Ref: Grasim/LDH/EHS/2025/19

Date: 29/09/2025

To,
The Environment Engineer
Punjab Pollution Control Board (PPCB)
Regional Office-1, Phase V, Focal Point
Ludhiana, 141010, Punjab

Subject: Submission of Form V "Environment Statement" for FY 24-25 w.r.t our integrated paint manufacturing plant, Ludhiana.

Dear Sir,

With the reference of above subject, please find enclosed the Annual Environment Statement, Form-V in accordance with section 14 in the Environmental Protection Act 1986.

We request you to accept the same and kindly acknowledge the receipt of the document.

Thanking you,
Sincerely,
For M/s Grasim Industries Limited

Grasim Industries Limited Ludhiana

(Authorized Signatory)

PPCB R.O.-1 RECEIVED DAK LUDHIANA 9/9/2025

Enclosed: Annexure: Environment Statement "Form- V"

Copy of Kind Information to:

M/s Member Secretary Office, Head office, Vatavaran Bhawan, Nabha Road, Patiala, Punjab.

[FORM - V]

(See rule 14)

Environmental statement for the financial year ending the 31st of March 2025

PART- A

Name and address of the owner	Mr. Himanshu Kapania M/S. GRASIM INDUSTRIES LIMITED Plot No. B-1, D-02 (P), Hi-Tech Valley, Village Dhanansu, Dist. Ludhiana, State Punjab
Occupier of industry, operation & process:	Mr Himanshu Kapania
Industry category	Red
Production capacity (MTPA):	Water Based Paint: 250000 KL /YEAR Emulsion -100000 KL/YEAR
Year of establishment:	2023-24
Date of the last Environmental Statement submitted:	30 Sept 2024

PART-B

Water and Raw Material Consumption

(i) Water consumption m3/day

Process: Total quantity of fresh water	94.3
Cooling: Total quantity of fresh water	166.5
Domestic: Total quantity of fresh water	126.4
Others	32.87
Total Water consumption per day	420.2

Grasim Industries Limited Ludhiana

Name of Products	Process water consumption per unit of product	
	During FY 23-24	During FY 24-25
Paint	0.56 m^3 per Kl	0.50 m^3 per Kl

(ii) Raw material consumption: -

Sr.no	Name of raw material	Name of products	Consumption of raw material MT per unit of output during (MT/kl) (FY 23-24)	Consumption of raw material MT per unit of output during (MT/kl) (FY 24-25)
1	Pigments	Paints	0.07	0.07
2	Extenders	Paints	0.48	0.41
3	Additives	Paints & Emulsions	0.07	0.06
4	Solvents	Paints & Emulsions	0.03	0.03
5	Emulsions (Chemical Purchased)	Paints	0.06	0.06
6	Monomers	Emulsion	0.15	0.12
7	Others	Paints & Emulsions	0.002	0.002

Grasim Industries Limited Ludhiana

PART-C

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

Water Pollutant

Sr. No	Parameters	Quantity of pollution discharged kg/day	Concentration of pollutants in discharges(mg/L)	Percentage of variation from prescribed standard
1	pH	_	_	_
2	Total Suspended Solids	0.56	28.0	-72.0
3	Total Dissolved Solids	36.57	1836.7	-12.5
4	COD	4.33	217	-12.9
5	BOD 3 days @ 27c	0.44	22.0	-26.7
6	Oil and grease	0.08	4.0	-60.0
7	Total Residual Chlorine	0.02	1.0	0.0
8	Lead as (Pb)	0.0002	0.012	-88.5
9	copper As Cu	0.0004	0.020	-99.0
10	Nickel as (Ni)	0.0001	0.008	-99.6
11	Zinc	0.0031	0.2	-96.9
12	Arsenic as (As)	0.0001	0.003	-98.5
13	Mercury as (Hg)	0.0000	0.001	-99.5
14	Cadmium (Cd)	0.0000	0.001	-99.5
15	Chromium as (hexavalent Cr+6)	0.0006	0.030	-70.0
16	Total Chromium as (Cr)	0.0004	0.022	-98.9
17	Selenium as (Se)	0.0002	0.01	-90.0
18	Fluoride as F	0.0000	0.0001	-99.9
19	Sulphide as S	0.0000	0.0001	-99.9
20	Iron (as Fe), mg/l	0.01	0.3	-96.8
21	Phenolic Compounds as C6H5OH	0.0002	0.0	-99.9
22	Temperature	0.51	25.7	-26.7
23	Chloride as CL	8.10	406.7	-59.3
24	Calcium as Ca	4.32	217.0	-78.3
25	Total Metal	0.01	0.5	-92.6
26	Magnesium	1.51	75.7	-49.6
27	Potassium	1.39	70.0	-53.3
28	Cobalt	0.0002	0.0	-95.0

Grasim Industries Limited Ludhiana

Note:

Our facility operates a Zero Liquid Discharge (ZLD) system, ensuring that no wastewater is discharged from the premises, all effluents are treated and recycled within the plant.

Air Pollutant

Air Pollutant Stack: DG -1					
Sr No	Pollutant	Quantity of pollution discharged (kg/day)	Concentration of pollutants discharged (mass/volume)	Percentage of variation from prescribed standards	
1	PM (mg/Nm^3)	0.149	70	-6.62	Negative Variance Indicates the Quality Parameter of DG-1 Emission is Much better than Prescribed Standards
2	SO_2 (mg/Nm^3)	0.065	30.83	-89.7	
3	NO_x (mg/Nm^3)	1.112	523	-12.7	
Stack: DG -2					
1	PM (mg/Nm^3)	0.139	68.58	-8.56	Negative Variance Indicates the Quality Parameter of DG-2 Emission is Much better than Prescribed Standards
2	SO_2 (mg/Nm^3)	0.062	30.50	-89.8	
3	NO_x (mg/Nm^3)	1.072	530.6	-11.5	
Stack: Boiler-1					
1	PM (mg/Nm^3)	0.064	23.3	-40.7	Negative Variance Indicates the Quality Parameter of Boiler 501 is better than Prescribed Standards
2	SO_2 (mg/Nm^3)	0.021	7.83	-92.7	
3	NO_x (mg/Nm^3)	0.392	143	-67.8	

Grasim Industries Limited Ludhiana

Stack: Boiler-2					
1	PM (mg/Nm^3)	0.945	34	-45.3	Negative Variance Indicates the Quality Parameter of Boiler 502 is better than Prescribed Standards
2	SO_2 (mg/Nm^3)	0.196	9	-94.3	
3	NO_x (mg/Nm^3)	1.936	137.3	-72	

Stack: Boiler-3					
1	PM (mg/Nm^3)	0.581	24.9	-83.4	Negative Variance Indicates the Quality Parameter of Boiler 503 is better than Prescribed Standards
2	SO_2 (mg/Nm^3)	0.184	7.9	-97.37	
3	NO_x (mg/Nm^3)	3.072	131.6	-78.07	

NA- Limits not applicable

Grasim Industries Limited Ludhiana

PART-D

Hazardous Wastes
[As specified under The Hazardous Wastes (Management, Handling and Other waste) Rules, 2016

	Details of Hazardous Waste Management				
S. N.	**Name of Waste**	**Category- of Hazardous waste as Schedules**	**Quantity (MT/Annum) (FY 23-24)**	**Quantity (MT/Annum) (FY 24-25)**	**Mode of Disposal**
1	Contaminated oil with wash water & sludge	3.1 – Schedule-I	00	00	Collection, Storage, Disposal and Transportation to active TSDF as landfilling
2	Sludge and filters contaminated with oil	3.3 – Schedule-I	00	00	Collection, Storage, Disposal and Transportation to active TSDF as landfilling/co-processing
3	Used / Spent Oil	5.1 – Schedule-I	00	00	Collection, Storage, and sale to SPCB approved authorised recycler/ co-processing
4	Contaminated aromatic, aliphatic or naphthenic solvents, may or may not be fit for reuse	20.1 – Schedule-I	00	00	Collection, Storage, and sale to SPCB approved authorised recycler
5	Distillation Residues	20.3 – Schedule-I	00	00	Collection, Storage, Disposal and Transportation to active TSDF as landfilling
6	Process wastes, residue, and sludge (Filler Residue)	21.1 – Schedule-I	00	37.27	Collection, Storage, Disposal and Transportation to active TSDF/ co-processing (Production started in Feb-2024, due to small qty generation HW disposed within 120 days from site)

Grasim Industries Limited Ludhiana

7	Wastes or residues such as filter aid	23.1- Schedule-I	0.0	26.03	Collection, Storage, Disposal and Transportation to active TSDF as landfilling or Sale to SPCB approved authorised recycler/ co-processing
8	Discarded Container/ Drum	33.1 – Schedule-I	0.0	0.0	Recovery & Reuse - Authorised recyclers
9	Discarded containers / barrels /liners contaminated with hazardous wastes / chemicals	33.1 – Schedule-I	2.9	0.0	Recovery & Reuse - Authorised recyclers
10	Chemical containing residue arising from decontamination	34.1 – Schedule-I	00	00	Collection, Storage, Disposal and Transportation to active TSDF as landfilling
11	Flue gas cleaning residue	35.1 – Schedule-I	00	00	Collection, Storage, Disposal and Transportation to active TSDF/ co- processing
12	Spent Ion Exchange Resin containing toxic metals	35.2 – Schedule-I	00	00	Collection, Storage, Disposal and Transportation to active TSDF/ co- processing
13	Chemical Sludge from wastewater Treatment	35.3 – Schedule-I	8	351	Collection, Storage, Disposal and Transportation to active TSDF/ co- processing
14	Oil and Grease skimming residue	35.4 – Schedule-I	00	00	Collection, Storage, Disposal and Transportation to active TSDF/ co- processing
15	Spent Carbon	36.2 – Schedule-I	00	00	Return to supplier for regeneration/ Co-processing

Grasim Industries Limited Ludhiana

PART-E

Solid Waste (Non-Hazardous Waste)

Waste Source	Total Quantity (Kg)	
	During Financial Year (23-24)	During Financial Year (24-25)
a) From Process		
1. Plastic scrap	25	254
2. Wooden Scrap	258	143.6
3. Papers/Cardboard	4	51.6
4. Powder Waste	0	110.7
5.Metal Waste	23.4	417
6. Miscellaneous Waste	241.4	47.1
b) From Pollution Control Facilities	Nil	Nil
c) Quantity recycled or re-utilised within the Unit	Nil	Nil
1. Sold	All mentioned in (a) of part E, above	All mentioned in (a) of part E, above
s2. Disposed	Nil	Nil

E-Waste

Waste Source	Total Quantity (Kg)	
	During Financial Year (23-24)	During Financial Year (24-25)
E waste	0	0

Grasim Industries Limited Ludhiana

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.

A. Hazardous waste

Details of Hazardous Waste Management			
S. N.	**Name of Waste**	**Category- of Hazardous waste as Schedules**	**Mode of Disposal**
1	Contaminated oil with wash water & sludge	3.1 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
2	Sludge and filters contaminated with oil	3.3 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
3	Used / Spent Oil	5.1 – Schedule-I	Collection, Storage, and sale to PPCB approved authorised recycler
4	Contaminated aromatic, aliphatic or naphthenic solvents, may or may not be fit for reuse	20.1 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
5	Distillation Residues	20.3 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
6	Process wastes, residue, and sludge (Filler Residue)	21.1 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility.
7	Wastes or residues such as filter aid	23.1- Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
8	Discarded Container/ Drum	33.1 – Schedule-I	Recovery & Reuse - Authorised recyclers

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9	Discarded containers / barrels /liners contaminated with hazardous wastes / chemicals	33.1 – Schedule-I	Recovery & Reuse - Authorised recyclers
10	Chemical containing residue arising from decontamination	34.1 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
11	Flue gas cleaning residue	35.1 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
12	Spent Ion Exchange Resin containing toxic metals	35.2 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
13	Chemical Sludge from wastewater Treatment	35.3 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
14	Oil and Grease skimming residue	35.4 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility
15	Spent Carbon	36.2 – Schedule-I	Collection, Storage, Disposal and Transportation to co-processing facility

B. Solid Waste		
1. Metal waste	NA	Sold to scrap dealer
2. Wooden Scrap	NA	Sold to scrap dealer
3. Papers/Cardboard	NA	Sold to scrap dealer

Grasim Industries Limited Ludhiana

PART-G

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

Our site has implemented multiple pollution control measures that have significantly contributed to the conservation of natural resources and reduction in production costs. Key initiatives include:

1. Installation of Zero Liquid Discharge (ZLD) System:
    - The unit has installed a comprehensive ZLD system comprising:
        - Effluent Treatment Plant (ETP): 150 KLD
        - Reverse Osmosis (RO) Plant: 100 KLD
        - Multiple Effect Evaporator (MEE): 15 KLD
    - This system enables complete recycling and reuse of wastewater, drastically reducing freshwater consumption and discharge to the environment.

Impact:

- Natural Resource Conservation: Significant reduction in freshwater intake by maximizing reuse of treated water.
- Cost Optimization: Lower water procurement costs and reduced environmental compliance expenses.
- Sustainability: Enhanced environmental performance and alignment with regulatory and corporate sustainability goals.

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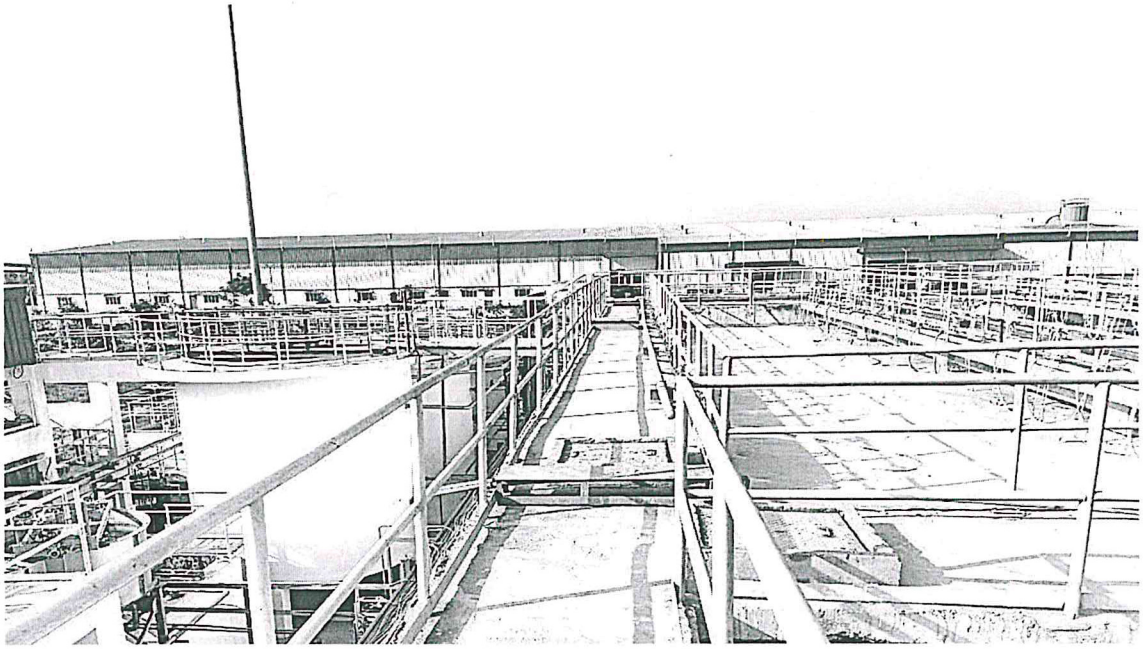
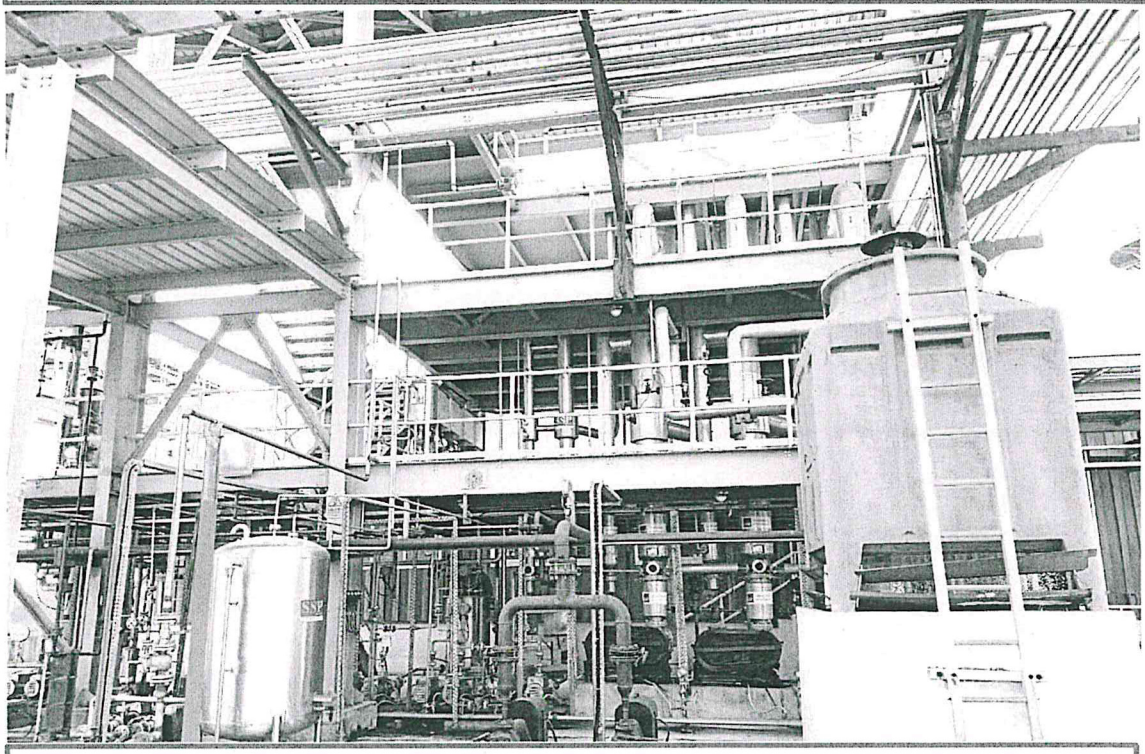
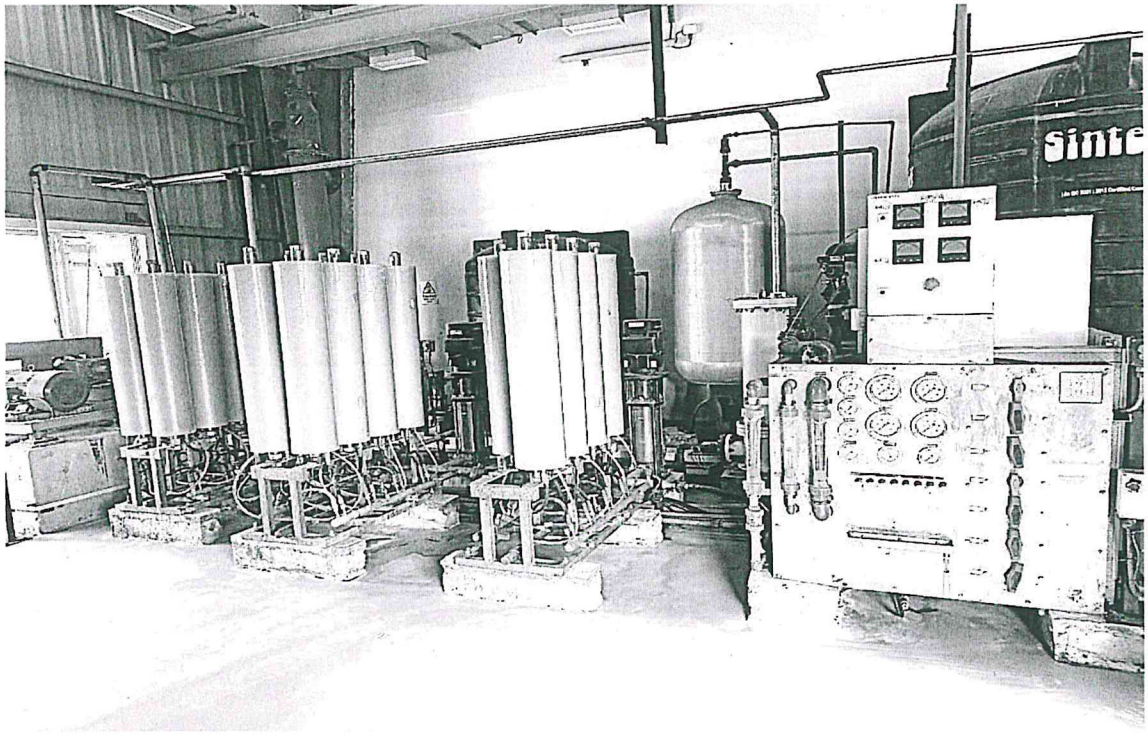


ETP Plant

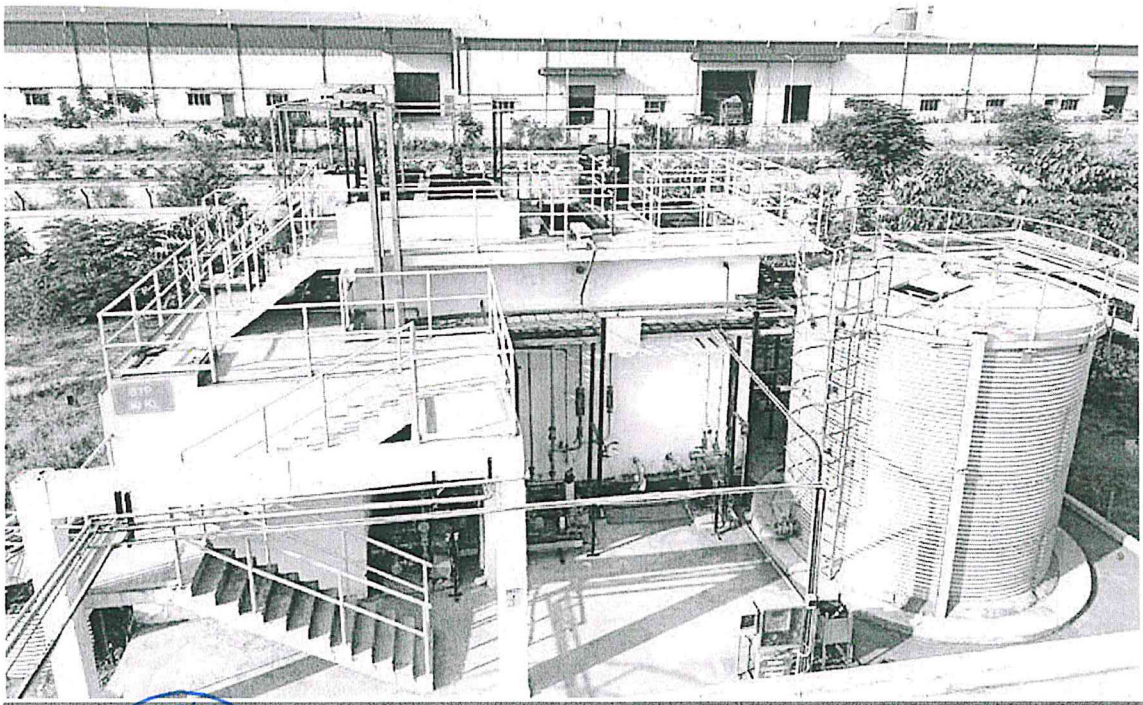


MEE PLANT

Grasim Industries Limited Ludhiana



RO PLANT



STP PLANT

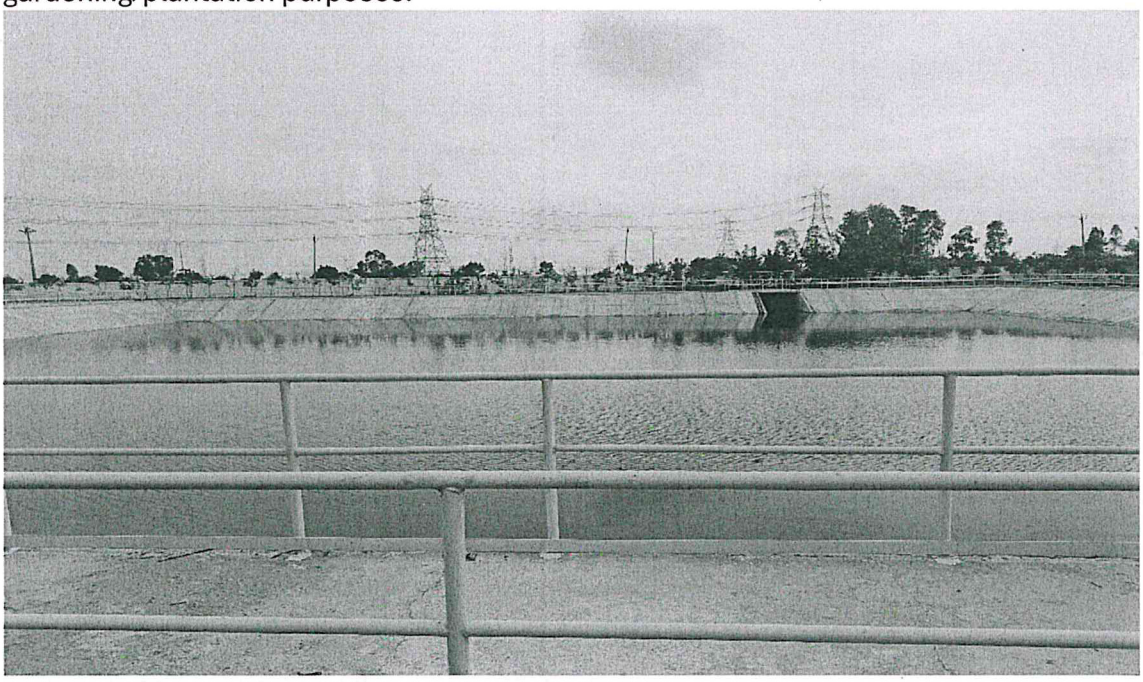
Rainwater Harvesting

Construction of Rainwater Reservoir:

Rainwater harvesting is a mechanism involved in collecting, storing, and using rainwater which is most essential. The principle of operation of our plant is to harvest and utilize maximum quantity of rainwater rather than let it out of our plant premises. We designed rainwater harvesting system for collection (catchment area and related piping) of two streams of rainwater.

- Rooftop water- All the building's roof top
- Storm drain water and drainage system Both of these streams collected and stored in separate tanks for reuse.

Project proponent shall construct the 2 no. of rainwater tank of total capacity 9600 KL to store the rainwater run off generated from the roof tops etc during monsoon season within its premises and reutilize the same for industrial process and gardening/plantation purposes.

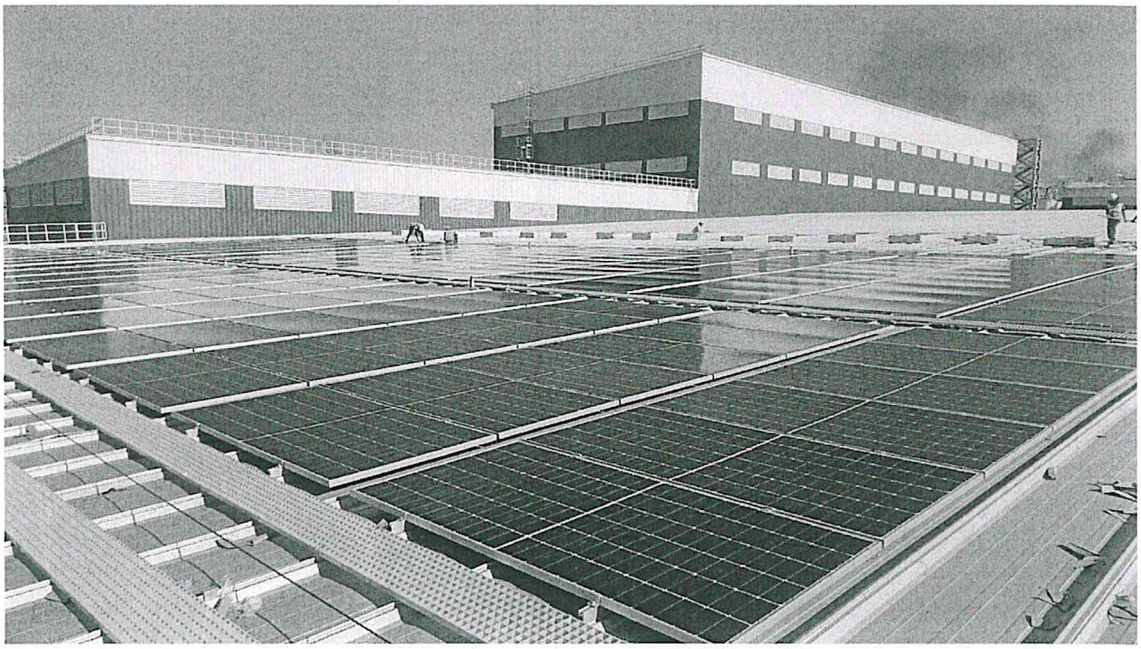


Water Reservoir

Grasim Industries Limited Ludhiana

Solar Plant:

The Unit has installed 1 MW solar plant at site with investment of approx. 3 Cr. This shows the commitment towards uses of renewable energy for operation.



Grasim Industries Limited Ludhiana

Green belt development

1. **Green belt is being developed for full 33% of the plot area, totalling about 21.0 acres. The site has planted 15000 of tress including shrubs at site.**
2. Drip Irrigation system for Periphery Planation and Sprinkler system installed for the watering
   For Buffer area
3. Below verities of plantation done in green belt:

Sr.NO	Plant Name
1	Silver Oak
2	Gulmohar
3	Spathodea
4	Chinaberry,
5	Chukresia
6	Gular
7	Erythrina
8	Mahogani
9	Jamun
10	Kadamb
11	Simbul
12	Pilkhan
13	Bottle Palm 15 feet High Palm
14	Cassia Fistula
15	Bismarckia Palm
16	Kaner (NERIUM OLEANDER)
17	GOLDEN BOTTLE BRUSH TOPIARY
18	TERMANALIA MANTALY
19	CYPRESS DWARF
20	BAMBOO BUDDHA (8 FEET TO 10
21	ARECA PALM (4'-0" TO 5'-0")
22	LARGESTOMIA INDICA (10'-0" TO 12'-0" HT)
23	JACRANDA (12'-0" HT)
24	PHONIX PALM
25	FURCAREA
26	CONOCARPUS 10 FEET
27	ASHOKA (8'-0" TO 10'-0" HT)
28	SPIDER LILLY
29	PUTRENJIVA
30	ARJUN
31	BEL
32	DATE PALM
33	MANGO
34	LEMON DWARF
35	NEEM
36	AMLA

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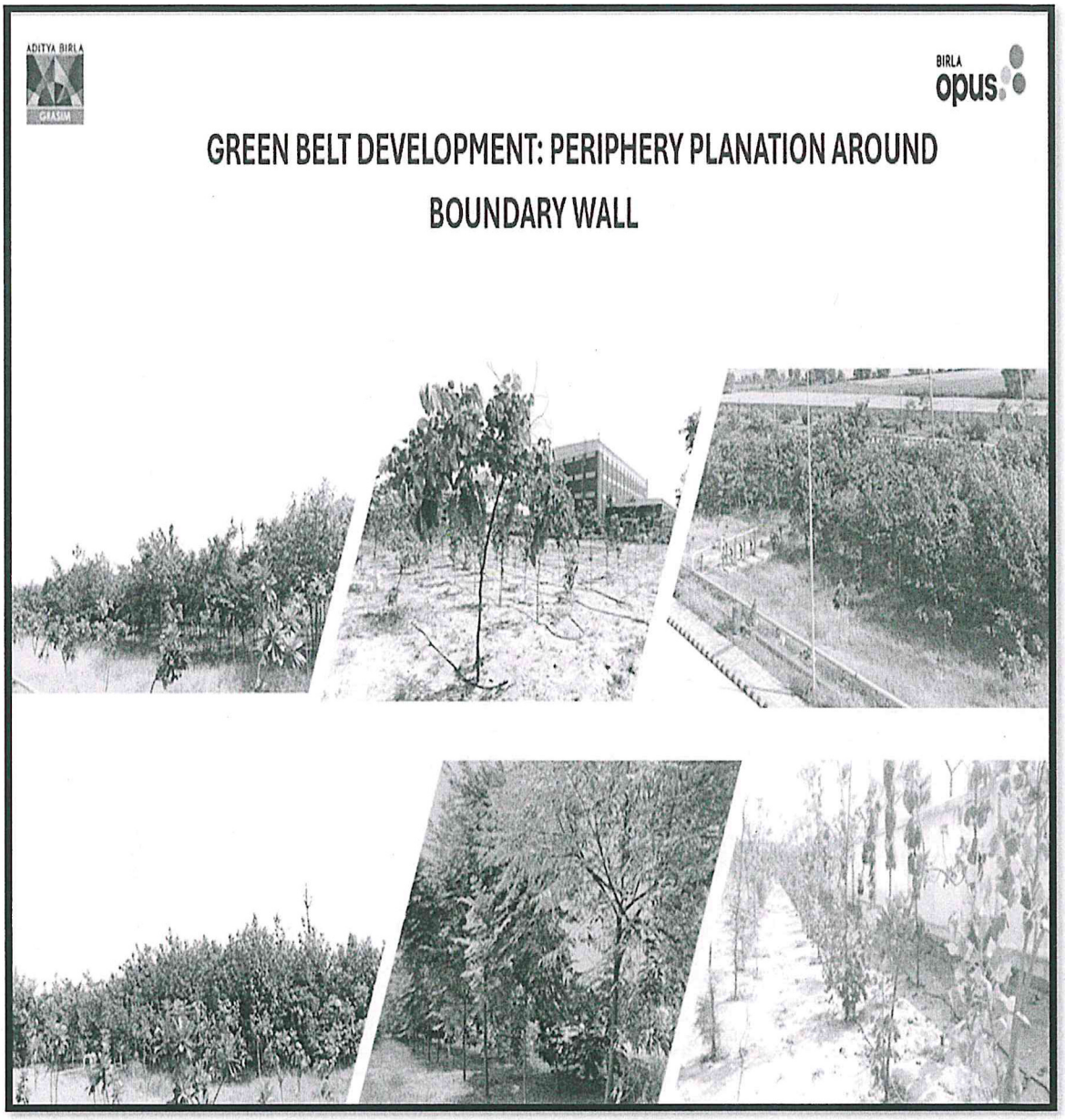
37	KADAMB
38	FICUS PANDA
39	Standkamin (18-inch dia)
40	plumeria Alba
41	Bombax Ceiba
42	Ficus Infectoria (pilkhan)
43	Furcraea
44	Cycus Revoluta
45	Silver oak
46	Phoenix palm
47	Bheda
48	Neem
49	kachnar (Bauhinia variegata)
50	Mango (Mangifera indica)
51	Alestonia
52	Shrubs
53	Cledonderdran inermi
54	Hamellia patterns Dwarf
55	Chandani Dwarf sqft
56	Ticoma Stans (Ticoma Gaudi Chaudi)
57	Wadellia Tribolta
58	Pitonia
59	Boungenvelliea (3 colours)
60	Budded Rose
61	Gardenia Dwarf
62	Exora
63	Euphorbia Milli
64	Mogra
65	Madhukamni scented
66	Marigold
67	Salvia
68	Dianthus
69	Hibiscus Dwarf (4 colours)

Grasim Industries Limited Ludhiana



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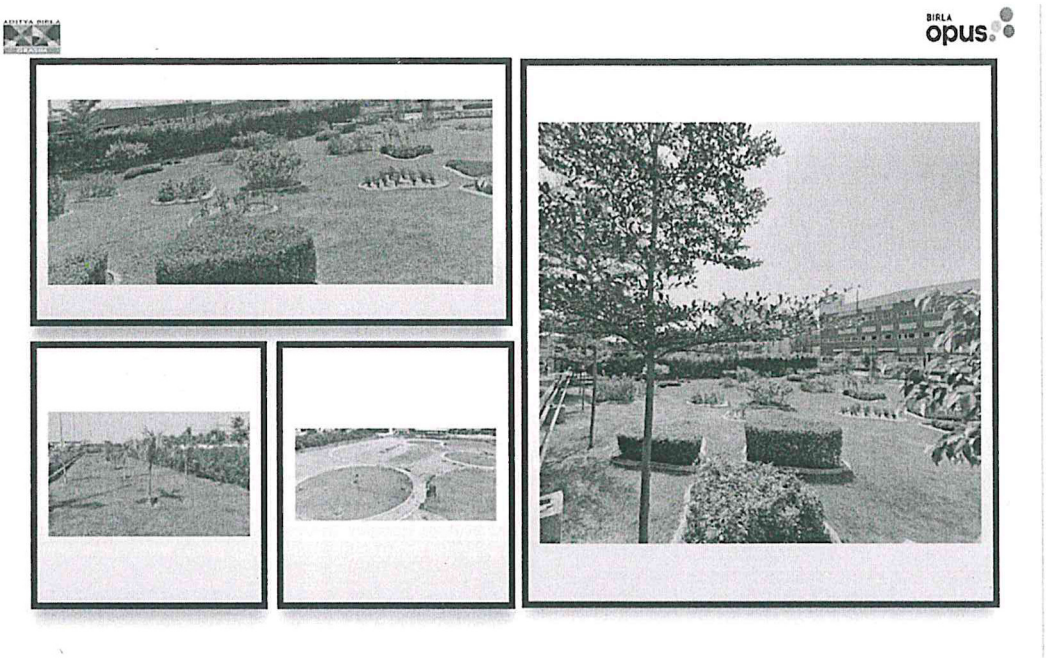


The detail of the expenditure on Green Belt Development during the year 2024-25 is as given below

Green Belt Development	Cost (Cr.)
Periphery Plantation (As per EC) + Green Pocket/Park (Ornamental, Grasses, Hedge) Development	0.414

Grasim Industries Limited Ludhiana

CER Activities

- Under Corporate Environmental Responsibility (CER) initiatives, two testing mobile monitoring vans were formally handed over to the Punjab Pollution Control Board (PPCB), Patiala.

Under Corporate Environmental Responsibility (CER) initiatives, 40,000 jute carry bags and 20,000 plant saplings and 2000 copper bottles were distributed across various schools in Ludhiana to promote environmental sustainability and ecological awareness.

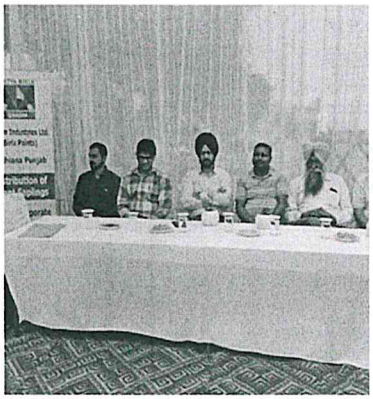
Grasim Industries Limited Ludhiana

Installation of Bottle Crushing Machine

Under Corporate Environmental Responsibility (CER) initiatives, a plastic bottle crusher machine was installed at DAV College, Jalandhar, and jute carry bags were distributed to promote sustainable practices and environmental awareness.

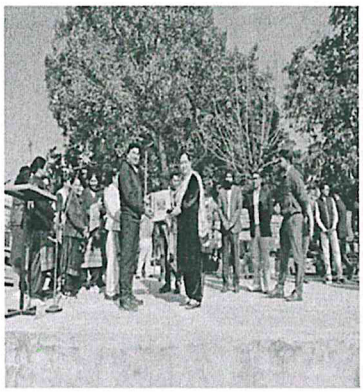
Distribution of Jute Carry Bags

Under CER initiatives, 20,000 jute carry bags were distributed during Mahakumbh at Prayagraj to promote eco-friendly practices and reduce single-use plastic consumption.



Grasim Industries Limited Ludhiana

Distribution of Copper Bottle
To reduce the single use of plastic distributed 2000 Nos. Copper bottle in schools and various government offices



CER EXPENSES FY 24-25

Sr.No	Description	Cost (Rs)
1	Establishing Nursery for Nurturing, Caring and Sharing of Native Trees Species and distributing sapling to nearby communities free of charge along with Plantation of Native Trees in Selected Areas	2,03,74,021/-
2	Donation of Environmental Books/Literature to Schools/Panchayat/Colleges	
3	Donation of Plastic Bottle Crusher to Railway Station/Bus Stands	
4	Distribution of Paper / Jute Bags to replace Plastic Bags	
5	Distribution of Glass/ Metallic Bottles to replace Plastic Bottles	
6	Upgradation/Provision of Monitoring Lab/Van to PPCB – Ludhiana	
7	Setting a Virtual Corporate Interaction Lab (Innovation & sustainability solutions) in Guru Nanak Dev University	
8	Contribution to Tandrust Punjab Fund for Environmental Initiatives taken by Govt. of Punjab	
9	Provision of Solar Electrification / Water Heating in Schools, Police Stations, Panchayat Office, and Nearby Villages etc.	
10	Pond Restoration in nearby Villages	

Grasim Industries Limited Ludhiana

Other measures

Impact of pollution abatement measures taken on the cost of production

The detail of the expenditure on pollution abatement during the year 2024-25 is as given below

Environmental Protection measures	Cost (Rs)
ETP/RO/MEE treatment chemicals Cost	19,97,000
Testing charges for monitoring parameters of ambient air, stack emissions and treated effluent	9,74,000
Expenditure toward Landscaping & Landscaping & another environment asset	44,14,906
Hazardous waste Disposal	24,07,000
Total	**97,92,906**

Grasim Industries Limited Ludhiana

PART-I

MISCELLANEOUS:

Any other particulars in respect of environmental protection and abatement of pollution.

The details of various Air Pollution Control Measures adopted at Grasim Industries Limited., Ludhiana plants are as follows:

1. **Closed Loop Handling of Liquid Raw Materials:**

Majority of liquid raw materials are directly pumped from tankers to storage tanks. The addition of these materials in process vessels is through pipeline and hence there will not be any fugitive emissions during transfer of these materials.

2. **Storage of Powders in Silos & its transfer through pneumatic conveying:**

All Powder raw materials are stored in silos of capacity 75m3, 350 m3, and 550 m3. These powders are transferred to process vessels through pneumatic conveying in a closed manner, thereby, minimizing the dusting levels.

3. **Bag Filters for Dust Collection:**

All the silos, charge hoppers, weigh hoppers and FIBC hoppers are equipped with Reverse Jet Cleaned Bag Filters with emissions of less than 10mg/m3 and are designed to operate with a pressure drop of less than 25mbarg.

4. **Provision of Vent Condenser with Chilled Water:**

Vent condensers are provided to reactors with chilled water circulation for the reduction of solvent emission from the storage tanks. Circulation of chilled water will ensure higher recovery of vapours, thereby, minimizing their emission in the atmosphere.

Grasim Industries Limited Ludhiana

5. <u>Scrubber mechanism has been provided:</u>

i. 2400 Nm3/hr system for Water based Paint Block connected to vents of TSDs

ii. 700 Nm3/hr, system for Emulsion Block connected to vents of Reactors, PETs, and Batching Tanks

(Signature of a person carrying out an industry) DATE: 29 Sept 2024

Name: Mr Manoj Dadwal

(Authorized Signatory)