SPIC
Nourishing growth

Ref: S&E/E.8-I/24

Date: 29th May 2024

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

Dear Sir,

Sub: Environmental Statement for the year 2023 - 2024 for SPIC Fertilizer Plant.

We are pleased to submit the Environmental Statement in Form-V pertaining to our SPIC Fertilizer plants at Tuticorin for the year ending 31st March 2024.

Thanking you,

For "**Southern Petrochemical Industries Corporation Limited**",

Balu.E
29/05/2024

E BALU

WHOLE TIME DIRECTOR

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

SPIC

ENVIRONMENT (PROTECTION) ACT 1986

ENVIRONMENT (PROTECTION) SECOND AMENDMENT RULES, 1992

FORM-V

(See Rule 14)

Environmental statement for the finaneial year Ending 31st Mareh, 2024

PART-A

i)	Name and address of the owner / occupier of the industry, operation or process	:	E.BALU SPIC Limited 88, Mount Road, Chennai – 600 032. M/s Southern Petrochemical Industries Corporation Limited, SPIC Nagar, Tuticorin 628 005.
Ii)	Industry Category	:	Primary SIC No.2800 (Chemicals and allied products) Secondary SIC No.2873 (Nitrogenous Fertilizers)
Iii)	Production Capacity		
	a) Urea(Neem coated)	:	7,59,200 MT/annum
Iv)	Year of establishment	:	1969
v)	Date of the last environmental report submitted	:	16.06.2023

PART – B

Water and Raw Material Consumption

i)	Water consumption	:	Average M^3/Day (Actual)
	Cooling	:	8352.7
	Process	:	1243.2
	Domestic	:	247.3
	Gardening	:	167.8

Sl. No.	Name of Products	Water Consumption per unit of products (M^3/MT)	
		During the previous Financial year 2022 - 2023	During the current Financial year 2023 - 2024
1.	Urea	5.10	5.05

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 2022 - 2023	During the current Financial year 2023 - 2024
1.	Naphtha	Ammonia	0.33	0.33
2.	Natural Gas	Ammonia	0.597	0.62

PART – C

Pollution Generated

(Parameters as specified in the consent issued) whom so ever

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:**			
	pH	--	7.3- 8.4	
	AN	1.13 Kg/day	17.9 mg/l	All parameters are well within the prescribed standards
	TKN	1.32 Kg/day	21 mg/l	
II	**AIR:**			
1)	Urea Prilling Tower:			
	Particulate Matter	584.8 Kg/day	40.7 mg/ Nm^3	No deviation from prescribed standards
2)	Reformer Flue gas			
	NOx	113.71 Kg/day	31 mg/ Nm^3	No deviation from prescribed standards
3)	**GT HRSG**			
	NOx	348.9 Kg/day	124.6 mg/ Nm3	No deviation from prescribed standards
	SO2	42.1 Kg/day	15 mg/ Nm3	No deviation from prescribed standards

Effluent disposal to sea 20.31 M3/ Day (Only 108 days during the year)

PART – D
(Hazardous Wastes)

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

Sl. No.	Hazardous Wastes	Total Quantity (MT)			
		Quantity generated during 2022 - 23	Quantity generated during 2023 - 24	Characteristics	Closing Stock & Mode of collection/ Treatment & Disposal
1)	***Liquid Used Oil:***				
a)	*HW category 3.3 Sludge and filters contaminated with oil*	*Not generated*	*5*	*Semi- solid*	*Nil*
b)	*HW Category 5.1 Used or Spent Oil*	*21.32 KL*	*25.49 KL*	*Oil*	*Nil*
2)	**Solid Spent Catalyst : (Nitrogenous Fertilizer Plant)**				
a)	*HW Category 18.1 (Co and Mo catalyst)*	*Not generated*	*Not generated*	*Cobalt content: 3.5% w/w Molybdenum 6.0% w/w*	*0.21 MT Spent catalysts collected in drums, sealed and kept for disposal.*
b)	*HW Category 18.1 Spent catalyst (LT vessel – Zn-Cu catalyst)*	*Not generated*	*Not generated*	*Zinc content : 35 % w/w Copper : 29.0% w/w*	*Nil*
c)	*HW Category 18.1 Spent catalyst (Zinc oxide Catalyst)*	*Not generated*	*Not generated*	*Zinc content : 7 % w/w*	*Nil*
d)	*HW Category 18.1 Spent catalyst (Methanator – Nickel catalyst)*	*Not generated*	*19.502 MT*	*Nickel content: 10 to 20 % w/w*	*19.502 MT Spent catalyst collected in drums, sealed and kept for disposal.*
e)	*HW Category 18.1 Spent catalyst (Primary and Secondary Reformer – Nickel catalyst)*	*1.325 MT*	*44.948 MT*	*Nickel content: 10 to 20 % w/w*	*26.550 MT Spent catalyst collected in drums, sealed and kept for disposal.*
f)	*HW Category 18.1 Spent catalyst (Converter Iron catalyst)*	*145.23 MT*	*Not generated*	*Fe content: 86%*	*24.01 MT Spent catalyst collected in drums, sealed and kept for disposal*
e)	*HW Category 18.1 Spent catalyst (Cu promoted iron catalyst)*	*Not generated*	*48.96 MT*	*Copper content: 29% w/w and Iron content - 86% w/w*	*48.97 MT of Spent catalysts collected in drums, sealed*

					and kept for disposal.
3)	*HW Category 33.1 Empty barrels/containers/liners contaminated with hazardous chemicals /wastes*	*Not generated*	*5.347 MT*	*Barrels contaminated with hazardous chemicals /wastes*	*5.347MT collected and kept for disposal*
4)	*HW Category 35.3- Chemical sludge from waste water treatment*	*Not generated*	*44.59 MT*	*Calcium carbonate sludge*	*44.59 MT is utilized in M.s Greenstar fertilizer limited as filler in DAP.*

PART – E

BY PRODUCT

Sl.No.		*Total Quantity (MT)*	
		Generated During the current financial year (2022 - 2023)	**Generated During the current financial year (2023 - 2024)**
1)	NIL	NIL	NIL
	SOLID WASTES		
1)	NIL	NIL	NIL

PART – F

Please specify characterisation (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: 1458.** The spent catalyst are sent to them for Landfill after treatment.(LAT)

PART – G

Impact of the pollution control measures on conservation of natural resources and on the cost of production:

SPIC firmly believes that industrial productivity and environmental protection are to co-exist. With the strong environmental concern and commitment, SPIC 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. Online monitoring of Ammonia and Particulate matter is done in Urea Prilling tower with investment of about Rs.40 lakhs and data transmitted to Care Air Centre, TNPCB from 29th March 2018.
2. Effluent Quality Monitoring System – Water Quality Watch software was installed with a cost of around Rs. 2 lakhs.
3. Online monitoring of TSS in Integrated Effluent Treatment plant has been installed with an investment of about Rs.2.5 lakhs and connected to WQW from 07.02.20.
4. Online monitoring of Ammonia plant – Reformer Flue gas stack NO2 analyser was installed with an investment of about Rs. 1 lakhs, SO2 analyzer at a cost of Rs.30 lakhs.Connected to Air Center from 09.12.19.
5. Effluent Quality monitoring station was commissioned and uploaded to CPCB and TNPCB. (pH and sea flow were uploaded from 30.06.15 and AN from 13.10.2015)
6. Ammonia Plant reformer stack flue gas online monitoring is done and transmitted to Care Air Center, TNPCB from June 2015.
7. AAQ monitoring Station was commissioned and uploaded to Care Air Centre, TNPCB on 30.10.2015.
8. An online display of ambient air quality has been started since 2015 at the factory gate entrance area, which displays the pollutant data to the general public.
9. Due to optimization of steam network we are able to keep both the offsite boilers as standby boilers and thereby the SO2 and CO2 emission from the Off Site boilers has stopped.
10. Treated effluent is reused in M/s Greenstar Fertilizers Limited and for gardening purpose extensively.
11. The Eco club in Spic nagar School is patronized by SPIC and many awareness programmes on Environment protection were conducted.
12. We have obtained ISO 45001 and ISO 14001.
13. Natural gas has been used as fuel and feedstock for production of Ammonia since March 2021 and substantial reduction of SO2 and NOx has been achieved.

14. We have stopped two numbers of fuel oil fired boilers after Ammonia plant modernization during the year since the steam requirement is met through waste heat recovery from process.

15. Online SO2 and NOx Analysers for Boilers stack has been installed at the cost of Rs. 17.7 lakhs.

16. Online monitoring of Ammonia plant – GT HRSG SO2 NOx analysers were installed with an investment of about Rs. 80 lakhs and connected to are Air Center from 10.05.2022.

17. Effluent generated from urea is collected in collection pit and is utilized in process.

18. 1920 MT of Plastic Waste was recycled through PRO as part of EPR Obligation.

19. Out of 22.7 MW generation of captive solar power production, 30% is used in SPIC.

20. Electromagnetic flow meter was installed at Sea disposal line in IETP at a cost of Rs. 1.6 lakhs.

21. We have also installed online effluent monitoring system at STP for the parameters pH, TSS, BOD and COD at a cost of Rs 23 Lakhs.

22. All Emission monitoring analysers were validated by third party NABL accredited lab.

23. Ambient and stack survey analysis carried out in all the plants through NABL accredited lab.

Overall cost towards effluent treatment and statutory requirement was Rs. 326.87 lakhs. The break-up details is given:

Effluent Treatment Cost and Statutory requirement for Environment :		Rs.in Lakhs
Direct	Power for IETP	36.05
	Chemicals for IETP	191.66
Indirect	Salary and Statutory Fees	99.16
Total Cost of ETP and Statutory requirement		Rs. 326.87 Lakhs

PART – H

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

We are maintaining the green belt (more than 40.62 % of all over area.) 1075 saplings have been planted during 2023 -2024.

Cost incurred for green belt development for the year 2023-2024 is 3 lakhs.

PART – I

Miscellaneous

Any other particulars in respect of environment protection and abatement of pollution till March 2024.

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 2024 theme given by UNEP, "Beat Plastic Pollution" was circulated in intranet for the benefit of employees.

   Plantation of New Saplings:
   World Environment day was celebrated on June 5th and 165 saplings were planted and about 1075 trees were planted during the year 2023-2024.

3. World Water Day was celebrated on March 22nd and 90 tree saplings were planted around premises. World Earth Day was celebrated on April 22nd and 15 tree saplings were planted on that day.
4. Regular refresher training programme is conducted for employees on Safety and Environment. "Environment management in SPIC" is one of the topic in the above training Programme.
5. Monitoring of stack emission and ambient air and water quality is being done regularly.
6. Maintenance department is carrying out regular checking and scheduled maintenance of all the pollution control devices.
7. Production & Administration departments taking care of housekeeping.
8. Dedicated Horticulture section is taking care of tree plantation and green belt development. Every year we are growing new trees.
9. 220 Conventional Bulbs were replaced with LED bulbs across factory premises at the cost of Rs. 1.237 Lakhs as a part of energy reduction.
10. We have developed Miyawaki Forest by planting 500 saplings in land allocated by District authorities in Tuticorin.
11. Awareness created among school children and employees requesting to adopt "Mission LiFE" action points in their day to day life.

Signature : Balu-E 29/05/2024

Name and address of the person submitting the Environmental Statement Report : **E Balu**
WHOLE TIME DIRECTOR

On behalf of
Name and Address of the Unit

M/s Southern Petrochemical Industries Corporation Limited,
SPIC Nagar,
Tuticorin 628 005.