Notification dated 14<sup>th</sup> September 2006, subject to the compliance of the following Specific and General Conditions:

**A. SPECIFIC CONDITIONS:**

- i) ESP and adequate stack height shall be provided to coal fired boiler to control the air emissions within the limit stipulated by CPCB and GPCB. Low NOx burner shall be provided in Captive Co-generation Power Plant to reduce the NOx emissions.
- ii) The gaseous emissions (SO<sub>2</sub>, NOx, CS<sub>2</sub>, H<sub>2</sub>S, CO, HC) and particulate matter from process and CPP units shall conform to the norms prescribed by the CPCB/MPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired

efficiency. Continuous emission monitoring system (CEMS) should be installed to measure SO<sub>2</sub>, NO<sub>x</sub> and Particulate from the CPP stack and SO<sub>2</sub>, CS<sub>2</sub> and H<sub>2</sub>S from process plant stacks.

- iii) Exhaust containing CS<sub>2</sub> and H<sub>2</sub>S gas from rayon plant shall be passed through scrubber.
- iv) Ambient air quality data shall be collected as per NAAQES standards notified by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> September, 2009. The levels of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, CS<sub>2</sub>, H<sub>2</sub>S, HCl, VOCs and methane and non methane HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and GPCB.
- v) In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling & conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. The emissions shall conform to the limits stipulated by the GPCB.
- vi) The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.
- vii) Total fresh water requirement from Umrethi Dam supply should not exceed 15938 m<sup>3</sup>/day and prior permission shall be obtained from the concerned Authority. No ground water should be used. Efforts should be made to reduce the fresh water requirement by adopting 3 R's (Reduce, Reuse and Recycle) concept.
- viii) Total industrial wastewater generation shall not exceed 10540 m<sup>3</sup>/day. As proposed, effluent should be treated in the effluent treatment plant. Treated effluent shall be discharged into conveyance system for marine disposal after conforming to the standards prescribed for marine discharge norms and obtaining permission from the GPCB. Treated effluent should be passed through guard pond. Online pH meter, TOC analyzer and flowmeter should be installed. No process effluent shall be discharged in and around the project site. Sewage should be treated in STP. The water quality monitoring report for treated effluent should be submitted to the CPCB and Ministry's regional Office at Bhopal.
- ix) As proposed, effluent recycling RO plant shall be installed to produce 2000 m<sup>3</sup>/day recycle water. Efforts shall be made for recovery of sodium thiosulphate.
- x) Treated effluent should be passed through guard pond. Online pH meter, flow meter and TOC analyzer should be installed. Sulphide contents in the effluent should also be monitored
- xi) Process effluent/any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.
- xii) The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-Boundary Movement) Rules, 2008 and amended as on date for management of Hazardous wastes and prior permission from APPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. A copy of the same shall be submitted to the Ministry and Ministry's Regional Office at Bangalore.
- xiii) The Company shall strictly comply with the rules and guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended time to

- time. All Transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA), 1989.
- xiv) All the recommendations mentioned in the Environmental Management Plan, Rapid Risk Assessment Report, Disaster Management Plan and safety guidelines shall be implemented.
  - xv) Boiler ash should be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by wind or water regime during rainy season by flowing alongwith the storm water. Direct exposure of workers to fly ash & dust shall be avoided.
  - xvi) All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2008.
  - xvii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire fighting system shall be as per the norms.
  - xviii) Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facilities in the occupational health centre should be strengthened and the regular medical test records of each employee should be maintained separately.
  - xix) Dedicated parking facility for loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.
  - xx) As proposed, green belt over 33 % of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road sides etc. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.
  - xxi) All the commitments made to the public during the Public Hearing/Public Consultation meeting held on 4<sup>th</sup> October, 2014 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Bhopal.
  - xxii) The Company shall submit within three months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/procedure to being into focus any infringement/deviation/ violation of environmental or forest norms/conditions, (ii) Hierarchical system or Administrative order of the Company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) System of reporting of non-compliance/violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.
  - xxiii) At least 5 % of the total cost of the project (i.e. Rs 43 Crore) shall be earmarked towards the Enterprise Social Commitment (ESC) based on local needs and action plan with financial and physical breakup/details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such program should be ensured accordingly in a time bound manner.
  - xxiv) Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.

**B. GENERAL CONDITIONS:**

- i. The project authorities must strictly adhere to the stipulations made by the Gujarat Pollution Control Board (GPCB), State Government and any other statutory authority.

- ii. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- iii. The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16<sup>th</sup> November, 2009 shall be complied.
- iv. 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 is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.
- v. The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- vi. The Company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.
- vii. Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.
- viii. Usage of Personnel Protection Equipments (PPEs) by all employees/ workers shall be ensured.
- ix. 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, risk mitigation measures and public hearing relating to the project shall be implemented.
- x. 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.
- xi. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- xii. A separate Environmental Management Cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.
- xiii. The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment and Forests 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.
- xiv. A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zila Parisad/Municipal Corporation, Urban local Body and the local NGO, if any, from who suggestions/ representations, if any, were received while processing the proposal.
- xv. 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, the respective Zonal Office of CPCB and the Gujarat Pollution Control Board. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.

- xvi. The environmental statement for each financial year ending 31<sup>st</sup> 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 by e-mail.
- xvii. 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 [www.moef.nic.in](http://www.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.
- xviii. 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.

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

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

10.0 The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Water Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 alongwith their amendments and rules.

11.0 Environmental Clearance is issued to M/s Indian Rayon for expansion of viscose filament yarn at Veraval, District Gir Somnath, Gujarat.

  
(Lalit Bokolia)  
Additional Director

Copy to:-

1. The Principal Secretary, Forests & Environment Department, Government of Gujarat, Sachivalaya, 8<sup>th</sup> Floor, Gandhi Nagar - 382 010, Gujarat.
2. The Additional Principal Chief Conservator of Forests(central), Ministry of Environment & Forests, Regional Office, E-5, Arera Colony, Link Road -3, Bhopal -462 016, M.P.
3. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhi Nagar-382 043, Gujarat.
5. Monitoring Cell, Ministry of Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi.
6. Guard File/Monitoring File/Record File.

  
(Lalit Bokolia)  
Additional Director

No.11-80/2008-IA-III  
Government of India  
Ministry of Environment and Forests  
(IA-III Division)

Paryavaran Bhavan,  
CGO Complex, Lodhi Road,  
New Delhi - 110003.

Dated the 20<sup>th</sup> October, 2008

**Sub: Environmental clearance for laying pipeline for disposal of treated effluent in the coastal environment of Arabian Sea, off Veraval coast by M/s Indian Rayon - regarding.**

\*\*\*\*

Reference is invited to letter No.ENV-10-2008-1177-E, dated 6.10.2008 from Forests and Environment Department, Government of Gujarat and letters No.Nil, dated 22.7.2008 and No.C-18130, dated 8.9.2008 from M/s Indian Rayon regarding the subject mentioned above.

2. The project involves laying of a pipeline for discharging treated effluent in the coastal environment of Arabian Sea, off Veraval coast at a suitable location through pipeline. The proposed discharge of the treated effluent will be 12,000m<sup>3</sup>/day. Current maximum water requirement of power is 12060m<sup>3</sup>/day which is used mainly in unit, power plant and caustic soda plant. Treated effluent is being generated around 8500m<sup>3</sup>/day. After proposed expansion, requirement of water would be around 13,000m<sup>3</sup>/day which will be drawn from Hiren dam at Umrethi Village permission is obtained from irrigation department. Expected generation of treated effluent 8540m<sup>3</sup>/day. Proposed discharge point of treated effluent suggested by CSMCRI at Latitude 20°54.825'N, and Longitude 70°20.184'E. The treated effluent, at present, is being disposed off into the sea creek through open channel. The water from River Devka mixes with treated effluent and carries into the open sea. The proponent proposes to discharge their treated effluent, after meeting the standards laid by Gujarat PCB, into the coastal environment of Arabian Sea, off Veraval coast at a suitable location through pipeline. For release of 15,000m<sup>3</sup>/day of treated effluent, jet velocity of 3.0m/s and pipeline diameter of 25m (~10 inch) are considered adequate at a depth of 9.4-11.6m. This position may be shifted by 50m upstream/downstream with a similar depth on engineering considerations. The pipeline will traverse the seabed, 991m including intertidal region of about 90m to the discharge point. Dredging, trenching will be carried out for laying of the pipeline. Total pipeline project cost is Rs.5.77 crores.

3. The proposal was considered by Expert Appraisal Committee at its meeting held on 21<sup>st</sup> & 22<sup>nd</sup> August, 2008 and 18<sup>th</sup> & 19<sup>th</sup> September, 2008 and has recommended. Keeping in view the above facts, the proposal has been examined in the Ministry of Environment & Forests and environmental clearance from Coastal Regulation Zone Notification, 1991 as amended from time to time is hereby accorded to this project subject to effective implementation of the following conditions:-

**A. SPECIFIC CONDITIONS:**

- (i) The zinc concentration in the effluent at the discharge point shall be monitored and the report submitted to Regional Office Bhopal at very three months.
- (ii) All the conditions stipulated by Forests and Environment Department, Government of Gujarat vide their letter No.ENV-10-2008-1177-E, dated 6.10.2008 shall be strictly implemented.
- (iii) The pipelines shall not disturb the movement of fishing vessels or fishermen.
- (iv) It shall be ensured that there is no displacement of people, houses or fishing activity as a result of the project.
- (v) It shall be ensured that due to the project, there is no adverse impact on the drainage of the area and recharge of groundwater. No groundwater shall be tapped in the project area falling in Coastal Regulation Zone.

- (vi) The project proponent must ensure that the effluents /liquid waste discharged are as per the standards laid down by the Gujarat Pollution Control Board.
- (vii) The camps of labour shall be kept outside the Coastal Regulation Zone area. Proper arrangements for cooking fuel shall be made for the labour during construction phase so as to ensure that mangroves are not cut/destroyed for this purpose.
- (viii) The entire stretch of the pipelines shall be buried underground except at the booster pumping station, which will be properly fenced and the station would be manned round the clock. The buried lines will be protected with anticorrosive coaltar based coating. The coating will be tested in accordance with prescribed standards.
- (ix) Markers shall be installed at every 30 m to indicate the position of the line. Regular patrolling of the pipeline needs to be done. This will help in identifying any activity that have the potential to cause pipeline damage or to identify small leaks whose effects are too small to be detected by instrument.
- (x) There shall be display boards at critical locations along the pipeline viz road/rail/river crossings giving emergency instructions as well as contact details of M/s Indian Rayon. This will ensure prompt information regarding location of accident during any emergency. Emergency information board shall contain emergency instructions in addition to contact details.
- (xi) All necessary clearances from the concerned agencies shall be obtained before initiating the project.
- (xii) The project shall be implemented in such a manner that there is no damage whatsoever to the mangroves/other sensitive coastal ecosystems. If any damage to mangroves is anticipated/envisaged as a result of project activities then the clearance now being accorded shall stand cancelled and the proponents may seek fresh approval from the Ministry.
- (xiii) A continuous and comprehensive post-project marine quality monitoring programme shall be taken up. This shall include monitoring of water quality, sediment quality and biological characteristics covered in the EIA studies.

#### **2. GENERAL CONDITIONS:**

- (i) Construction of the proposed structures shall be undertaken meticulously conforming to the existing Central/local rules and regulations. All the construction designs/drawings relating to the proposed construction activities must have approvals of the concerned State Government Department/Agencies.
- (ii) The project authorities shall take appropriate community development and welfare measures for the villagers in the vicinity of the project site, including drinking water facilities. A separate fund shall be allocated for this purpose.
- (iii) To meet any emergency situation, appropriate fire-fighting system shall be installed. Appropriate arrangements for uninterrupted power supply to the environment protection equipment and continuous water supply for the fire fighting system shall be made.
- (iv) A separate Environment Management Cell with suitably qualified staff to carry out various environment related functions shall be set up under the charge of a Senior Executive who will report directly to the Chief Executive of the Company.
- (v) The funds earmarked for environment protection measures shall be maintained in a separate account and there shall be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards shall be reported to this Ministry's Regional Office at Bhopal.
- (vi) Full support shall be extended to the officers of this Ministry's Regional Office at Bhopal and the officers of the Central and State Pollution Control Board by the project proponents during their inspection for monitoring.

purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.

- (vii) In case of deviation or alteration in the project including the implementing agency, a fresh reference shall be made to this Ministry for modification in the clearance conditions or imposition of new one for ensuring environmental protection. The project proponents shall be responsible for implementing the suggested safeguard measures.
- (viii) This Ministry reserves the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.
- (ix) This Ministry or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.
- (x) A copy of the clearance letter shall be marked to the concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (xi) State Pollution Control Board/Committee shall display a copy of the clearance letter at the District Industries Center and Collector's Office/ Tehsildar's Office for 30 days.
- (xii) The project proponent shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the Gujarat State Pollution Control Board and may also be seen at website of the Ministry of Environment & Forests at <http://www.envfor.nic.in>.
- (xiii) The project proponents shall inform Regional Office Bhopal 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 work.
- (xiv) The project proponent will obtain the Forest clearance for the land passing through the Reserved Forest area before commencement of the project activities in forest area.
- (xv) So as to maintain ecological features and avoid damage to the ecosystem, movement of vehicles in the Inter Tidal Zone shall be restricted to the minimum.
- (xvi) Budgetary break up for Environmental Management Plan for the project to be mentioned.
- (xvii) Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

4. The above mentioned stipulations will be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (protection) Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, the Coastal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made thereunder from time to time. The project proponents shall also ensure that the proposal complies with the provisions of the approved Coastal Zone Management Plan of Gujarat and the Supreme Court's order dated 18<sup>th</sup> April, 1996 in the Writ Petition No.664 of 1993 to the extent the same are applicable to this proposal.

(Dr. A. Senthil Vel)  
Additional Director

To,

Director (Environment),  
Forests & Environment Department,  
Government of Gujarat, Block No.14,  
8<sup>th</sup> Floor, Sachivalaya, Gandhinagar - 382 010.

Copy to:

1. The Chief Conservator of Forests, Ministry of Environment & Forests, Ministry of Environment & Forests, Regional Office (Western Region), Kendriya Paryavaran Bhavan, Link Road No.3, Ravi Shankar Nagar, Bhopal - 4620 16.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
3. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhavan, Sector 10-A, Gandhinagar - 382 010, Gujarat.
4. Mr. P. Nersimha Rao, Vice President - HR, M/s Indian Rayon (A unit of Aditya Birla Nuvo Limited), Veraval-362266.
5. DiG (SU), Regional Office Cell, Ministry of Environment & Forests, New Delhi.
6. Guard File.
7. Monitoring Cell.
8. Director (E1), Ministry of Environment & Forests, New Delhi.

  
(Dr. A. Senthil Vel)  
Additional Director

**F.No.11-80/2008-IA-III (Part-II)**  
**Government of India**  
**Ministry of Environment and Forests**

**Paryavaran Bhawan,  
CGO Complex, Lodhi Road,  
New Delhi - 110 003.**

**Dated: 7<sup>th</sup> December, 2009.**

**To**

**M/s. Indian Rayon  
(A unit of Aditya Birla Nuvo Ltd.),  
Development & Environment Department,  
Veraval - 362 266,  
Gujarat.**

**Subject: Change of disposal point for the discharge of treated effluent at Veraval Coast, District Junagadh, Gujarat by M/s. Indian Rayon - Revised CRZ Clearance - Reg.**

\*\*\*

This has reference to your letter No.ABNL/Env/2008, dated 07.01.2009 and subsequent letter dated 24.02.2009 seeking amendment to the CRZ Clearance issued earlier vide letter No.11-80/2008-IA.III, dated 20.10.2008. The revised proposal has been appraised as per prescribed procedure in the light of provisions under the Coastal Regulation Zone Notification, 1991 on the basis of the documents enclosed with the application by Expert Appraisal Committee constituted by the competent authority in its meetings held on 17<sup>th</sup> - 18<sup>th</sup> September, 2009.

2. The proposal is for the amendment of the Clearance issued earlier for laying of a pipeline for discharging treated effluent to the tune of 15000 m<sup>3</sup>/day in the coastal environment of Arabian Sea, off Veraval Coast at a suitable location through pipeline. The Geophysical survey carried out by M/s. Hydroair along the pipeline route to the proposed discharge point (Latitude 20°54.825'N, Longitude 70°20'184"E) suggested by Central Salt & Marine Chemicals Research Institute (CSMCRI), Bhavnagar, Gujarat states that the seafloor along this pipeline route corridor is consisting of undulating rocky strata through out the entire length of 1140 m. It also mentioned that this corridor is totally unsuitable for laying a marine outfall pipeline due to the existence of undesirable rocky bed strata through out the length of the pipeline route. Therefore, M/s. Hydroair has suggested an alternative discharge point considering the depth and geophysical status of the area for obtaining the rock -free corridor almost perpendicular to the shore line and without having to cross the creek mouth in inter- tidal or surf zone. CSMCRI has studied and also recommended the suitability of alternative discharge point (Lat 20°54'34.5" N, Long. 70°20'23.4" E) suggested by M/s. Hydroair, which falls within a study area. The dilution calculated at



the diffuser point to be 49 to 84 times and available depth is more than 13 M. The pipeline will traverse 991 M including inter-tidal region of about 90 m to the alternate discharge point. The total length of pipeline from the pumping station up to the alternate discharge point is about 1500 M.

3. The pipeline laying for disposal of the treated effluent into the sea is a permissible activity as per the provisions of the CRZ Notification, 1991. The Gujarat Coastal Zone Management Authority has recommended the revised proposal vide letter No. ENV-10-2008-1177-E, dated 12.02.2009.

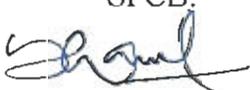
4. The Expert Appraisal Committee, after due consideration of the relevant documents submitted and additional clarifications furnished in response to its observations, have recommended the amendment for the modification of the Clearance issued. Accordingly, the Ministry hereby amend the Clearance issued earlier on 20.10.2008 for the above project as per the provisions of Coastal Regulation Zone Notification, 1991 and its subsequent amendments, subject to strict compliance of the additional terms and conditions as follows:

- (i) All other conditions shall remain same as stipulated earlier in the Clearance letter dated 20.10.2008 and shall be effectively implemented.
- (ii) All the conditions stipulated by GCZMA vide letter No. ENV-10-2008-1177-E, dated 12.02.2009 shall be strictly complied.

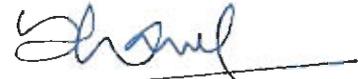
5. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were-received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

6. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO<sub>2</sub>, NO<sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

7. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.



8. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent 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 EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

  
**(Bharat Bhushan)**  
**Director**  
07.12.2008

Copy to:

1. The Principal Secretary, Department of Forests & Environment and Chairman, GCZMA, Govt. of Gujarat, Sachivalaya, Gandhinagar.
2. The Director, Forests & Environment Department, Govt. of Gujarat, Block No.14, 8<sup>th</sup> Floor, Sachivalaya, Gandhinagar - 382 010.
3. The Chairman, CPCB, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32.
4. The Chairman, Gujarat State Pollution Control Board, Paryavaran Bhawan, Sector 10 A, Gandhinagar-382 010.
5. The Chief Conservator of Forests, Ministry of Environment and Forests, Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No. 3, Ravishankar Nagar, Bhopal - 462016 (M.P.)
6. Guard File.
7. Monitoring Cell, MoEF.

  
**(Bharat Bhushan)**  
**Director**



**J. K. VYAS**  
**DIRECTOR (Environment)**

**GOVERNMENT OF GUJARAT**  
**FORESTS & ENVIRONMENT DEPARTMENT**  
**BLOCK No. 14, 8<sup>TH</sup> FLOOR,**  
**SACHIVALAYA**  
**GANDHINAGAR - 382 010, GUJARAT**  
**Ph : (079) 23251062**  
**Fax : (079) 23252156**  
**E-mail: direnv@gujarat.gov.in**

*Ref. No.ENV-10-2008-1177 -E*

*October 6, 2008*

**To,**  
Dr. A. Senthil Vel  
Additional Director  
Ministry of Environment Department  
Paryavaran Bhavan, CGO Complex  
Lodhi Road, New Delhi – 110 003.

***Sub: CRZ clearance for proposed treated effluent disposal pipeline of M/s Indian Rayon (A unit of Aditya Birla Nuvo Ltd.), Veraval, Dist. Junagadh.***

Dear Sir,

M/s Indian Rayon (A unit of Aditya Birla Nuvo Ltd.), Veraval, Dist. Junagadh have approached this Department for obtaining the recommendation for CRZ clearance for their proposed project of laying the treated effluent disposal pipeline (conveyance system) to dispose off the treated effluent to the tune of 15000 m<sup>3</sup>/day into the sea at a point suggested by the Central Salt & Marine Chemicals Research institute, Bhavnagar (CSMCRI) at co-ordinates latitude 20<sup>0</sup> 54''825' N and longitude 70<sup>0</sup> 20''184' E. The said pipeline is proposed to be laid as per the direction of the Gujarat Pollution Control Board; issued vide its letter dated 13-9-2007 (copy enclosed).

M/s Indian Rayon has proposed to collect the effluent from manufacturing processes and other ancillary industrial operations at their above-mentioned plant in Veraval and then treat in the same into their Effluent Treatment Plant. M/s Indian Rayon has proposed that the treated effluent to the tune of 8540 m<sup>3</sup>/day, duly meeting with the standards prescribed by the Gujarat Pollution Control Board will be disposed off at a point suggested by the CSMCRI in the sea through @ 1.5 km long pipeline. (The ETP is already having surplus capacity to take care of the said increase in the quantity.)

A copy of the map indicating the route of the pipeline and landuse in the route is enclosed herewith.

M/s Indian Rayon has also submitted the following documents alongwith their application:

1. A Rapid Environment Impact Assessment Report, April 2008 prepared by the Central Salt & Marine Chemicals Research institute, Bhavnagar (CSMCRI), (copy enclosed) for disposal of 15000 m<sup>3</sup>/d of treated effluent.
2. A report on Design Installation of Marine Outfall for Effluent at Veraval prepared by M/s Abhay Ocean India Pvt. Ltd.

In their report, the CSMCRI has included the Prevailing costal environment (chapter 5), Marine Environment impacts (chapter 6) and Environment Management Plan (chapter 7).

It is mentioned that about 42 to 77 times dilution would be available once the effluent is disposed of as per the diffuser system suggested by the CSMCRI. The CSMCRI has further recommended for releasing of the treated effluent meeting with the GPCB standards at 10 m depth contour (bellow CD). The CSMCRI has also mentioned that the treated wastewater when released as suggested is unlikely to have any adverse impact on marine ecology.

The Vice President – HR of M/s Indian Rayon has submitted following undertakings:

1. An undertaking to implement all the suggestions and recommendations given by the consultants in their EIA and Risk Assessment reports.
2. An undertaking to bear the cost of the external agency to be appointed by F&ED, GOG for supervision/ monitoring of the proposed activities.
3. An undertaking to carryout Comprehensive Environmental Impact Assessment and Risk Assessment reports.
4. An undertaking that the project proponent shall not tap the ground water to meet with the water requirements during construction and operational stages.
5. An undertaking that the construction labour shall be provided with adequate amenities including the water supply, sanitation and fuel to ensure that they do not ruin the existing environment.
6. An undertaking that the camps of the construction labour shall be located outside the CRZ areas and no waste including the construction debris shall be disposed of in the sea / creek or into the CRZ areas.
7. An undertaking that the socio-economic upliftment programme shall be implemented in consultation with the District Collector / District Development Officer.
8. An undertaking that the greenbelt development programme shall be implemented in consultation with the Forests Department.

The CSMCRI in their report and during the presentation held in this Department on 27/8/08 has confirmed that there are no ecologically sensitive areas in the pipeline route in CRZ area. It has been also mentioned that there are no mangroves in and around the disposal point. This was confirmed during the site visit carried out by a team of the Department on 30-8-2008.

Further, the Space Application Centre, Ahmedabad, an agency authorized by the Ministry of Environment and Forests, GOI, has refused to provide the CRZ map of the area and M/s Indian Rayon has submitted a map their pipeline route and the final disposal point on the said map (copy enclosed).

As per the provisions of the CRZ notification, 1991 and subsequent amendments, laying of the treated effluent disposal pipeline is a permissible activity. However, prior permission from the MoEF, GOI, is necessary.

Since the SAC, Ahmedabad, has refused to provide the CRZ map and the pipeline laying for disposal of the treated effluent into the sea is a permissible activity as per the provisions of the CRZ Notification and Coastal Zone Management Plan, the requirement for the CRZ map could be waived.

In view of above, State Government hereby recommends for according the environmental clearance under the CRZ notification for laying of the proposed treated effluent disposal pipeline upto disposal point as per the recommendation of the CSMCRI, by M/s Indian Rayon, with strict compliance of the following conditions:

1. The provisions of the CRZ notification of 1991 and subsequent amendments issued from time to time shall be strictly adhered to by M/s Indian Rayon.
2. The treated effluent, to the tune of 15000 m<sup>3</sup>/day (max.) meeting with the Gujarat Pollution Control Board (GPCB) norms at the point recommended by the CSMCRI, Bhavnagar, shall only be discharged through the said pipeline after obtaining necessary Consent of the GPCB under the Water Act, 1974. At present, the company shall dispose off 8540 m<sup>3</sup>/d of treated effluent and shall increase the quantity of the same after obtaining the necessary CCA / Consent under the Water Act, 1974, from the GPCB.
3. All the recommendations and suggestions given by the CSMCRI in its effluent disposal point selection report / Environment Impact Assessment report shall be implemented strictly by M/s Indian Rayon.
4. The effluent not meeting with the GPCB norms shall not be discharged and shall be stored in the Guard Ponds and recycled back into the Effluent Treatment Plant for further treatment to achieve the GPCB norms. M/s Indian Rayon shall install

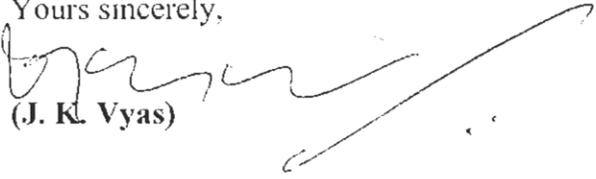
necessary facilities for this purpose and shall strictly ensure the compliance with the GPCB norms, round the clock.

5. Comprehensive Environment Impact Assessment report shall be submitted to this department and the recommendations/suggestions given in it shall be implemented.
6. The construction debris and sewage generated during the construction phase shall not be discharged into the creek, sea, estuary or into the CRZ area. The debris shall be removed from the construction site immediately after the construction is over and shall be disposed off as per the guidance of the GPCB.
7. The landward portion of the pipeline shall be buried at least 1m below the ground and the offshore portion shall be protected appropriately from the erosion.
8. The construction camps shall be located outside the CRZ area and the construction labours shall be provided with the necessary amenities, including sanitation, water supply and fuel and it shall be ensured that the environmental conditions are not deteriorated by the construction labours.
9. The groundwater shall not be tapped to meet with the water requirements during construction or operation phase in any case.
10. A Disaster Management Plan to meet with any eventualities that may arise during construction and/or operation phase shall be prepared implemented.
11. The pipeline shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipeline. In case of any such eventualities, the company shall immediately stop disposal through the said pipeline and take the corrective measures in consultation with the GPCB and the District Collector.
12. Necessary permissions from different departments/ agencies under different laws/ acts shall be obtained before commencing the construction / pipeline laying activities.
13. The company shall take up the mangrove plantation in 50 ha. of area on Gujarat coastline in phased manner in 5 years.
14. A separate Environmental Management Cell with qualified personnel shall be created to implement the Environmental Management Plan and a separate budget shall be provided for this purpose.
15. The cost of the external agency that may be appointed by this department for supervision / monitoring of the project activities during construction/ operational phases shall be borne by the M/s Indian Rayon.
16. Massive greenbelt development program including the mangrove plantation shall be carried out in consultation with the Forest Department by M/s Indian Rayon.
17. A large scale socio-economic upliftment program in consultation with the District Collector/ DDO shall be carried out. A separate budget shall be provided for this purpose and details be furnished to this Department from time to time.

18. Environmental Audit report shall be submitted every year. The report shall also cover the change in the coastal and marine environment enroute the proposed pipeline and around disposal point due to commissioning of the proposed pipeline.
19. A six monthly progress reports regarding the compliance of the conditions shall be submitted to this department.
20. Any additional condition that may be imposed by this department from time to time shall have to be complied with by the M/s Indian Rayon.

Thanking you,

Yours sincerely,

  
(J. K. Vyas)

*Copy to :*

✓ Shri P. Narsimah Rao  
Vice President-HR,  
M/s Indian Rayon (A unit of Aditya Birla Nuvo Ltd.),  
Veraval – 362 266.  
Dist. Junagadh



**J. K. VYAS**

**DIRECTOR (Environment)**

*Ref. No. ENV-10-2008-1177 -E*

**GOVERNMENT OF GUJARAT**  
**Forests & Environment Department**  
**Block no. 14, 8<sup>th</sup> floor**  
**Sachivalaya, Gandhinagar - 382 010**  
**Gujarat, INDIA**

**Ph : (079) 23251062**

**Fax : (079) 23252156**

**Email : direnv@gujarat.gov.in**

*February 12, 2009*

***Sub: CRZ clearance for proposed treated effluent disposal pipeline of M/s Indian Rayon  
(A unit of Aditya Birla Nuvo Ltd.), Veraval, Dist. Junagadh.***

Dear Sir,

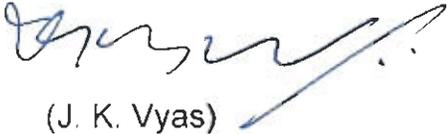
Reference is invited to the Ministry of Environment and Forests, Government of India's letter No. 11-80/2008-IA-III, dated 20-10-2008 according to the Environmental Clearance (EC) to your above mentioned project.

In view of the Specific Condition No. A (i) stipulated by the MoEF, GOI, in their above mentioned EC letter, following conditions stipulated by this Department in the letter dated 06-10-2008 shall have also to be strictly complied with by the Indian Rayon :

1. The provisions of the CRZ notification of 1991 and subsequent amendments issued from time to time shall be strictly adhered to by M/s Indian Rayon.
2. The treated effluent, to the tune of 15000 m<sup>3</sup>/day (max.) meeting with the Gujarat Pollution Control Board (GPCB) norms at the point recommended by the CSMCRI, Bhavnagar, shall only be discharged through the said pipeline after obtaining necessary Consent of the GPCB under the Water Act, 1974. At present, the company shall dispose off 8540 m<sup>3</sup>/d of treated effluent and shall increase the quantity of the same after obtaining the necessary CCA / Consent under the Water Act, 1974, from the GPCB.
3. All the recommendations and suggestions given by the CSMCRI in its effluent disposal point selection report / Environment Impact Assessment report shall be implemented strictly by M/s Indian Rayon.
4. The effluent not meeting with the GPCB norms shall not be discharged and shall be stored in the Guard Ponds and recycled back into the Effluent Treatment Plant for further treatment to achieve the GPCB norms. M/s Indian Rayon shall install necessary facilities for this purpose and shall strictly ensure the compliance with the GPCB norms, round the clock.
5. Comprehensive Environment Impact Assessment report shall be submitted to this department and the recommendations/suggestions given in it shall be implemented.

6. The construction debris and sewage generated during the construction phase shall not be discharged into the creek, sea, estuary or into the CRZ area. The debris shall be removed from the construction site immediately after the construction is over and shall be disposed off as per the guidance of the GPCB.
7. The landward portion of the pipeline shall be buried at least 1m below the ground and the offshore portion shall be protected appropriately from the erosion.
8. The construction camps shall be located outside the CRZ area and the construction labours shall be provided with the necessary amenities, including sanitation, water supply and fuel and it shall be ensured that the environmental conditions are not deteriorated by the construction labours.
9. The groundwater shall not be tapped to meet with the water requirements during construction or operation phase in any case.
10. A Disaster Management Plan to meet with any eventualities that may arise during construction and/or operation phase shall be prepared and implemented.
11. The pipeline shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipeline. In case of any such eventualities, the company shall immediately stop disposal through the said pipeline and take the corrective measures in consultation with the GPCB and the District Collector.
12. Necessary permissions from different departments/ agencies under different laws/ acts shall be obtained before commencing the construction / pipeline laying activities.
13. The company shall take up the mangrove plantation in 50 ha. of area on Gujarat coastline in phased manner in 5 years.
14. A separate Environmental Management Cell with qualified personnel shall be created to implement the Environmental Management Plan and a separate budget shall be provided for this purpose.
15. The cost of the external agency that may be appointed by this department for supervision / monitoring of the project activities during construction/ operational phases shall be borne by M/s Indian Rayon.
16. Massive greenbelt development program shall be carried out in consultation with the Forest Department by M/s Indian Rayon.
17. A large scale socio-economic upliftment program in consultation with the District Collector/ DDO shall be carried out. A separate budget shall be provided for this purpose and details be furnished to this Department from time to time.

18. Environmental Audit report shall be submitted every year. The report shall also cover the change in the coastal and marine environment enroute the proposed pipeline and around disposal point due to commissioning of the proposed pipeline.
19. A six monthly progress reports regarding the compliance of the conditions shall be submitted to this department.
20. Any additional condition that may be imposed by this department from time to time shall have to be complied with by M/s Indian Rayon.



(J. K. Vyas)

To,

✓ Shri P. Narsimah Rao  
Vice President-HR,  
M/s Indian Rayon (A unit of Aditya Birla Nuvo Ltd.),  
Veraval – 362 266.  
Dist. Junagadh

Copy to:

1. Shri A. Senthil Vel, Additional Director, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi – 110 003
  - For information please. Also please be informed that the applicant is the Indian Rayon and not the Director (Environment), so please mark such clearances to the applicant with a copy to the undersigned as conveyed earlier.
2. Dr. A. Mehrotra, Additional Director, Ministry of Environment and Forests, Post Bag No. 376, Nehru Nagar, Bhopal.
  - Also please monitor the compliance of the above conditions alongwith the conditions stipulated by the MoEF, GOI.
3. Shri R. G. Shah, Member Secretary, Gujarat Pollution Control Board, Sector 10 A, Gandhinagar.
  - With a request to ensure that the conditions stipulated by the MoEF, GOI, as well as this Department are strictly complied with by the project proponent. An action taken report in this regard to be submitted this Department on a regular basis.

## ANNEXURE XIII

COMPLIANCE STATUS OF ENVIRONMENTAL  
CLEARANCES ACCORDED BY MINISTRY OF  
ENVIRONMENT, FORESTS & CLIMATE  
CHANGE, GOVERNMENT OF INDIA, NEW  
DELHI

ADITYA BIRLA



By Registered AD / Speed Post ✓

o/c

GRASIM/ENV/ /2020  
May, 25, 2020

To  
Ministry of Environment, Forests & Climate Change  
Western Region Office (Western Zone),  
Kendriya Paryavaran Bhawan, Link Road No. 3,  
E-5, Ravi Shankar Nagar, **Bhopal - 462016**

R-49

**Kind Attention: Dr. M. Ramesh**

Sub.: Compliance Status of Environmental Clearances accorded by Ministry of Environment, Forests & Climate Change, Government of India, New Delhi

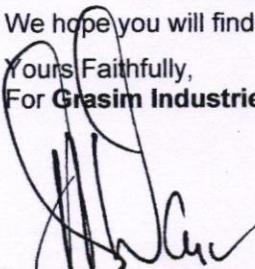
Ref.: 1. MoEF Letter No. J-11012/25/95-IA.II (I) dated 19.06.1995 & Amendment dated 31.08.1998  
2. MoEF Letter No. J-11011/445/2008-IA.II (I) dated 18.07.2008  
3. MoEF Letter No. J-11011/382/2008-IA.II (I) dated 02.08.2011  
4. MoEF Letter No. 11-80/2008-IA.III dated 20.10.2008  
5. MoEF Letter No. 11-80/2008-IA.III (Part - II) dated 07.12.2009  
6. MoEF & CC Letter No. J-11011/343/2013-IA II (I) dated 22.06.2015

Respected Sir,

This is in reference to above mentioned letters received from MoEF&CC, please note that we are complying all stipulated condition. We are attaching herewith the descriptive reports on status of compliance to conditions of Environmental Clearance and Environmental Management for the period **1<sup>st</sup> November 2019 to 30<sup>th</sup> April 2020** as **Annexure - A**.

We hope you will find the above in order.

Yours Faithfully,  
For **Grasim Industries Limited; Unit - Indian Rayon**

  
**Harendra Singh Dagur**  
Unit Head

CC:

The Regional Officer  
Gujarat Pollution Control Board  
Pankaj Vikas Bunglow  
Opposite Saint Annes Church  
Station Road  
**Junagadh - 362001**

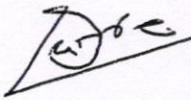
R-50

The Director  
Forest and Environment Department  
Block No. 14, 8<sup>th</sup> floor Sachivalaya  
**Gandhinagar - 382010**

R-51

Central Pollution Control Board Zonal Office (West),  
Parivesh Bhawan, Atmajyoti Ashram Rd, Opp. VMC  
Ward Office No. 10, Subhanpura,  
**Vadodara - 390023**

R-52



  
The fashion yarn

Grasim Industries Limited  
Unit - Indian Rayon

Veraval 362266, Dist. Gir Somnath, Gujarat, India

**DESCRIPTIVE REPORT ON STATUS OF COMPLIANCE TO CONDITIONS OF ENVIRONMENTAL CLEARANCES AND ENVIRONMENTAL MANAGEMENT**

<b>A.</b>	<b>As per Letter No. J-11011/343/2013-IA II (I) dated 22<sup>nd</sup> June, 2015 by MoEF &amp; CC for Expansion Project for production of Viscose Filament Yarn (1650 to 2400 MTPM), Sodium Sulphate (Na<sub>2</sub>SO<sub>4</sub>) Plant (2050 to 2350 MTPM), Captive Power Plant (34.5 to 54.5 MW) along with Installation of Sodium Sulphite (Na<sub>2</sub>SO<sub>3</sub>) Plant (3000 MTPM) &amp; Liquid Sulphur Dioxide (SO<sub>2</sub>) Plant (1500 MTPM).</b>	
i.	ESP and adequate stack height shall be provided to coal fired boiler to control air emissions within the limit stipulated by CPCB and GPCB. Low NO <sub>x</sub> burner shall be provided in captive Co-generation power plant to reduce the NO <sub>x</sub> emissions.	Our existing Captive Power Plant is operating with CFBC technology having capacity of 34.5 MW, for which we have installed three nos. of Electrostatic Precipitator to control particulate emission. Opacity meter has been installed for Continuous PM Emission Monitoring. The height of chimney of both Old & New Power plant Stacks is of 122 m as per the CPCB standards.  Compliance of Condition is noted and planned accordingly. Moreover, It is expected that 20 MW Captive power Plant with CFBC technology will be commissioned by June'2021 as the order for the boiler has been placed in May'2019. Flue gas of proposed Captive Power Plant shall be exhausted through the existing chimney. Further, we will ensure actualization of all particulars during commissioning of the project.
ii.	The gaseous emissions (SO <sub>2</sub> , NO <sub>x</sub> , CS <sub>2</sub> , H <sub>2</sub> S, CO, HC) and particulate matter from process and CPP units shall conform norms prescribed by the CPCB/ GPCB from time to time. At no time, the emission levels shall go beyond the prescribed standards. In the event of failure of any pollution control system adopted by the unit, the respective unit shall not be restarted until the control measures are rectified to achieve the desired efficiency. Continuous emission monitoring system (CEMS) should be installed to measure SO <sub>2</sub> , NO <sub>x</sub> and	At present in our existing Chlor-Alkali plant, we have installed Online Continuous Emission analyzer for parameter Cl <sub>2</sub> and HCl in Hypo and HCl Stack respectively. Similarly, Online Continuous Emission Monitoring System have been installed for Parameter Particulate Matter (PM), SO <sub>2</sub> , NO <sub>x</sub> for both Old and New Power Plant and data w.r.t. all above mentioned parameter has been transmitted to GPCB/CPCB server.  We have installed Online Continuous Emission Monitoring System for parameter SO <sub>2</sub> for both of Sulphuric Acid Plant and it is in operation.  We have installed three Nos. of H <sub>2</sub> S monitors & Three Nos. of CS <sub>2</sub> monitors within CS <sub>2</sub> Plant to indicate the Work Zone

	<p>particulate from the CPP stack and SO<sub>2</sub>, CS<sub>2</sub> and H<sub>2</sub>S from process plant stacks.</p>	<p>concentration of CS<sub>2</sub> &amp; H<sub>2</sub>S gas. In addition, we have installed Online Continuous Emission Monitoring System for parameter CS<sub>2</sub> &amp; H<sub>2</sub>S for both Rayon Stack and now analyzer performance is kept under stabilization.</p> <p>We have also installed 36 Nos. of Chlorine Sensors in our Caustic Soda Plant which are inter-connected to the Distributed Control System through which whole lot of manufacturing process are carried out.</p> <p>Also we have installed 12 Nos. of hydrogen sensors for monitoring which are hooked up with DCS for onsite hydrogen handling area in Caustic Soda Plant.</p> <p>The gaseous emission from process stacks conform to the standard as per prescribed by GPCB/MoEF &amp; CC. The reports are submitted to GPCB every month and Six monthly reports are being submitted to RO, MoEF &amp; CC, Bhopal. Copy of the Stack monitoring results from Nov'2019 to Apr'2020 are annexed and marked hereto as <b><u>Annexure – I.</u></b></p> <p>Apart from above, stack monitoring, AAQ and Treated Effluent Analysis results performed by NABL (QCI) accredited laboratory namely "Kadam Environmental consultants" Vadodara, results of which are annexed and marked hereto as <b><u>Annexure – II.</u></b></p>
<p>iii.</p>	<p>Exhaust containing CS<sub>2</sub> and H<sub>2</sub>S gas from rayon plant shall be passed through scrubber.</p>	<p>In the existing Rayon Plant, H<sub>2</sub>S is scrubbed with Caustic Soda in 2 stage Absorption system to recover Sodium Sulphide. The gaseous emission from the Carbon di-Sulphide plant in the form of CS<sub>2</sub> are recovered by condenser.</p> <p>Exhaust gas containing CS<sub>2</sub> &amp; H<sub>2</sub>S gas is controlled by supplying humidified air through Air Washers continuously.</p> <p>The exhausting dilute gases through 2 Nos. of process stack and the emission level of both CS<sub>2</sub> &amp; H<sub>2</sub>S concentration is being maintained within permissible limit.</p>

		<p><b>The project will be expanded in three phases within 5 years for which EC &amp; CTE have been granted.</b></p> <p><b>Phase-1:</b> We have been granted Consolidated Consent and Authorization (CCA) from GPCB, Gandhinagar for enhancing VFY production from 1650 MTPM to 1950 MTPM vide letter no. GPCB/CCA/JNG-1(23)/ID17239/345269 dated 12.02.2016. We have been granted a renewed CC&amp;A No. GPCB/ID- 17239/CCA/JNG-1 (27) for which Consent order number is. AWH -92560 Date of issue: 23/04/2018. For enhancing VFY production, 12 New Machines were being installed and the installation due to some unforeseen reasons is kept on hold till the end of 2021. The existing pollution control facilities are adequate to maintain the stipulated norms by GPCB.</p> <p><b>Phase -2:</b> In order to further increase the production of Viscose Filament Yarn (1950 to 2200 MTPM), Sodium Sulphate (Na<sub>2</sub>SO<sub>4</sub>) Plant (2050 to 2350 MTPM), Captive Power Plant (34.5 to 54.5 MW) within the existing plant premises, we shall seek prior approval for CTO from GPCB prior to production.</p> <p><b>Phase – 3:</b> In order to further increase the production of Viscose Filament Yarn (2200 MTPM to 2400 MTPM) &amp; new product Sodium Sulphite (Na<sub>2</sub>SO<sub>3</sub>) Plant (3000 MTPM) and Liquid Sulphur Dioxide (SO<sub>2</sub>) Plant (1500 MTPM) within the existing plant premises, we shall seek approval for CTO from GPCB prior to production.</p> <p>During the commissioning of Phase -2 &amp; 3, concentration of CS<sub>2</sub> &amp; H<sub>2</sub>S in process gas shall remain within permissible limit by the application of similar facilities.</p>
iv.	Ambient Air Quality data shall be collected as per NAAQS standards notified by the Ministry vide G.S.R. No 826 (E) dated 16 <sup>th</sup> September, 2009. The levels of PM <sub>10</sub> , PM <sub>2.5</sub> ,	In the existing plant, four Nos. of AAQ stations are established and ambient air quality is being measured for PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>x</sub> , NO <sub>x</sub> , CS <sub>2</sub> , H <sub>2</sub> S, HCl, and Cl <sub>2</sub> . Location of Stations are concluded after consultation with GPCB

	<p>SO<sub>2</sub>, NO<sub>x</sub>, CO, CS<sub>2</sub>, H<sub>2</sub>S, HCl, VOCs and methane and non-methane HC shall be monitored in the ambient air and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically, it shall simultaneously be sent to the Regional office of MoEF, the respective Zonal office of CPCB and GPCB</p>	<p>officials. Copy of the AAQ results from Nov'2019 to Apr'2020 are annexed and marked hereto as <b>Annexure – III</b>. The AAQ results are being displayed in main gate and the same is being updated regularly. The AAQ results are being uploaded in our website (<a href="http://www.grasim.com/sustainability.aspx">http://www.grasim.com/sustainability.aspx</a> &amp; <a href="http://adityabirlanuvo.com/indianRayon.php">http://adityabirlanuvo.com/indianRayon.php</a>) regularly. Simultaneously, the same AAQ results are sent to all the statutory body. Apart from above, Ambient Air Quality is performed by GPCB approved Environmental Auditor namely Darshan Engineering College, Rajkot. Further, we have installed Two nos. of online Continuous Ambient Air Quality Monitoring System (CAAQMS) over Rooftop of our Rayon Administrative Building and over rooftop of Caustic Soda Administrative Building. Online Data from both the stations are being transmitted to GPCB server. In addition, AAQ and Treated Effluent Results are being displayed over digital interface at our Main gate. Additional one nos. of Continuous Ambient Air Quality Monitoring System (CAAQMS) has been installed and the photographs of the same are enclosed as <b>Annexure – IV</b>.</p>
<p>V.</p>	<p>In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emission shall be controlled by providing closed storage, closed handling &amp; conveyance of chemicals/materials, multi cyclone separator and water sprinkling system. Dust suppression system including water sprinkling system shall be provided at loading and unloading areas to control dust emissions. Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly</p>	<p>In existing plant, we have taken adequate preventive measures in all potential fugitive emission generating points such as coal handling point, transfer point etc. to control fugitive emission. The arrangements are as below :</p> <ul style="list-style-type: none"> <li>• Coal is being kept in a covered shed and it is being transferred to Coal Bunker through encased conveyor Belt system to prevent fugitive dust emissions.</li> <li>• Bag Filters &amp; Cyclone Separator (Mechanical dust collector) with Coal fired boilers to control particulate emissions.</li> <li>• Water sprinkler system in Coal Handling Plant to control fugitive emissions</li> </ul>

	<p>monitored. The emission shall confirm to the limits stipulated by the GPCB.</p>	<ul style="list-style-type: none"> <li>• Dry fog based Dust suppression system (114 Nos. Nozzles) provided in Coal Handling plant with investment of Rs. 30 Lacs to control of sub-micron particle of dust</li> <li>• Water sprinkler system in coal yard to control particulate emissions</li> <li>• Water sprinkler system in ash pond area to control particulate emissions</li> <li>• Further, to improve the Ambient Air Quality, 26 Nos. of Rain Guns are provided for suppression of Coal Dust in Coal Storage &amp; Handling Unit.</li> </ul> <p>Work environment is being monitored on continuous basis by chlorine sensors, installed at different locations as per the requirement. CS<sub>2</sub> and H<sub>2</sub>S are also being monitored with sensor and results are continuously monitored and maintained and it is being reported to statutory Authority in Form No- 37.</p>
vi.	<p>The gaseous emission from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG set to mitigate the noise pollution.</p>	<p>We have D.G Sets for emergency power back up having Stack Height as per GPCB Standards, which are as given below:</p> <ul style="list-style-type: none"> <li>➤ 2 Nos. of D.G Set (750 KVA)</li> <li>➤ 1 Nos. of D.G Sets (500KVA)</li> <li>➤ 1 Nos. of D.G set (1500 KVA)</li> </ul> <p>The DG sets are provided with the acoustic enclosures to mitigate the noise.</p>
vii.	<p>Total fresh water requirement from Umrethi Dam supply should not exceed 15938 m<sup>3</sup>/day and prior permission shall be obtained from the concerned Authority. No ground water should be used. Efforts should be made to reduce the fresh water requirement by adopting 3R's (Reduce, Reuse and Recycle) concept.</p>	<p><b>Agreed.</b></p> <p>Total fresh water requirement from Umrethi Dam supply will be maintained within the limit as per stipulated condition. We will further reduce fresh Water consumption through water conservation measures such as 3R's (Reduce, Reuse and Recycle).</p>

viii.	<p>Total industrial wastewater generation shall not exceed 10540 m<sup>3</sup>/day. As proposed, effluent should be treated in effluent treatment plant. Treated effluent shall be discharged into conveyance system for marine disposal after confirming to the standards prescribed for marine discharge norms and obtaining permission from the GPCB. Treated effluent should be passed through guard pond. Online pH meter, TOC analyzer and flow meter should be installed. No process effluent shall be discharged in and around the project site. Sewage should be treated in STP. The water quality monitoring report for treated effluent should be submitted to the CPCB and Ministry's regional office at Bhopal.</p>	<p>Indian Rayon has Consolidated Consents and Authorization from Gujarat Pollution Control Board (GPCB) for generation of 11372 m<sup>3</sup>/day of treated effluent. However, after the expansion, our wastewater generation will be 10540 m<sup>3</sup>/day. We have Effluent Treatment Plant (ETP) having Capacity of 12000 m<sup>3</sup>/day and it will be adequate for treatment of wastewater after Expansion. The treated effluent is processed through guard pond. Thereafter it is being discharged into sea through pipeline having design discharge capacity of 15,000 m<sup>3</sup>/day into deep sea with diffuser system and same meets all parameters within the GPCB limits.</p> <p>Further, we have installed Online Continuous Effluent Monitoring system for pH, TSS, Temperature &amp; Flow and the online data has been transmitted to GPCB/CPCB server.</p> <p>In addition to this, we have installed Sewage Treatment Plant of capacity 500 m<sup>3</sup>/day. However, we are generating sewage within limits of 388 m<sup>3</sup>/day. The treated effluent from STP is being utilized as source of make-up Water for cooling Towers &amp; in Plantation.</p> <p>Copy of Treated Effluent Analysis report for the period from Nov'2019 to Apr'2020 is annexed and marked hereto as <b>Annexure – V</b>. Apart from above, Treated Effluent Analysis is done by GPCB approved Environmental Auditor namely Darshan Engineering College, Rajkot. Also, We have installed Online Continuous Emission Monitoring System for parameter TOC at site and it is in operation.</p>
ix)	<p>As proposed, effluent recycling RO plant shall be installed to produce 2000 m<sup>3</sup>/day recycle water. Efforts shall be made for recovery of sodium thiosulphate.</p>	<p>In Phase -1, we have installed RO Plant of 500 m<sup>3</sup>/day and it is in operation. The remaining 1500 m<sup>3</sup>/day of effluent recycling will be achieved in subsequent phases i.e. phase-2 &amp; 3. Efforts for recovery of Sodium thiosulphate is noted.</p>
x)	<p>Treated effluent should be passed through guard pond. Online pH meter, TOC analyzer</p>	<p>At present, treated effluent is processed through guard pond. Thereafter it is being discharged into sea through pipeline into deep sea having design capacity of 15,000</p>

	and flow meter should be installed. Sulphide contents in the effluent should also be monitored.	<p>m<sup>3</sup>/day with diffuser system and same meets all parameters within the GPCB limits.</p> <p>Further, Online Continuous Effluent Monitoring system for pH, TSS, Temperature &amp; Flow have been installed in our ETP and the online data has been transmitted to GPCB/CPCB server.</p> <p>Sulphide concentration in effluent water is being regularly monitored.</p> <p>With regard to TOC Meter, kindly refer <b>reply to pt. vii</b></p>
xi)	Process effluent/ any wastewater shall not be allowed to mix with storm water. Storm water drain shall be passed through guard pond.	We are very conscious and alert to take all precautions regularly so that mixing of both the streams (Storm & Process) will not take place. It is being done by formulating periodic schedule for cleaning of all Effluent Channel as well as storm channels to eliminate chocking of the same and we have instructed all the concerned departments / sections for implementation of the same on continuous & regular basis.
xii)	The company shall obtain Authorization for collection, storage and disposal of hazardous waste under the Hazardous Waste (Management, Handling and Trans-boundary movement) Rules, 2008 and amendment as on date for management of hazardous waste and prior permission from GPCB shall be obtained for disposal of solid/Hazardous waste in the TSDF. A copy of the same shall be submitted to the Ministry and Ministry's regional office at Bhopal.	<ul style="list-style-type: none"> <li>We have been granted with Authorization from the Gujarat State Pollution Control Board for collections/treatment/storage/disposal of hazardous wastes in Consolidated Consent &amp; Authorization (CC&amp;A) vide Letter No. GPCB/ID- 17239/CCA/JNG-1 (27) for which Consent order number is. AWH -92560 Date of issue: 23/04/2018. Copy of the renewed CCA has also been submitted at your office.</li> <li>Solid/Hazardous Waste Generated from process are being disposed through GPCB approved TSDF with prior permission.</li> </ul>
xiii)	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	<ul style="list-style-type: none"> <li>We have been granted authorization for handling and storage of Hazardous waste, generated in the plant and relevant procedures are followed. We have approvals from Chief Inspectorate of Factories, Gandhinagar, Chief Controller of Explosives, Nagpur and Fire Safety Inspectorate.</li> </ul>

	<p>Chemicals shall be as per the motor vehicle Act (MVA), 1989.</p>	<ul style="list-style-type: none"> <li>• We are complying with the rules and regulations under Manufacture, Storage and Import of Hazardous chemicals Rules, 1989 as amended in October, 1994 and January, 2000.</li> <li>• All transportation of hazardous chemicals are being done as per the Motor Vehicle Act (MVA), 1989 as registered vehicles are only used for transportation.</li> </ul>
<p>xiv)</p>	<p>All the recommendations mentioned in the Environment Management Plan, Rapid Risk Assessment Report, Disaster Management Plan and safety guidelines shall be implemented.</p>	<ul style="list-style-type: none"> <li>• We have onsite Emergency plan and offsite Emergency plan having duly approved by Deputy –Director (Industrial Safety and Health), Government of Gujarat.</li> <li>• We are adhering to the recommendations mentioned in Environmental Management Plan &amp; Rapid Risk Assessment Report. Moreover, we are also carrying out safety audit regularly and the report is submitted to various Government bodies.</li> <li>• We have adopted Aditya Birla Sustainability Framework for Safety System in VFY, CSP &amp; CPP as the part of which we have Implemented 14 safety standards to maintain and improve work place safety culture.</li> <li>• Implemented Process Safety Management System to prevent process incidents and to prevent unexpected releases of toxic, reactive or flammable liquids and gases from processes of highly hazardous processes.</li> <li>• The Company is fully committed to the protection of the EHS as well as quality as it is evident from the adaption of Management Systems: ISO 14001:2015, ISO 9001:2015, ISO 45001:2018 from reputed international agency Intertek and SA 8000:2014 &amp; ISO 50001:2011 from reputed international agency DNV.</li> </ul>

xv)	Boiler ash should be stored separately as per CPCB guidelines so that it shall not adversely affect the air quality, becoming air borne by air or water regime during rainy season by flowing along with the storm water. Direct exposure of workers to fly ash & dust shall be avoided.	At present, we are having Dry Fly ash collection facility in CPP. There are Four Silos with Bag Filter having total capacity of 1200 MT is available for storage of dry fly ash. We will uphold the existing facility for proposed fly ash generation. The persons working there use the appropriate PPEs to avoid exposure. The same practices shall be followed for the proposed power plant.
xvi)	All the fly ash shall be utilized as per fly ash Notification, 1999 subsequently amended in 2003 and 2008.	The fly ash generated in our Captive Thermal Power Plant is utilized 100% in Cement Plants. Thus, we are complying the guidelines of Fly ash Notifications. Further to inform that we are regularly submitting yearly return in Standard Proforma provided by MoEF & CC, New Delhi as per Fly Ash Notification to the Head Office, Gandhinagar and your Regional Office at Junagadh as well.
xvii)	The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per norms.	<p>Recommendations of Fire study &amp; Risk Assessment are being implemented to prevent fire hazards.</p> <p>Routine Assessments are being done with implementation of Preventive measures and recommendations of the study. Fire safety measures is incorporated within factory premises. All the fire extinguishing media such as Water, dry chemicals, CO<sub>2</sub>, etc. are kept in vital locations.</p> <p>We have full-fledged hydrant system which will suffice to take care of an emergency in the plant.</p> <p>Mock drills are being carried out to train the workman to deal with emergency situation.</p>
xviii)	Occupational health surveillance programme should be undertaken as regular exercise for all the employees. The first aid facility in the occupational health center should be strengthened and regular medical test records of each employee should be maintained separately.	<ul style="list-style-type: none"> <li>• Occupational health surveillance programme are undertaken as regular exercise for all the employees, specifically for those engaged in handling hazardous substances.</li> <li>• The first aid facilities in the occupational Health Centre are strengthened and the medical records of each employee have been maintained separately.</li> </ul>

xix)	Dedicated parking facility or loading and unloading of material should be provided in the factory premises. Unit should develop and implement good traffic management system for their incoming and outgoing vehicles to avoid congestion on the public road.	At present, we have the adequate infrastructure for parking for vehicle engaged in loading and unloading of material. Further, we have a team of personnel, who take care the transporting system inside plant premises. Outward moving vehicles are instructed not to rush in public road and move in a queue in order to avoid congestion.
xx)	As proposed, green belt over 33% of the total project area should be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area, in downward direction, and along road side etc. selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	<ul style="list-style-type: none"> <li>• We have developed 33.64 % of plant area viz. Rayon, Power Plant and Caustic Soda Plant into Green belt with local species. There are 119602 nos. existing trees as on 1<sup>st</sup> of April 2020. Besides above 1.147 acre area is used/developed with lawn (Hariyali). Total 10.3 Km length of hedges are planted and maintained.</li> <li>• Plant Area breakup: <ul style="list-style-type: none"> <li>➤ Plant Boundary: 176.26 acre</li> <li>➤ Green Belt Area: 59.31 acre (33.64% of total area)</li> <li>➤ Open Area: 114.18 acre</li> </ul> </li> </ul> <p>Although we have already achieved the 33% of area covered under Green belt but still we are carrying out plantation during onset of monsoon every year. For the year 2019-20, we planted 2546 nos. of sapling inside plant premises till date.</p>
xxi)	All the commitments made to the public during public hearing/Public consultation meeting held on 4 <sup>th</sup> October, 2014 shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the ministry's Regional office at Bhopal.	All the comments raised during public hearing/ consultation was noted and detailed Action Plan and Budgetary Allocation will be earmarked to satisfactorily implement the same. We shall submit the aforesaid report to your office.
xxii)	The company shall submit within three months their policy towards Corporate Environmental Responsibility which should inter-alia address (i) standard operating	Complied We do have the Corporate Environmental Policy featuring all the attributes delineated in the condition. Also we would

	<p>process/procedure to bring into focus any infringement/ deviation/ violation of environmental or forest norms. Conditions, (ii) Hierarchical system or Administrative order of the company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) system of reporting of non-compliance/ violation environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.</p>	<p>like to mention that we are carrying out the Environmental Management in our unit in line with the formulated Policy.</p>
xxiii)	<p>At least 5% of the total cost of the project (i.e. Rs. 43 Crore) shall be earmarked towards the <b>Enterprise Social Commitment (ESC)</b> based on local needs and action plan with financial and physical break up /details shall be prepared and submitted to the Ministry's Regional Office at Bhopal. Implementation of such programme should be ensured accordingly in a time bound manner.</p>	<p>Noted for Compliance A separate budget has been earmarked for CSR/ESC activities. CSR study report has already been submitted to your good office. CSR/ESC activities is being carried out by IR Jan Seva. CSR Report for the period Apr'2019 to Mar'2020 is annexed hereto and marked as <b>Annexure – VI</b>.</p>
xxiv)	<p>Provision shall be made for the housing for the construction Labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile sewage treatment plant, safe drinking water, medical health care, crèche etc. the housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.</p>	<p>Noted We will provide the basic amenities to the construction workers within the site.</p>

General Condition		
i)	<p>The project authorities must strictly adhere to the stipulations made by the <b>Gujarat State Pollution Control Board (GPCB)</b>, State Government and any other statutory authority.</p>	<p>Presently, we are complying all the conditions given by Gujarat State Pollution Control Board, State Government and other statutory authority.</p>
ii)	<p>No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment &amp; Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.</p>	<p>Noted</p> <p>we have received the Environmental Clearance for Expansion of Viscose Filament Yarn (1650 to 2400 MTPM), Sodium Sulphate (Na<sub>2</sub>SO<sub>4</sub>) Plant (2050 to 2350 MTPM), Captive Power Plant (34.5 to 54.5 MW) along with Installation of Sodium Sulphite (Na<sub>2</sub>SO<sub>3</sub>) Plant (3000 MTPM) &amp; Liquid Sulphur Dioxide (SO<sub>2</sub>) Plant (1500 MTPM) from Ministry of Environment, Forests &amp; Climate Change, New Delhi vide letter no. J-11011/343/2013-IA II (I) dated 22nd June, 2015.</p> <p>We have been granted amendment in CTE/NOC from Gujarat Pollution Control Board for Expansion of production Capacity of Viscose Filament Yarn &amp; other products as prescribed in Environmental Clearance of Expansion Project Vide Order No. GPCB/CCA/JNG-1(21)/ID17239/332587 dated 10.11.2015 and corrigendum in Amendment vide Order No. GPCB/CCA/JNG-1(23)/ID17239/342712 dated 25.01.2016.</p> <p>We have been granted Consolidated Consent and Authorization (CCA) from GPCB, Gandhinagar for enhancing VFY production from 1650 MTPM to 1950 MTPM vide letter no. GPCB/CCA/JNG-1(23)/ID17239/345269 dated 12.02.2016.</p> <p>We have been granted a renewed CC&amp;A No. GPCB/ID-17239/CCA/JNG-1 (27) for which Consent order number is. AWH -92560 Date of issue: 23/04/2018.</p>
iii)	<p>The National Ambient Air Quality Emission standards issued by the Ministry vide G.S.R.</p>	<p>Noted</p>

	No 826 (E) dated 16 <sup>th</sup> September, 2009 shall be complied.	
iv)	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control Board (SPCB) and it shall be ensured that at least one stations is installed in the upwind and downwind direction as well as where maximum ground level concentrations are anticipated.	Complied. Refer Specific Condition No. (iv)
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 EPA Rules, 1989 viz. 75 dB (A) (day time) and 70 dB (A) (night time).	Adequate measures are taken to provide earmuffs/earplugs for persons working in noisy areas. All the places where practicable silencers are provided to the equipment's like compressors, Blowers etc. We are regularly monitoring Noise Level at Ambient Air and also in Work Zone.
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 for the process activities of the project to conserve fresh water.	All efforts for rain water harvesting are being taken. Due to high water table in area further recharging is not possible. However, separate storm water drains are provided to prevent flooding by discharging into Devka River. In addition to this, we have also developed watershed development recharge pits in the several villages falling under 10 km of radius of Study area, resulting into rise in water level in nearby areas.
vii)	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	We are regularly carrying out training to all employees on safety and health aspects on handling chemicals. Pre-employment and routine periodical medical examinations are also performed.

viii)	Usage of personnel protective Equipment's (PPE's) by all employees/workers shall be ensured.	All employees/Workers are provided with Personnel Protective Equipment's based on the work place hazards.
ix)	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, risk mitigation measures and public hearing relating to the project shall be implemented.	We adhere to the recommendations made in EIA/EMP report covering all aspect in condition.
x)	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding areas. CSR activities shall be undertaken by involving local villages and administration.	We actively participate in activities meant for improving Socio-economic conditions of surrounding.
xi)	The company shall undertake eco-developmental measures including community welfare measures in the project area of the overall improvement of the environment.	Noted
xii)	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and monitoring functions.	We have a Corporate Environment Management structure which reports to the Office of the Chairman. Director of our Business monitors the environment management system and at the Unit Level President & Vice President leads Environment Management system. Qualified & Competent Engineers to maintain the aspects and implement Environment Management System effectively and ensure its continuous improvement. A well-equipped laboratory & dedicated EMC are established in the factory to regularly analyze & monitor the highly fragile eco-system of the complex. We are also monitoring ambient air apart from four stations. All the results are within the GPCB Prescribed

		<p>Norms. For the Environmental requirement, return on investment is not calculated and the budget is allocated as discretionary budget. There is no limitation from the side of Management for spending on regulatory/ Environmental protection requirements. The Environment Management Cell comprises of following persons and headed by:</p> <p>a) President &amp; Unit Head</p> <p>b) FH – VFY</p> <p>d) FH – Caustic &amp; Power Plant</p> <p>e) Department Head – Environment &amp; Sustainability</p> <p>f) Department Head – Civil</p> <p>g) Manager – ETP</p> <p>h) Department Head - Safety</p> <p>i) Engineer/ Officer – Environment &amp; Sustainability</p> <p>k) Environmental Analyst</p> <p>l) Department Head – Estate, Fire &amp; Security.</p>
xiii)	<p>The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment &amp; Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose</p>	<p>The policy of the company is that for any Environmental incidents there are no budget restrictions. However a minimum amount of Rs. 40 to 50 Lacs earmarked on annual basis for environmental activities. This is besides expansion incurred for chemical consumption and strengthening of existing pollution control and monitoring equipment.</p>
xiv)	<p>A Copy of clearance letter shall be sent by Project Proponent to the concerned panchayat/ Zila Parishad/ Municipal Corporations, Urban local body and the</p>	<p>Complied</p> <p>We have Intimated to Local Administration (District Collector/ Add. District Collector) about accordance of Environmental Clearance on 30.06.2015.</p>

	local NGO if any, from who suggestions/ representations, if any, were received while processing the proposal.	
xv)	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, the respective Zonal Office of CPCB and the Gujarat Pollution Control Board. A copy of Environmental Clearance and six monthly compliance status reports shall be posted on the website of the company.	<p>We are submitting the six monthly compliance report of stipulated EC conditions to your good office and GPCB in hardcopy and we are also uploading it on our website. Henceforth, we will be regularly submitting the same in the form of softcopy through Email. Kindly note that Aditya Birla Nuvo Limited have been amalgamated with Grasim Industries Limited w.e.f 1<sup>st</sup> July 2017. Therefore, now, our unit is called Grasim Industries Limited, Unit – Indian Rayon. We have intimated about the amalgamation to Pollution Control Authorities viz. The Director, IA Division (Industry - II), New Delhi, MoEF &amp; CC, Western Regional Office, Bhopal, Zonal Officer, CPCB, Vadodara, GPCB, Gandhinagar, GPCB, Junagadh vide our Letter dated 22<sup>nd</sup> June 2017, 3<sup>rd</sup> July 2017 and 15<sup>th</sup> July 2017 respectively.</p> <p>Further, we have submitted notarized undertaking about change of company name only without increase in any production prospective to Unit Head – Junagadh, GPCB, Gandhinagar vide our Letter dated 9<sup>th</sup> October 2017.</p> <p>We have incorporated a name change which has been included in our CC&amp;A by GPCB [No: GPCB/ID -17239/ CCA - JNG -1(26)] and the same was informed to MoEF &amp; CC through our letter dated 28.12.2017</p>
xvi)	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated shall be submitted to concerned State Pollution Control Board as prescribed under the EP 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	We are regularly submitting the Environmental Statement to GPCB and uploading the same on our website. The same also sent to Regional Office, MoEF & CC. Henceforth, we will be regularly submitting the same in the form of softcopy through Email as well.

	to the respective Regional Office of MoEF & CC by e-mail.	
xvii)	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 <a href="http://www.moef.nic.in">http://www.moef.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office.	Complied We have already intimated about the advertisement of accordance of Environmental Clearance with in stipulated time to your good office vide our letter no. ABNL/ENV/C3262/2015 dated June 27 <sup>th</sup> 2015 i.e. within 7 days period.
xviii)	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.	Noted for compliance. Moreover, we have been granted Provisional NOC/CTE dated 15 <sup>th</sup> September 2015 for aforesaid project.
8)	The ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	We will implement all the conditions.
9)	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner shall implement these conditions.	We will comply any additional conditions may be imposed by your esteemed department from time to time.
10)	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and	We are complying all the provisions under Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Waste (Management and Transboundary Rules, 2016 and

	Handling) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	the Public Liability Insurance Act, 1991 along with their amendments and rules.  We are operating our Plant under statutory Consents & Clearances accorded from Gujarat Pollution Control Board, Gandhinagar and Ministry of Environment, Forests & Climate Change, New Delhi respectively.
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<b>B.</b>	<b>As per EC Letter No. J-11011/445/2008 – IA.II (I), Dated: 18.07.2008 by MoEF &amp; CC for Expansion Project for production of Viscose Filament Yarn from 1300 MTPM to 1650 MTPM &amp; Caustic Soda production from 200 TPD to 400 TPD.</b>	
<b>S. No.</b>	<b>Conditions</b>	<b>Reply to Stipulated Conditions</b>
<b>A. Specific Conditions</b>		
i.	The effluent generation shall not exceed 8540 m <sup>3</sup> /d. The effluent from the caustic soda plant and viscose filament rayon plant shall be treated in the company's own Common Effluent Treatment Plant and the treated effluent after conforming to the industry specific discharge standards shall be sent to sea creek. The domestic effluent shall be disposed of through septic tank soak pit	Being Complied
ii.	Process emissions from the caustic soda plant shall be scrubbed with alkali scrubber with efficiency of 95% at each stage. Bubble cap tray followed by packed bed scrubber with water as scrubber media shall be installed to control HCl emissions. Stack of adequate height for caustic soda plant and HCl synthesis unit shall be provided for dispersion of emission	Complied

iii.	<p>The vent gases from Sodium hypochlorite plant and HCl acid plant shall be controlled at source by effective absorption system. Waste Chlorine gas shall be used in preparation of HCl. Bubble cap tray followed by packed bed scrubber with DM water shall be provided to scrub HCl gas mist and vapor. The vent gases shall be discharged from the stacks of adequate height for effective dispersion. On line chlorine monitors with DCS within Caustic Soda plant to monitor chlorine gas and on line hydrogen monitors with DCS shall be installed</p>	Complied
iv.	<p>Particulate emissions from the captive power plant and coal fired boiler shall be controlled by electrostatic precipitator and bag filters and emissions shall be dispersed through stack of adequate height. Particulate emissions shall conform to the prescribed standards. For dispersion of emissions from the DG set, stack height as per CPCB standards shall be provided. Emissions from the DG Sets shall conform to the standards prescribed by the CPCB. The DG sets will be provided with the acoustic enclosures to mitigate the noise.</p>	Complied
v.	<p>Dykes of adequate height shall be provided around the HCl acid tanks to collect the acid within the dyke walls in the event of catastrophic failure of the tank</p>	Complied
vi.	<p>The gaseous emissions from the carbon di sulphide plant in the form of CS<sub>2</sub> and H<sub>2</sub>S shall be recovered by condensers and H<sub>2</sub>S shall be scrubbed with caustic soda and 2-stage absorption system to recover sodium sulphide.</p>	Complied
vii.	<p>The adequate measures shall be taken to prevent the fire hazards and accidental release of Cl<sub>2</sub>.</p>	Complied

viii.	The project authorities shall comply with the recommendations made in the EIA/EMP report.	Complied.
ix.	Green belt shall be developed in 12 ha of plant area to mitigate the effects of fugitive emissions all around the plant. The development of green belt shall be as per the Central Pollution Control Board guidelines.	Complied
x.	Rainwater harvesting measures shall be undertaken to recharge the ground water.	Complied
<b>B. General Conditions</b>		
i.	The project authorities shall strictly adhere to the stipulations made by the <b>Gujarat State Pollution Control Board (GPCB)</b>	Complied
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment & Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Complied
iii.	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained.	Complied We are renewing the approvals periodically.
iv.	The project authorities shall strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003.	Complied

	Authorization from the State Pollution Control Board must be obtained for collections/ treatment/ storage/ disposal of hazardous wastes.	
v.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dB (A)) 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 EPA Rules, 1989 viz. 75 dB (A) (day time) and 70 dB (A) (night time).	Being Complied
vi.	Occupational health surveillance programme shall be undertaken as regular exercise for all the employees, specifically for those engaged in handling hazardous substances. The first aid facilities in the occupational health center should be strengthened and the medical records of each employee should be maintained separately	Being Complied
vii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA and Risk analysis. Report. The Company must also undertake social welfare/ community development measures in the surrounding villages, such as health care, education and drinking water supply facilities	Complied
viii.	A separate Environmental Management Cell equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and monitoring functions.	Complied
ix.	The project authorities shall provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment &	Complied

	Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.	
x.	The implementation of the project vis-à-vis environmental action plans will be monitored by Ministry's Regional Office at Bhopal/ State Pollution Control Board/ Central Pollution Control Board. A six monthly compliance status report should be submitted to monitoring agencies.	Complied
xi.	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 State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> . This should be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office.	Complied
xii.	The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work, if any.	Complied This project was applied to enhance the production capacity of Viscose Filament Yarn through modification in machinery and in Caustic Soda Plant by installation of three electrolyzers in the cell house. For the aforesaid project we have been granted NOC/CTE on 30.06.2009 and subsequently, we obtained Consolidated Consent Authorization (CCA) on 26.11.2010 and amendment in CCA on 18.11.2011. We have received the Amendment from GPCB/CCA-JNG-1 (16) ID – 17239/96938 dated 18th November 2011 for commissioning of New Superior Spool Technology for Manufacturing of Viscose Filament Yarn within the existing production capacity of 1650 MTPM.

8.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted
9.	The Ministry reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner shall implement these conditions.	Noted.
10.	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997	Complied
11.	The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Noted. We are operating our plant under statutory consents & clearances from Gujarat Pollution Control Board (GPCB), Gandhinagar and Ministry of Environment & Forests (MoEF), New Delhi respectively.

<b>C.</b>	<b>As per Amendment in EC vide Letter No. J-11011/382/2008-IA.II (I) dated 02.08.2011 by MoEF &amp; CC for Expansion project for enhancing production capacity of Viscose Filament Yarn from 1300 MTPM to 1650 MTPM and Caustic Soda plant of 200 TPD</b>	
<b>S. No.</b>	<b>Conditions</b>	<b>Reply to Stipulated Conditions</b>
i.	Plant capacity shall not increase beyond 1650 MTPM as mentioned in the Ministry's letter no. J-11011/445/2008-IA.II (I) dated 18.07.2008 No further expansion/ modification shall be carried out without prior approval from the MoEF.	Complied
ii.	All the conditions mentioned in the letter no. J-11011/445/2008-IA.II (I) dated 18.07.2008 shall be satisfactory complied.	Complied
iii.	Permission from the State Government shall be obtained for the change in technology.	Complied

<b>D.</b>	<b>As per EC no. J -11012/25/95-IA.II (I) dated 19.06.1995 &amp; amendment dated 31.08.1998 by MoEF &amp; CC (Expansion Project)</b>	
<b>S. No.</b>	<b>Conditions</b>	<b>Reply to Stipulated Conditions</b>
1	The PA must strictly adhere to the stipulations made by the SPCB and the State Government.	Complied
2	The PA must take effective steps to limit the emissions of CS <sub>2</sub> & H <sub>2</sub> S and in no case, it should exceed the limits prescribed by GPCB-amended condition.	Being Complied
3	Gaseous and particulate emissions from the various process vents and storage tanks should conform to the standards prescribed by the competent authorities from time to time. At no time will the emission levels be allowed to go beyond the prescribed standards. In the event of failure of the any respective unit should be put out of the operation immediately and should not be restarted to achieve the desired efficiency. An interlocking system should be incorporated & its effectiveness checked and approved by the SPCB.	Being Complied
4	At least four AAQ monitoring stations should be established in the down wind direction as well as where maximum ground level concentrations of SPM, SO <sub>2</sub> , NO <sub>x</sub> , CS <sub>2</sub> , H <sub>2</sub> S and Cl <sub>2</sub> are anticipated. The selection of the AAQ monitoring stations should be based on modeling exercise to represent short term ground level concentrations, sensitive targets etc. in consultation with the SPCB. Stack emissions should also be regularly monitored by installing stack monitoring devices in consultation with the SPCB. Data on AAQ and stack emissions should be submitted regularly to this Ministry once in six months and the SPCB once in three months along with the statistical analysis and interpretation.	Being Complied
5	Fugitive emissions should be controlled, regularly monitored and data recorded.	Being Complied

6	Liquid effluents coming out of the existing plant should conform to the standards as prescribed by the SPCB/ stipulated under the EP Act, 1986 and the treated effluents should be recycled/ reused to the maximum extent possible. There should not any effluent discharge from proposed caustic soda plant.	Being Complied
7	The hazardous wastes should be handled as per the HWMH Rules, 1989 of the EP Act, 1986. A plan for handling, treatment and disposal of hazardous wastes should be prepared and submitted for approval within six months.	Being Complied
8	Adequate measures for control of noise should be taken so as to keep noise levels below 85dB in the working environment. Persons working near the noisy machines in the different units, blowers, compressors etc. should be provided with well-designed ear muffs/ plugs. Besides, measures should be taken to reduce the noise at the source itself my employing engineering methods.	Being Complied
9	Adequate number of chlorine sensors coupled with alarm system should be installed at vulnerable locations to detect chlorine leak(s) for timely action. An early warning system should develop to alert the nearby communities during emergency situations. A wind sock should be provided at appropriate place within the plant in consultation with the SPCB.	Complied
10	Necessary approval should also be taken from the Explosive Department and the Chief Inspector of Factories, Gujarat regarding the design and safety of the pressure vessels, storage tanks etc.	Complied We are renewing the approvals periodically.
11	Work place air quality should be monitored regularly for acid mist, CS <sub>2</sub> , H <sub>2</sub> S and Cl <sub>2</sub> so as to ensure that it meets the standards prescribed by the competent authorities/	Being Complied

	OSHA/ NIOSH/ ACGIH in the form of time weighted averages.	
12	Brine sludge collection area should always be kept clean. Area should be made impervious to avoid contamination of ground water due to spillage. The method should be approved by the SPCB.	Being Complied
13	Workers before entering the bring sludge area and undertaking any work must wear adequate PPE such as safety goggles, aprons, gloves etc. This may be achieved by proper training and strict enforcement of safety regulation.	Being Complied
14	Showers (de-contamination booths) and eyes baths should be installed and properly maintained and the safety programme should also include periodic checking and maintenance of these systems as per the requirement of the Safety Directorate.	Being Complied
15	Occupational health surveillance programme should be undertaken as a regular exercise especially with respect to exposure to CS <sub>2</sub> , H <sub>2</sub> S, chlorine, thermal stresses and noise pollution. Maintenance of individual medical records along with base-line data is required.	Being Complied
16	A green belt of adequate width and density using local plant species should be developed all around the plant including sludge dumping site in consultation with the local DFO. There should be an average of 1500 trees/ha in the green belt and an overall average of 300/ha for the plant.	Complied
17	Risk assessment report should be revised and submitted for approval by this Ministry incorporating worst scenario and risk contours for hazardous toxic chemicals and gases. Hazard distance should not cross the battery limits of the factory under any circumstances.	Complied
18	The PA should revise the DMP incorporating graphs/ nomograms indicating special distribution of concentrations of pollutants	Complied

	during day and night under different stability classes wind conditions so that in case of accidental release of toxic gases the area likely to be affected could be known and rescue operations may be organized accordingly. Handling, manufacture, storage and transport of hazardous chemicals should be as per the details/provisions in the MSIHC Rules, 1989	
19	Approval from the State Govt. / SPCB should be obtained for the proposed landfill site.	Complied
20	All the requirements of the CRZ notification must be complied with.	Complied
21	The PA should set up laboratory facilities for collection and analysis of samples under the supervision of competent technical personnel, who will directly report to the Chief Executive.	Complied
22	A separate EMC with suitably qualified people to carry out various functions should be set up under the control of Senior Executive, who will directly report to the Heat of the organization.	Complied
23	The ministry may revoke or suspend the clearance, is implementation of any of the above conditions is not satisfactory.	Noted

<b>E.</b>	<b>As per EC Letter No. 11-80/2008-IA.III (Part - II) dated 07.12.2009 by MoEF &amp; CC for Marine Pipeline Project</b>	
<b>S.No.</b>	<b>Conditions</b>	<b>Reply to Stipulated Conditions</b>
1.	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the RO of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> (ambient level as well as stack emissions) or critical sectorial parameters, indicated for the project shall be monitored & displayed at a convenient location	Being complied

	near the main gate of the company in the public domain.	
2.	The PP shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective RO of MoEF, the respective Zonal Office of CPCB and the SPCB.	Complied
3.	The environmental statement for reach financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the PP to concerned SPCB as prescribed under the EP Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective RO of MoEF by e-mail.	Being complied
<b>F.</b>	<b>As per Letter No. ENV-10-2008-1177-E dated 12.02.2009 by GCZMA for Marine Pipeline Project</b>	
<b>S.No.</b>	<b>Conditions</b>	<b>Reply to Stipulated Conditions</b>
1	The Provisions of the CRZ notification of 1991 and subsequent amendments issued from time to time shall be strictly adhered to by M/s Indian Rayon.	We will comply with all the provisions of the CRZ Notification of 1991 and subsequent amendments issued from time to time.
2	The treated effluent, to the tune of 15000 m <sup>3</sup> /day (max) meeting with the Gujarat Pollution Control Board (GPCB) Norms at the point recommended by CSMCRI, Bhavnagar, shall only be discharged through the said pipeline after obtaining necessary Consent of the GPCB under the Water Act, 1974. At present, the company has disposed of 8450 m <sup>3</sup> / day of treated effluent and shall increase the quantity of the same after obtaining the necessary CCA/ Consent under the water Act 1974, from the GPCB.	Being complied
3	All the recommendations and suggestion given by the CSMCRI in its effluent disposal point selection report/ Environment Impact Assessment Report shall be implemented strictly by M/s Indian Rayon.	Complied

4	The effluent not meeting with the GPCB Norms shall not be discharged and shall be stored in the Guard ponds and recycled back in to the effluent Treatment Plant for further treatment to achieve the GPCB Norms. M/s Indian Rayon shall install necessary facilities for this purpose shall strictly ensure the compliance with the GPCB Norms, round the Clock	Complied
5	Comprehensive Environment Impact Assessment report shall be submitted to this department and the recommendations/ suggestions given in it shall be implemented.	Complied
6	The construction debris and sewage generated during the construction phase shall not be discharged in to sea creek, sea, estuary or in to the CRZ Area. The debris shall be removed from the construction site immediately after the construction is over and shall be disposed of as per the guidelines of the GPCB.	Complied
7	The land ward portion of the pipeline shall be buried at least 1m below the ground and the offshore portion shall be protected appropriately from the erosion.	Complied
8	The construction camps shall be located outside the CRZ area and the construction labors shall be provided with necessary amenities including sanitations, water supply and fuel and it shall be ensured that the environmental conditions are not deteriorated by the construction labors.	Complied
9	The ground water shall not be tapped to meet with water requirements during construction or operation phase in any case.	Complied
10	A Disaster Management plan to meet any eventualities that may arise during constructions and/ or operations phase shall be prepared implemented.	Complied
11	The Pipeline Shall be monitored regularly by the company and it shall be ensured that there is no leak from the pipe line .In case of any such	Complied

	eventualities, the company shall immediately stop disposal through the said pipeline and take corrective measures in the connection in consultation with GPCB and the District Collector.	
12	Necessary permissions from different departments/ agencies under different laws/ acts shall be obtained before commencing the constructions/ pipeline laying activities.	Complied
13	The company shall take up the mangrove plantation in 50 ha of area on Gujarat coastal line in phased manners in five years.	Complied
14	A separate Environmental Management Cell with qualified personnel shall be created to implement Environmental Management Plan and a separate budget shall be provided for this purpose.	Complied
15	The cost of external agency that may be appointed by this department for supervision/ monitoring of the project activities during constructions operational phases shall be borne by the M/s Indian Rayon.	We will bear cost of external agency appointed by DoEF, Gandhinagar for supervision/ monitoring of the project activities during constructions operational phases.
16	Massive Green belt development program shall be carried out in consultations with the forest department by M/s Indian Rayon.	Complied
17	A large Scale Socio-economic upliftment program in consultation with the District Collector/ DDO shall be carried out. A Separate budget shall be provided for this purpose and details be finished to this department from time to time.	Complied
18	Environment Audit Report shall be submitted every year. The report shall also cover the change in the costal and marine environment enroute the proposed pipeline and around disposal point due to commissioning of the proposed pipe line	Complied Marine monitoring is regularly carrying out through M/s. National Institute of Oceanography, Mumbai and report is being submitted to all the Regulatory Authorities on regular basis. Monitoring Report for samples collected during the period 11.03.2019 to 23.03.2019 is awaited.
19	A Six monthly Progress reports regarding the compliance of the conditions shall be submitted to this department.	We will comply.

20	Any additional conditions that may be imposed by the DOEF Department time to time shall have to be complied By M/s Indian Rayon.	We will comply any additional conditions may be imposed by the your department time to time
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<b>G. As per EC Letter No. 11-80/2008-IA.III dated 20.10.2008 by MoEF &amp; CC for Marine Pipeline Project</b>		
<b>S.No.</b>	<b>Conditions</b>	<b>Reply to Stipulated Conditions</b>
<b>A. Specific Conditions</b>		
(i)	The Zinc Concentration in the effluents at the discharge point shall be monitored and the report submitted to the Regional Office, Bhopal at every three months.	Complied Marine monitoring is regularly carrying out through M/s. National Institute of Oceanography, Mumbai and report is being submitted to all the Regulatory Authorities on regular basis. Monitoring Report for samples collected during the period 11.03.2019 to 23.03.2019 is awaited.
(ii)	All the conditions stipulated by Forests and Environment Department Government of Gujarat vide their letter No. ENV-10-2008-1177E dated 06.10.2008 shall be strictly implemented.	Complied
(iii)	The Pipe line shall not be disturbed the movement of fishing vessels or fishermen.	Complied
(iv)	It shall be ensured that there is no displacement of people, houses or fishing activities as result of the project.	Complied
(v)	It shall be ensured due to the project that there is no adverse impact on the drainage of the area and recharge of Ground water. No ground water shall be tapped in the project area falling in Coastal Regulation Zone.	Complied
(vi)	The Project Proponent must ensure that the effluents/ liquid wastes discharged are the standards laid down by the Gujarat Pollution Control Board.	Complied
(vii)	The camps of Labour shall be kept outside the Coastal Regulation Zone area. Proper arrangement for cooking fuel shall be made for the Labour during construction phase so as to ensure that mangroves are not cut /destroyed for this purpose.	Complied
(viii)	The entire stretch of the pipe lines Shall be buried underground except at the booster pumping	Complied

	station which will be fenced and station would be manned round the clock .The buried lines will be protected with anticorrosive Coal tar based Coating. The Coating will be tested in accordance with prescribed Standard.	
(ix)	Markers shall be installed at every 30 M to indicate the position of the line. Regular patrolling of the pipe line needs to be done. This will help in identifying any activities that have the potential to cause the pipe line damage or to identify small leaks whose effect are too small to be detected by Instrument.	Complied
(x)	Their Shall be display board at critical location along the pipe line viz. road/ rail/ river crossings giving emergency instructions as well as contact details of M/s Indian Rayon .This will ensure prompt information regarding location of the accident during any emergency. Emergency information board shall contain emergency instructions .Any additions to contact details.	Complied
(xi)	All necessary clearance from concerned agencies shall be obtained before initiating the project.	Complied
(xii)	The Project shall be implemented in such a manner that there is no damage whatsoever for the mangroves/ other sensitive coastal ecosystems. If any damage in mangroves is anticipated as a result of project activities then the clearance now been accorded shall stand cancelled and proponents may seek fresh approval from Ministry.	Complied
(xiii)	A Continuous and comprehensive post project Marine Monitoring quality programme shall be taken up. This shall include monitoring of water quality, sediment quality and biological characteristics covered in the EIA Studies.	Complied Marine monitoring is regularly carrying out through M/s. National Institute of Oceanography, Mumbai and report is being submitted to all the Regulatory Authorities on regular basis. Monitoring Report for samples collected during the period 11.03.2019 to 23.03.2019 is awaited.
<b>B. General Conditions</b>		

(i)	Construction of the proposed structure shall be under taken miraculously conforming to the existing center/ local rules and regulation. All the construction/ drawing related to the proposed construction activity must have approval of the concerned state government department/ agencies.	Complied
(ii)	The project authorities shall take appropriate community development and welfare measures for the villagers in the vicinity of the project site, including drinking water facilities. A separate fund shall be allocated for this purpose	Complied
(iii)	To meet any emergency situation appropriate firefighting system shall be installed. Appropriate arrangement uninterrupted power supply to the environment protection equipment and continuous water supply for the firefighting system to be made.	Complied
(iv)	A separate Environment Management Cell with suitably qualified staff to carry out various environment related function shall be set up under the charge of senior executive who will directly to the chief executive of the company.	Complied
(v)	The funds earmarked for environment protection measures shall be maintained as a separate account and shall be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safe guard shall be reported to this ministry's regional office at Bhopal	Complied

**Proposed Environmental Expenditure in Financial Year 2019 - 20**

S. No.	Environmental Management Plan	Budget Rs. Lacs
1	Pipe line Maintenance including Diffuser System	50
2	Water Environment including ETP Performance	100
3	Post Marine Environment Monitoring	40
4	Additional Ambient Air Quality Monitoring Station	100
5	Socio Economic Environment	250
6	Green Belt Development	50
	<b>Total</b>	<b>590</b>

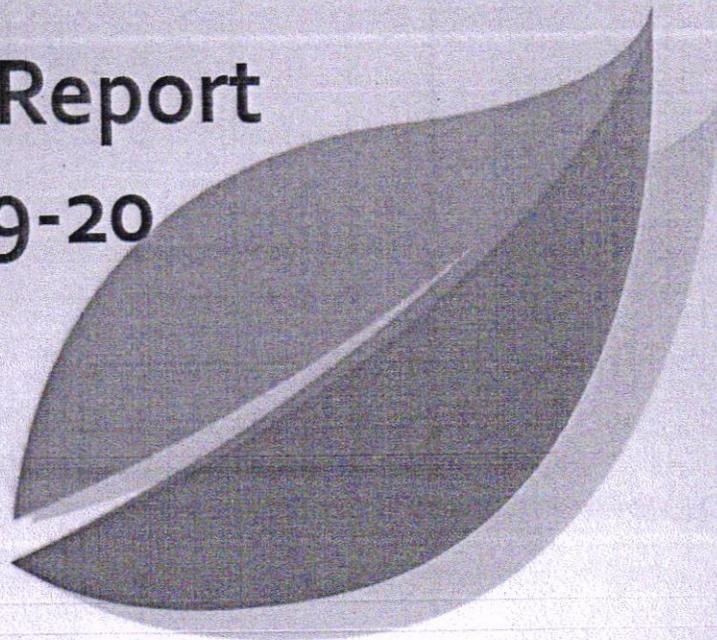
(vi)	Full support shall be extended to the officers of the ministry regional office at, a fresh reference shall be made to this ministry for modification in the clearance Bhopal and the officers of the	Complied
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	Central and State Pollution Control Board by the project proponent during their inspection for monitoring agency.	
(vii)	In case deviation or alteration in the project including the implementing agency, a fresh reference shall be made to this Ministry for modification in the clearance conditions or imposition of new one for ensuring environmental protection. The project proponents shall be responsible for implementing the suggested safeguard measures.	Noted and Complied
(viii)	The Ministry deserves right to revoke this clearance, if any conditions stipulated are not complied with to the satisfaction of this Ministry.	Noted
(ix)	This Ministry are any competent Authority may stipulate any other additional conations subsequently; any if deemed necessary, for Environmental protection, shall be compiled with.	Noted
(x)	A Copy of clearance letter shall be marked to the concerned agency panchayat/ local/ NGO if any, from whom any suggestions/ representations has been received while processing the proposal.	Complied
(xi)	State Pollution Control Board/ Committee shall display a copy of the clearance letter at District Industry Center, Collector's Office/ Tehsildar's office for thirty days.	Not pertains to the Project
(xii)	The Project Proponent Shall advertises at least in two local new papers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that project has been accorded Environment Clearance and copies of Environment Clearance letters are available with Gujarat State Pollution Control Board and may also be seen at website of the Ministry of Environment and Forests at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> .	Complied
(xiii)	The Project Proponents shall inform to Regional office, Bhopal as well as Ministry, the date of financial closure and final approval of the project	Complied

	by the concerned authorities and the date of start of work.	
(xiv)	The Project Proponent will obtain the Forest Clearance for the land passing through the Reserved Forest Area before commencement of the Project activities in Forest Area.	Complied
(xv)	So as to maintain ecological features and avoid damage to the eco system, movement of Vehicles in the Intertidal zone Shall be restricted to the minimum.	Complied
(xvi)	Budgetary break up for the Environmental Management Plan for the Project to be mentioned.	Same as mentioned in Point No. 5
(xvii)	Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred, with in a period of thirty days as prescribed under Section 11 of the National Environment Appellate Act, 1997.	Not Applicable
4.	The above mentioned stipulations will be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Chemicals (Manufacturing, Storage and Import) Rules, 1989, the Costal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made thereunder from time to time. The project proponents shall also ensure that the proposal complies with the provisions of the approved Coastal Zone Management Plan of Gujarat and the Supreme Court's order dated 18 <sup>th</sup> April, 1996 in the Writ Petition No. 1993 to the extent the same are applicable to this proposal.	Being Complied

# Social Report

## 2019-20



**Grasim Industries Limited**  
**Indian Rayon, Veraval**

Indian Rayon is committed to provide a safe environment to the stakeholders especially to the society in the vicinity. Our responsibility towards the society as part of Good Corporate Governance is being delivered in a structured manner through deployment of ISO 14001, OHASAS 18001, and SA 8000 .As a responsible Corporate Citizen, in line with our Group's vision of CSR, under the aegis of Aditya Birla Centre for Community Initiatives and Rural Development, Indian Rayon carries out CSR activities in the unit.

#### Social Vision

"To actively contribute to the social and economic development of the communities in which we operate. In so doing build a better, sustainable way of life for the weaker sections of society and raise the country's human development index."

#### CSR Policy

For us in Aditya Birla Group, reaching out to underserved communities is part of our DNA. We believe in the trusteeship concept. This entails transcending business interests and grappling with the "quality of life" challenges that underserved communities face, and working towards making a meaningful difference to them

#### Towards Inclusive Growth

An India, free from poverty. An India, of inclusive growth. An India, where every person realizes his or her optimal potential. An India, where every human being lives a life of dignity. An India, that can hold her head high in the hegemony of nations."



**"When you give with an open heart, the good that you do for the other person comes back to you in some form of a blessings"**

**Mrs. Rajashree Birla**

Chairperson,

The Aditya Birla Centre For

Community Initiatives and Rural Development

#### Making a difference

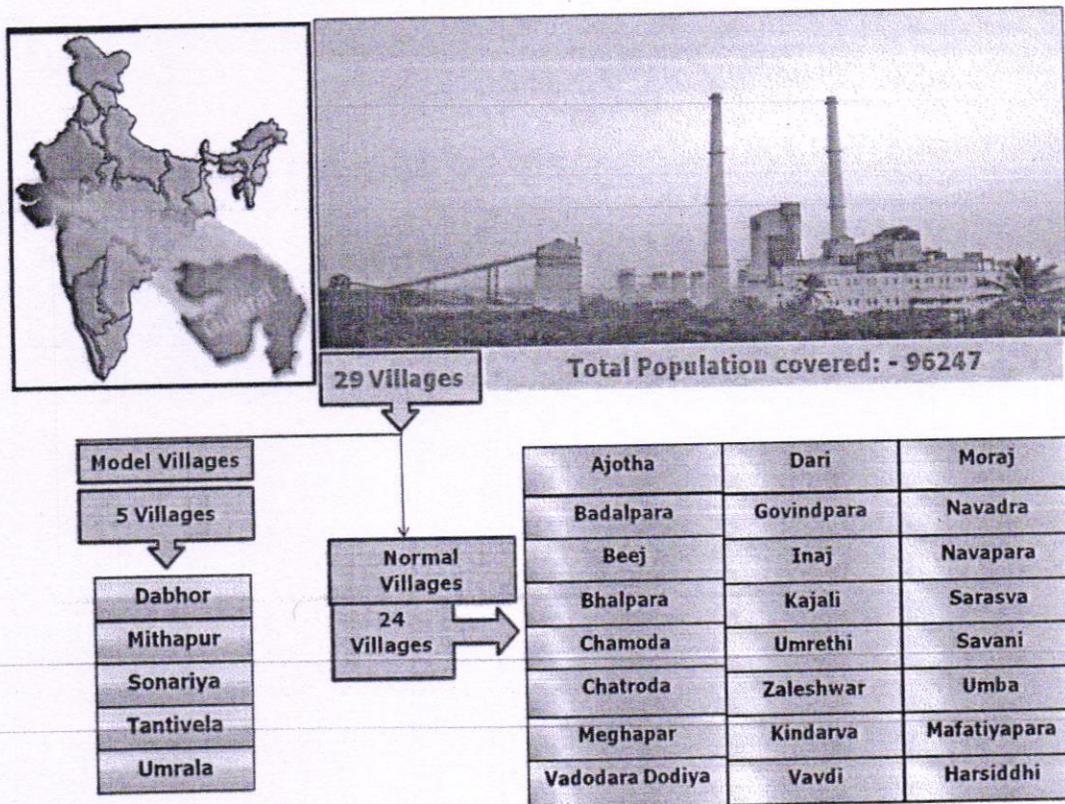
Before Corporate Social Responsibility (CSR) found a place in corporate lexicon, it was already textured into our Group's value systems. Philosophy of CSR Cell is to improve the quality of the life and to foster the sustainable and integrated development in the communities where it operates.

**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

Indian Rayon carries out CSR activities through Jan Seva Trust. Since its inception in 1989, Jan Seva Trust is headed by Smt. Rajashree Birla and managed by Grasim Industries Ltd., Unit : Indian Rayon i.e. an ADITYA BIRLA GROUP COMPANY, at Veraval. Smt. Rajashree Birla has endeavoured to see that villagers live a life of dignity in India's interiors. Vision of Smt. Birla is to make a qualitative difference to the lives of the weaker sections of the society in proximity to her plants and in doing so improve the human development index of our nation.

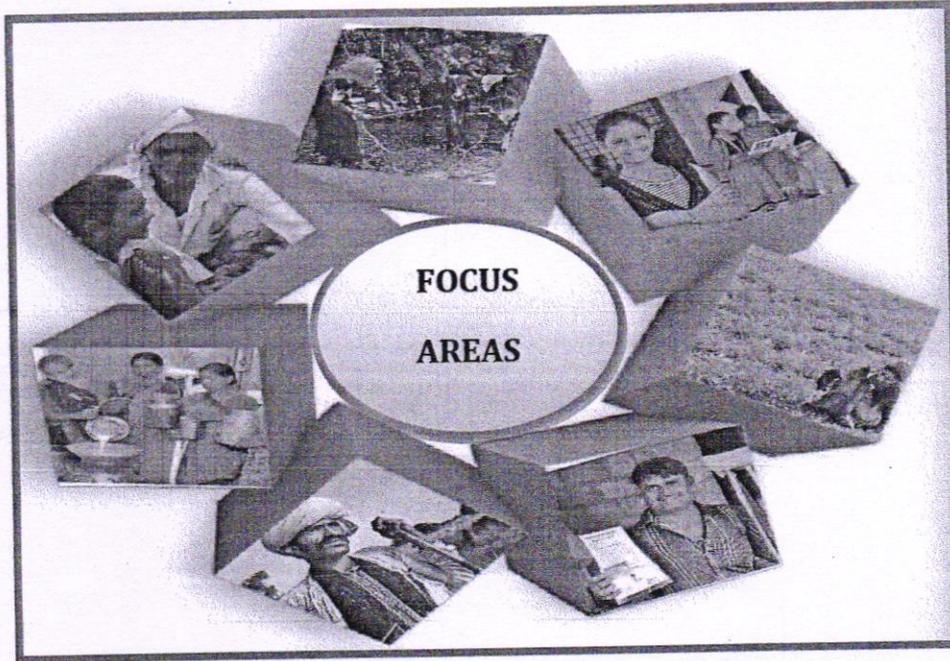
CSR cell aims at uplifting level of socio-economic status in Veraval and villages in its vicinity. CSR cell is working aggressively for the cause of Education, Health Care, Sustainable Livelihood, Infrastructure Development and Women Empowerment at the community level. The social projects operate in twenty-nine villages. Out of these 29 villages, we have selected five villages namely - Dabhor, Tantivela, Mithapur, Sonariya and Umralla to make them as Model Villages with an aim to focus the thrust areas of development. CSR cell is doing its development activities in coordination with various NGO's, Banks and Government bodies.

### AREA OF OPERATION



Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)

**Our focus areas:** Our rural development activities span five key areas and our single-minded goal here is to help build model villages that can stand on their own feet. Our focus areas are healthcare, education, sustainable livelihood, infrastructure and espousing social causes.



**Education:** CSR cell is working towards creating conducive environment for quality education. For this, we are working towards building better infrastructure in the Schools/Aanganwadis, organizing extra-curricular activities and development oriented competitions in various fields like elocution , reading, writing , drama ,singing & dancing and sports activities. Apart from this, we are providing merit award to outstanding performers in the board exam and providing learning material like notebooks, bags, study materials etc to school children. We are helping for successful working of Kasturba Gandhi Balika Vidhyalaya at Veraval taluka. Furthermore, we keenly work towards our goal of hundred percent enrolments and zero dropouts in the school, for which a lot of awareness activities and one to one counselling are provided at village level.



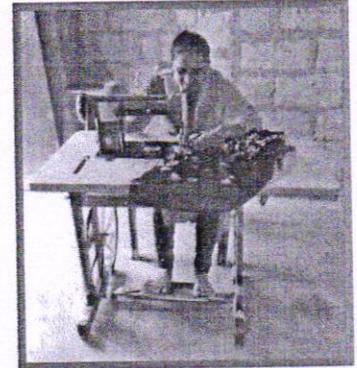
**Health Care:** Coordinating various health-oriented events such as General Medical Camp, Eye Camp, Thalassemia Testing Camp, Mother & Child Immunization, Pulse Polio Immunization drive, Skin and leprosy



camp, Family Planning Camp, Blood Group Testing & Awareness Camp etc at the villages and Veraval. CSR cell provides mobile medical services on biweekly basis at villages and on weekly basis at Kasturba Gandhi Balika Vidhyalay – Kajali & Veraval where there is absence of medical facilities. CSR team is playing active role in immunization programmes and is working toward generating awareness for Family Planning, Healthy Mother and Child concept, De-addiction

etc. We have came up with 65 bedded Multi – specialty Hospital. The primary objective of medical inputs is to Minimize Maternal and Infant mortality rate and increase life expectancy by ensuring better health services.

**Sustainable Livelihood:** Educating farmers regarding best methods, most suitable crops, HYV-seeds, right irrigation techniques, water-harvesting systems, tissue culture, fruit and vegetable gardens etc., for this farmers are sent for trainings & seminars. In-house training & awareness workshops are also conducted at village level to educate and empower the farmers. In addition to this, we help the community members in acquiring professional skills by running Tailoring class, Aaree Bharat class (Saurashtra's famous embroidery), and computer literacy program. CSR team help poor villagers in acquiring skills and then in acquiring subsidized bank loan to start their own work. Our goal is the economic rehabilitation of unemployed youth, Poor landless laborers, to increase the Per capita income of the farmers.



**Infrastructure:** We are working towards development of roads, school buildings, safe drinking water facilities, hygienic sanitation facilities, Proper houses and other basic infrastructural amenities required at villages in coordination with various government schemes. Further, we provide economic help to farmers for construction of Farm-well recharging, biogas plant, irrigation facilities, agricultural equipment etc. In addition to it we provide furniture, computers, sports equipment etc at schools.





**Social Cause:** We are organizing many social awareness programmes; the main theme is eradication of Superstitious & prejudice, De-addiction, AIDS Awareness, Female Feticide and Girl Child Education. For this awareness programmes/meetings are organized with help of medical officers, NGOs, Social workers to change the rigid mind-set and to educate the villagers about various issues. In addition to it, mass marriages are organized to provide economic support to poor families at the time of their children's marriage. Social forestry is another dimension of our work. Apart from this, we make villagers aware about various welfare schemes of government and help them in completing the formalities to take the benefit of the suitable schemes.

**Objective:**

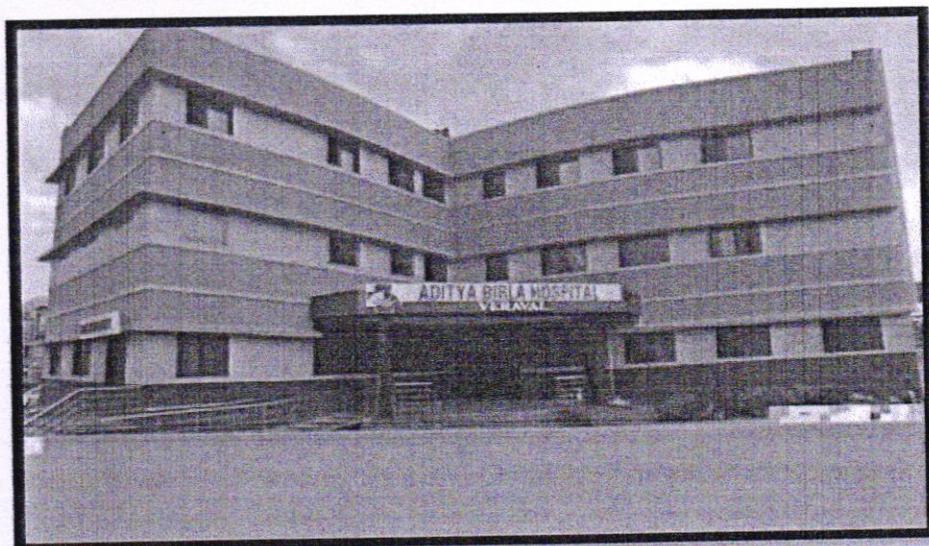
- To create a Supportive, Encouraging Environment for Education & Development and to ensure quality education to bring down school dropout rate through capacity building with special attention to Girl Child.
- To reach out the deprived population in the villages and to provide quality healthcare facilities to all.
- To augment Per Capita Income, bring prosperity & self-reliant.
- To ensure basic infrastructural facilities for all.
- To provide support to village communities for eradication of social evils and gender discrimination through a series of social awareness campaigns.

**Guiding Principles:**

- Designing, evolving and implementing **sustainable, replicable and scalable development models** that lead to measurable socio - economic development of the community and ecological development in its area of influence.
- **Involving the community in all stages of the process**, in the true spirit of participatory development.
- Having **focused and transparent processes** that provide for equal opportunity while **improving the quality of life**.
- **Partnering and networking with government, development agencies, corporate bodies and NGOs** to implement appropriate community development programs.
- Creating **knowledge resource centers to transfer and share information** and help to **build capacities of partners and community**.
- **Involving employees** in volunteering for community development programs.

Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)

## Aditya Birla Multispecialty Hospital



### Services / Facilities:

- 24x7 Emergency Services, Casualty Services , Investigations, Pharmacy
- Critical Care Unit: ICU & NICU
- Qualified & Trained Nursing Staffs
- Software support : Hospital Management System
- TMT, 2D Echo, PFT facilities
- Visiting : Superspecialties : Cardiologist, Urologist, Neurologist, Clinical Cardiologist, etc.
- Only hospital in Veraval with in house facilities of investigation of Thyroid Profile, Vitamin-D3, RA factor, ABG Analysis etc.
- Decent, Welcoming Administrative Staff.

### Consultants:

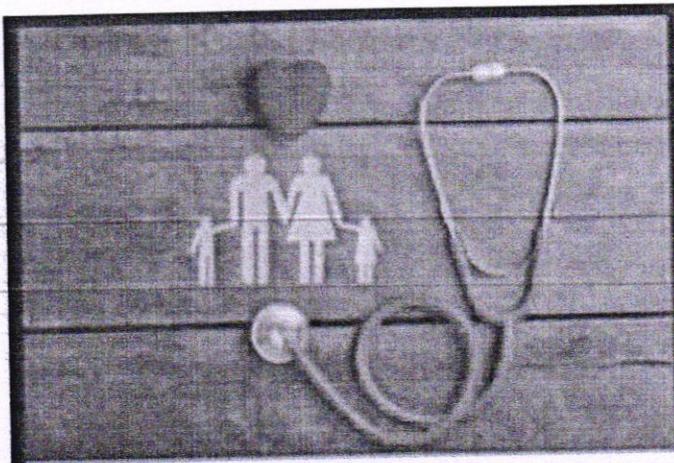
- Physician
- Gynecologist
- Orthopedic Surgeon
- General Surgeon
- Pediatrician
- Pathologist

**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

**Achievements:**

- **DIALYSIS:** All the Dialysis (Positive/ Negative) Bed (6) were added, equipped with Hi Tech machines, empanelled under Government Schemes- making it Completely Free for Long Standing Kidney Failure Patients. To avoid Hypoglycemia, Snacks are being provided, also to and fro charges are being paid and repeated tests/ consultation of Physician/ Nephrologist is being given free.
- Total 1888 dialysis done in 2019-20
- **LAPROSCOPIC SURGERIES:** We added Richard Wolf Laproscopic Unit (The only Unit after Ahmedabad)- an Eye behind Surgeon's eye to identify the smallest, least variant tissue, before cutting- thus preventing any Surgical Error. We take the pride of conducting Highest Laproscopic Surgeries in our District under Government schemes.
- **SPINE SURGERY:** was added again, providing doorstep Tertiary Care.
- **HEALTH PROMOTION – VARIOUS CHECKUP PLANS AT LOWER RATES:** Prevention is Better than Care- imparting awareness and assuring people for Better Health.
- First UROSURGERY ON 04/01/2020
- 7 Surgeries in a day
- We expect to conduct at least 150 UROSURGERIES in a year.

- No. of Bed : 65
- Nos. of Patients: 38775
- Total Critical Cases: 4583
- Total Surgery: 1110
- No of Patients with Government Schemes : 2126



**State & National Government Schemes  
@ our Hospital**

Bal Sakha

MA Yojana

Pradhan Mantri Aayushman Bharat

**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

### Achievements / Appreciation:

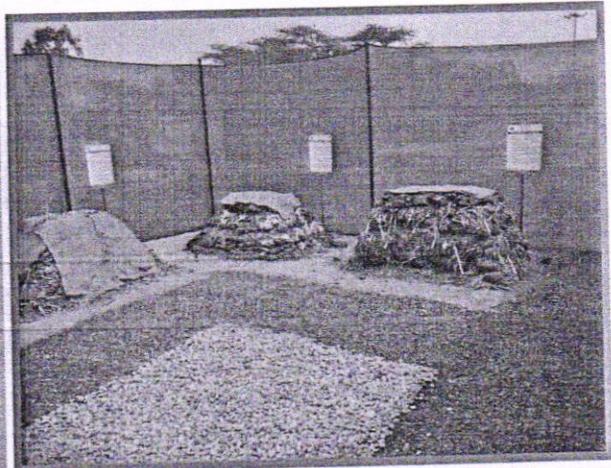
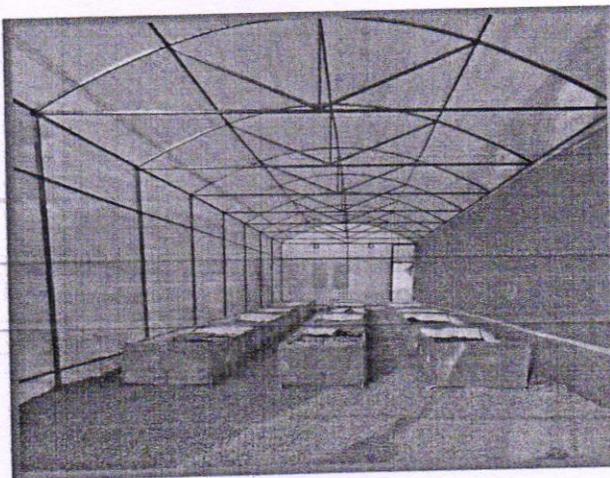
To understand importance of Gir cow and its role for livelihood and agriculture, two days' workshop was organized by Somnath Trust. CSR team with 40 Farmers from our villages has participated in the workshop. Healthy Cow competition was organized and winners has been rewarded. Our Organization have received appreciation certificate by Union Minister of Agriculture & Farmers Welfare - Mr. Purshottam Rupala.



### New Initiatives

#### Set up of Vermicompost manufacturing unit:

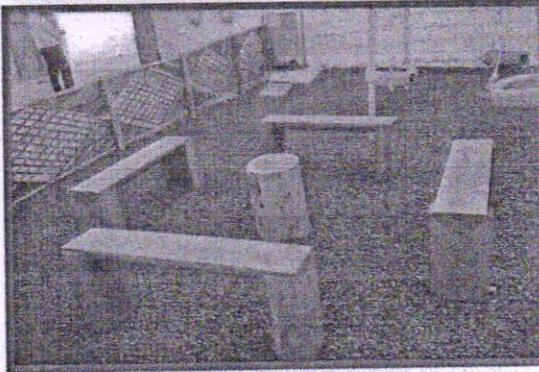
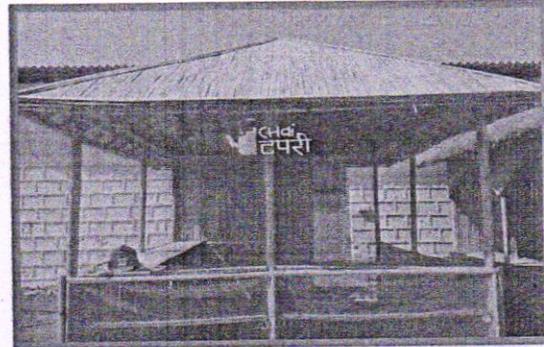
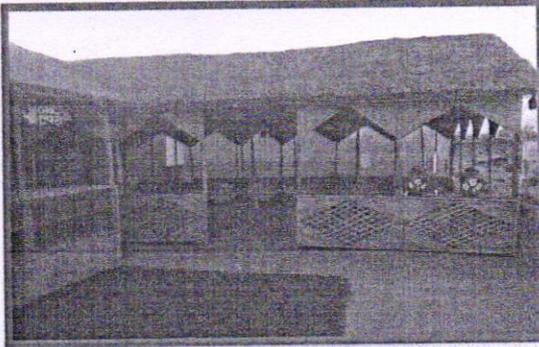
To promote organic manure for agriculture, full-fledged vermicompost manufacturing unit have been established. Farmers would be visiting the unit and will able to see the demonstration of various type of fertilizers. Training sessions would be conducted. Further, to promote organic farming, vermicomposting fertilizer would be sold to the farmers on subsidized rate. In such a way, we would be engaging more and more farmers for doing organic farming.



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

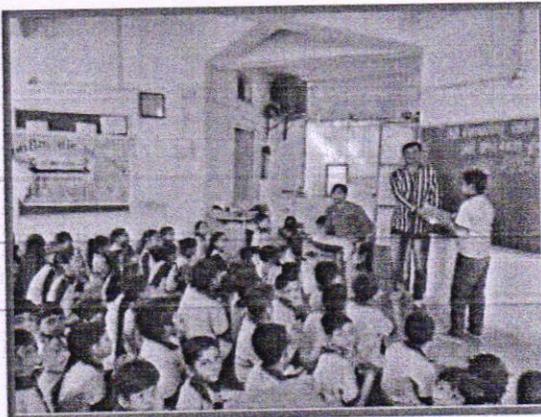
**Preparation of multipurpose training hall:**

For organizing training programs related to Agriculture and Animal Husbandry, we have come up with training hall on village base theme, adjacent to vermicompost unit.



**Distribution of School shoes and socks:**

We have observed that many students studying in Government Primary Schools are coming in school without shoes & socks. Hence, we have taken initiative to provide shoes and socks to students of Government Primary Schools. This year we have given socks to 3185 nos. students of standard 6<sup>th</sup> to 8<sup>th</sup> of 50 Government Primary Schools of our adopted villages.



**Support for Samyadan Initiative:**



To improve literacy level of weaker student of standard second, Government of Gujarat has initiated a campaign "Samaydan". In this initiative, volunteers have taught 02 hours daily to these identified students in the schools during vacation period. From our organization, 32 persons have joined in this initiative. They have spent time from 9 to 11 AM for 10 days to allocated school and taught to students in 06 primary schools.



**A step towards Digital India:**

To support Digital India Movement, in coordination with Indian Post Payment Bank and Village Gram Panchayats, organized saving account opening programs at our 07 adopted villages. In this system, accounts has opened without any physical documents and with zero balance facility. Total 717 saving accounts opened in the year.



## Special Projects

### Sanitation Program:

To promote Swachchh Bharat Abhiyan, Jan Seva Trust is providing financial support for construct individual sanitation blocks in our adopted villages. Under this project, total 170 nos. individual sanitation blocks has been constructed. CSR team has verified individual constructed sanitation blocks, fitted the board and later on payment has been done the beneficiary through cheque in the presence of village Sarpanch and other village leaders.



### Program for Differently Able Students:

#### Divyang Sadhan Sahay Camp:

To provide required instruments / items to Divyang students, a need assessment camp was organized in the month of July 2019. Based on this camp, required instruments like hearing aid, tricycle, CP Chair, crutches etc. were distributed in Taluka level Camp by the Government authority. We have coordinated this camp and provided required support to the authority. Total 99 differently able students were benefitted by this camp.



#### Sports Kit Distribution Program :

To boost sports activities, Government of Gujarat organizes Khel Mahakumbh Program every year for students and others. For differently able students special Khel Mahakumbh is also planned every year. Total 29 differently able students from our area have participated in this special Khel Maha Kumbh event under various categories. To felicitate these students, sports kit was distributed in the presence of District Project Coordinator, Block Recourse Centre Coordinator and Company Senior Executives.



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

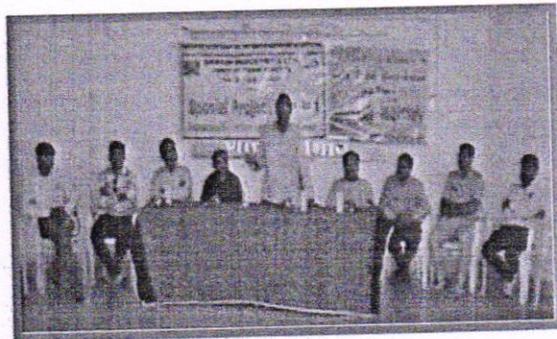
**Divyang Certificate Program:**

In co-ordination with Block Resource Centre and Government Civil Hospital, Veraval. Jan Seva Trust has supported a Certificate Preparation Camp for Divyang Students of Veraval Taluka. Total 72 Divyangs were benefitted by the Program.

With the help of IED Department, we have organized special Navratri Mahotsav for differently able students and their parents at Veraval. District Primary Education Officer, IED District Officer, Block Resource Coordinator and Company Officers were present during the event.



**Divyang Certificate Camp at BRC Bhavan Veraval**



**Special Navratri Celebration for Divyang Students @ BRC Bhavan Veraval**

### Case Study: Manisha Gavadiya - A brave girl

Manisha Gavadiya lives in a small and backward village i.e Tantivela village. Manisha is coming from a backward and very poor family. In her family, there are total 6 members. Her parents are uneducated and does labour work. She is studying std. 8<sup>th</sup> in primary school of village. As per the school principal, she is very clever in study as well as in sports specially Kho -Kho Game. She was a captain and won Kho-Kho at Taluka level against the strongest team.



Josh and Hosh, was of high level in her. But after some days, it was found that she started remain absent, not involved in games and sits silently in the class also. School Principal has personally visited her house and interacted with her parents. During interaction found that, she is having very high diabetics and doctors has suggested to take insulin. But due to their financial situation, won't able to do proper treatment of her.



School principal has shared the matter with us. During weekly medical, our doctor has seen her and further referred to our Aditya Birla Hospital for further laboratory tests. As per the report, she has to take daily 4 time insulins and nutritious diet. Immediately, Jan Seva Trust has come forward and ensured for continuous consultancy by our prediatician, providing insulin as well as nutrition diet to her. Expenditure per month comes to around Rs. 1000.

After 8 months, our prediatic doctor has shared a good news with us that 70% she has recovered i.e her diabetic level has gone tremendously down .Within next few months, she would be recovered fully.

Presently, she has enrolled for defence classes and getting ready for bright future.



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

## Step's taken towards averting from COVID 19



Reaching out at  
Distressed  
Community

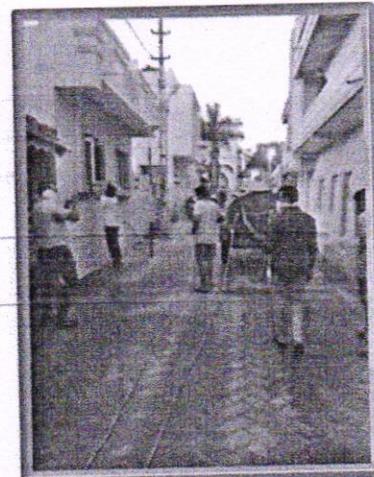
### Awareness



### Social Distancing



### Sanitization



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**



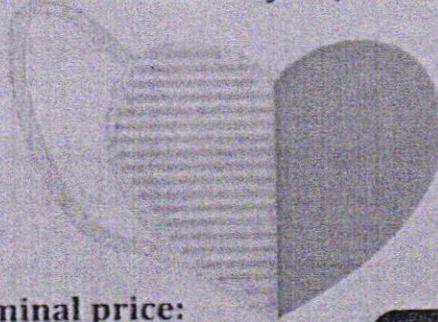
**Behind every mask  
there is a heart.**

**Donate / Buy**

Your contribution would give  
**PROTECTION**  
as well as  
**LIVELIHOOD**  
to the  
**NEEDY**

Nominal price:  
Rs.10 per mask

**Pahel**  
by  
Indian Rayon Jan Seva Trust



**For order / query:**

**Donate for COVID-19 relief.**

Please whatsapp:  
Your name, contact no., query:  
on 9898027537

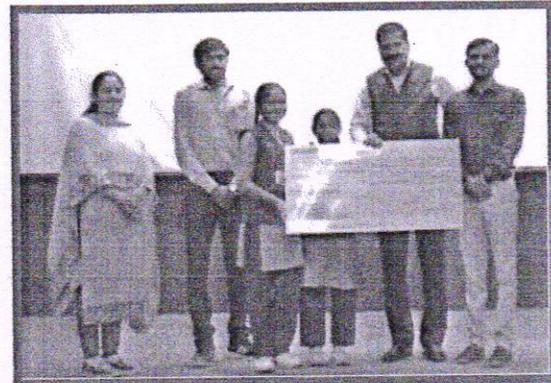
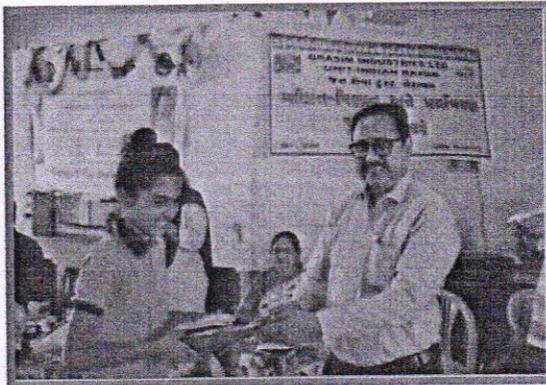


**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

## Other Programs : Education

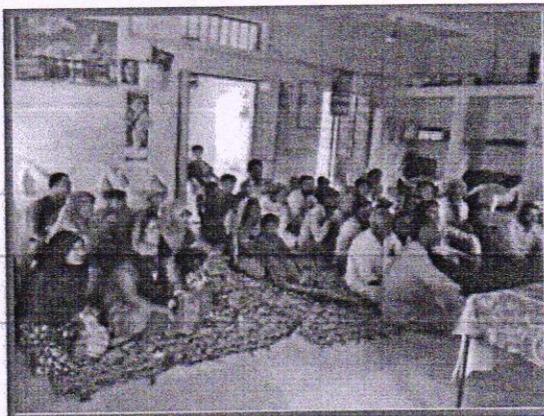
### Math-Science Exhibition:

Taluka & District level Math-Science exhibition was organized by Government Education Department. We have supported the exhibition by providing motivation reward to all 150 school students from different villages of Veraval Taluka. During the Mass Communication Meeting, we have appreciated Taluka level winners - 04 schools by awarding cheque of Rs. 5000 and District level winner school by awarding cheque of Rs. 21000.



### Parents Meet Program:

To create importance of education & filling gap between school & parents, "Parents Meet" was organized at Primary school of village Navapara & Mithapur. 191 parents were present during the meet including village leaders. Role and responsibilities of Parents, Students and School administrations were discussed in detail.



**Distribution of Lesson Diary and Pot to schools:**

As per last year initiative and good feedback from schools, this year also we have provided 10,012 diaries for 65 Government Primary Schools of our adopted villages. This provides better communication between school management and parents of the students. We have also provided 800 school bags and 1495 used spin pots to 38 schools of our adopted villages for plantation. Schools are decorating these pots and using it for plantation.

**School Diary with our Branding & Hospital Details**

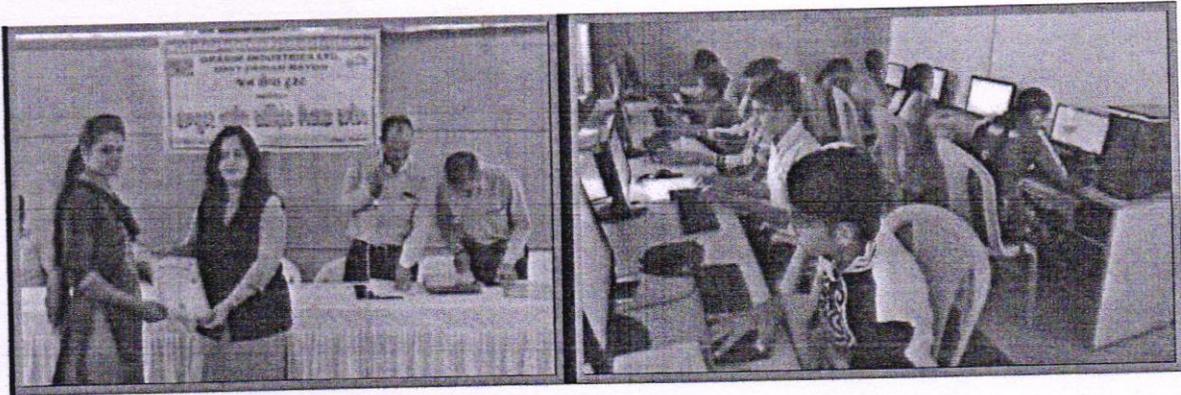


**Used Spin Pots painted & Planted by Schools**



**Computer Training:**

With an aim to increase the computer literacy level in the students / youths of Rural & Urban area, Jan Seva Trust is running Computer Training Program in coordination with Lakhotia Computer Centre, Veraval. Through this initiative we are providing a platform to learn the various Computer course and that too in nominal fees. Certificate is also given to student after completion of the course. During the year, total 220 students have completed the courses.



**Merit Scholarship Award Program:**

To appreciate brilliant students of rural area, in collaboration with Sumangal Mahila Mandal, we have organized Merit Award Program at Indian Rayon Veraval. Total 175 nos. students from 42 villages, who scored above 78% in SSC & 71.00% in HSC Board examination, were awarded. Chairman, Trustees and other Senior Executives and President & members of Sumangal Mahila Mandal has graced the occasion with their presence.



## Health & Hygiene :

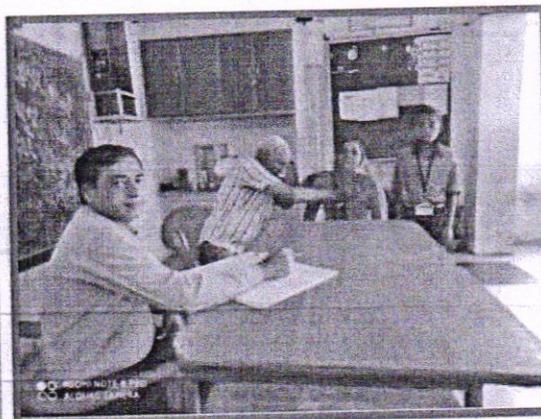
### School Health Check-up Camp:

School Health Check-up Programs were organized at Primary School village Bhalpara, Umrethi, Chamoda, Umrala and Sim Shala of Vavdi (A) in coordination with Aditya Birla Hospital, Veraval. Total 571 students were examined and given necessary treatment.



### Mobile Medical Service:

Jan Seva Trust is providing doorstep medical service in our 04 Model villages Umrethi (Village), Kasturba Gandhi Balika Vidyalay and Harshiddhi Society (Veraval). During the year, total 6496 patients were diagnosed and treated in our Rural Medical Services.



**General Medical Camp:**

In coordination with our Aditya Birla Hospital, we have organized 03 nos. General Medical Camps at village Umba, Talala and Meghpur. Patients were diagnosed by doctors and given medicines free of cost. Sugar test and ECG facilities were also arranged at camp place. Total 1014 patients were benefited from this program.



**Blood Group & Hemoglobin Testing Camp:**

To create awareness about blood group, 09 nos. Blood Group Testing Camps were organized at village Chanduvav, Bhalpara, Dabhor, Veraval, Adri, Ajotha & Savni. Individual laminated card with details of height, weight & blood group were given to all 1569 students for their record. In coordination with Aditya Birla Hospital, Hemoglobin Testing Camps were organized at Model school village Inaj, Girls School Ajotha, KGBV Veraval & Adri. During the Camps, HB level of 625 girl students were tested.



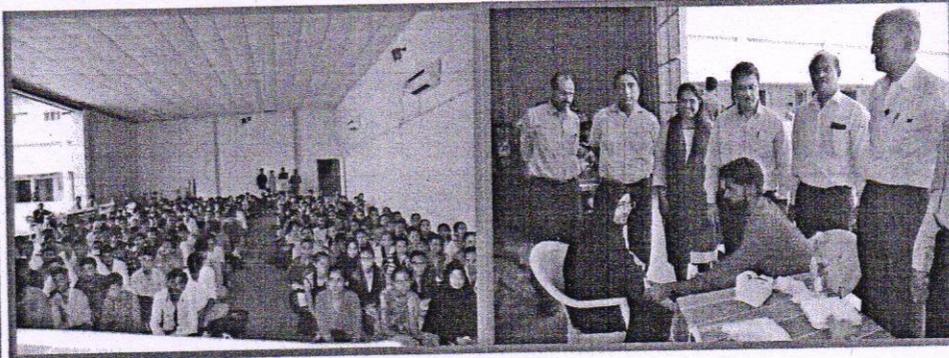
**Pulse Polio Immunization Drive:**

During Pulse Polio Immunization drive on 19<sup>th</sup> January 2020, polio drops were given to 8852 children through 46 booths in 26 adopted villages & Veraval city.



**Thalassemia Testing Camp:**

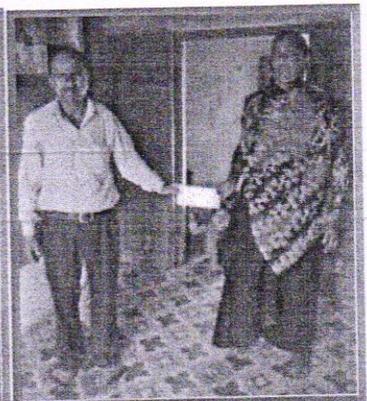
In co-ordination with Red Cross Society, we have organized Awareness camp as well as Thalassemia Testing Camp. 440 students of Choksi College & J M Science College, Veraval has been covered.



**Aid to poor patient for critical treatment:**

We are providing financial support to poor patient for critical illness like cancer, kidney treatment.

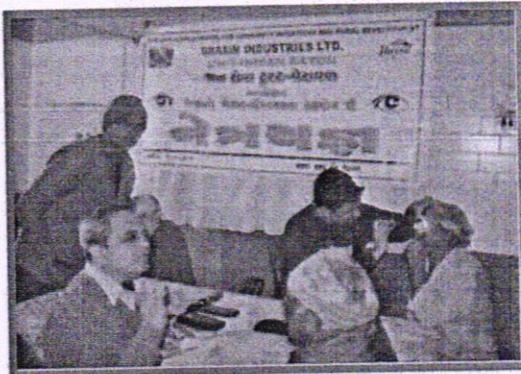
During the year, total 55 patients were given financial support for their treatment of critical illness.



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

**Eye Camp:**

To provide free cataract operation facility to needy people, 07 eye camps were organized at Veraval & Prabhas Patan. Total 872 patients were screened and given treatment. 203 persons were selected & operated free of cost at Shivanand Mission Hospital, Virnagar.



**Sustainable Livelihood:**

**Agriculture Training:**

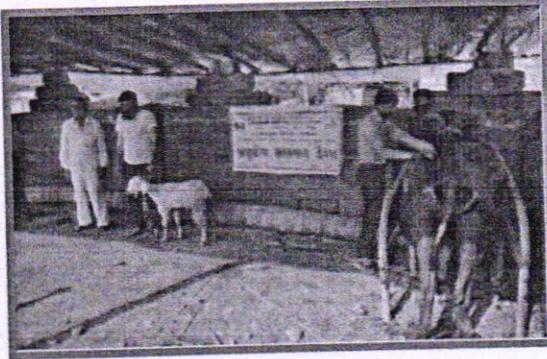
We are continuously promoting "Agriculture and Zero Budget Agriculture Training" concept to reduce input cost and increasing yield in agriculture. To motivate them we are organizing field level farmers meeting at our villages. Such programs were organized at village Chhatroda, Dabhor, Umba and Chamoda. We have also arranged training at Krishi Vigyan Kendra Kodinar for farmers in three batches from village Navadra, Dabhor, Badalpara and Chamoda. Total 320 farmers were benefitted by these Training Programs.



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

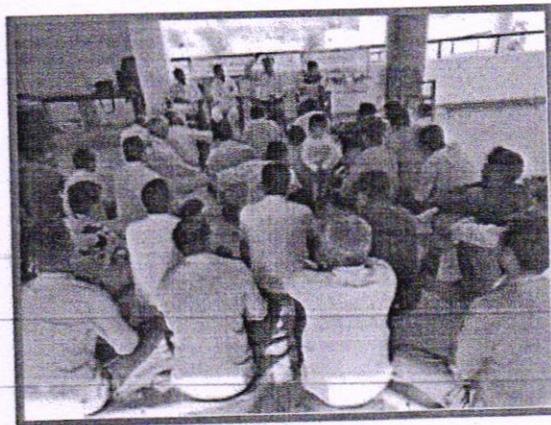
**Animal Treatment Camp:**

Animal Treatment Camps were organized at village Chamoda, Mithapur, Umba, Badalpara, Bhalpara and Umrala in collaboration with District Animal Husbandry department. During these camps, total 4294 animals were treated.



**Dairy Development Training:**

In coordination with Somnath Trust and BAIF, 8 Nos. Dairy Development Training Programs were organized at village Bhalpara, Ajotha, Chhatroda, Tantivela, Sonariya, Badalpara, Dari and Mithapur. Experts have given awareness on better animal husbandry practices, preliminary treatment of animal and how to increase milk production. They have also given information regarding animal treatment Project run by Somnath Trust. Total 431 animal breeders were benefitted by these trainings.



**Fruit & Vegetable Preservation Training Program:**

As per the season, in collaboration with Krishi Vigyan Kendra, Kodinar, Fruit & Vegetable Preservation Training Programs were organized in which training has been imparted on how to make various types of Pickles, Fruit Jam, Mango (Kachhi Keri) sarbat etc. In this year, total 06 programs were organized at village Dabhor, Badalpara, Navadra, Moraj, Ajotha and Kindarva. Total 284 females have participated in the Programs.



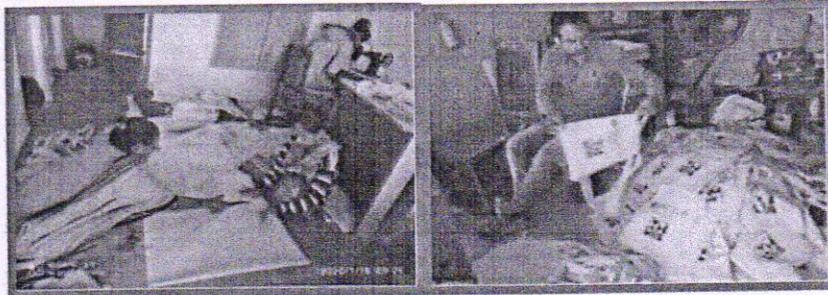
**Tailoring Training Program:**

For self-employment, we are giving stitching training to needy females of our villages. We are giving priority to widow, divorcee, deserted, schedule caste and poor females for this training. We are providing free of cost training, one way transportation fair, financial support for purchasing sewing machine after completion of the training. We are also provides market linkages for stitching work as well. During the year, we have given training to 100 females of our area.



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

**WOW Moment:** 1<sup>st</sup> order received from Aditya Birla Insulator, Halol for 260 cotton bags: On Saturday noon we have received order of 260 bags with printing. Order was to be completed by Sunday evening. On Sunday, already Pulse Polio campaign was planned. CSR team as well as trainees has taken a challenge. Whole team has worked together and has able to complete the order on time.

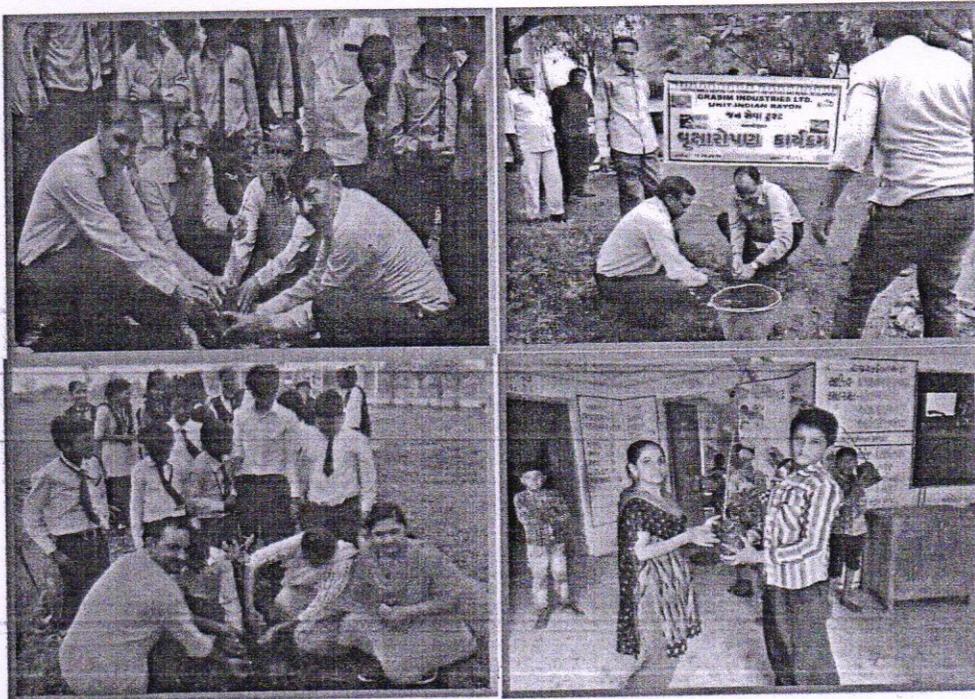


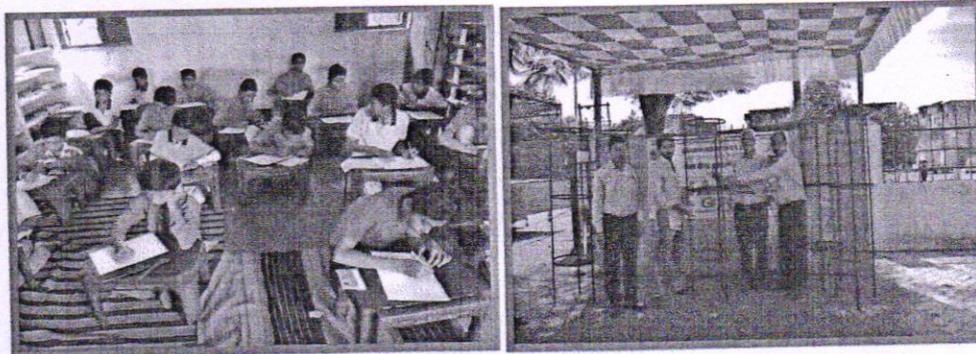
**Tree Plantation Program:**

In support to our "Green India Movement" effort, every year we are providing tree saplings to the Schools, Gram Panchayats of our adopted villages. We have collected request from them and on that basis, in coordination with Forest dept. We have organized tree plantation Programs at Primary School of village Inaj, Vadodara (Dodia), Mithapur, Govindpara and Middle School of village Dari. Along with tree plantation in school grounds, 5115 saplings were distributed to the students for plantation at their house and farm in 21 schools.

To protect these plantations, we have also distributed 350 nos. tree guards to 17 organizations (Schools, Gram Panchayats, Government offices) during the year.

**Painting Competition:** To create more awareness about environment, we have organized drawing & painting competition at school and given prizes to the winners.

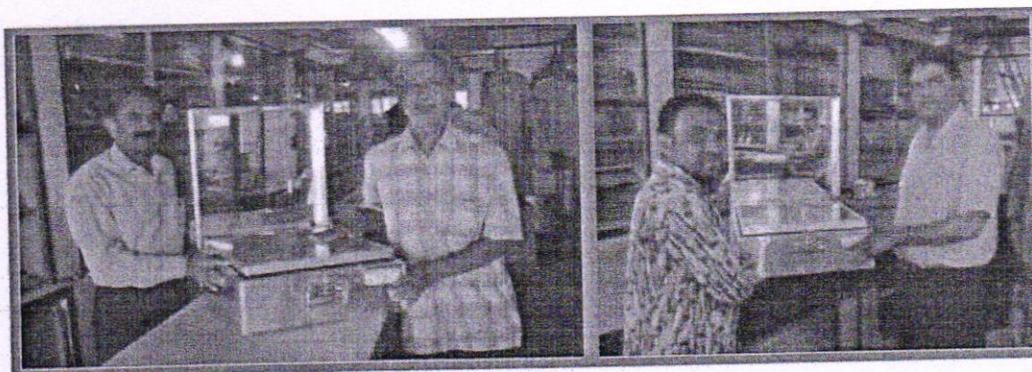




### Social Causes:

#### Solar Cooker:

To boost use of solar energy, in co-ordination with Khadi and Village Industries Corporation 20 solar cookers were distributed at subsidized rate.

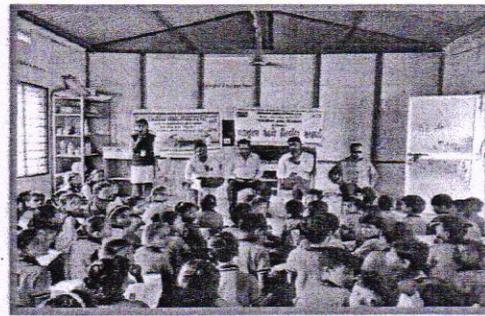


#### Rural Awareness Program:

In collaboration with Government Health department 03 Rural Awareness Programs were organized at village Dabhor, Sonariya and Bhalpara. Experts have given awareness on various topics like mental health, family budget, habit of savings, vyanan mukti, role of female in family, importance of education and female health issues. Total 159 females were benefited by these Programs.

Another program regarding tobacco awareness was organized at village Tantivela in co-ordination with District Health department. They have given awareness on bad effects of tobacco addiction in various forms. Film on hazards of tobacco was screened to villagers. Oath was taken not to take tobacco in any form. Total 150 persons were benefitted by the Program. We have also coordinated with Yellow Line Campaign Organization for prevention of selling of tobacco near school premises.

In the end of year, we have also done campaign on Covid-19 awareness through banners and pamphlets in our adopted villages.



**Swachchhata Saptah Celebration:**

We have organized various school level competitions like, speech, essay, drawing & painting, shramdan shibir, art & culture etc at 19 schools. Total 592 students have participated in various competitions.



**Celebration of 150th  
Birth Anniversary of  
Mahatma Gandhi**



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

**Kala Mahotsav:**

In collaboration with Education dept., on the celebration of 150th Birth Anniversary of Mahatma Gandhi, various competitions like speech, drawing and painting, essay writing etc. was organized at school level, cluster level, Taluka level and District level. We have sponsor prizes for all the winners of Kala Mahotsav in each competition.



**Dust Bin Distribution Program:**

To strengthen door-to-door garbage collection system, we have distributed 2800 nos. dustbin to each household of 05 Gram Panchayats. Government has provided tractor to all these Gram Panchayats for daily garbage collection.



**Energy Savings & Environment Awareness Program:**

03 Nos. Energy Savings & Environment Awareness Programs were organized at village Mithapur, Moraj & Veraval. Information & awareness were given by our power plant team on energy savings and environment conservation. Total 194 villagers were benefitted by the Programs.



**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**



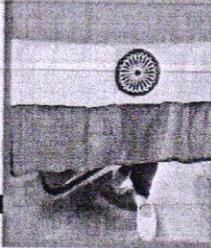
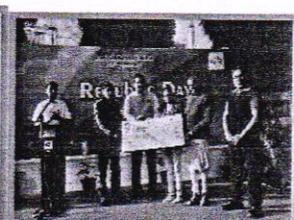
**Blanket Distribution Program:**

On eve of Late Shri B K Birla Ji's birthday, we have organized Blanket Distribution Program at Rangayan. Total 273 blankets were distributed to needy senior citizens of surrounding 19 villages. Initially survey was carried out to find out such needy persons from rural area. For the function, to & fro arrangements for beneficiaries was arranged by our organization.



**Sponsorship for International Sports Event :**

**Yoga Queen:** Ms. Bharti Solanki of small village Lati of Gir Somnath district, has participated in 1<sup>st</sup> Asian Yogasan Sport Championship at Dhaka in July 2019. She has represented India. She has won 2 gold, 1 silver and 1 bronze medal. Jan Seva Trust has financially supported her for participation in this event.



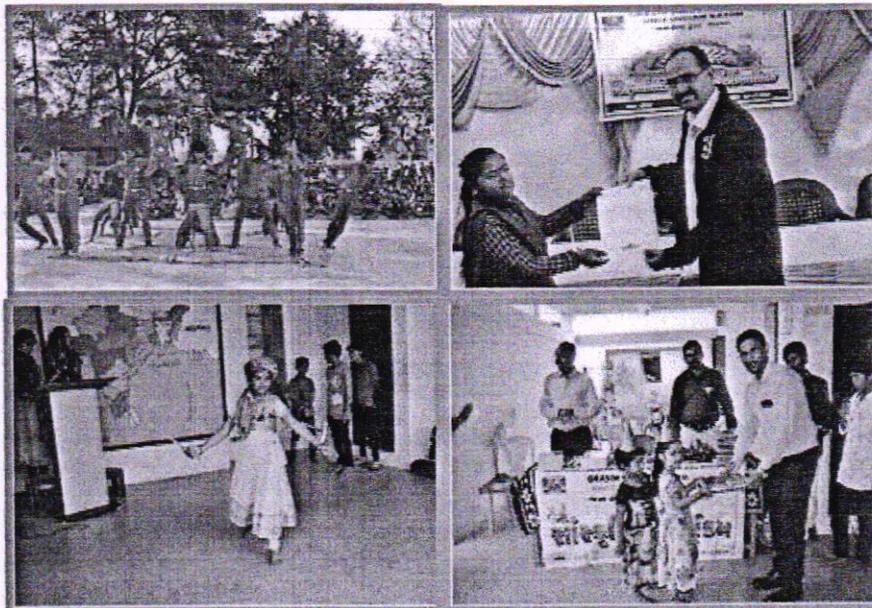
**Financial support for Medical Treatment:**

This Yoga Queen, Ms. Bharti Solanki was met an accident and her position was very critical. With an aim to give financial support to Ms. Bharti for medical treatment, Jan Seva Trust initiated campaign. Indian Rayon employee, Sumangal Mahila Mandal and Jan Seva Trust contributed for this noble cause. Cheque of Rs. 1.50 Lakhs was given to Ms. Bharti by company executives.



**Art & Cultural Program:**

Art & Culture Program was organized at 12 schools of adopted villages. Ras Garba, Songs, Bhajan and elocution competition was organized for the students. Total 1016 students have participated in different competitions. We have participated in 26th January celebration Programs at village Navadra, Moraj, Sonariya, Navapara and Vavdi (Adri). Villagers, village leaders and Government authorities were present in the Program. We have sponsored prizes for 486 children who have participated in the different cultural programs.

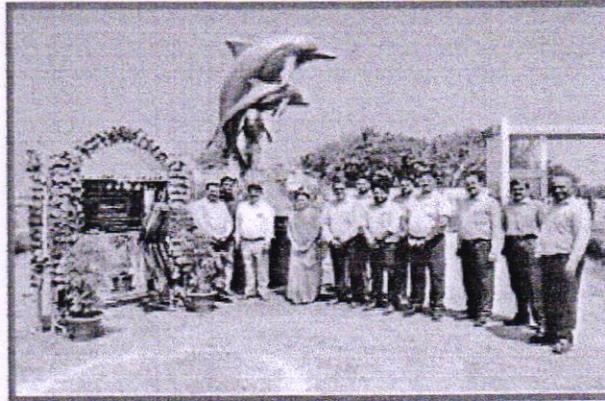


**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

## Infrastructure Development :

### Beautification of Veraval city:

For beautification of Veraval city, we have developed 02 circles with sculptures of Lion Family and Dolphins in Veraval city. These circles were inaugurated by Ms. Manjulaben Suyani, President of Veraval Patan Joint Municipality in presence of other leaders and Company Executives.



### Support during Cyclone:

We have provided 4000 food packets during "Vayu" cyclone condition at Veraval. We have also provided staying arrangements to needy people during this situation.

**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**



**Infrastructural Support in Government Primary Schools:**

We have given financial support to Primary School of village Umralla for paver block flooring in school ground. We have also given financial support to Primary School Mithapur for construction of Sanitation Unit. We have given 17 syntax water tanks to Primary Schools of our adopted villages for water storage.

**CSR Live Week @ WTC Mumbai:**

Indian Rayon CSR team has participated in 02 days CSR Live Week Exhibition, Networking & Conference organized at World Trade Centre, Mumbai on 4<sup>th</sup>-5<sup>th</sup> July 2019. We have displayed & sold out our handcraft products prepared by our trainees of Aaree Work classes.



**ELPs and Lead Leap Participants CSR visit:**

During the month June, one day CSR visit of ELPs was organized and visited Badalpara, Veraval and Chamoda villages. During visit, they have interacted with beneficiaries and other villagers.

In addition, 10 days CSR Stint for Lead Leap Participants was organized during the month of June and they visited our villages, to study CSR Programs and gave their suggestions.

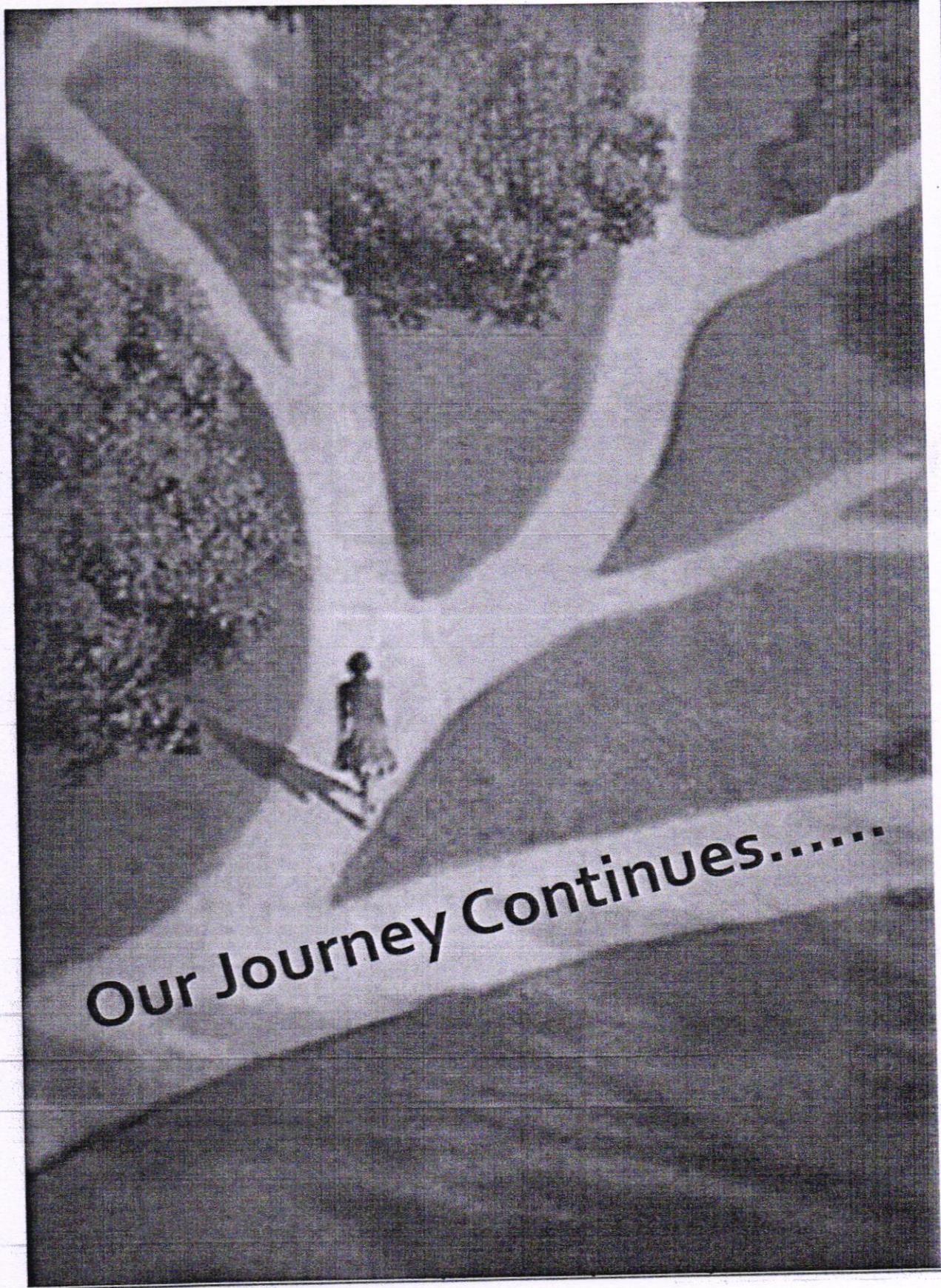


**Fund Utilized RS. 405.81 lakhs and Fund Mobilized: Rs. 1934.43 lakhs**

**Grasim Industries Ltd. (Unit : Indian Rayon , Veraval)**

ADITYA BIRLA  
GRASIM

**Raysil**  
The fashion yarn



**Our Journey Continues.....**

## ANNEXURE XIV

# ENVIRONMENT MANAGEMENT IN POWER PLANT & COAL HANDLING AREA



**Grasim Industries Limited**  
Unit:- Indian Rayon

Power Plant, Veraval, Gir-Somnath  
Gujarat Pin Code - 362266 [India]  
Telephone Number - 2876245711  
Fax Number - 2876243220  
Regd. Office - PO Birlagram, Nagda Dist-Ujjain(MP)  
India - 456331  
E-Mail ID - indian.rayon@adityabirla.com

**PURCHASE ORDER DRAFT**

PO Number : 2860000035  
PO Date : 05.09.2020

Vendor Code : 2100092592 (Not Registered)  
M/S EQUENTIA NATURAL RESOURCES PTE LTD  
05.00, 20 PECK SEAH STREET,  
SINGAPORE

SINGAPORE - 079312  
Singapore, Singapore

State Code :  
Contact Person :  
Ph. No. - 6562252822  
E-Mail ID -  
GSTIN :  
Import Export Code : 1188001353

Ref. No.:  
Date : Reference PO 2860000033  
dated 23.03.2020

Contact Person : Mr Saurabh Pandey  
Phone : 02876-248655  
E-Mail ID : saurabh.b.pandey@adityabirla.com

Dear Sir,

We are pleased to place our order for the following material(s)/ service(s) subject to terms and conditions and instructions specified here and overleaf. Please address all Bills and correspondence mentioning our order No. & date to the HOD (Materials) **Grasim Industries Limited/Unit:- Indian Rayon P.O Power Plant - 362266, Veraval, Gujarat.** Kindly mention our Item code & Purchase Order with applicable HSN/SAC Code on your invoice.

SNo	Material/Service Code Code Description	HSN / SAC Code	Quantity UoM	Unit Price	Discount	Total Tax	Net Value
1	STEAMCOAL 4200 STEAMCOAL 4200- IMPORTED	27011920	25500.000 TO	36.29 USD		5.00 % 46269.00	925395.00
	<b>Delivery Schedule</b>		<b>25500.000</b>		<b>30.11.2020</b>		
	Basic Price (Gross)					925395.00	
	Import GST Deduct			5.00 %		46269.00	

**Total Value Excluding Taxes**

**925395.00**

Amount in Words: US Dollar Nine Hundred Twenty-five Thousand Three Hundred Ninety-five and Cent Zero Only.

**Purchase Order Terms and Conditions**

INCO Terms : CIF - PIPAVAV  
Insurance : Consigner  
Freight  
Payment Terms : As mentioned in Terms & Conditions  
Dispatch Through

Dispatch From  
Dispatch Mode

**Consignee Details**

GSTIN : 24AAACG4464B5Z0  
Website : www.adityabirla.com

PAN No : AAACG4464B  
CIN No : L17124MP1947PLC000410

**Remarks -**

This has reference to our earlier related PO NO:2860000033. Dated: 23.03.20 subsequent discussions we had with your Mr. Paresh Khandelwal We are pleased to award you order for supply of Imported Indonesian Origin Coal on the following terms and conditions:-

**1. Specifications:-**

Gross Calorific Value (arb):4200 Kcal/Kg. Min.  
Total Moisture (arb) : 38% Max.  
Inherent Moisture (adb) : 13 %  
Ash (adb) : 6-8 % Max.  
Volatile matter (adb) : 38 to 42% Max.  
Sulphur : <1 % Max.  
Size of Coal : 0-50 mm -90% (0-4mm not exceeding 20%)

Rejection limit based on Load port report

(GCV (arb) : Less than < 4000 Kcal/kg



**Grasim Industries Limited**  
Unit:- Indian Rayon

Power Plant, Veraval, Gir-Somnath  
Gujarat Pin Code - 362266 [India]  
Telephone Number - 2876245711  
Fax Number - 2876243220  
Regd. Office - PO Birlagram, Nagda Dist-Ujjain(MP)  
India - 456331  
E-Mail ID - indian.rayon@adityabirla.com

**PURCHASE ORDER DRAFT**

PO Number : 2860000035  
PO Date : 05.09.2020

Fe2O3% in Ash : if more than 18%  
Sulphur : if Sulphur is more than 1%

2. Origin : Indonesian

3. Quantity : 25500 Mt (+/-10%)

4. Rate :  
Price : USD = 36.29 USD. per MT CIF

Delivary 10th August-2020 at Pipavav

5. Payment:

FLC 80% Payment of Total CIF Value of Invoice through Irrevocable FLC having Usance period of 105 days from date of bill of lading in the name of Equentia Natural Resources Pte Ltd and 20% direct payment will be released after receipt of entire ordered quantity and quality adjustment as per third party Independent Inspection Agency (IIA) reports.

6. Discharge Port: 25500 MT(+/-10%) at Pipavav/Porbandar port

7. Quality: The coal should be as per the specifications mentioned coal will be rejected if GCV (arb) less than 4000 Kcal/kg

8. Shipment schedule: You have agreed to arrange arrival of shipment at Pipavav port of 25500 MT by 08th Aug-20.

9. Weight Determination:  
As per Plant Weighbridge report.

10. Bonus/Price Adjustment due to Quality Variations

(a) Bonus: No Bonus is applicable.

(b) Adjusted Price = (CIF x Actual GCV (ARB)) divided by Guaranteed GCV (ARB)

(c) In Case If Coal is consumed and if GCV falls below 4000 GAR, Double Penalty will be applicable for Lower GAR.

11. Quality Determination:

Quality tests will be carried out at our Plant by our appointed third party independent inspection agency (IIA) and report of IIA shall be considered final and binding on you.

12. Documents:

12.1 One Original and 4 copies of your Commercial invoice showing the name of the Carrying vessel, date of Bill of lading, the actual tonnage shipped and the total value of the shipment, calculated on the basis of the certificate of weight.

12.2 Three Originals and four non-negotiable copies of Clean on Board Bills of Lading signed by the Master or Agents of the carrying Vessel marked Freight payable as per Charter Party.

12.3 One Original and Four copies of the Certificate of Sampling and Analysis.

12.4 One Original and four Copies of the certificate of weight

12.5 One Original and four Copies of the Certificate of Origin

12.6 You shall E-Mail full set of documents to us within 5 - 7 working days.



**Grasim Industries Limited**  
Unit:- Indian Rayon  
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**PURCHASE ORDER      DRAFT**

**PO Number : 2860000035**  
**PO Date : 05.09.2020**

12.7 In case the Bill of Lading and other documents are not received before arrival of the ship for taking delivery of the Coal, shipping guarantee if any to be provided, the charges thereon shall be to your account.

12.8 Bill of Exchange for 80% CIF value payable after the 180 days of Bill of lading.

12.9 Bill of Exchange for 20% CIF value payable after actual receipt of material at buyer#s plant.

13. Insurance: Insurance will be covered by you.

14. Confidentiality: Each party shall treat its terms as confidential and shall not disclose them to any third party (other than to its professional advisors or as required by Law) without the written consent of the other party.

15. Force Majeure: Both of us shall not be liable for any failure to fulfill any terms of this contract and to the extent that despite the exercise of reasonable diligence fulfillment has been delayed, interfered with or prevented by labour disputes or by compliance with any order or request of any national, port, local or transportation authority of any person or body purporting to be or to act for such authority of by any circumstances whatsoever which is not within the control of us or you as the case may be such as War, Blockades, Revolution, Surrection, Civil Commotion, Riot, Mobilisation, Act of Government or public enemy, Act of God, Plagues or other Epidemics, Fire, Flood, Sabotage, Quarantine, Extrication, Explosions, or Embargo including any change/modification in commercial Laws, Rules, Regulations by the Government.

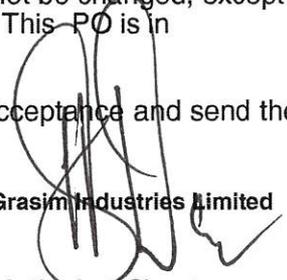
16. Entire Agreement: This contract contains the entire agreement between the parties with respect to the subject matter hereof and all proposals, negotiations and representations with reference there to are merged herein.

17. Applicable Law: This Purchase Order shall be governed and interpreted by Indian law.

18. Other Conditions: The terms and conditions of this Purchase Order cannot be changed, except in writing, in documents signed by duly authorized representatives of both you and us. This PO is in Continuation with our early po No.2860000033 Amendement-1

Please stamp and sign the duplicate copy of this order as a token of your acceptance and send the same to us for our records.

  
**Prepared by**

  
**For Grasim Industries Limited**  
**Authorised Signatory**





## Terms & Conditions

- 1 The material/goods/equipment etc. shall be strictly in accordance with the description, specifications and in full conformity with the Purchase Order and of best quality. In case if it is found that materials supplied are not according to the specification required by the buyer or received in damaged or broken condition or otherwise, found not satisfactory owing to any reason, is entitled to reject/cancel the material/goods/equipment and procure the same from the MARKET on its own and adjust the costs and expenses of such procurement from the deposit made by the Supplier/Seller and/or the Buyer is entitled to recover the balance from the Supplier/Seller. Where no standards of specifications are prescribed, the Supplier/Seller shall ensure supply of the same as per the best quality/standard. In which event the Supplier/Seller shall arrange for the removal of such rejected material from the Buyer's premises at his/its own costs and expenses within ten days from the date of receipt of intimation from the Buyer. In case the Supplier/Seller fails to remove such rejected material even within ten days, the Buyer is entitled to dispose the material goods/equipment after waiting for a maximum period of thirty days for the Supplier/Seller to arrange for removal.
- 2 Where the Material are required by the Purchase Order to be dispatched to Unit- Indian Rayon, Gujarat Siding on Railway, a Tax Invoice in duplicate giving full details of each consignment together with Rly. Goods Receipts or Parcel way Bill should be sent to HOD (Materials) Grasim Industries Limited P.O. Power Plant, Veraval Gir-Somnath, Gujarat(362266)and not to any other Department to or individual, if possible on the same day as the consignment is dispatched or at the latest on the following day. The Tax Invoice should give full reference of the order number and date against which the Supplies are made.
- 3 In case of Supplier/Sellers fails to deliver materials strictly within the delivery schedule, the Buyer may instruct to despatch the same by any costlier mode of transport. The entire additional expenditure involved will therefore, have to be borne by the Supplier/Seller even if the order is on the basis of F.O.R. Supplier/Seller's station of despatch and therefore the normal goods train freight will have to be borne by the Buyer and all additional expenditure shall be recovered from the Supplier/Seller.
- 4 The prices mutually agreed between the Buyer and Supplier/Seller are final and therefore no revision on any account shall be entertained. Time of delivery is the essence of the terms and conditions for Sale/Supply against this Purchase Order if the material is not delivered strictly within the specified time of delivery; the Buyer is entitled to reuse/accept the deliver at its discretion. In case no time is prescribed, the delivery shall be made within seven days from the date the Purchase Order. The Buyer shall be entitled to withhold any payments for breach of any of these terms/conditions by the Supplier/Seller/Seller.
- 5 Where the order is placed on F.O.R. Unit- Indian Rayon, siding basis both freight and insurance charges shall be deemed to have been included in such price and the loss, breakages or any damages during transit due to any cause whatsoever shall be borne by the Supplier/Seller.
- 6 Payment shall be made on the actual weight or quantity received and compliance of the pacifications duly certified by the Buyer. All charges and expenses on account of wharfage and demurrages are to the Seller/Suppliers' account. This Purchase Order is valid only till the expiry of the delivery date mentioned herein or mutually accepted
- 7 Invoices and all documents shall contain our purchase order number & date, packing list or challan and test certificate etc. showing complete despatch particulars. The buyer shall not be responsible for payment of any wharfage/demurrage charges for any delay in delivery of the material/goods/equipment on account of the documents not being retired by the bank/s due to non-mention of these details.
- 8 For all high energy consumption equipment, Energy efficiency of the equipment is one of the deciding factor for selection and finalisation of order. All Documents e.g. test Certificates / Guarantee / Bonds other such documents wherever applicable to be sent along with Commercial invoice HOD materials at our site immediately after dispatch of material.
- 9 Material should be packed in road-worthy packing to avoid transit damages and to be dispatched along with the invoice, documents such as Three copies of Excise Gate Pass cum Invoice. Excise Duty will be paid only if Transporter Copy of Invoice with the Seal and Signature on the top of the Invoice incorporating (1) GST Registration No. of Supplier/Seller, (2) Rate of duty and Amount in words & figure. (3) Full name of the company is received along with material to avail tax credit benefit.
- 10 Payment of all current and future duties, levies or taxes (including any statutory variation therein) leviable on the service / supply / work undertaken as per this PO, shall be strictly to the account of Seller/Supplier.
- 11 The Supplier / Vendor hereby covenants to comply with the applicable provisions of law, including but not limited to section 171 of Central Goods and Service Tax Act, 2017 or applicable section of IGST/UTGST/SGST law, and pass on to the company all the benefits arising from any reduction in the rate of tax on any supply of goods or service or both or the benefits of input tax credit, exemption, concessions, rebate, set-off, by way of reduction in the prices of the services / supply / work undertaken by the Supplier / Vendor as per this PO.
- 12 The Seller/Supplier shall ensure compliance of all statutory obligations and take payments of all the levies. The Buyer shall not be responsible for any non-compliance and penalties and consequences arising out of the Seller/Supplier's non-compliance/non-payment. You shall comply with the provisions of goods and service tax laws to ensure that the company is able to avail the entire eligible tax credit on timely basis for the service / supply / work undertaken by you under this PO.
- 13 In addition to the indemnities covered elsewhere in the agreement/order, you shall further agrees to indemnify and to keep the company harmless from and against any actual or potential liabilities, damages, interest penalty and cost to the company arising from breach or non-compliance of laws. Further you agrees that indemnity clause shall survive the termination / expiry of this agreement, howsoever occurring.
- 14 Without prejudice to the provisions of this PO, the obligations of the Supplier / Vendor to comply with the Goods and Service Tax provisions in respect of the services / supply / work undertaken by the Supplier / Vendor as per this PO, shall survive the termination / expiry of this PO, howsoever occurring.
- 15 If you fails to provide documents as required to avail the GST credit, Grasim shall not pay amount of GST charged by seller in their tax invoice along with supply of goods or service. You shall ensure filing of correct tax returns on or before due dates as specified in GST law. In case of failure in tax returns filing or any delay in tax credit due to other mistake at your end, Grasim shall recover the amount of tax paid against such invoice and interest @ 18% per annum thereon for the period of delay in tax credit. All tax information given on the purchase order should be mentioned in the Tax Invoice of manufacturers/original suppliers of the materials.
- 16 We are committed to QMS ISO 9001:2008, EMS ISO 14001:2015, EMS ISO 50001:2011, OHSAS 18001:2007 & SA 8000:2014 We encourage all stack holders to join with us in systemic approach. Supplier with above system approached & Certification and give due weightage.
- 17 The PO/ WO shall be void, if at any point of time you are found to be a black listed dealer as per GSTN rating system and further no payment shall be entertained.
- 18 Any dispute arising out of this Purchase Order shall be referred to a Sole Arbitrator to be appointed by the Buyer under the provisions of the Arbitration and Conciliation Act, 1996 as amended and the decision of such Sole Arbitrator shall be final and being on both the Buyer and the Seller/Supplier. The venue of such arbitration shall be at Veraval, Gir-Somnath.
- 19 Material shall be booked through our approved transporter directly reaching to Veraval, Gir-Somnath, Gujarat. You should instruct transporter to declare the following declaration on the LR Note as per circular No. B1/6/2005 dated 27th July 2005 of the Board of Central Excise & Customs.
- 20 You shall submit guarantee/warrantee certificate conforming to the specifications of P.O. and dimensional accuracies as per the requirement/drawing/design.
- 21 Please raise separate invoice for separate PO, Otherwise your payment will be delayed. Unless the material is dispatched on full truck load, the consignment should not be booked on door delivery basis. All materials are subject to Inspection / Verification and acceptance at our Stores. All disputes under this Purchase Order shall be subject to the jurisdiction of the courts in Veraval, Gir-Somnath in Gujarat.
- 22 Safety Precautions : Kindly provide MSDS (Material Safety Data Sheet) along with each supply, if applicable. Contact address in case of emergency must be mentioned clearly. Relevance of products to standard must be mentioned. Date of manufacturing, Batch No., Expiry Date must be mentioned, if applicable.
- 23 Code of Conduct : You shall adhere to and implement Supplier Code of Conduct issued by Company
- 24 Confidentiality :- Except and as otherwise agreed by the parties and subject to applicable law or any court of competent jurisdiction, this \_\_\_\_\_ (agreement/purchase order/ MOU) and all details, documents, data applications, software, systems, papers, statements and business/customer Information' which may be communicated to the Supplier/Seller shall be treated as absolutely confidential and the Supplier/Seller irrevocably agrees and undertakes and ensures that the Supplier/Seller and shall keep the same secret and confidential and not disclose the same, in whole or in part to any person without the prior written permission of the Company.
- 25 You should strictly adhere to whenever you supply any material to us. As per Companies Act, companies are required to make certain disclosure pertaining to the Vendors registered under the Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act, 2006).
- 26 If your firm/company is registered under MSMED Act, 2006 please send us a copy of the registration certificate within 15 days to enable us to make proper disclosure in our Financial Statements. If copy of the registration certificate is not received before said time schedule, it will be assumed that the provisions of the MSMED Act, 2006 are not applicable to your firm/company.
- 27 Kindly submit your order acceptance in 7 days by Fax 2876243220 or indian.rayon@adityabirla.com to the concerned person as mentioned in the order, if not we will consider this PO is accepted by you with all terms and conditions.
- 28 You shall not sub-contract any work to any existing contractor working in the unit and shall not engage any contractual manpower of other contractor.

**Note : In case material found short / damaged, the bill shall be passed with actual received quantity in good condition at our factory. You have to raise the credit note immediately against our shortage Memo and the same shall be updated on GSTN also.**

**Integrity                      Commitment                      Passion                      Seamlessness                      Speed**

Plot No. 97, Sector 1/A  
Gandhidham - 370201  
[CIN : U51909WB1956PTC023037]

T : 02836 226225  
F : 02836 226225  
E : gandhidham@mitrask.co.in

Certificate No : GDM/20-21/C-496A

Date: 12.10.2020

Reference No. : OP/GAN/CO-2020/00082

## CERTIFICATE OF ANALYSIS

CARGO DESCRIBED AS : COAL IN BULK  
CLIENT : M/S.GRASIM INDUSTRIES LTD (A Unit of INDIAN RAYON)  
SUPPLIER : M/S. CL-97 PORBANDAR FINAL  
PLACE OF SAMPLING : AT COAL YARD, IRIL, VERAVAL  
DATES OF SAMPLING : 13.08.20 TO 02.10.20  
QUANTITY (13.08.20 TO 02.10.20) : 250008.550 MT

### DAYWISE TRUCK SAMPLING & ANALYSIS:

Day wise one sealed moisture sample was analyzed at Indian Rayon Laboratory & Quality sample was analyzed in our laboratory and result obtained as under:

SR NO	DATE OF SAMPLING	NO OF TRIPS	Weighbridge Qty.	TM %	LOT NO.	W.AVG TM%
1	13-Aug	8	240.640	33.96	1	34.06
2	14-Aug	42	1263.600	34.08		
3	15-Aug	31	944.890	34.23	2	34.31
4	16-Aug	20	603.360	34.44		
5	17-Aug	14	424.640	35.05	3	34.69
6	18-Aug	14	417.840	34.57		
7	19-Aug	14	425.100	34.46		
8	20-Aug	23	703.680	34.22	4	34.63
9	21-Aug	24	727.580	35.03		
10	22-Aug	23	675.290	34.03	5	34.20
11	23-Aug	24	705.650	34.37		
12	24-Aug	24	725.990	34.25	6	34.30
13	25-Aug	8	235.740	34.13		
14	26-Aug	28	844.930	34.40		
15	27-Aug	22	671.080	34.48	7	34.51
16	28-Aug	13	396.190	34.55		
17	30-Aug	18	555.240	35.60	8	35.19
18	31-Aug	12	367.070	35.36		
19	02-Sep	29	886.230	34.87		



# MITRA S. K. Private Limited



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Certificate No : GDM/20-21/C-496A

Date: 12.10.2020

Reference No. :OP/GAN/CO-2020/00082

SR NO	DATE OF SAMPLING	NO OF TRIPS	Weighbridge Qty.	TM %	LOT NO.	W.AVG TM%
20	03-Sep	26	799.700	35.34	9	34.79
21	04-Sep	27	823.550	34.25		
22	05-Sep	20	605.680	35.64	10	34.89
23	06-Sep	34	1038.540	34.45		
24	07-Sep	22	668.380	34.26	11	34.33
25	08-Sep	11	335.720	34.47		
26	09-Sep	16	491.930	34.12	12	34.15
27	10-Sep	15	459.720	34.06		
28	11-Sep	28	852.710	34.21	13	34.78
29	12-Sep	15	460.820	34.13		
30	13-Sep	12	367.170	35.03	14	34.64
31	14-Sep	12	374.170	35.35		
32	15-Sep	13	398.720	34.54	15	34.49
33	16-Sep	14	425.510	34.71		
34	17-Sep	17	520.300	34.65	16	34.99
35	18-Sep	16	493.750	34.39		
36	19-Sep	21	638.650	34.57	17	35.35
37	20-Sep	17	520.310	35.01		
38	21-Sep	24	732.000	34.97	18	35.38
39	22-Sep	19	582.660	35.28		
40	23-Sep	14	433.670	35.44	18	35.38
41	24-Sep	18	555.360	35.58		
42	25-Sep	10	305.210	35.78	18	35.38
43	01-Oct	5	137.590	34.67		
44	02-Oct	6	171.990	34.56	18	35.38



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Certificate No : GDM/20-21/C-496A

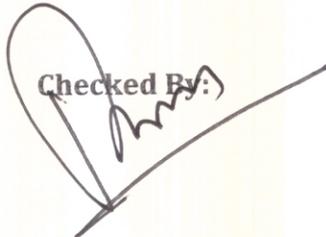
Date: 12.10.2020

Reference No. : OP/GAN/CO-2020/00082

**COMPOSITE SAMPLE ANALYSIS REPORT:**

Day wise sample collected & prepared a composite sample as per work order. Quality sample analyzed in our laboratory and result obtained as under:-

LOT NO.	DURATION	QYANTITY	W.AVG TM%	IM %	VM %	ASH %	FC %	S%	GCV (ADB)	GCV (DB)	GCV (ARB)
1	13.08.20 TO 14.08.20	1504.240	34.06	13.68	35.38	6.90	44.04	0.34	5556	6437	4244
2	15.08.20 TO 16.08.20	1548.250	34.31	12.86	35.57	7.48	44.09	0.34	5561	6382	4192
3	17.08.20 TO 19.08.20	1267.580	34.69	15.16	35.86	7.52	41.46	0.34	5394	6358	4152
4	20.08.20 TO 21.08.20	1431.260	34.63	14.58	35.94	7.57	41.91	0.36	5472	6406	4188
5	22.08.20 TO 23.08.20	1380.940	34.20	13.77	35.98	7.11	43.14	0.37	5508	6388	4203
6	24.08.20 TO 26.08.20	1806.660	34.30	14.62	35.02	7.63	42.73	0.34	5448	6381	4192
7	27.08.20 TO 28.08.20	1067.270	34.51	14.78	35.84	7.18	42.2	0.38	5462	6409	4198
8	30.08.20 TO 02.09.20	1808.540	35.19	15.12	35.78	6.92	42.18	0.32	5502	6482	4201
9	03.09.20 TO 04.09.20	1623.250	34.79	14.69	35.59	7.28	42.44	0.29	5484	6428	4192
10	05.09.20 TO 06.09.20	1644.220	34.89	14.72	35.94	7.31	42.03	0.34	5498	6447	4198
11	07.09.20 TO 08.09.20	1004.100	34.33	14.56	35.88	7.08	42.48	0.28	5468	6400	4203
12	09.09.20 TO 11.09.20	1804.360	34.15	14.08	35.92	7.32	42.68	0.32	5464	6359	4188
13	12.09.20 TO 14.09.20	1202.160	34.78	14.78	35.98	7.16	42.08	0.29	5469	6418	4185
14	15.09.20 TO 17.09.20	1344.530	34.64	14.54	35.77	7.33	42.36	0.27	5479	6411	4191
15	18.09.20 TO 19.09.20	1132.400	34.49	14.28	38.63	6.75	40.34	0.28	5492	6407	4197
16	20.09.20 TO 21.09.20	1252.310	34.99	14.79	37.65	6.79	40.77	0.30	5489	6442	4188
17	22.09.20 TO 23.09.20	1016.330	35.35	14.36	37.61	6.96	41.07	0.28	5512	6436	4161
18	24.09.20 TO 02.10.20	1170.150	35.38	14.26	37.32	7.48	40.94	0.33	5542	6464	4177
<b>TOTAL W/AVG</b>		<b>25008.550</b>	<b>34.63</b>	<b>14.41</b>	<b>36.11</b>	<b>7.23</b>	<b>42.25</b>	<b>0.32</b>	<b>5489</b>	<b>6414</b>	<b>4193</b>

Checked By: 

FOR, MITRA S K PRIVATE LIMITED

AUTHORISED SIGNATORY





**Grasim Industries Limited**  
Unit:- Indian Rayon

Power Plant, Veraval, Gir-Somnath  
Gujarat Pin Code - 362266 [India]  
Telephone Number - 2876245711  
Fax Number - 2876243220  
Regd. Office - PO Birlagram, Nagda Dist-Ujjain(MP)  
India - 456331  
E-Mail ID - indian.rayon@adityabirla.com

**PURCHASE ORDER ORIGINAL**

PO Number : 2900009805  
PO Date : 27.08.2020

Vendor Code : 2100008616 (Registered)  
M/S ADANI ENTERPIRSES LTD  
8th FLOOR, NR. MITHAKHALI CIRCLE  
NAVRANGPUR  
SHIKHAR BUILDING  
AHMEDABAD - 380009  
Gujarat, India

State Code : 24  
Contact Person :  
Ph. No. - 079-25558689 / 9099002516  
E-Mail ID - Ritesh.Mathur@adani.in  
GSTIN : 24AABCA2804L1Z0

Ref. No.:  
Date :

Contact Person : Mr Saurabh Pandey  
Phone : 02876-248655  
E-Mail ID : saurabh.b.pandey@adityabirla.com

Dear Sir,  
We are pleased to place our order for the following material(s)/ service(s) subject to terms and conditions and instructions specified here and overleaf. Please address all Bills and correspondence mentioning our order No. & date to the HOD (Materials) **Grasim Industries Limited/Unit:- Indian Rayon P.O Power Plant - 362266, Veraval, Gujarat.** Kindly mention our Item code & Purchase Order with applicable HSN/SAC Code on your Invoice.

SNo	Material/Service Code Code Description	HSN / SAC Code	Quantity UoM	Unit Price	Discount	Total Tax	Net Value
1	STEAMCOAL 5000 - IMPORTED STEAMCOAL 5800 - South African	27010000	5000.000 TO	5400.00 INR		5.00 % 1350000.00	27000000.00
				Input : CGST+SGST Set off			
<b>Delivery Schedule</b>				<b>5000.000</b>	<b>30.09.2020</b>		
Basic Price (Gross)						27000000.00	
CGST				2.50 %		675000.00	
SGST				2.50 %		675000.00	

**Total Value Excluding Taxes**

**27000000.00**

**Amount in Words: Rupees Two Crore Seventy Lakh Only.**

**Purchase Order Terms and Conditions**

**INCO Terms** : FOR - VERAVAL PLANT  
**Insurance** : Consigner  
**Freight**  
**Payment Terms** : As mentioned in Terms & Conditions  
**Dispatch Through**

**Dispatch From**  
**Dispatch Mode**

**Consignee Details**

GSTIN : 24AAACG4464B5Z0  
Website : www.adityabirla.com

PAN No : AAACG4464B  
CIN No : L17124MP1947PLC000410

Remarks -

1. PRICE:

Cost of South African coal will be Rs.5800/- Per MT (Rupees Five Thousand Eight Hundred only) Plus GST on Coal rate extra as actual on FOR site basis. The above price will remain firm and no escalation of whatsoever nature will be applicable. You will arrange to transport the material by road.

Coal Rate Rs 5400 /MT  
Compensation Cess Rs 400 /MT

Total Rs 5800 PMT Plus GST extra at actual on Coal rate on FOR Site Veraval basis.

2. QUANTITY: 5000 MT (+/-10%)

3. SPECIFICATIONS:

Gross Calorific Value (ARB) : 5800 Kcal/kg min  
Total Moisture (ARB) : 9%+/-1% Max  
Inherent Moisture : 2%-4%  
ASH (ADB) : 19%-23%



**Grasim Industries Limited**  
Unit:- Indian Rayon

Power Plant, Veraval, Gir-Somnath  
Gujarat Pin Code - 362266 [India]  
Telephone Number - 2876245711  
Fax Number - 2876243220  
Regd. Office - PO Birlagram, Nagda Dist-Ujjain(MP)  
India - 456331  
E-Mail ID - indian.rayon@adityabirla.com

**PURCHASE ORDER**

**ORIGINAL**

PO Number : 2900009805  
PO Date : 27.08.2020

Volatile Matter : 20-28% Max  
Sulphur : < 1%  
Size of Coal : 0-50 mm (up to 0-4 mm not exceeding, 30%)

**4. PAYMENT:**

80% payment will be released within 7 days from the date of receipt of bills, against weekly bills for the delivered quantity at our site at Veraval.

20% balance payment will be released after receipt of entire ordered quantity and adjusting penalty based on the plant weigh bridge quantity and third party Independent Inspection Agency (IIA) reports within 2 weeks.

**5. Price adjustment:**

Pro-rata adjustment in the price will be made if Gross Calorific Value (ARB) varies from Guaranteed GCV (ARB) as per the below formula:

**a) Gross Calorific Value (ARB):**

Adjusted Price = {Rs 5800 x Actual Wt Avg GCV (Arb)} divided by Guaranteed GCV (ARB)

**Rejection Clause:**

If GCV (ARB) is less than 5600 KCAL/Kg

**6. QUANTITY DETERMINATION:**

Weighment as per our site weighbridge would be final and no shortage would be allowed.

**7. QUALITY DETERMINATION:**

Quality tests will be carried out by our appointed third party independent inspection agency (IIA) and report Of IIA shall be considered final and binding on you.

Test result for the whole quantity received will be weighted averaged out and price adjustment for deviation in quality, if any, Will be applicable according to Clause No. 5 (a) above.

Sampling by the IIA will be carried out at the unloading point at our works at regular interval during unloading of coal to our works at Veraval on daily basis.

Report of the IIA shall be final and binding on both the parties. Price adjustment for lower GCV shall be applicable

On Weighted average of various periodical report submitted by IIA

**8. DELIVERY:**

a) You will arrange to deliver the material to our Site as per following delivery schedule from Kandla Port.

AUG 20 : 2000 MT, SEP. 20 : 3000 MT

b) In case the quality of coal supplied by you is not as per our order specifications, we will inform you about the same and you will have to stop the supplies immediately within 24 hours from our intimation.

c) We reserve the right to short close the order any movement without any financial compensation.

d) In case you are unable to supply such quantity, we reserve our rights to procure coal from alternate source & debit the differential cost to you towards risk purchase implication.

**9. WEIGHMENT:**

You will arrange for Weighment at our weighbridge of each and every vehicle before and after unloading and shall submit all the Weighment records along with challan and other documents as desired by us at the receiving plant.

The weight recorded at our weighbridge shall be treated as final and in case our weighbridge is out of order,



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**PURCHASE ORDER**

**ORIGINAL**

**PO Number : 2900009805**  
**PO Date : 27.08.2020**

the Weighment shall be arranged as per procedure decided by receiving plant at that time.

#### 10. INSURANCE:

You will take necessary insurance cover of your vehicles as well as manpower engaged and third party insurance and shall be fully liable in case of any accident that occurs whether outside or inside our premises.

You shall also be paying necessary road tax and other charges as required by State/Central Govt. from time to time and shall ensure that papers required during transportation of material are available.

It will be your responsibility to ensure that the product being lifted by you for us is safely delivered at our premises as per terms and conditions of this contract. In case of any accident or mishap in transit, the same shall be treated as a shortage and you will have to bear the cost of entire loss.

#### 11. DOCUMENTS REQUIRED:

You will ensure that all necessary documents such as Invoice/Delivery Challans in desired number or copies, L.R., E Way Bill and other form (if required) as per requirement are submitted with each consignment. You will be solely responsible for any fine imposed by any authorities such as Sales Tax, RTO, Octroi, Excise, Police, Check Post authorities etc. for lack of requisite documentation/papers.

You will submit the following documents

Copy of load port quality certificate,  
Load port quality analysis is to be done from international reputed agency.

#### 12. OTHER TERMS AND CONDITIONS:

- a) We reserve the right to accept or reject the coal and the Price adjustment due to Quality Variations will be applicable as per clause No 5 (A).
- b) If there is any increase/decrease in Custom duty, Tax, Government levies on Imports, Wharf age, Port charges etc.it shall be applicable on actual basis for Price of the Coal.
- c) Delay in payment will not carry any interest.
- d) Truck detention charges, if any and of any nature, will NOT be paid by us.
- e) You will be totally responsible to compensate us for damage, if any, to our property during transportation of coal.
- f) Quality of coal and timely delivery are the essence of this order.
- g) The loading of the coal at discharge port in our account shall be done strictly in the presence of Our representative only

#### 13. LAWS/ARBITRATIONS:

Any dispute arising during execution of this contract shall be settled amicably by mutual agreement between us.

#### 14. JURUSDICITION :

This contract is subject to Veraval (Gujarat) jurisdiction.

We require order acknowledgement immediately.

**For Grasim Industries Limited**

**Prepared by**

**Authorised Signatory**

## Terms & Conditions

- 1 The material/goods/equipment etc. shall be strictly in accordance with the description, specifications and in full conformity with the Purchase Order and of best quality. In case if it is found that materials supplied are not according to the specification required by the buyer or received in damaged or broken condition or otherwise, found not satisfactory owing to any reason, is entitled to reject/cancel the material/goods/equipment and procure the same from the MARKET on its own and adjust the costs and expenses of such procurement from the deposit made by the Supplier/Seller and/or the Buyer is entitled to recover the balance from the Supplier/Seller. Where no standards of specifications are prescribed, the Supplier/Seller shall ensure supply of the same as per the best quality/standard. In which event the Supplier/Seller shall arrange for the removal of such rejected material from the Buyer's premises at his/its own costs and expenses within ten days from the date of receipt of intimation from the Buyer. In case the Supplier/Seller fails to remove such rejected material even within ten days, the Buyer is entitled to dispose the material goods/equipment after waiting for a maximum period of thirty days for the Supplier/Seller to arrange for removal.
- 2 Where the Material are required by the Purchase Order to be dispatched to Unit:- Indian Rayon, Gujarat Siding on Railway, a Tax Invoice in duplicate giving full details of each consignment together with Rly. Goods Receipts or Parcel way Bill should be sent to HOD (Materials) Grasim Industries Limited P.O. Power Plant, Veraval Gir-Somnath, Gujarat(362266)and not to any other Department to or individual, if possible on the same day as the consignment is dispatched or at the latest on the following day. The Tax Invoice should give full reference of the order number and date against which the Supplies are made.
- 3 In case of Supplier/Sellers fails to deliver materials strictly within the delivery schedule, the Buyer may instruct to despatch the same by any costlier mode of transport. The entire additional expenditure involved will therefore, have to be borne by the Supplier/Seller even if the order is on the basis of F.O.R. Supplier/Seller's station of despatch and therefore the normal goods train freight will have to be borne by the Buyer and all additional expenditure shall be recovered from the Supplier/Seller.
- 4 The prices mutually agreed between the Buyer and Supplier/Seller are final and therefore no revision on any account shall be entertained. Time of delivery is the essence of the terms and conditions for Sale/Supply against this Purchase Order if the material is not delivered strictly within the specified time of delivery; the Buyer is entitled to reuse/accept the deliver at its discretion. In case no time is prescribed, the delivery shall be made within seven days from the date the Purchase Order. The Buyer shall be entitled to withhold any payments for breach of any of these terms/conditions by the Supplier/Seller/Seller.
- 5 Where the order is placed on F.O.R. Unit:- Indian Rayon, siding basis both freight and insurance charges shall be deemed to have been included in such price and the loss, breakages or any damages during transit due to any cause whatsoever shall be borne by the Supplier/Seller.
- 6 Payment shall be made on the actual weight or quantity received and compliance of the pacifications duly certified by the Buyer. All charges and expenses on account of wharfage and demurrages are to the Seller/Suppliers' account. This Purchase Order is valid only till the expiry of the delivery date mentioned herein or mutually accepted
- 7 Invoices and all documents shall contain our purchase order number & date, packing list or challan and test certificate etc. showing complete despatch particulars. The buyer shall not be responsible for payment of any wharfage/demurrage charges for any delay in delivery of the material/goods/equipment on account of the documents not being retired by the bank/s due to non-mention of these details.
- 8 For all high energy consumption equipment, Energy efficiency of the equipment is one of the deciding factor for selection and finalisation of order. All Documents e.g. test Certificates / Guarantee / Bonds other such documents wherever applicable to be sent along with Commercial invoice HOD materials at our site immediately after dispatch of material.
- 9 Material should be packed in road-worthy packing to avoid transit damages and to be dispatched along with the invoice, documents such as Three copies of Excise Gate Pass cum Invoice. Excise Duty will be paid only if Transporter Copy of Invoice with the Seal and Signature on the top of the Invoice incorporating (1) GST Registration No. of Supplier/Seller, (2) Rate of duty and Amount in words & figure. (3) Full name of the company is received along with material to avail tax credit benefit.
- 10 Payment of all current and future duties, levies or taxes (including any statutory variation therein) leviable on the service / supply / work undertaken as per this PO, shall be strictly to the account of Seller/Supplier.
- 11 The Supplier / Vendor hereby covenants to comply with the applicable provisions of law, including but not limited to section 171 of Central Goods and Service Tax Act, 2017 or applicable section of IGST/UTGST/SGST law, and pass on to the company all the benefits arising from any reduction in the rate of tax on any supply of goods or service or both or the benefits of input tax credit, exemption, concessions, rebate, set-off, by way of reduction in the prices of the services / supply / work undertaken by the Supplier / Vendor as per this PO.
- 12 The Seller/Supplier shall ensure compliance of all statutory obligations and take payments of all the levies. The Buyer shall not be responsible for any non-compliance and penalties and consequences arising out of the Seller/Supplier's non-compliance/non-payment. You shall comply with the provisions of goods and service tax laws to ensure that the company is able to avail the entire eligible tax credit on timely basis for the service / supply / work undertaken by you under this PO.
- 13 In addition to the indemnities covered elsewhere in the agreement/order, you shall further agrees to indemnify and to keep the company harmless from and against any actual or potential liabilities, damages, interest penalty and cost to the company arising from breach or non-compliance of laws. Further you agrees that indemnity clause shall survive the termination / expiry of this agreement, howsoever occurring.
- 14 Without prejudice to the provisions of this PO, the obligations of the Supplier / Vendor to comply with the Goods and Service Tax provisions in respect of the services / supply / work undertaken by the Supplier / Vendor as per this PO, shall survive the termination / expiry of this PO, howsoever occurring.
- 15 If you fails to provide documents as required to avail the GST credit, Grasim shall not pay amount of GST charged by seller in their tax invoice along with supply of goods or service. You shall ensure filing of correct tax returns on or before due dates as specified in GST law. In case of failure in tax returns filing or any delay in tax credit due to other mistake at your end, Grasim shall recover the amount of tax paid against such invoice and interest @ 18% per annum thereon for the period of delay in tax credit. All tax information given on the purchase order should be mentioned in the Tax Invoice of manufacturers/original suppliers of the materials.
- 16 We are committed to QMS ISO 9001:2008, EMS ISO 14001:2015, EMS ISO 50001:2011, OHSAS 18001:2007 & SA 8000:2014 We encourage all stack holders to join with us in systemic approach. Supplier with above system approached & Certification and give due weightage.
- 17 The PO/ WO shall be void, if at any point of time you are found to be a black listed dealer as per GSTN rating system and further no payment shall be entertained.
- 18 Any dispute arising out of this Purchase Order shall be referred to a Sole Arbitrator to be appointed by the Buyer under the provisions of the Arbitration and Conciliation Act, 1996 as amended and the decision of such Sole Arbitrator shall be final and being on both the Buyer and the Seller/Supplier. The venue of such arbitration shall be at Veraval, Gir-Somnath.
- 19 Material shall be booked through our approved transporter directly reaching to Veraval, Gir-Somnath, Gujarat. You should instruct transporter to declare the following declaration on the LR Note as per circular No. B1/6/2005 dated 27th July 2005 of the Board of Central Excise & Customs.
- 20 You shall submit guarantee/warrantee certificate conforming to the specifications of P.O. and dimensional accuracies as per the requirement/drawing/design.
- 21 Please raise separate invoice for separate PO, Otherwise your payment will be delayed. Unless the material is dispatched on full truck load, the consignment should not be booked on door delivery basis. All materials are subject to Inspection / Verification and acceptance at our Stores. All disputes under this Purchase Order shall be subject to the jurisdiction of the courts in Veraval, Gir-Somnath in Gujarat.
- 22 Safety Precautions : Kindly provide MSDS (Material Safety Data Sheet) along with each supply, if applicable. Contact address in case of emergency must be mentioned clearly. Relevance of products to standard must be mentioned. Date of manufacturing, Batch No., Expiry Date must be mentioned, if applicable.
- 23 Code of Conduct : You shall adhere to and implement Supplier Code of Conduct issued by Company
- 24 Confidentiality :- Except and as otherwise agreed by the parties and subject to applicable law or any court of competent jurisdiction, this \_\_\_\_\_ (agreement/purchase order/ MOU) and all details, documents, data applications, software, systems, papers, statements and business/customer Information') which may be communicated to the Supplier/Seller shall be treated as absolutely confidential and the Supplier/Seller irrevocably agrees and undertakes and ensures that the Supplier/Seller and shall keep the same secret and confidential and not disclose the same, in whole or in part to any person without the prior written permission of the Company.
- 25 You should strictly adhere to whenever you supply any material to us. As per Companies Act, companies are required to make certain disclosure pertaining to the Vendors registered under the Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act, 2006).
- 26 If your firm/company is registered under MSMED Act, 2006 please send us a copy of the registration certificate within 15 days to enable us to make proper disclosure in our Financial Statements. If copy of the registration certificate is not received before said time schedule, it will be assumed that the provisions of the MSMED Act, 2006 are not applicable to your firm/company.
- 27 Kindly submit your order acceptance in 7 days by Fax 2876243220 or indian.rayon@adityabirla.com to the concerned person as mentioned in the order, if not we will consider this PO is accepted by you with all terms and conditions.
- 28 You shall not sub-contract any work to any existing contractor working in the unit and shall not engage any contractual manpower of other contractor.

**Note : In case material found short / damaged, the bill shall be passed with actual received quantity in good condition at our factory. You have to raise the credit note immediately against our shortage Memo and the same shall be updated on GSTN also.**

**Integrity**

**Commitment**

**Passion**

**Seamlessness**

**Speed**

Plot No. 97, Sector 1/A  
Gandhidham - 370201  
[CIN : U51909WB1956PTC023037]

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E : gandhidham@mitrask.co.in

Certificate No : GDM/20-21/C-496 B

Date: 27.10.2020

Reference No. : OP/GAN/CO-2020/00083

## CERTIFICATE OF ANALYSIS

CARGO DESCRIBED AS : COAL IN BULK  
CLIENT : M/S.GRASIM INDUSTRIES LTD (A Unit of INDIAN RAYON)  
SUPPLIER : M/S. CL-95 FINAL  
PLACE OF SAMPLING : AT COAL YARD, IRIL, VERAVAL  
DATES OF SAMPLING : 14.03.20 TO 07.10.20  
QUANTITY (14.03.20 TO 07.10.20) : 30018.160 MT

### DAYWISE TRUCK SAMPLING & ANALYSIS:

Day wise one sealed moisture sample was analyzed at Indian Rayon Laboratory & Quality sample was analyzed in our laboratory and result obtained as under:

SR NO	DATE OF SAMPLING	NO OF TRIPS	Weighbridge Qty.	TM %	Quantity	W.AVG TM%
1	14-Mar	5	155.670	8.12	1108.630	8.07
2	15-Mar	31	952.960	8.06		
3	16-Mar	16	494.080	8.18	1728.320	8.45
4	17-Mar	40	1234.240	8.56		
5	18-Mar	17	520.310	8.59	1508.070	8.60
6	19-Mar	32	987.760	8.61		
7	20-Mar	19	582.380	8.26	1291.670	8.39
8	21-Mar	5	153.750	8.44		
9	22-Mar	3	93.110	8.25		
10	23-Mar	15	462.430	8.57		
11	24-Mar	3	92.780	8.43	1203.810	8.09
12	30-Apr	9	261.920	7.79		
13	01-May	15	444.790	8.01		
14	02-May	14	404.320	8.29	1525.170	8.30
15	03-May	10	297.850	8.20		
16	04-May	22	641.600	8.41		
17	06-May	20	585.720	8.23	1398.980	8.20
18	07-May	11	318.040	8.36		
19	08-May	10	293.970	8.21		
20	09-May	9	273.260	8.11		
21	14-May	18	513.710	8.13		



# MITRA S. K. Private Limited



TESTING • INSPECTION

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Date: 27.10.2020

Reference No. :OP/GAN/CO-2020/00083

SR NO	DATE OF SAMPLING	NO OF TRIPS	Weighbridge Qty.	TM %	Quantity	W.AVG TM%
22	15-May	2	60.750	8.39	1300.910	8.11
23	17-May	20	605.160	8.35		
24	19-May	21	635.000	7.86		
25	22-May	15	457.270	8.17	1120.850	8.17
26	24-May	9	269.970	7.83		
27	25-May	1	30.870	8.21		
28	26-May	12	362.740	8.42		
29	27-May	10	296.890	8.41	1160.330	8.31
30	28-May	10	292.800	8.37		
31	29-May	9	263.960	8.30		
32	30-May	10	306.680	8.18		
33	31-May	9	268.410	8.41	1220.390	8.33
34	01-Jun	12	360.570	8.57		
35	02-Jun	10	295.000	8.01		
36	13-Jun	10	296.410	8.29		
37	14-Jun	10	298.280	8.55	1194.460	8.46
38	15-Jun	10	298.830	8.74		
39	16-Jun	10	304.740	8.33		
40	17-Jun	10	292.610	8.21		
41	18-Jun	10	303.240	8.27	1217.330	8.49
42	19-Jun	10	299.840	8.55		
43	20-Jun	9	277.450	8.75		
44	21-Jun	1	30.580	8.65		
45	30-Jun	10	306.220	8.39	1147.050	8.47
46	01-Jul	15	459.250	8.22		
47	02-Jul	10	302.490	8.39		
48	15-Jul	13	385.310	8.82		



# MITRA S. K. Private Limited

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SR NO	DATE OF SAMPLING	NO OF TRIPS	Weighbridge Qty.	TM %	Quantity	W.AVG TM%
49	16-Jul	20	592.560	8.72	1048.810	8.71
50	17-Jul	15	456.250	8.69		
51	18-Jul	19	571.550	8.81	1201.610	8.62
52	19-Jul	21	630.060	8.44		
53	20-Jul	17	521.180	8.85	1119.470	8.80
54	22-Jul	20	598.290	8.76		
55	23-Jul	26	790.320	8.93	1908.840	8.84
56	24-Jul	37	1118.520	8.77		
57	25-Jul	34	1035.040	8.84	1035.040	8.84
58	27-Jul	38	1152.380	8.97	1152.380	8.97
59	28-Jul	36	1093.150	8.88	1093.150	8.88
60	27-Aug	9	279.190	8.30	279.190	8.30
61	29-Jul	1	30.790	8.79	462.620	8.53
62	28-Aug	1	30.790	8.21		
63	04-Sep	4	123.510	8.53		
64	05-Sep	8	246.690	8.52		
65	06-Sep	1	30.840	8.69		
66	02-Oct	17	525.060	8.34	1264.420	8.50
67	03-Oct	24	739.360	8.62		
68	04-Oct	25	770.940	8.52	1265.080	8.46
69	05-Oct	16	494.140	8.36		
70	06-Oct	1	30.960	8.32	61.58	8.18
71	07-Oct	1	30.620	8.04		

## COMPOSITE SAMPLE ANALYSIS REPORT:

Day wise sample collected & prepared a composite sample as per work order. Quality sample analyzed in our laboratory and result obtained as under:-

LOT NO.	DURATION	QYANTITY	W.AVG TM%	IM %	VM %	ASH %	FC %	S%	GCV (ADB)	GCV (DB)	GCV (ARB)
1	14.03.20 TO 15.03.20	1108.630	8.07	2.02	20.63	28.93	48.42	1.03	5252	5360	4928
2	16.03.20 TO 17.03.20	1728.320	8.45	2.86	20.71	28.41	48.02	1.00	5132	5283	4837
3	18.03.20 TO 19.03.20	1508.070	8.60	2.79	20.28	30.03	46.9	1.37	4917	5058	4623
4	20.03.20 TO 23.03.20	1291.670	8.39	3.78	20.22	29.89	46.11	1.25	4948	5142	4711



# MITRA S. K. Private Limited



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Certificate No : GDM/20-21/C-496 B

Date: 27.10.2020

Reference No. : OP/GAN/CO-2020/00083

LOT NO.	DURATION	QYANTITY	W.AVG TM%	IM %	VM %	ASH %	FC %	S%	GCV (ADB)	GCV (DB)	GCV (ARB)
5	24.03.20 TO 02.05.20	1203.810	8.09	3.84	20.27	29.78	46.11	1.47	4932	5129	4714
6	03.05.20 TO 06.05.20	1525.170	8.30	3.90	20.12	29.67	46.31	1.20	4964	5165	4737
7	07.05.20 TO 14.05.20	1398.980	8.20	4.00	20.53	29.47	46	1.02	4917	5122	4702
8	15.05.20 TO 19.05.20	1300.910	8.11	3.37	20.93	27.64	48.06	0.93	5063	5240	4815
9	22.05.20 TO 26.05.20	1120.850	8.17	2.87	21.06	28.42	47.65	0.91	5134	5286	4854
10	27.05.20 TO 30.05.20	1160.330	8.31	3.34	21.28	29.92	45.46	1.17	4925	5095	4672
11	31.05.20 TO 13.06.20	1220.390	8.33	3.9	20.97	29.50	45.63	1.06	4863	5060	4639
12	14.06.20 TO 17.06.20	1194.460	8.46	4.86	20.99	28.41	45.74	1.01	4883	5132	4698
13	18.06.20 TO 30.06.20	1217.330	8.49	3.53	21.02	26.50	48.95	0.91	5244	5436	4974
14	01.07.20 TO 15.07.20	1147.050	8.47	4.83	21.54	29.17	44.46	0.73	4795	5038	4612
15	16.07.20 TO 17.07.20	1048.810	8.71	4.89	21.35	29.39	44.37	0.75	4887	5138	4691
16	18.07.20 TO 19.07.20	1201.610	8.62	4.46	20.37	29.35	45.82	0.91	4909	5138	4695
17	20.07.20 TO 22.07.20	1119.470	8.80	4.56	20.25	29.08	46.11	1.12	4918	5153	4699
18	23.07.20 TO 24.07.20	1908.840	8.84	3.95	20.4	29.28	46.37	1.41	4934	5137	4683
19	25.07.20	1035.040	8.84	4.73	20.95	29.17	45.15	0.81	4815	5054	4607
20	27.07.20	1152.380	8.97	4.6	21.04	28.53	45.83	0.99	4967	5206	4739
21	28.07.20	1093.150	8.88	4.49	20.03	29.44	46.04	0.91	4914	5145	4688
22	27.08.2020	279.190	8.30	3.69	20.70	26.23	49.38	1.34	5268	5470	5016
23	29.7.20 TO 06.09.20	462.620	8.53	4.02	20.42	26.46	49.1	1.02	5249	5469	5002
24	02.10.20 TO 03.10.20	1264.420	8.50	3.59	21.08	25.98	49.35	1.00	5278	5475	5008
25	04.10.20 TO 05.10.20	1265.080	8.46	3.66	21.16	25.28	49.9	1.12	5330	5532	5065
26	06.10.20 TO 07.10.20	61.580	8.18	3.46	20.73	25.92	49.89	1.10	5265	5454	5008
<b>TOTAL W/AVG</b>		<b>30018.160</b>	<b>8.48</b>	<b>3.83</b>	<b>20.72</b>	<b>28.69</b>	<b>46.76</b>	<b>1.07</b>	<b>5006</b>	<b>5204</b>	<b>4763</b>

Checked By

FOR, MITRA S K PRIVATE LIMITED

AUTHORISED SIGNATORY



# Coal Storage & Handling : Indian Rayon

## Lignite consumption stoppage

Stopped feeding lignite coal from 17<sup>th</sup> October 2019.

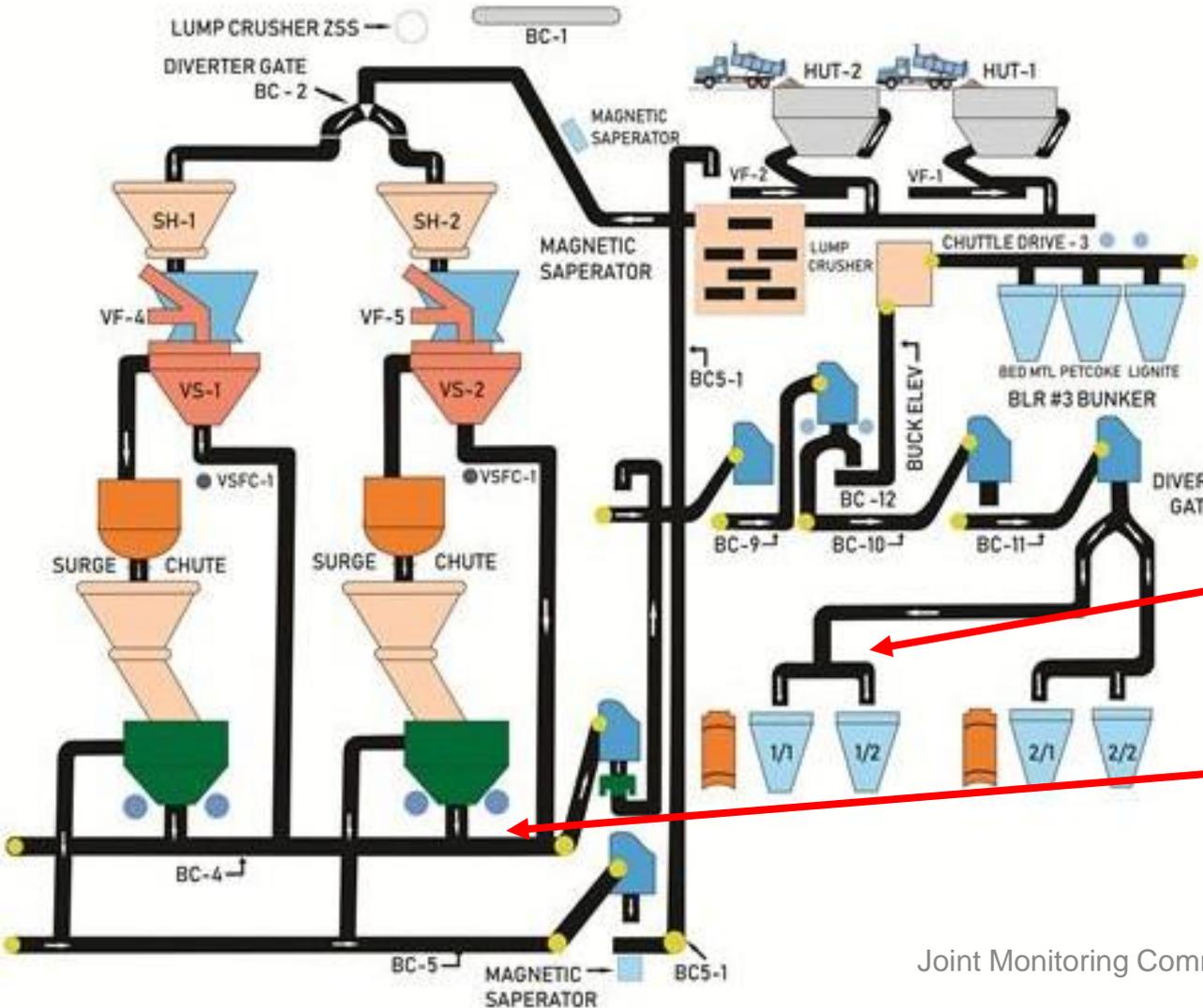
Residual quantity of 105 MT fed on 14<sup>th</sup> December 2019.

Lignite consumption details

MvT	Material Doc.	Posting Date	Reference	Doc. Date	Batch	Material	Descr.	Σ Quantity	Unit	Σ Amount LC	WBS Elem.	HeaderText	SLoc	User name	Order
261	4904614906	13.12.2019		14.12.2019		LIGNITE	LIGNITE	105.687-	TO	396,902.32-			PS07	VRLPPPO02	8400017761
261	4904487599	16.10.2019		17.10.2019		LIGNITE	LIGNITE	9.609-	TO	36,086.13-			PS07	VRLPPPO02	8400017291
261	4904127871	20.04.2019		29.04.2019		LIGNITE	LIGNITE	20.175-	TO	73,677.37-			PS07	VRLPPPO02	8400015845
261	4904127856	20.04.2019		29.04.2019		LIGNITE	LIGNITE	20.372-	TO	74,396.80-			PS07	VRLPPPO02	8400015844
261	4904113773	19.04.2019		23.04.2019		LIGNITE	LIGNITE	20.739-	TO	75,737.16-			PS07	VRLPPPO02	8400015838
261	4904113775	19.04.2019		23.04.2019		LIGNITE	LIGNITE	20.130-	TO	73,513.14-			PS07	VRLPPPO02	8400015839
261	4904113609	18.04.2019		23.04.2019		LIGNITE	LIGNITE	19.543-	TO	71,369.46-			PS07	VRLPPPO02	8400015833
261	4904113605	18.04.2019		23.04.2019		LIGNITE	LIGNITE	21.043-	TO	76,847.34-			PS07	VRLPPPO02	8400015832
261	4904113530	17.04.2019		23.04.2019		LIGNITE	LIGNITE	20.348-	TO	74,309.25-			PS07	VRLPPPO02	8400015826
261	4904113531	17.04.2019		23.04.2019		LIGNITE	LIGNITE	19.848-	TO	72,483.29-			PS07	VRLPPPO02	8400015827
261	4904113533	17.04.2019		23.04.2019		LIGNITE	LIGNITE	9.368-	TO	34,211.18-			PS07	VRLPPPO02	8400015828
261	4904113452	16.04.2019		23.04.2019		LIGNITE	LIGNITE	19.848-	TO	72,483.30-			PS07	VRLPPPO02	8400015821
261	4904113449	16.04.2019		23.04.2019		LIGNITE	LIGNITE	20.739-	TO	75,737.16-			PS07	VRLPPPO02	8400015820
261	4904113459	16.04.2019		23.04.2019		LIGNITE	LIGNITE	48.796-	TO	178,199.06-			PS07	VRLPPPO02	8400015822
261	4904112494	15.04.2019		22.04.2019		LIGNITE	LIGNITE	19.787-	TO	72,260.53-			PS07	VRLPPPO02	8400015815
261	4904112502	15.04.2019		22.04.2019		LIGNITE	LIGNITE	47.260-	TO	172,589.71-			PS07	VRLPPPO02	8400015816
261	4904112528	15.04.2019		22.04.2019		LIGNITE	LIGNITE	19.702-	TO	71,950.12-			PS07	VRLPPPO02	8400015815
261	4904112518	15.04.2019		22.04.2019		LIGNITE	LIGNITE	19.787-	TO	72,260.53-			PS07	VRLPPPO02	8400015814
261	4904112437	14.04.2019		22.04.2019		LIGNITE	LIGNITE	19.979-	TO	72,961.70-			PS07	VRLPPPO02	8400015808
261	4904112438	14.04.2019		22.04.2019		LIGNITE	LIGNITE	19.432-	TO	70,964.10-			PS07	VRLPPPO02	8400015809
261	4904112439	14.04.2019		22.04.2019		LIGNITE	LIGNITE	46.594-	TO	170,157.53-			PS07	VRLPPPO02	8400015810
261	4904115996	13.04.2019		24.04.2019		LIGNITE	LIGNITE	27-	TO	98,602.06-			PS07	VRLPPPO03	8400015862
261	4904102198	12.04.2019		17.04.2019		LIGNITE	LIGNITE	44.515-	TO	162,564.90-			PS07	VRLPPPO02	8400015795
261	4904102197	12.04.2019		17.04.2019		LIGNITE	LIGNITE	44.937-	TO	164,106.00-			PS07	VRLPPPO02	8400015794
261	4904102203	12.04.2019		17.04.2019		LIGNITE	LIGNITE	102.212-	TO	373,269.31-			PS07	VRLPPPO02	8400015796
261	4904009578	11.04.2019		15.04.2019		LIGNITE	LIGNITE	60.516-	TO	220,288.53-			PS07	VRLPPPO02	8400015776

# Coal Storage & Handling : Indian Rayon

## Coal Handling Details with APCM



Bag filter installation in crusher house and Bunker floor



# Coal Storage & Handling : Indian Rayon

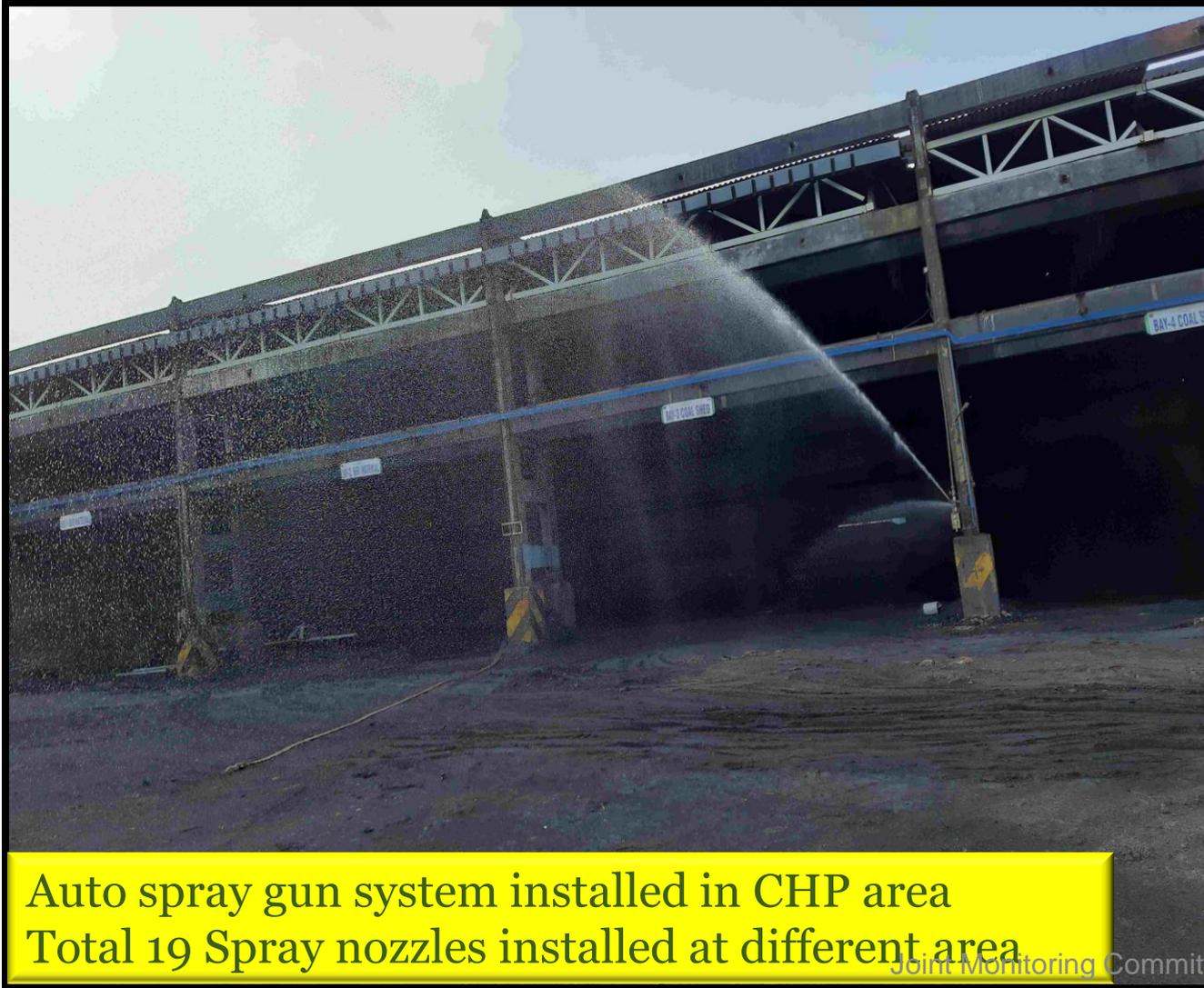
## Coal Handling Details with APCM



Total 24 Fog nozzles installed at various junction Points

# Coal Storage & Handling : Indian Rayon

## Coal Handling Details with APCM



Auto spray gun system installed in CHP area  
Total 19 Spray nozzles installed at different area

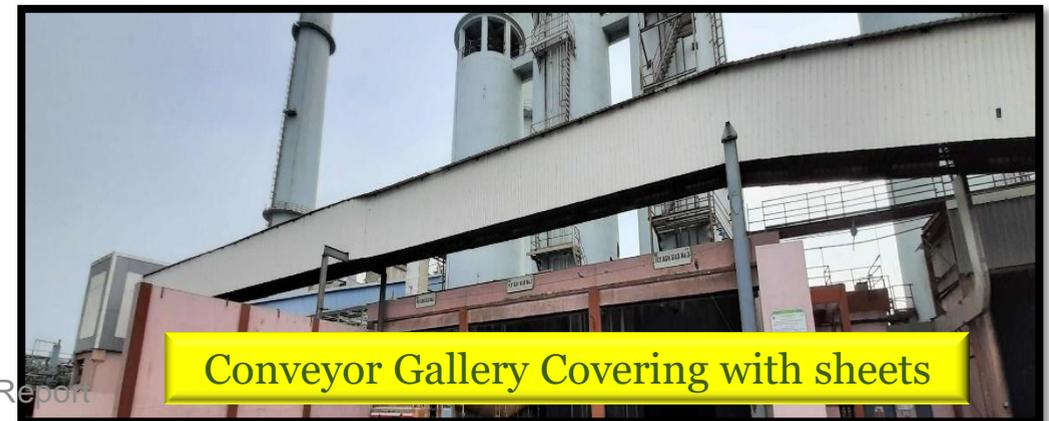


Rain Gun at top of structure to cover large open area

# Coal Storage & Handling : Indian Rayon

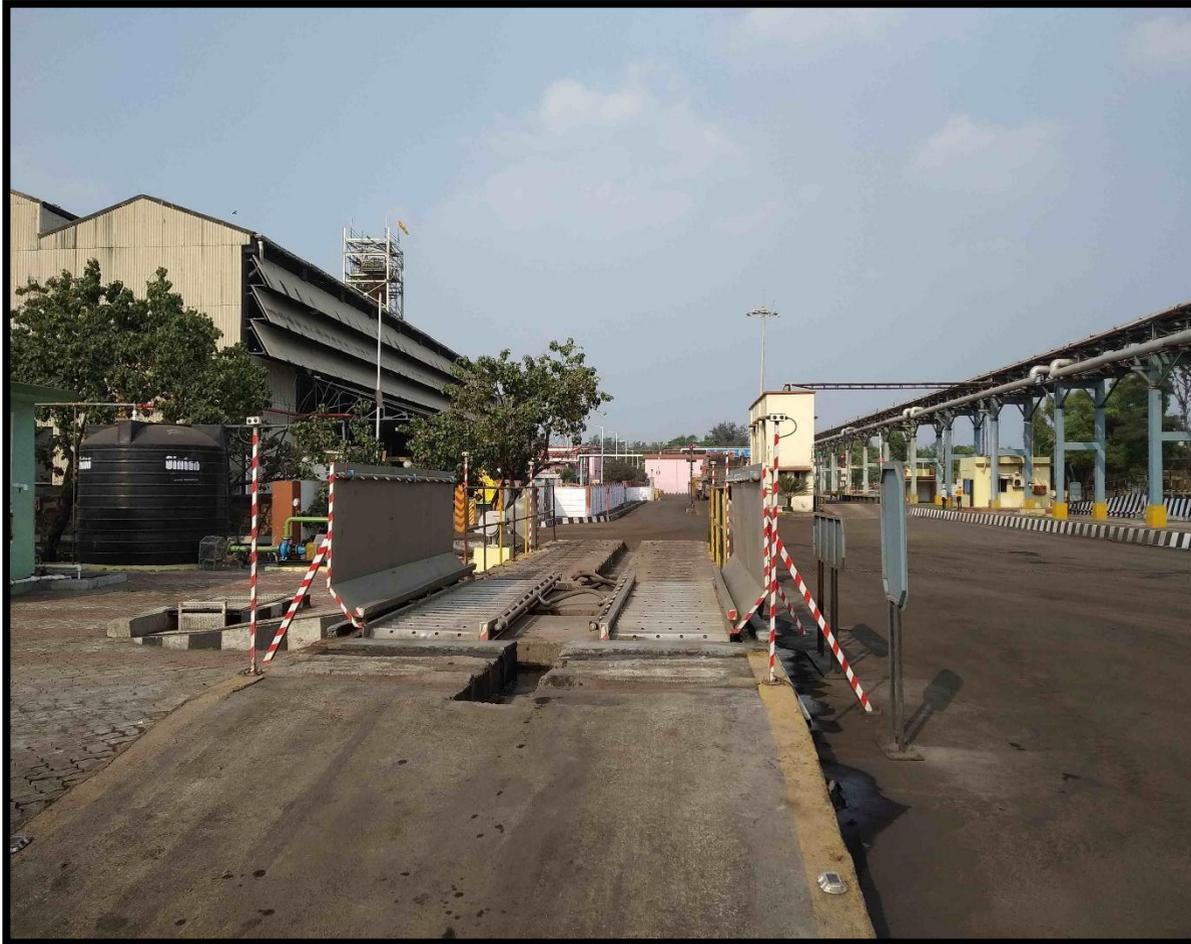
## Coal Handling Details with APCM

Covering of crusher house, conveyor belts & all junction points



# Coal Storage & Handling : Indian Rayon

## Coal Handling Details with APCM



Installation of Truck Wheel Washing System

Installation Cost:- 41.87 Lacs

# Coal Storage & Handling : Indian Rayon

## Coal Handling Details with APCM



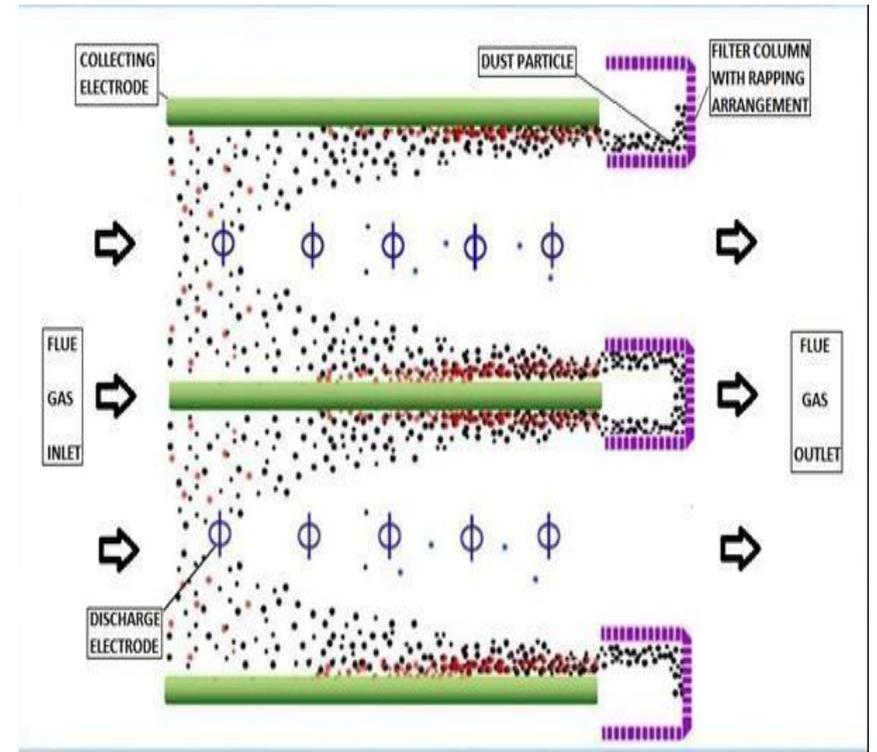
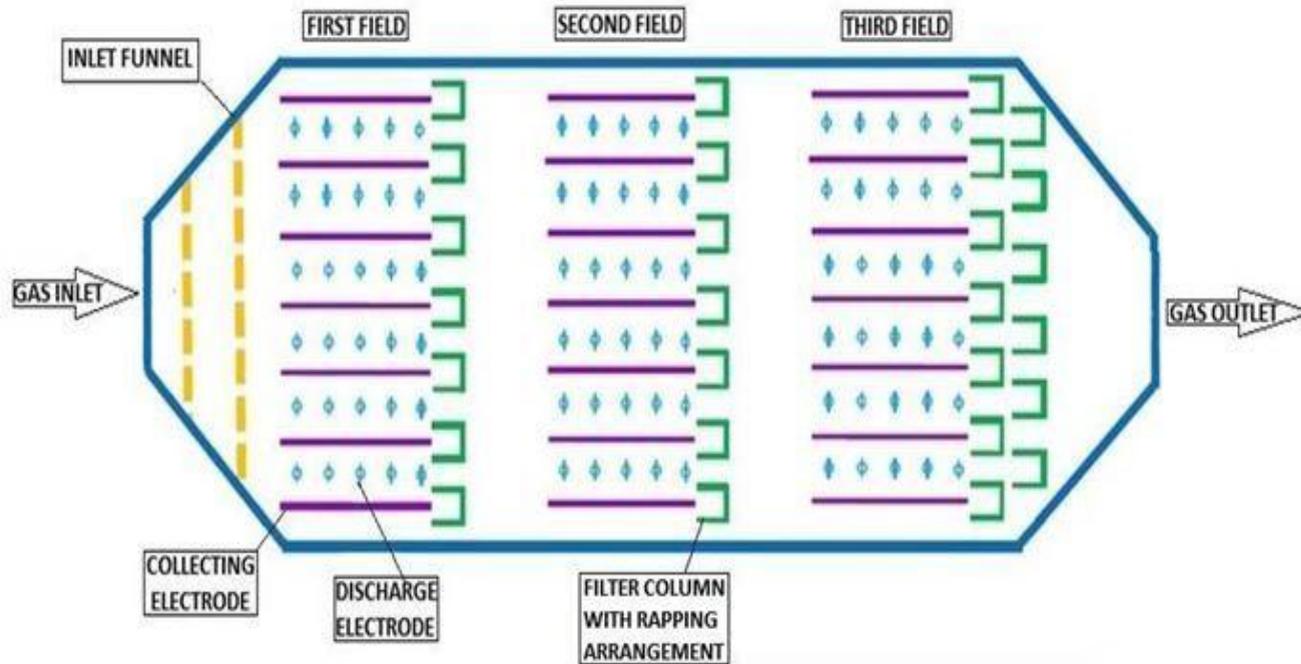
Cleaning of floors with vacuum cleaners

Cost:- 3.3 Lacs

# Coal Storage & Handling : Indian Rayon

## ESP Up gradation Details

- 1) FC System in all filed of ESP no 3 in Apr'18. Filter is made of SS 304 mesh (150) with rapping arrangement  
Emission reduced below 50 ppm



# Coal Storage & Handling : Indian Rayon

## ESP Up gradation Details

### 2) FC System in all filed of ESP no 3

#### Advantages:

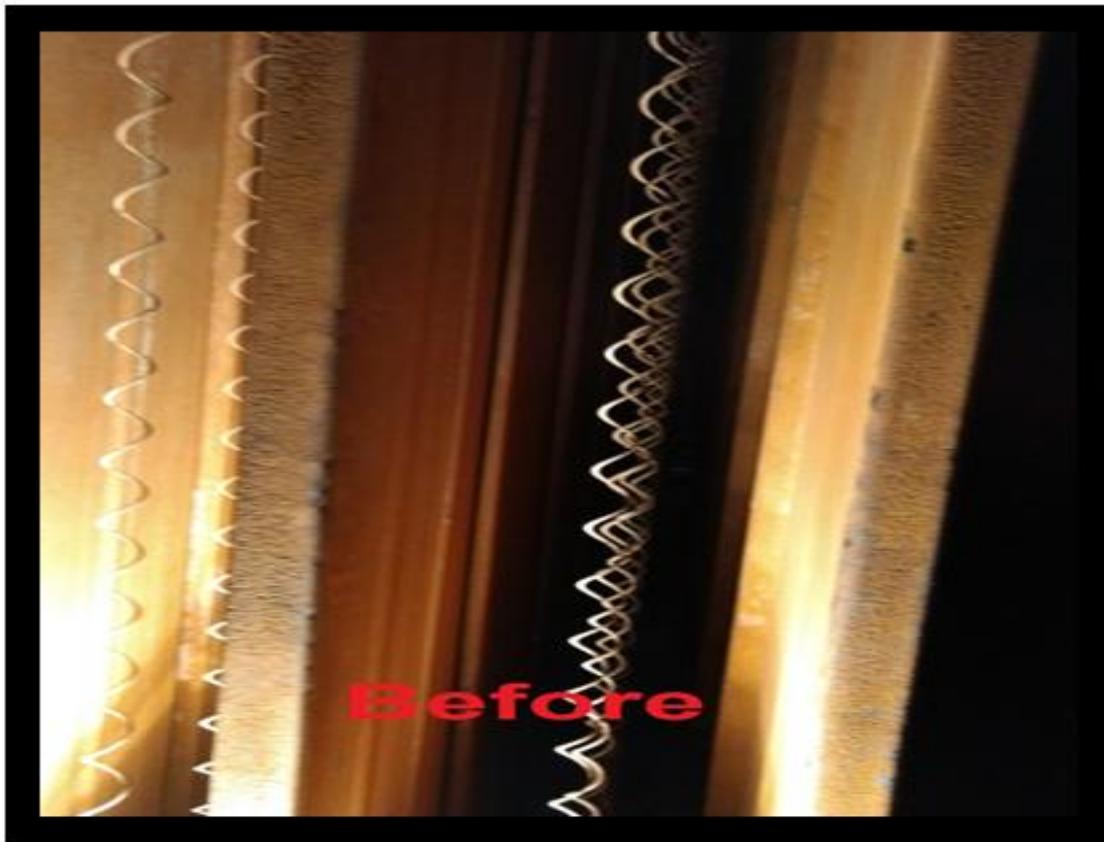
- Increasing about 30% collection area of ESP so also increasing efficiency.
- Good resistances to high temperature and strong dust abrasive.
- FC acts also as gas carding device, beneficial to gas distribution.
- FC has good gas permeability. No increase in the over dimension and pressure drop of the original ESP
- FC dust cleaning by independent or by same rapping devices of original CE system.



# Coal Storage & Handling : Indian Rayon

## ESP Up gradation Details

Replaced Collecting Plates (133nos) and modified emitting electrode from spiral type to Barbed type (756nos)  
. Result mA increased from 62 to 150 & reduction in emission.



# Coal Storage & Handling : Indian Rayon

## ESP Up gradation Details

### 3) Replacement of Single Phase Tr-Rectifier set with three phase Tr-Rectifier set for ESP

Single phase Transformer-Rectifier set have limitations of charging due to its half cycle of charging, which impacts on stack control.

Lower line current resulting into Lower rating of cabling & input switchgear cost



- Action taken: For ESP 3/3, we've replaced complete set with its control Panel

Installation Cost:- 6.9 Lacs

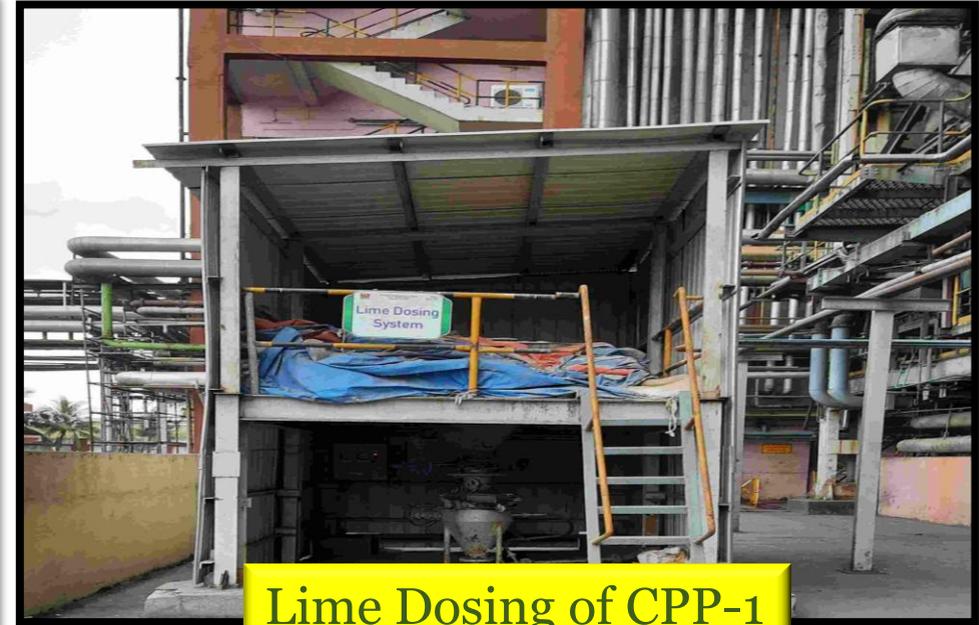
# Coal Storage & Handling : Indian Rayon

**Lime Dosing System in fuel provided-Yes**  
lime dosing system for both the units



Lime Dosing of CPP-2

Installation Cost:- 15.21 Lacs



Lime Dosing of CPP-1

Limestone consumption details			
Sr. No	Month	Material	Consumption (MT)
1	August'20	Lime stone powder	20
2	September'20	Lime stone powder	35
3	October'20 till 21	Lime stone powder	18

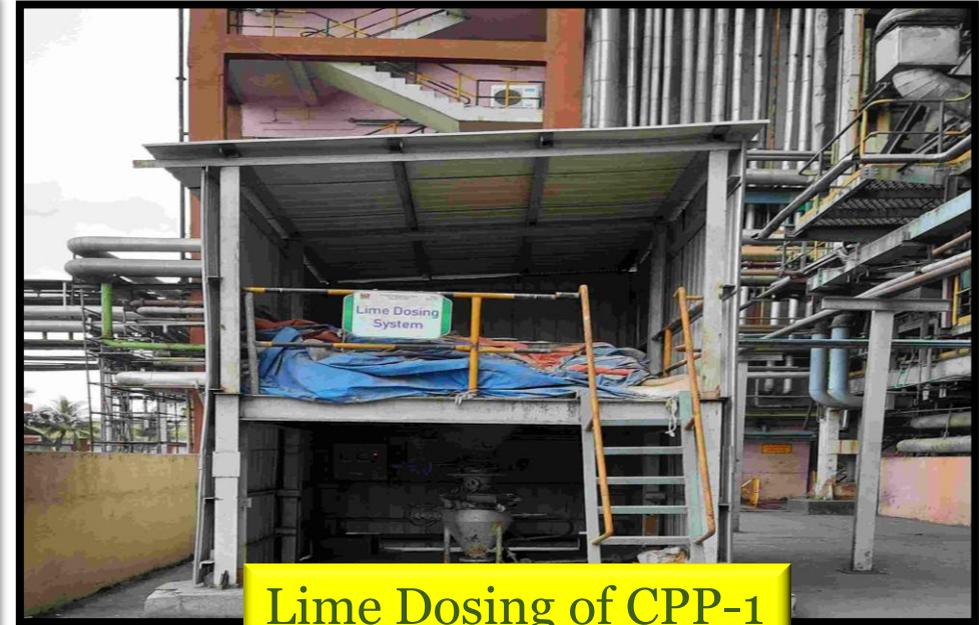
# Coal Storage & Handling : Indian Rayon

**Lime Dosing System in fuel provided-Yes**  
lime dosing system for both the units



Lime Dosing of CPP-2

Installation Cost:- 15.21 Lacs



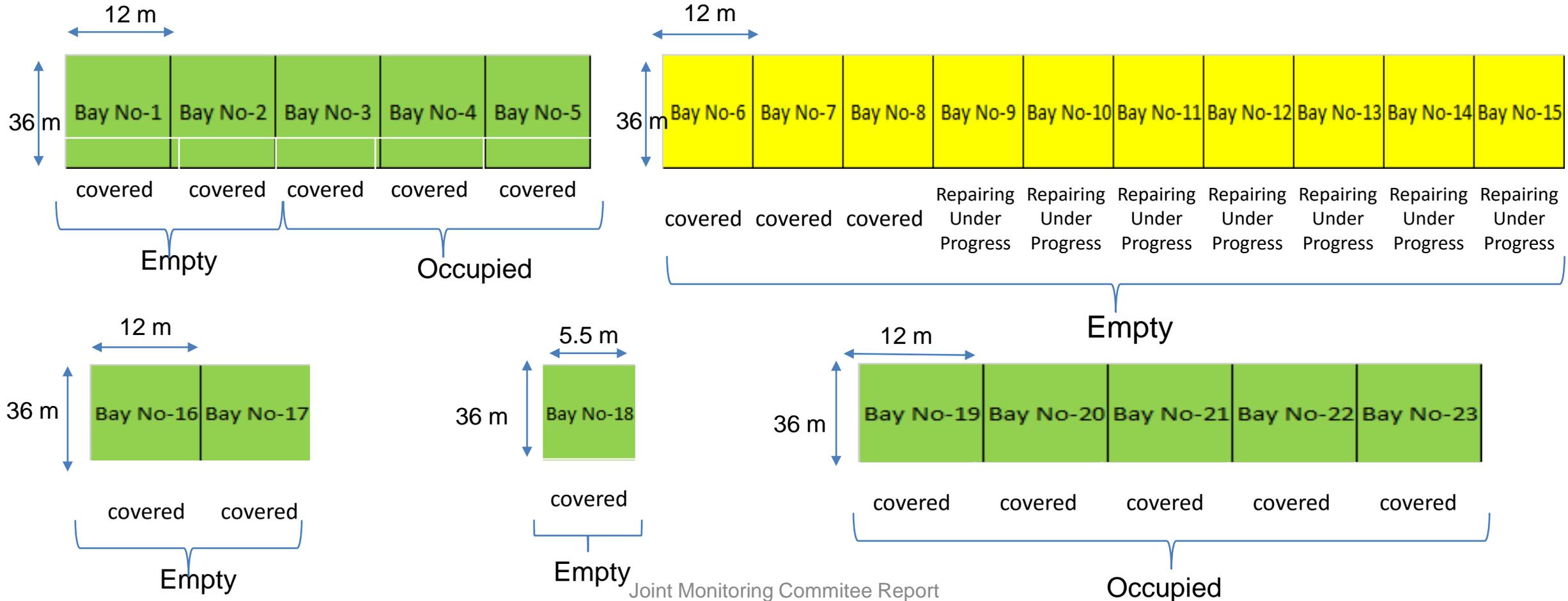
Lime Dosing of CPP-1

Limestone consumption details			
Sr. No	Month	Material	Consumption (MT)
1	August'20	Lime stone powder	20
2	September'20	Lime stone powder	35
3	October'20 till 21	Lime stone powder	18

# Coal Storage & Handling : Indian Rayon

## Coal Storage Area with Storage Capacity

Total Capacity of storage = 30000 MT



# Coal Storage & Handling : Indian Rayon

## Coal Storage Area with Storage Capacity

Coal shed extension by 60 meters. coal is stored in closed shed yard only



Old Coal shed damaged roof sheet & structure replaced



# Coal Storage & Handling : Indian Rayon

## Noise Pollution Control Measures

Ash compressors acoustic enclosure panel



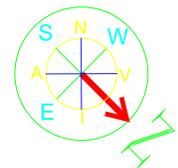
Installation Cost:- 2.3 Lacs

Silencer fitting on each vent line



## ANNEXURE XV

### PLANT LAYOUT WITH GREEN BELT



LEADING TO ARABIAN SEA THROUGH PIPE LINE WITH DIFFUSER SYSTEM AROUND 1.5 km.  
 THE COORDINATES OF LFP Lat. 20°54'56" N LONG 70°20'50"E  
 THE COORDINATES OF DIFFUSER POINT Lat. 20°54'34.5" N LONG 70°20'23" E

ARABIAN SEA AREA TABLE

SR. No.	DESCRIPTION	AREA IN SQ.M.	AREA IN ACRE
A	TOTAL PLANT AREA (FACTORY + COLONY)	7,13,319.00	176.26
B	TOTAL EXISTING CONSTN. AREA IN FACTORY (RAYON+POWER+CAUSTIC)	1,63,731.62	40.45
C	TOTAL EXISTING CONSTN. AREA IN COLONY	9,872.00	2.43
D	TOTAL EXISTING CONSTN. AREA FACTORY+COLONY (B+C)	1,73,603.62	42.89
E	TOTAL PROPOSED CONSTN. AREA IN FACTORY (RAYON+POWER+CAUSTIC)	83,629.25	20.66
F	TOTAL CONSTN. AREA (EXISTING+PROPOSED) IN PLANT (D+E)	2,57,232.87	63.56
G	TOTAL GREEN BELT AREA	2,39,169.20	59.09
H	TOTAL OPEN AREA	2,05,013.75	50.66

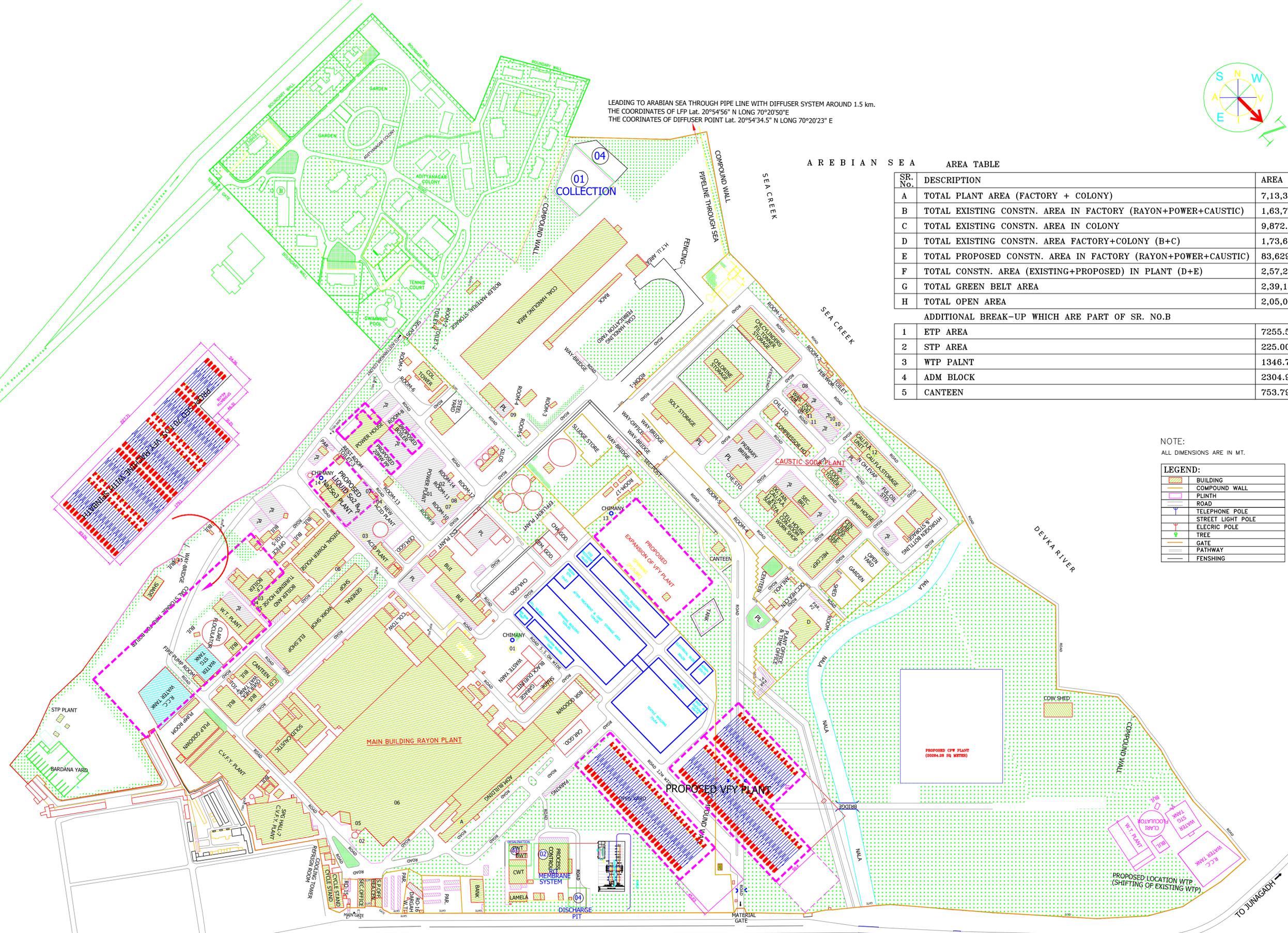
  

ADDITIONAL BREAK-UP WHICH ARE PART OF SR. NO.B			
1	ETP AREA	7255.59	1.79
2	STP AREA	225.00	0.05
3	WTP PLANT	1346.74	0.33
4	ADM BLOCK	2304.97	0.56
5	CANTEEN	753.79	0.18

NOTE:  
 ALL DIMENSIONS ARE IN MT.

LEGEND:

	BUILDING
	COMPOUND WALL
	PLINTH
	ROAD
	TELEPHONE POLE
	STREET LIGHT POLE
	ELECTRIC POLE
	TREE
	GATE
	PATHWAY
	FENCING



\* LOCATION OF PROPOSED PROCESS STACKS

13. PROPOSED RAYON PLANT STACK  
 14. PROPOSED SODIUM SULPHITE & LIQUID SULPHUR DIOXIDE PLANT STACK

- LOCATION OF CHIMNEY
- LOCATION OF AMBIENT AIR QUALITY STATION
- LOCATION OF AIR POLLUTION SYSTEM

REV.	DATE	DESCRIPTION	MADE	CHECKED
B	19.06.14	ADDED 2 NoS. STACK IN PLANT	GOHIL	J. Rathore
A	29.10.13	SUBMISSION FOR MOEF NEW DELHI	GOHIL	J. Rathore

TITLE: LAYOUT OF FACTORY AREA

DEPARTMENT: CIVIL

ADITYA BIRLA

Grasim Industries Ltd  
 Unit - Indian Rayon  
 VERAVAL (GUJ.), INDIA

SCALE: 1:1000

PROJECTION

DRAWN	GOHIL
CHECKED	J. Rathore
APPROVED	J. Rathore
DATE	07.02.2019
DRG. NO.	IRCV-8111
REV.	

## ANNEXURE XVI

CORPORATE SOCIAL RESPONSIBILITY (CSR) -  
EXPENDITURE BY INDIAN RAYON DURING  
2019-2020 SUBMITTED BY INDUSTRY



**CSR expenditure by Indian Rayon for the year 2019-2020**

Key Focus Areas	Amount Spent by (Rs. In Lakhs)				
	State Grant	Govt	Jan Seva Trust, Veraval	Any Other	Total Cost
FY'20					
Education	52.57		33.45	11.71	97.72
Health & Family Welfare	53.35		283.43	1054.65	1391.43
Sustainable Rural Livelihood	98.43		32.14	42.64	173.21
Infrastructural Development	24.89		20.52	8.30	53.71
Social Welfare Issues	41.69		16.47	22.79	80.95
Administrative expense	0		0	0	0
Capex (Hospital & School)	0		0	0	0
CSR Salary	0		19.80	0	19.80
Opex - Repair (School)	0		0	0	0
Sub Total	270.94		405.81	1140.07	1816.82

Yours faithfully,

Shailendra Rathore  
Deputy General Manager  
Environment & Sustainability

ANNEXURE XVII

PHOTOGRAPHS TAKEN DURING INSPECTION  
OF THE INDUSTRY PREMISE AND  
SURROUNDINGS





**3. Zinc Clarifier (ETP)**



**4. Zinc Clarifier**



5. Polyelectrolyte dosing tank



6. Sensor based online monitoring of finally treated effluent flow



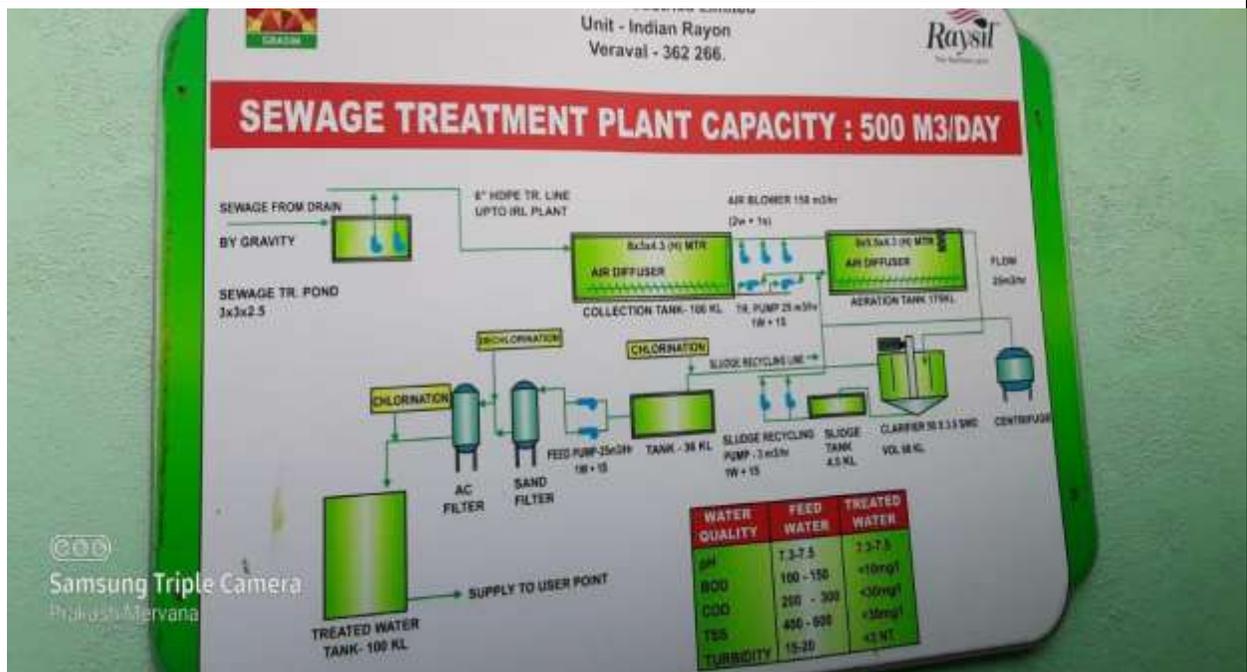
7. Guard Pond before Final Discharge to Marine Pipeline



8. Sampling Port of Marine Pipeline laid down for deep sea discharge



9. Sewage Treatment Plant



10. STP Flow Diagram



11. Hazardous Waste Storage Area



12. Hazardous Waste Storage Area



13. Hazardous Waste Storage Area



14. Fly Ash Storage Silo



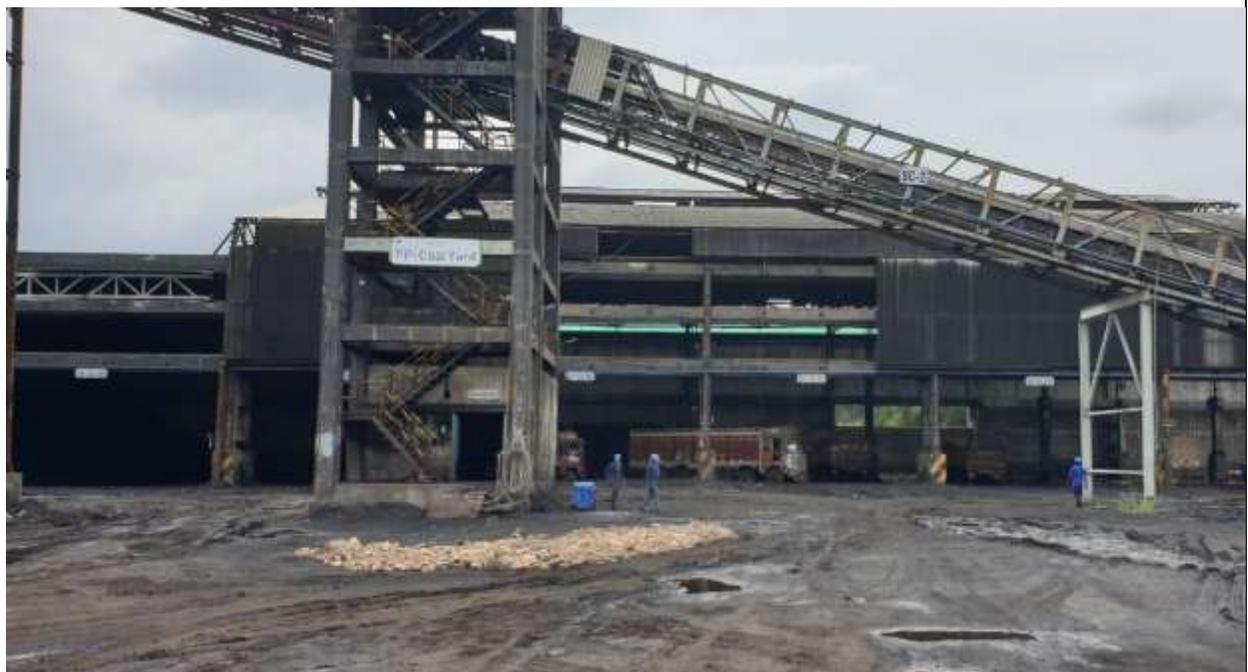
15. Fly Ash Storage Silo



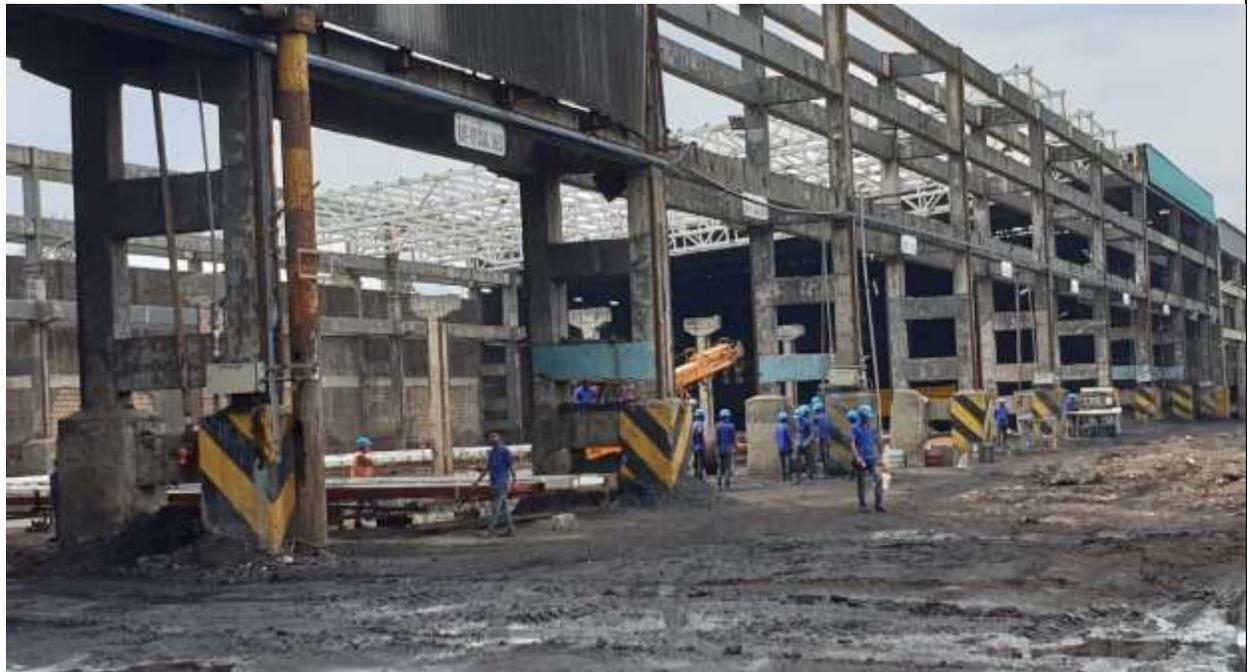
16. Online CAAQMS results at Main Gate for Public Display



17. Coal Storage & Handling Area



18. Coal Storage & Handling Area



19. Coal Storage & Handling Area



20. Coal Storage & Handling Area



21. Coal Storage & Handling Area



22. Junagadh Gate developed to avoid direct exit of Heavy Vehicles to the Highway



23. Parking Bay for Loading/Unloading Trucks – Material Transport



24. Parking Bay for Loading/Unloading Trucks – Material Transport



25. Parking Bay for Loading/Unloading Trucks – Material Transport



26. Landscape view between the Industry and Sea



27. Landscape view between the Industry and Sea



28. Landscape view between the Industry and Sea



29. Plant Peripheral area towards Devaka River and Arabian Sea side



30. Plant Premise



31. Natural Drain Passing through Premise



32. Chlorine Sensor installed in Plant Premise



33. Domestic solid waste dumped on the bank of River Devaka



34. Domestic solid waste dumped on the bank of River Devaka