967

SPIC
Nourishing growth

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

Date: 15th June 2022

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

Dear Sir,

**Sub: Environmental Statement for the year 2021 - 2022 for SPIC Fertilizer Plant.**

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

Thanking you,
For "Southern Petrochemical Industries Corporation Limited",

**P. Senthil Nayagam**
**General Manager (Works)**

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

16 JUN 2022

SPIC

# 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 | : | Mr. S.R.Ramakrishnan.<br>SPIC Limited<br>88, Mount Road, Chennai – 600 032.<br>M/s Southern Petrochemical Industries Corporation Limited,<br>SPIC Nagar, Tuticorin 628 005. |
| Ii) | Industry Category | : | Primary SIC No.2800<br>(Chemicals and allied products)<br><br>Secondary SIC No.2873<br>(Nitrogenous Fertilizers) |
| Iii) | Production Capacity | | |
| | a) Urea | : | 6,20,400 MT/annum |
| Iv) | Year of establishment | : | 1969 |
| 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 | : | 9249.5 |
| Process | : | 1143.2 |
| Domestic | : | 178.7 |

| Sl. No. | Name of Products | Water Consumption per unit of products ($M^3$/MT) | |
|---|---|---|---|
| | | During the previous Financial year 2020 - 2021 | During the current Financial year 2021 - 2022 |
| 1. | Urea | 6.20 | 6.11 |

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 current Financial year 2020 - 2021 | During the current Financial year 2021 - 2022 |
| 1. | Naphtha | Ammonia | 0.697 | 0.416 |
| 2. | Natural Gas | Ammonia | 0.0149 | 0.345 |

## 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 | -- | 7.1- 8.4 | |
| | AN | 3.06 Kg/day | 25.58 mg/l | All parameters are well within the prescribed standards |
| | TKN | 2.84 Kg/day | 23.75 mg/l | |
| II | **AIR:** | | | |
| 1) | Urea Prilling Tower: | | | |
| | Particulate Matter | 608.2 Kg/day | 43 mg/ $Nm^3$ | No deviation from prescribed standards |
| 2) | Reformer Flue gas | | | |
| | NOx | 36.89 Kg/day | 10mg/ $Nm^3$ | No deviation from prescribed standards |

Effluent disposal to sea 119.58 M3/ Day (Only 183 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) | | Characteristics | Closing Stock & Mode of collection/ Treatment & Disposal |
|---|---|---|---|---|---|
| | | Quantity generated during 2020 - 21 | Quantity generated during 2021 - 22 | | |
| 1) | **Solid Spent Catalyst : (Nitrogenous Fertilizer Plant)** | | | | |
| a) | *HW Category 18.1 (Co and Mo catalyst)* | *0.02 MT* | *Not generated* | *Cobalt content: 3.5% w/w Molybdenum 6.0% w/w* | *0.021 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* | *Not generated* | *Nickel content: 10 to 20 % w/w* | *Nil* |
| e) | *HW Category 18.1 Spent catalyst (Primary and Secondary Reformer – Nickel catalyst)* | *28.9 MT* | *1.666 MT* | *Nickel content: 10 to 20 % w/w* | *1.637 MT Spent catalyst collected in drums, sealed and kept for disposal.* |
| f) | *HW Category 18.1 Spent catalyst (Converter Iron catalyst)* | *Not generated* | *Not generated* | *Fe content: 86%* | *Nil* |
| e) | *HW Category 18.1 Spent catalyst (Cu promoted iron catalyst)* | *Nil* | *Not generated* | *Copper content: 29% w/w and Iron content - 86% w/w* | *0.01 MT of Spent catalysts collected in drums, sealed and kept for disposal.* |
| 2. | ***Liquid Used Oil:*** | | | | |
| a) | *HW Category 5.1 Used or Spent Oil* | *15.72 KL* | *34.03 KL* | *Oil* | *Nil* |
| b) | *HW category 5.2 Waste or residue containing oil* | *Nil* | | *Semi- solid* | *Nil* |

## PART – E

### BY PRODUCT

| Sl. No. | | Total Quantity (MT) | |
|---|---|---|---|
| | | Generated During the previous financial year (2020 - 2021) | Generated During the current financial year (2021 - 2022) |
| 1) | NIL | NIL | NIL |
| | | | |
| | **SOLID WASTES** | | |
| | **From Pollution Control Facilities:** | | |
| 1) | Calcium carbonate sludge generated from effluent treatment plant | 51.50 | 47.46 |
| | **Quantity recycled or reutilized within the unit** | | |
| | Calcium Carbonate | 51.50 | 47.46 |

## 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)

13. We have obtained ISO 45001 and ISO 14001.

14. 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.

Overall cost towards effluent treatment and statutory requirement was Rs.543.317 lakhs. The break-up details is given:

| Effluent Treatment Cost and Statutory requirement for Environment : | | Rs.in Lakhs |
|---|---|---|
| Direct | Power for IETP | 30.689 |
| | Chemicals for IETP | 328.63 |
| Indirect | Salary and Statutory Fees | 183.99 |
| Total Cost of ETP and Statutory requirement | | Rs.543.317 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.) 823 saplings have been planted during 2021 -2022.
   Cost incurred for green belt development for the year 2021 is 3 lakhs.

## PART – I
## Miscellaneous

Any other particulars in respect of environment protection and abatement of pollution till March 2021.

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 2021 theme given by UNEP, "Ecosystem Restoration" was circulated in intranet for the benefit of employees.

   Plantation of New Saplings:
   200 (Two hundred ) saplings were planted on the inauguration function At the north side of Chromium pond encapsulation, IETP 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 SPIC" 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. 560 MT of Plastic Waste was recycled through PRO as part of EPR Obligation.

Signature :

Name and address of the person submitting the Environmental Statement Report : **P. Senthil Nayagam**
**General Manager(Works)**

On behalf of
Name and Address of the Unit

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