



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2023

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000061993

Submitted Date

30-09-2023

PART A

Company Information

Company Name

Grasim Industries Limited (Unit - Century Rayon)

Application UAN number

MPCB-Consent_Ammendment-0000010874

Address

P B NO 22, Murbad Road, Shahad-421103, Dist- Thane (M S)

Plot no

45,53,56,57,58,59,76,77,78,201,202,207

Taluka

Ulhasnagar

Village

Shahad

Capital Investment (In lakhs)

75362

Scale

Large

City

Ulhasnagar

Pincode

421103

Person Name

Prakash S Bhat

Designation

General Manager

Telephone Number

09821284699

Fax Number

02512730064

Email

prakash.s.bhat@adityabirla.com

Region

SRO-Kalyan II

Industry Category

Red

Industry Type

R47 Synthetic fibers including rayon ,tyre cord, polyester filament yarn

Last Environmental statement submitted online

yes

Consent Number

Format1.0/CAC/UAN No.MPCB-CONSENT_AMENDMENT-0000010874/2307000070

Consent Issue Date

2023-07-11

Consent Valid Upto

30.09.2026

Establishment Year

1956

Date of last environment statement submitted

Sep 30 2022 12:00:00:000AM

Industry Category Primary (STC Code) & Secondary (STC Code)

Product Information

Product Name

Viscose Filament Yarn

Consent Quantity

29300

Actual Quantity

24735

UOM

MT/A

Sulphuric Acid

76000

73354

MT/A

Carbon-Di-Sulphide

20000

17459

MT/A

By-product Information

By Product Name

Consent Quantity

Actual Quantity

UOM

Part-B (Water & Raw Material Consumption)**1) Water Consumption in m3/day**

Water Consumption for Process	Consent Quantity in m3/day	Actual Quantity in m3/day
	14658.00	13866.00
Cooling	2000.00	1516.00
Domestic	2318.00	1960.00
All others	0.00	0.00
Total	18976.00	17342.00

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Trade Effluent	15300	13315	CMD
Colony Domestic Effluent	1200	745	CMD

2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
Viscose Filament Yarn	189.67	190.27	MT/A
Sulphuric Acid	1.63	1.49	MT/A
Carbon di Sulphide	2.80	3.01	MT/A

3) Raw Material Consumption (Consumption of raw material per unit of product)

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
PSY Wood Pulp	1.037	1.037	Ton/Ton
PSY Caustic Soda	0.597	0.596	Ton/Ton
PSY Carbon-di-Sulphide	0.279	0.280	Ton/Ton
PSY Sulphuric Acid	0.905	0.901	Ton/Ton
PSY Zinc	0.006	0.006	Ton/Ton
T/C Wood Pulp	1.018	1.017	Ton/Ton
T/C Caustic Soda	0.721	0.746	Ton/Ton
T/C Carbon-di-Sulphide	0.319	0.319	Ton/Ton
T/C Sulphuric Acid	0.868	0.860	Ton/Ton
T/C Zinc	0.009	0.009	Ton/Ton
CSY Wood Pulp	1.052	1.059	Ton/Ton
CSY Caustic Soda	0.644	0.658	Ton/Ton
CSY Carbon-di-Sulphide	0.282	0.285	Ton/Ton
CSY Sulphuric Acid	1.476	1.461	Ton/Ton
CSY C Zinc	0.019	0.019	Ton/Ton
Sulphur in Sulphuric Acid plant	0.329	0.331	Ton/Ton
Sulphur in CS2 plant	0.913	0.914	Ton/Ton

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Coal & Charcoal Churi	97090	91758	MT/A
LSHS	29200	194.787	MT/A

Part-C**Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)****[A] Water**

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons	Standard	Reason
	Quantity	Concentration	%variation		
Suspended Solids	294.59	26.33	0	100 mg/l	0
C.O.D	783.09	70	-	250 mg/l	-
B.O.D. (3 days at 27oC)	223.74	20.00	-	30 mg/	-
Oil & Grease	53.14	4.75	-	10 mg/l	-
Zinc	23.31	2.08	-	5 mg/l	-

[B] Air (Stack)

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/NM3)	Percentage of variation from prescribed standards with reasons	Standard	Reason
	Quantity	Concentration	%variation		
CS2	8688.91	206.79	0	300 mg/Nm3	0
H2S	2083.70	49.59	0	70 mg/Nm3	-
SO2 from Coal Fired Boiler	2930	1116.91	-	5320 Kgs/day	-
SO2 from Acid Plant	309.49	559.03	-	3.5 Kg/T of sulfuric acid production (728 Kgs/day)	-
SOx from D G Set	0	0	-	7200 Kgs/day	Standby
NOx from D G Set	0	0	-	100 ppm	Standby
Acid Mist	3.48	12.08	-	50 mg/Nm3	-

Part-D**HAZARDOUS WASTES****1) From Process**

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
17.2 Spent catalyst	2.52	7.41	MT/A
Other Hazardous Waste	229.33	228.07	MT/A
5.1 Used or spent oil	10.41	6.390	MT/A
5.2 Wastes or residues containing oil	20.26	37.430	MT/A
33.2 Contaminated cotton rags or other cleaning materials	7.19	10.950	MT/A

33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	3.03	8.060	MT/A
35.2 Spent ion exchange resin containing toxic metals	8.67	11.000	MT/A
28.1 Process Residue and wastes	0	1505.01	MT/A

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
35.3 Chemical sludge from waste water treatment	3982.43	3680.000	MT/A

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
Dry Viscose, Trash Sweeping Waste Cellulose from Rayon and T.C. plant, Civil debris & Burnt Charcoal	6194	5547.39	MT/A
Yarn Waste	709.48	802.66	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
Cinder Ash & Fly Ash	11908	13828.93	MT/A
Bio Sludge	81.66	87.24	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/A

Part-F

Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
35.3 Chemical sludge from waste water treatment	3680.000	MT/A	NA, Disposal at CHWTSDF (MWML,Taloja)
17.2 Spent catalyst	7.410	MT/A	NA, Disposal at CHWTSDF (MWML,Taloja)
Other Hazardous Waste	228.070	MT/A	NA, Disposal at CHWTSDF (MWML,Taloja)
5.1 Used or spent oil	6.390	MT/A	Sent to Authorized recycler
5.2 Wastes or residues containing oil	37.430	MT/A	Sent to Authorized recycler
33.2 Contaminated cotton rags or other cleaning materials	10.950	MT/A	Disposal at CHWTSDF (MWML,Taloja)
35.2 Spent ion exchange resin containing toxic metals	11.000	MT/A	Disposal at CHWTSDF (MWML,Taloja)
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	8.060	MT/A	Sent to Authorized party
28.1 Process Residue and wastes	1505.01	MT/A	Sent to authorised party and captive consumption

2) Solid Waste

Type of Solid Waste Generated

Trash, Sweeping, Waste Cellulose from Rayon & T.C., Civil Debris & De
ased Charcoal

Qty of Solid Waste UOM Concentration of Solid Waste

5547.39 MT/A NA

Part-G

Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
Replacement of old Reciprocating air compressors (8x7 & 9x7) by screw compressor in Engine room.	0	0	0	108360	28	0
Replacement of old single stage screw compressor with Two stage Screw compressor with permanent magnet motor and VFD for CSY ejector System. & Replacement of Obsolete Air compressor by Energy Effeicie	0	0	0	311345	40	0
Provision Of Vfd Along With Panel For CSY Soft Water Pump -2 Nos. (45kw)	0	0	0	105120	12.5	0
Replacement of old conventional Cooling Tower no.6 by Mist type Fill less Cooling tower for Spin Bath	0	0	0	38220	20	0
Replacement of reciprocating air compressor No 5 (250 CFM) by Screw compressor-Boiler House	0	0	0	33288	7.8	0
Upgradation of TG-1 by Installing New Rotor and Diaphragms for Energy Efficiency-Boiler House	0	0	0	1189500	159.7	0
High Velocity Water Spray System for Transformer Boiler House	0	0	0	0	3.17	0
STP for Colony (Aux. - ETP)	0	0	0	0	285.55	0
Recovery of Anhydrous sod. Sulphate 5 T/D (CSY - Spinbath)	0	0	0	0	33.09	0
Standby Clarifier in ETP Plant	0	0	0	0	252.40	0
Online CEMS (treated sewage) for Colony STP discharge parameters (pH, BOD,COD & TSS etc)	0	0	0	0	13.45	0
Explosives Gas detector for confined space (8 Nos)-Safety-Rayon-EHS	0	0	0	0	2.09	0
Multi gas meter/analyser portable (2 Nos)-Safety-Rayon-EHS	0	0	0	0	1.20	0
Storm Water and ETP Water Separation	0	0	0	0	16.92	0

Additional ETP sludge Storage shed	0	0	0	0	28.73	0
Vacuum Cleaner	0	0	0	0	1.57	0

Part-H

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

[A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection

<i>Detail of measures for Environmental Protection</i>	<i>Environmental Protection Measures</i>	<i>Capital Investment (Lacks)</i>
Replacement of old Reciprocating air compressors (8x7 & 9x7) by screw compressor in Engine room.	Energy Saving Scheme	3.28
Replacement of old single stage screw compressor with Two stage Screw compressor with permanent magnet motor and VFD for CSY ejector System. & Replacement of Obsolete Air compressor by Energy Efficie	Energy Saving Scheme	39.37
Provision Of Vfd Along With Panel For CSY Soft Water Pump -2 Nos. (45kw)	Energy Saving Scheme	9.98
Replacement of old conventional Cooling Tower no.6 by Mist type Fill less Cooling tower for Spin Bath	Energy Saving Scheme	19.34
Replacement of reciprocating air compressor No 5 (250 CFM) by Screw compressor-Boiler House	Energy Saving Scheme	7.13
Upgradation of TG-1 by Installing New Rotor and Diaphragms for Energy Efficiency-Boiler House	Energy Saving Scheme	136.01
Replacement of fans for Spinning Air washer no. 3, 4 & 7 - Rayon- A.C.(M)	Energy Saving Scheme	1.80
35KW Roof Top Solar Pv sytem at Main Substation-PH	Energy Saving Scheme	7.20
Replacement of old condensate water pumps by energy efficient pumps	Energy Saving Scheme	0.22
New Mist Type Combo vacuum condenser for reject FD, Qty:- 1 set	Energy Saving Scheme	8.78
Replacement of Cooling tower fan by Aerofoil design fan (3 sets)	Energy Saving Scheme	3.55
Recovery of Anhydrous sod. Sulphate 5 T/D (CSY - Spinbath)	Environment Protection measures	33.09
Standby Clarifier in ETP Plant	Environment Protection measures	252.40
Online CEMS (treated sewage) for Colony STP discharge parameters (pH, BOD,COD & TSS etc)	Environment Protection measures	13.45
Explosives Gas detector for confined space (8 Nos)-Safety-Rayon-EHS	Environment Protection measures	2.09
Multi gas meter/analyser portable (2 Nos)-Safety-Rayon-EHS	Environment Protection measures	1.20
Storm Water and ETP Water Separation	Environment Protection measures	16.92
Additional ETP sludge Storage shed	Environment Protection measures	28.73
High Velocity Water Spray System for Transformer Boiler House	Environment Protection measures	3.17
STP for Colony (Aux. - ETP)	Environment Protection measures	285.55

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection

<i>Detail of measures for Environmental Protection</i>	<i>Environmental Protection Measures</i>	<i>Capital Investment (Lacks)</i>
Replacement of second Economizer in Acid Plant No.1	Energy Saving Scheme	73.71
Recovery of locally drain condensate of Washing tank (AT New and old Process)	Energy Saving Scheme	30.10
Potential to Improve Blow down heat recovery system and flash steam recovery of Acid Plant Boiler	Energy Saving Scheme	15.0
Reduce MSEDCL Bill through ADD Capacitor Bank (300 KVR)	Energy Saving Scheme	7.50

Modernization, Upgradation & Capacity enhancement for CSY hall conditioning. (For Air conditioning sys.)	Energy Saving Scheme	70.0
Replacement of old condensate water pumps by energy efficient pumps	Energy Saving Scheme	29.78
New Mist Type Combo vacuum condenser for reject FD, Qty:- 1 set	Energy Saving Scheme	6.22
Upgradation of TG-1 by Installing New Rotor and Diaphragms for Energy Efficiency-Boiler House	Energy Saving Scheme	2.39
Replacement of Cooling tower fan by Aerofoil design fan (3 sets)	Energy Saving Scheme	0.95
FRP Trough for PSY Spinning Machines (Qty -12 Nos)	Environment Protection measure	250
Installation of 200 KLD UF Plant	Environment Protection measure	200.0
Chimney Replacement of Stoker fired boiler	Environment Protection measure	119.0
Standby Clarifier in ETP Plant	Environment Protection measure	71.68
Storm Water and ETP Water Separation	Environment Protection measure	30.0
Additional ETP sludge Storage shed	Environment Protection measure	2.27
Vaccum Cleaner for dust cleaning	Environment Protection measure	1.57
Replacement of existing old workstation for CEMS	Environment Protection measure	1.20
Steam drying system for calcination plant	Environment Protection measure	80.0

Part-I

Any other particulars for improving the quality of the environment.

Particulars

Grasim Industries Limited (Unit Century Rayon) lays high emphasis on Environmental Improvement programme like plantation of trees in its premises and surrounding areas. Varieties of planted trees are based on seasonal climate and nature of soil as tested at our own Horticulture Department. The trees planted are, Peltophurum, Acacia, Cassurina, Cassia, Gold Mohar, Rain Tube, Pole Plantation, Saal, Bamboo, etc. The company spends huge amount every year on plantation alone. Shivaji Udyan opposit

Name & Designation

Prakash S Bhat - GM-EHS & Sustainability

UAN No:

MPCB-ENVIRONMENT_STATEMENT-0000061993

Submitted On:

30-09-2023