



# Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

## FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2023

### Unique Application Number

MPCB-ENVIRONMENT\_STATEMENT-0000057636

### Submitted Date

14-09-2023

## PART A

### Company Information

#### Company Name

RASHTRIYA CHEMICALS & FERTILIZERS,  
LTD (TROMBAY UNIT)

#### Application UAN number

5429

#### Address

MAHUL ROAD , CHEMBUR , MUMBAI :  
400074

#### Plot no

127Chembur 1 ( Marawali), 1,5,5,1 to 6 ( Anik )

#### Taluka

Kurla

#### Village

Marawali

#### Capital Investment (In lakhs)

274747.00

#### Scale

LSI

#### City

Mumbai

#### Pincode

400074

#### Person Name

Anil Kumar Shrivastava

#### Designation

Executive Director (Trombay)

#### Telephone Number

9820994737

#### Fax Number

0222552231

#### Email

ed\_tr@rcfild.com

#### Region

SRO-Mumbai III

#### Industry Category

Red

#### Industry Type

R52 Fertilizer(basic) (excluding formulation)

#### Last Environmental statement submitted online

yes

#### Consent Number

Formate1.0/CAC/UAN.NO.:00000114391/CR/CO-2206001329

#### Consent Issue Date

2022-06-23

#### Consent Valid Upto

2026-07-31

#### Establishment Year

1978

#### Date of last environment statement submitted

Sep 23 2022 12:00:00:000AM

#### Industry Category Primary (STC Code) & Secondary (STC Code)

### Product Information

#### Product Name

AMMONIA

#### Consent Quantity

465000

#### Actual Quantity

456695

#### UOM

MT/A

UREA

483600

316209

MT/A

COMPLEX FERTILIZERS ( SUPHALA + ANP )

855600

638240

MT/A

BIOLA

1200

152.010

MT/A

MICROLA

1200

406.690

MT/A

SUJALA ( 19:19:19 ) / ( DRIP/FOILER)	22200	6350	MT/A
Methanol	69960	7352	MT/A
METHYLAMINE	5242	0	MT/A
Ammonium Bicarbonate	25000	24205	MT/A
Sodium Nitrite/Nitrate	5230	335	MT/A
Sulphuric acid	111600	69969	MT/A
Nitric acid (100% basis)	398040	397489	MT/A
Conc. Nitric Acid	27000	23148	MT/A
Phosphoric acid	37200	0	MT/A
Treated water from STP	9864000	8780115	KL/A
Rapid wall panel (Square meter)	15069475	0	SqFeet/Y
Wall Plaster	48000	0	MT/A
Wall putty	7200	0	MT/A
Ammoniam Nitrate	190000	175693.810	MT/A
Grid Syncorinized Solar PV Power Plant	2	1851.86	Mwh
GTG Power Generation	64	66036	Mwh

#### By-product Information

<b>By Product Name</b>	<b>Consent Quantity</b>	<b>Actual Quantity</b>	<b>UOM</b>
ARGON	7198	3025	MT/A

### Part-B (Water & Raw Material Consumption)

#### 1) Water Consumption in m3/day

<b>Water Consumption for Process</b>	<b>Consent Quantity in m3/day</b>	<b>Actual Quantity in m3/day</b>
<b>Cooling</b>	19465.00	9797.28
<b>Domestic</b>	4505.00	1250.31
<b>All others</b>	0.00	0.00
<b>Total</b>	34165.00	20143.20

#### 2) Effluent Generation in CMD / MLD

<b>Particulars</b>	<b>Consent Quantity</b>	<b>Actual Quantity</b>	<b>UOM</b>
WATER GETS POLLUTED AND POLLUTED	13088	3827.36	CMD

#### 2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)

<b>Name of Products (Production)</b>	<b>During the Previous financial Year</b>	<b>During the current Financial year</b>	<b>UOM</b>
AMMONIA ( Treated Water )	209964	1411746	M3/Anum
METHANOL ( Treated Water )	97337	13458	M3/Anum
Sulphuric Acid ( Treated Water )	51611	67960	M3/Anum
Nitric Acid ( Treated Water )	314468	332074	M3/Anum
Phosphoric Acid	0	0	M3/Anum
Urea ( Treated Water )	190905	11670	M3/Anum

Complex fertilizers	0	0	M3/Anum
Conc Nitric Acid ( DM Water )	1311	1131	M3/Anum
Ammoniam Bi Carbonate	44013	44032	M3/Anum
Sodium Nitrate/Nitrite	0	0	M3/Anum
Grid Syncorinized Solar PV Power Plant	112	93	M3/Anum
Ammoniam Nitrate ( AN ) Plant	0	0	M3/Anum
Drinking Water ( BMC )	206155	220265	M3/Anum

### **3) Raw Material Consumption (Consumption of raw material per unit of product)**

<b>Name of Raw Materials</b>	<b>During the Previous financial Year</b>	<b>During the current Financial year</b>	<b>UOM</b>
Rock phosphate	132583	166433.10	MT/A
MAP	101365	96109.00	MT/A
DAP	10864.080	27218.460	MT/A
KCL	148554	169297	MT/A
SULPHUR	21246.164	22785.144	MT/A
NEEM OIL	164361	151318	Ltr/A
AMMONIA	406255.87	442047.048	MT/A
Soda Ash	567.010	299.450	MT/A
Caustic Soda Lye	236.765	0	MT/A
Natural Gas ( as feed )	226295.702	206230.642	MT/A

### **4) Fuel Consumption**

<b>Fuel Name</b>	<b>Consent quantity</b>	<b>Actual Quantity</b>	<b>UOM</b>
NATURAL GAS	214941	170217.772	MT/A
DIESEL	187.434	117.634	MT/A

## **Part-C**

### **Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)**

#### **[A] Water**

<b>Pollutants Detail</b>	<b>Quantity of Pollutants discharged (kL/day)</b>	<b>Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour</b>	<b>Percentage of variation from prescribed standards with reasons</b>	<b>Standard</b>	<b>Reason</b>
	<b>Quantity</b>	<b>Concentration</b>	<b>%variation</b>		
pH	3827.36	7.2	0	NA	NA
Ammonical Nitrogen as N	3827.36	26.8	0	NA	NA
Free Ammonical Nitrogen as N	3827.36	0	0	NA	NA
Nitrate Nitrogen as N	3827.36	15.2	0	NA	NA
Cynide as Cn	3827.36	0	0	NA	NA
Vanadium as V	3827.36	0	0	NA	NA
Arsenic as As	3827.36	0	0	NA	NA
Phosphates as P	3827.36	4.7	0	NA	NA
Oil & grease	3827.36	0	0	NA	NA

Suspended solids	3827.36	33.5	0	NA	NA
Flourides as F	3827.36	0.4	0	NA	NA
Hexavalent Chromium as Cr	3827.36	0	0	NA	NA
Total Chromium as Cr	3827.36	0	0	NA	NA
Total residual chlorine (as Cl2)	3827.36	0.1	0	NA	NA
BOD	3827.36	9.6	0	NA	NA
Total dissolved solids	3827.36	1146.5	0	NA	NA
Total Kjeldhal Nitrogen as N	3827.36	42.6	0	NA	NA

### [B] Air (Stack)

<b>Pollutants Detail</b>	<b>Quantity of Pollutants discharged (kL/day)</b>	<b>Concentration of Pollutants discharged(Mg/NM3)</b>	<b>Percentage of variation from prescribed standards with reasons</b>	<b>Standard</b>	<b>Reason</b>
	<b>Quantity</b>	<b>Concentration</b>	<b>%variation</b>		
UREA ( PM emission )	50000	22.9	0	NA	NA
SPM/TPM ( ANP )	28500	0	0	NA	NA
SO2 Boiler	32400	0	0	NA	NA
SO2 ( Sulphuric acid Plant )in ppm	24877	179	0	NA	NA
Acid Mist ( Sulphuric acid Plant )	24877	6.2	0	NA	NA
Fluorine ( Suphala ) in ppm	40000	6.1	0	NA	NA
MP.Nitric Acid ( NOx) in ppm	140000	24	0	NA	NA
Ammonia ( Urea Vent Stack )	4000	27.66	0	NA	NA
Ammonia (Suphala )	40000	15.31	0	NA	NA
HP.Nitric Acid ( NOx) in ppm	51000	22	0	NA	NA
Dust from ( Suphala plant )	40000	28.10	0	NA	NA

## Part-D

### HAZARDOUS WASTES

#### 1) From Process

<b>Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
5.1 Used or spent oil	99.40	43.42	MT/A
18.1 Spent catalyst	0	0	MT/A
17.1 Process acidic residue, filter cake, dust	19.38	10	MT/A

#### 2) From Pollution Control Facilities

<b>Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
35.3 Chemical sludge from waste water treatment	2510.62	2101.21	MT/A

## Part-E

### SOLID WASTES

#### 1) From Process

<b>Non Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
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Chalk	343	4506.06	MT/A
Gypsum	87143.96	69743.09	MT/A

### 2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
Metal Waste Sold	457.79	498.89	MT/A
Non metal waste sold	497.68	560.28	MT/A

### 3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
17.1 Process acidic residue, filter cake, dust	10.25	10	MT/A
35.3 Chemical sludge from waste water treatment	1149.87	2101.21	MT/A

## 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.**

### 1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
35.3 Chemical sludge from waste water treatment	2760.75	MT/A	A Typical analysis of Sludge from Effluent Treatment Plant , Constituents Value , % w/w . 1) Moisture Content- 54.21, 2) Total P2O5-33.12 ,3)Water soluble P2O5-0.52, 4)CO2- 5.11, 5)Acid Insoluble- 3.9

### 2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
CHALK	0	MT/A	The typical analysis of solid waste, Chalk (Calcium Carbonate) is as given below: Constituents Value , % w/w 1)Free moisture Content:- 23.43, Dry basis analysis 1)Calcium carbonate as CaCO3 :-97.26 ,
GYPSUM	0	MT/A	The typical analysis of Solid Waste, Gypsum (Calcium Sulphate) is as given below: Constituents Value , % w/w 1) Free Moisture 21.56. Analysis on Dry Basis 2) Total P2O5: 0.16, 3) W.S.P2O5: 0.07, 4) Si

## Part-G

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

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
AMMONIA- V : Primary Reformer catalyst and tubes replaced. LT Main catalyst & LT Guard catalyst replaced .Steam savings: 4 T/hr	0	0	4000	0	963.625	2154.00
ANP: NH3 Evaporator modification and commissioning. Steam saving:1T/hr.	0	0	1000	0	8.0	376.00

SGP : Standby line of Makeup water to GT-HRSG from SGP Boiler-3 LP Heater outlet installed.	0	0	0	48.3	2.5	35.00
UREA : Reuse of HP Ammonia Pump FFL Oil (Enklo 220) after Oil filtration. Saving of 3960 Liters of oil through oil filtration	0	3.960	0	0	0.17	6.00
UREA: Installation of Motor Actuated Ball Valve for Fire Hydrant/Monitor (2nos.) installed at LP Steam Vent area in Urea Plant. Will To increase the response time and for possibility of remotely opera	0	0	0	0	2.0	0
STP/ETP: VFD's for BPCL supply pumps installed .Energy saving of 537KWh/Day	0	0	0	537	9.4	17.88
STP/ETP : Line from permeate water header to CIP tank in STP-2 installed. Saving of production loss of 4716M3/Annum of water.	4716	0	0	0	0.10	1.56
Nitric Acid Group: Hook up of 40 ata vent silencer. Avoiding noise pollution.	0	0	0	0	4.13	0
AMMONIA-I : Re-vaccumation of cold converters (liquid nitrogen storage tank). Saving of liquid nitrogen of approx. 3.5 MT/day	0	0	3500	0	15.0	94.50
P H S : Steam traps in RCF Trombay unit replaced resulting in reduction of steam losses. Steam saving:1T/hr.	0	0	1000	0	159.17	376
ELECTRICAL WORKSHOP : 20 Nos. of smart energy saving device for Air Conditioners in plant premises area installed. 25,550 KWH saving per year	0	0	0	25550	1.30	2.36
ELECTRICAL WORKSHOP 5 Nos. of 60 W All in one integrated LED solar street light fitting installed. 22190 KWH saving per year	0	0	0	22190	2.95	2.00
ELECTRICAL WORKSHOP 50 Nos. old Hitachi make split AC with Ductable AC replaced. 31,26,144 KWH saving per year .31,26,144 KWH saving per year.	0	0	0	3126144	36.16	11.66
ELECTRICAL WORKSHOP 20 Nos. conventional lighting timers replaced by smart lighting timer. 414,904 KWH saving per year.	0	0	0	414904	1.534	1.37

## Part-H

***Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.***  
***[A] Investment made during the period of Environmental Statement***

**Detail of measures for Environmental Protection**

Waste disposal & treatment cost (includes ETP /STP sludge & Sulphur sludge disposal cost.)

Cost for air emissions Maintenance of Air & Stack monitoring Instruments (Stack monitoring, filters, agents etc.)

External Party monitoring for Environment Parameters in and around the Factory.

Operation and Maintenance, material and services, and related personnel costs for running ETP , Old STP and New STP (Trombay Unit) for 2022-23 is

Cost for Recycling of Plastic Waste as per PWM 2016 as Brand Owner

Cost for Maintenance of ISO Standards & Certificates in RCF, Trombays IMS training IMS External Audit

Cost for Maintenance of Real Time Display Board

**Environmental Protection Measures**

Recycling of Hazardous Waste

Maintenance of Monitoring Equipments

Monitoring of Various Parameters by MoEFCC approved party

Operation and Maintenance ETP, Old STP and New STP

CAs per the Plastic Waste Management Rule 2016

IMS Awareness & Audits from External Accrediated Parties for ISO Standards training & Display Board

Display Board for Displaying Real Time Environment Data for Public Display

**Capital Investment (Lacks)**

87.72

10.96

2.48

9505.32

13.43

0.60

0.43

**[B] Investment Proposed for next Year****Detail of measures for Environmental Protection**

Waste disposal & treatment cost (includes ETP /STP sludge & Sulphur sludge disposal cost.)

Cost for air emissions Maintenance of Air & Stack monitoring Instruments (Stack monitoring, filters, agents etc.)

External Party monitoring, IMS training & Display Board

Operation and Maintenance, material and services, and related personnel costs for running ETP , Old STP and New STP (Trombay Unit) for 2023-24 is

Cost for Recycling of Plastic Waste as per PWM 2016 as Brand Owner

Cost for Maintenance of ISO Standards & Certificates in RCF, Trombays IMS training IMS External Audit

Cost for Maintenance of Real Time Display Board

**Environmental Protection Measures**

Recycling of Hazardous Waste

Maintenance of Monitoring Equipments

Monitoring of Various Parameters by MoEFCC approved party

Operation and Maintenance ETP, Old STP and New STP

CAs per the Plastic Waste Management Rule 2016

IMS Awareness & Audits from External Accrediated Parties for ISO Standards training & Display Board

Displaying Real Time Environment Data for Public Display

**Capital Investment (Lacks)**

55.00

7.00

4.00

8000.00

60.00

3.5

1.0

**Part-I****Any other particulars for improving the quality of the environment.****Particulars**

As per Increase in Urea Demand and due to Shortage of Urea Production in India. India Govt has to import Urea from other Countries. In view of the national vision of "Atmanirbhar Bharat" and to meet the growing domestic demand, RCF came forward to help in this Cause to Install a New Nano Urea Fertilizer project . • Public Hearing : In view of above projects, Public hearing was conducted by MPCB on 2nd March 2023 at RCF Trombay Unit. RCF Trombay unit is registered with CPCB for Plastic Waste

**Name & Designation**

Anil Kumar Shrivastav , Executive Director , RCF Ltd., Trombay Unit

**UAN No:**

MPCB-ENVIRONMENT\_STATEMENT-0000057636

**Submitted On:**

14-09-2023