GREENSTAR

Ref.: S&E/E.8-I/22

Date:16th June 2022

The Member Secretary
Tamilnadu Pollution Control Board
76, Mount Road
Guindy
Chennai – 600 032

Respected Sir,

Sub: Environmental Statement for the year 2021 -2022 for Greenstar Fertilizers Limited Plants

We are pleased to submit the Environmental Statement in Form-V (in duplicate) pertaining to our Greenstar Fertilizer plants at Tuticorin for the year ending 31st March 2022.

Thanking you,
For "Greenstar Fertilizers Limited"

Balu-E. 16/06/2022

E. Balu
Chief Operating Officer

SPIC
GSFL
17 JUN 2022
DESPATCHED

cc.: 1.The District Environmental Engineer
Tamilnadu Pollution Control Board
C7 & C9, SIPCOT Industrial Complex
Meelavittan, Tuticorin – 628 008

2.The Joint Chief Environmental Engineer
Tamilnadu Pollution Control Board
32, 33, A/3 Raja Rajeswari Nagar,
Perumalpuram, Thirunelveli – 627007

Greenstar Fertilizers Limited
CIN : U24100TN2010PLC077127
REGD OFFICE : "SPIC HOUSE", No. 88, Mount Road, Guindy, Chennai - 600 032, Tamilnadu, India.
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Greenstar

ENVIRONMENT (PROTECTION) ACT 1986

ENVIRONMENT (PROTECTION) SECOND AMENDMENT RULES, 1992

FORM-V

(See Rule 14)

Environmental statement for the financial year ending 31st March, 2022

PART-A

i)	Name and address of the owner / occupier of the industry, operation or process	:	S. Narayanan Whole Time Director 2C,Block II, Ramaniyam Abbotsbury, 42, C P Ramaswamy Road, Alwarpet, Chennai – 600018. M/s Greenstar Fertilizers Limited, SPIC Nagar, Tuticorin - 628 005.
Ii)	Industry Category	:	Primary SIC No.2800 (Chemicals and allied products) Secondary SIC No. 2874 (Phosphatic Fertilizers)
Iii)	Production Capacity (Reassessed capacity by MoEF)		
	a) Di-Ammonium Phosphate (DAP)	:	6,06,100 MT/annum
	b) Aluminium Fluoride	:	10,000 MT/annum
	c) Single Super Phosphate	:	350 MT/day
Iv)	Year of establishment	:	Sulphuric Acid Plant :1975 Phosphoric Acid Plant:1976 DAP Plant Train I:1977 DAP Plant Train II: 1983 Aluminium Fluoride Plant : 1987 SSP : 2010
v)	Date of the last environmental report submitted	:	08.06.2021

PART – B

Water and Raw Material Consumption

i) Water consumption : Average M^3/Day (Actual)

Cooling	:	1332.1
Process	:	308.1
Domestic	:	178.7

Sl. No.	Name of Products	Water Consumption per unit of products (M^3/MT)	
		During the current Financial year 2020 -2021	During the current Financial year 2021 -2022
1.	DAP	1.08	1.12
2.	Aluminium Fluoride	14	11.68
3.	SSP	0.15	0.144

ii) Raw Material consumption

Sl. No.	Name of the Raw Material	Name of the Product	Consumption of raw material per unit of output	
			During the previous Financial year 2020 - 2021	During the current Financial year 2021 - 2022
1.	Sulphur	Sulphuric Acid	0.332	0.332
2.	Rock Phosphate	Phosphoric Acid	3.74	3.61
3.	Aluminium Hydroxide	AlF_3	1.252	1.282
4.	Rock Phosphate	SSP	0.546	0.540

PART – C

Pollution Generated

(Parameters as specified in the consent issued)

Sl. No.	Pollutants	Quantity of Pollutants discharged mass/day	Concentration of pollutants discharged in mass/volume	Percentage of variation from prescribed standards with reasons
I	**WATER:**	No Effluent Generation		
II	**AIR:**			
1)	Sulphuric Acid Plant:			
	SO_2	411.38 Kg/day	327.0 mg/NM^3	No deviation from prescribed standards. The Sulphuric Acid plant is converted to DCDA Process
	Acid Mist	7.305 Kg/day	5.8 mg/NM^3	No deviation from prescribed standards
3)	Phosphoric Acid Plant:			
	Fluoride -TCA III	1.55 Kg/day	0.39 mg/NM^3	No deviation from prescribed standards
	Fluoride HH Off Gas Stack	1.64 Kg/day	1.23 mg/ NM^3	No deviation from prescribed standards
	RG Mill Particulate matter	20.4 Kg/day	47.2 mg/NM^3	No deviation from prescribed standards
4)	DAP Plants:			
	Particulate Matter	67.37 Kg/day	13.22 mg/NM^3	No deviation from prescribed standards
	Fluoride	3.010 Kg/day	0.69 mg/NM^3	No deviation from prescribed standards
	Ammonia	142.145 Kg/day	26.52 mg/NM^3	No deviation from prescribed standards
5)	AlF3 Plant			
	Particulate Matter	3.58 Kg/day	37.3 mg/NM^3	No deviation from prescribed standards
	SO_2	8.3 Kg/day	382.3 mg/NM^3	No deviation from prescribed standards
6)	SSP			
	Particulate Matter	15.1 Kg/day	42.0 mg/NM^3	No deviation from prescribed standards
	Fluoride	2.02 Kg/day	5.6 mg/NM^3	No deviation from prescribed standards

PART- D
(Hazardous Wastes)

(as specified under Hazardous Wastes (Management and Handling) Rules, 1989)

Sl. No.	Hazardous Wastes	Total Quantity (MT)			
		Quantity generated during 2020 - 21	Quantity generated during 2021 - 22	Characteristics	Closing Stock & Mode of collection/ Treatment & Disposal
1.	**Solid spent Catalyst: (Sulphuric Acid Plant)**				
	HW Category 17.2 Sulphuric Acid Plant Converter Catalyst	3.5	1.29	V_2O_5 – 3% w/w	1.29
2.	HW Category 17.1 Process acidic residue, filter cake, dust	Nil	29.7	Solid	Nil
3.	Used or Spent oil HW Category : 5.1	14.53 KL	7.03 KL	Oil	8.93 KL

PART – E

BY PROCUDT

S.No	BY PRODUCT	Total quantity (MT)	
		Generated during the current financial year 2020 - 2021	Generated during the current financial year 2021 – 2022
1.	**From Process:** Phosphogypsum generated from Phosphoric Acid Plant	603900	902700
	Gypsum Sold	819298.71	914657
2.	**From Process:** Silica generated from Aluminium Fluoride Plant	3809	4469
	Silica sold	5242.08	4809.6
	SOLID WASTE : Nil		

PART – F

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

As specified in PART D and PART E

We have become a member of **Industrial Waste Management Association- membership No; 1459.**
Hazardous waste authorization also obtained from TNPCB.

PART – G

Impact of the pollution control measures on conservation of natural resources and on the cost of production:
Greenstar Fertilizers Limited firmly believes that industrial productivity and environmental protection are to co-exist. With the strong environmental concern and commitment, Greenstar Fertilizers Limited has taken great strides in prevention of pollution and protection of the precious environment. The various pollution control and monitoring measures have been helpful to bring about an overall improvement of the quality of water, air and land in the nearby environment. We have implemented several measures for waste minimization / pollution prevention.

1) An ambient air quality has been monitored online and it has been displayed at the factory gate entrance area which shows the pollutant data for the general public.

2) SA plant stack SO_2 online monitoring is done and transmitted to care air centre, TNPCB from May 2013. DAP I and II Plants Ammonia analyzers were lined up to care air centre from February 2016.

3) Startup scrubber commissioned and lined up with SO2 Stack to reduce SO2 emission to environment.

4) Bio mass used in stand by steam generation unit (biomass boiler) as a conservation of Fossil fuels.

5) Major part of treated effluent from SPIC is reused in Greenstar Plant to conserve raw water.

6) Ambient HF was monitored through online analyzer and the connectivity was lined up to care air center, TNPCB from August 2018.

7) HF Analyzers were installed in DAP and PA Plant Stacks and Data is being transmitted to Care air Centre, TNPCB since December 2019.

8) Installed Remote calibration facility for SA plant SO2 Analyzer from July 2020 onwards.

9) We have obtained ISO 45001 and ISO 14001.

10) PM analyzers were installed in RG Mill Stack and Data is being transmitted to Care air Centre, TNPCB since November 2020.

11) HF analyzer was installed in SSP plant stack and Data is being transmitted to Care air Centre, TNPCB since February 2021.

12) PM analyzers were installed in DAP- I, DAP- II and SSP Plant Stacks and Data is being transmitted to Care air Centre, TNPCB since January 2021.

13) HF analyser was installed in DAP II plant and data is being transmitted to Care air Centre, TNPCB since 21.10.2021.

14) 473 MT of Plastic Waste was recycled through PRO as part of EPR Obligation.

5) Overall cost towards effluent neutralization and statutory requirements towards environment protection was Rs.67.05 lakhs. The break-up details is given:

Cost for Neutralization:		Rs.in Lakhs
Direct	Chemicals for Phosphatic Plants	6.7
Indirect	Salary and Statutory Fees	60.35
Total Cost of Neutralization and statutory requirements		Rs.67.05 Lakhs

PART – H

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

1) We are maintaining the green belt more than 33% of all over area inside factory and nearby township. Totally 823 trees have been planted in the year 2021 - 22.

   Cost incurred for green belt development for the year 2021 - 2022 is 3 lakhs.

2) We have incorporated the dry mode of gypsum conveying system instead of gypsum slurry mode to impervious gypsum dyke.

3) As per CPCB guidelines Gypsum pond is being converted into impervious lined ponds.

PART – I

Miscellaneous

Any other particulars in respect of environment protection and abatement of pollution till March 2022.

1) Green Belt Development Programme is continuously carried out to improve the quality of the environment.

2) WORLD ENVIRONMENT DAY CELEBRATIONS:

Environment Quiz and Essay, Environment Day Pledge, World Environment Day 2022 theme given by UNEP, "Ecosystem Restoration" was circulated in intranet for the benefit of employees.

Plantation of New Saplings:

World Environment day was celebrated on June 5th and 200 saplings were planted and about 823 trees were planted during the year 2021-2022.

3) Regular refresher training programme is conducted for employees on Safety and Environment. "Environment management in Greenstar Fertilizers Limited" is one of the topic in the above training Programme.

4) Monitoring of stack emission and ambient air and water quality is being done regularly.

5) Maintenance department is carrying out regular checking and scheduled maintenance of all the pollution control devices.

6) Production & Administration departments taking care of housekeeping.

7) Dedicated Horticulture section is taking care of tree plantation and green belt development. Every year we are growing new trees.

8) Part of treated effluent water generated from SPIC Ltd., is being used for Green Belt development inside the Factory premises.

9) Environment Monitoring was carried out around the Phosphogypsum stack by CVR lab and the report was submitted to TNPCB.

Signature : E.Balu 16/06/2022

Name and address of the person submitting the Environmental statement report : **E.Balu**
Chief Operating Officer

On behalf of
Name and Address of the Unit : M/s Greenstar Fertilizers Limited
SPIC Nagar, Tuticorin 628 005.