

SPIC
Nourishing growth



656

Ref : S&E/E.8-1/20
Date: 18th May 2020

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

Dear Sir,

Sub: Environmental Statement for the year 2019 - 2020 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 2020.

Thanking you,

For "Southern Petrochemical Industries Corporation Limited",

P. Senthil Nayagam
General Manager (Works)

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
30/2, Sidco Industrial Estate, Pettai
Tirunelveli – 627 010.



Southern Petrochemical Industries Corporation Limited

(CIN: L11101TN1969PLC005778)

Factory: SPIC Nagar, Muthiahpuram Post, Tuticorin 628 005 Tamilnadu, India

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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, 2020****PART-A**

- i) Name and address of the owner / occupier of the industry, operation or process : Mr. S.R.Ramakrishnan.
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 (Reassessed capacity by MoEF)
- a) Urea : 6,20,400 MT/annum
- iv) Year of establishment : 1969
- v) Date of the last environmental report submitted : 04.06.2019

PART – B**Water and Raw Material Consumption**

i)	Water consumption	:	Average M ³ /Day (Actual)
	Cooling	:	10967.2
	Process	:	220.8
	Domestic	:	178.2

Sl. No.	Name of Products	Water Consumption per unit of products (M ³ /MT)	
		During the previous Financial year 2018 - 19	During the current Financial year 2019 - 20
1.	Urea	6.94	7.44

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 2018 - 19	During the current Financial year 2019 - 20
1.	Naphtha	Ammonia	0.752	0.737

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	<u>WATER:</u>			
	pH	--	7.2- 8.4	All parameters are well within the prescribed standards
	AN	3.81 Kg/day	25.91 mg/l	
	TKN	3.81 Kg/day	25.91 mg/l	
II	<u>AIR:</u>			
1)	Urea Prilling Tower:			No deviation from prescribed standards
	Particulate Matter	447.8 Kg/day	41.6 mg/ Nm ³	
2)	Reformer Flue gas			No deviation from prescribed standards
	NOx	18.28 Kg/day	5 mg/ Nm ³	

Effluent disposal to sea 147.14 M3/ Day (Only 80 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)			Closing Stock & Mode of collection/ Treatment & Disposal
		Quantity generated during 2018 - 19	Quantity generated during 2019 - 20	Characteristics	
1)	Solid Spent Catalyst : (Nitrogenous Fertilizer Plant)				
a)	HW Category 18.1 Spent catalyst (LT vessel – Zn-Cu catalyst)	98.41	Not generated	Zinc content : 35 % w/w Copper : 29.0% w/w	Nil
b)	HW Category 18.1 (Co and Mo catalyst)	2.05	Not generated	Cobalt content: 3.5% w/w Molybdenum 6.0% w/w	0.19 MT of Spent catalyst collected in drums, sealed and kept for disposal.
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)	17.095	9.1	Nickel content: 10 to 20 % w/w	9.1 MT of Spent catalyst collected in drums, sealed and kept for disposal.
f)	HW Category 18.1 Spent catalyst (Converter Iron catalyst)	Not generated	Not generated	Magnetite content	NIL
e)	HW Category 18.1 Spent catalyst (Cu promoted iron catalyst)	39.845	46.44	Fe 86%w/w	3.9 MT of Spent catalyst collected in drums, sealed and kept for disposal.
2.	Liquid Used Oil:				
	HW Category 5.1 Used or Spent Oil	25.66 KL	30 KL	Oil	Stock as on 31.03.2020 9.1 KL

PART – E

BY PRODUCT

Sl. No.	BY PRODUCT	Total Quantity (MT)	
		Generated During the previous financial year (2018 - 19)	Generated During the current financial year (2019 - 20)
1)	NIL	NIL	NIL
<u>SOLID WASTES</u>			
<u>From Pollution Control Facilities:</u>			
1)	Calcium carbonate sludge generated from effluent treatment plant	19.326	18.1
<u>Quantity recycled or reutilized within the unit</u>			
	Calcium Carbonate	19.326	18.1

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 and connected to are 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. Environment clearance obtained for changeover of feed stock from Naphtha to mixed feed stock (Naphtha + NG) from MoEF on 28.03.17. and CTE Obtained on 07/11/2020.
10. Environment clearance obtained for Modernization cum expansion of Fertilizer manufacturing unit from MoEF on 07.01.20.
11. 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.
12. Treated effluent is used for Phosphoric acid plant (M/s Greenstar Fertilizers Limited) and gardening purpose extensively.

13. The Eco club in Spic nagar School is patronized by SPIC and many awareness programmes on Environment protection were conducted.
14. Ammonia plant Primary reformer Catalyst was renewed to reduce energy loss.
15. Urea plant reactor was renewed for around Rs.8 Crores. for better reliability and energy efficiency.
16. VAM Machine was installed in Ammonia plant to reduce the work load of Compressor and for Energy efficiency.
17. New equipment are being installed in Ammonia plant for Environment friendly NG conversion project.
18. Variable Frequency drive has been installed for P1D pump of WTP plant. It enhances energy conservation.
19. We have obtained ISO 45001 and ISO 14001.

Overall cost towards effluent treatment was Rs.151.00 lakhs. The break-up details is given:

<u>Effluent Treatment Cost:</u>		<u>Rs.in Lakhs</u>
Direct	Power for IETP	0.176
	Chemicals for IETP	58.15
Indirect	Salary and Statutory Fees	70.377
Total Cost of ETP		Rs.128.71 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.) 1047 (Thousand forty seven) saplings have been planted during 2019 -20.
Cost incurred for green belt development for the year 2019-20 is 3 lakhs.

PART - I
Miscellaneous

Any other particulars in respect of environment protection and abatement of pollution till March 2020.

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 2019 theme given by UNEP, "**Beat Air Pollution**" was circulated in intranet for the benefit of employees.

Plantation of New Saplings:
113 (One hundred and thirteen) saplings were planted on the inauguration function near the IETP area in presence of DEE and AE, TNPCB- Tuticorin.
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. Plastic Waste Management Internal Committee was formed on 18.12.2019 and various measures were taken to curtail plastic waste pollution.

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.