



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2024

Unique Application Number

MPCB-ENVIRONMENT_STATEMENT-0000070071

Submitted Date

17-09-2024

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

Vikram Jawale

Designation

Executive Director (Trombay)

Telephone Number

9820994737

Fax Number

0222552231

Email

ed_tr@rcfltd.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 14 2023 12:00:00:000AM

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

Product Information

Product Name

AMMONIA

Consent Quantity

465000

Actual Quantity

447902

UOM

MT/A

UREA

483600

335363

MT/A

COMPLEX FERTILIZERS (SUPHALA + ANP)

855600

577400

MT/A

BIOLA

1200

101.300

MT/A

MICROLA

1200

316.611

MT/A

SUJALA (19:19:19) / (DRIP/FOILER)	22200	3068	MT/A
Methanol	69960	0	MT/A
METHYLAMINE	5242	0	MT/A
Ammonium Bicarbonate	25000	24627	MT/A
Sodium Nitrite/Nitrate	5230	0	MT/A
Sulphuric acid	111600	74456	MT/A
Nitric acid (100% basis)	398040	388020	MT/A
Conc. Nitric Acid	27000	21436	MT/A
Phosphoric acid	37200	0	MT/A
Treated water from STP	9864000	8152815	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	177086.049	MT/A
Grid Synchronised Solar PV Power Plant	2	2316.087	Mwh
GTG Power Generation	64	106235	Mwh

By-product Information

By Product Name	Consent Quantity	Actual Quantity	UOM
ARGON	7198	3030	MT/A

Part-B (Water & Raw Material Consumption)

1) Water Consumption in m3/day

Water Consumption for Process	Consent Quantity in m3/day	Actual Quantity in m3/day
Cooling	19465.00	8535.44
Domestic	4505.00	1302.52
All others	0.00	0.00
Total	34165.00	18947.26

2) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
WATER GETS POLLUTED AND POLLUTED	13088	2682.03	CMD

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

Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
AMMONIA (Treated Water)	1411746	1421483	M3/Anum
METHANOL (Treated Water)	13458	0	M3/Anum
Sulphuric Acid (Treated Water)	67960	78620	M3/Anum
Nitric Acid (Treated Water)	332074	323514	M3/Anum
Phosphoric Acid	0	0	M3/Anum
Urea (Treated Water)	11670	20228	M3/Anum

Complex fertilizers	0	0	M3/Anum
Conc Nitric Acid (DM Water)	1131	1274	M3/Anum
Ammoniam Bi Carbonate	44032	44725	M3/Anum
Sodium Nitrate/Nitrite	0	0	M3/Anum
Grid Syncorinized Solar PV Power Plant	93	100	M3/Anum
Ammoniam Nitrate (AN) Plant	0	0	M3/Anum
Drinking Water (BMC)	220265	218962	M3/Anum

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

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
Rock phosphate	166433.10	116166.875	MT/A
MAP	96109.00	116736.310	MT/A
DAP	27218.460	348.086	MT/A
KCL	169297	148670	MT/A
SULPHUR	22785.144	24278.77	MT/A
NEEM OIL	151318	127730.000	Ltr/A
AMMONIA	442047.048	442047.048	MT/A
Soda Ash	299.450	0	MT/A
Caustic Soda Lye	0	0	MT/A
Natural Gas (as feed)	206230.642	198254.639	MT/A

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
NATURAL GAS	214941	168455.713	MT/A
DIESEL	187.434	110.551	MT/A

Part-C

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

[A] Water

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons	Standard	Reason
	Quantity	Concentration	%variation		
pH	2682.03	7.4	0	NA	NA
Ammonical Nitrogen as N	2682.03	21.4	0	NA	NA
Free Ammonical Nitrogen as N	2682.03	0	0	NA	NA
Nitrate Nitrogen as N	2682.03	15.2	0	NA	NA
Cynide as Cn	2682.03	0	0	NA	NA
Vanadium as V	2682.03	0	0	NA	NA
Arsenic as As	2682.03	0	0	NA	NA
Phosphates as P	2682.03	4.5	0	NA	NA
Oil & grease	2682.03	0	0	NA	NA

Suspended solids	2682.03	32.7	0	NA	NA
Flourides as F	2682.03	0.5	0	NA	NA
Hexavalent Chromium as Cr	2682.03	0	0	NA	NA
Total Chromium as Cr	2682.03	0	0	NA	NA
Total residual chlorine (as Cl2)	2682.03	0.2	0	NA	NA
BOD	2682.03	8.5	0	NA	NA
Total dissolved solids	2682.03	1083.5	0	NA	NA
Total Kjeldhal Nitrogen as N	2682.03	39.7	0	NA	NA

[B] Air (Stack)

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/NM3)	Percentage of variation from prescribed standards with reasons	Standard	Reason
	Quantity	Concentration	%variation		
UREA (PM emission)	50000	18.5	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	110.75	0	NA	NA
Acid Mist (Sulphuric acid Plant)	24877	6.36	0	NA	NA
Fluorine (Suphala) in ppm	40000	6.5	0	NA	NA
MP.Nitric Acid (NOx) in ppm	140000	26.83	0	NA	NA
Ammonia (Urea Vent Stack)	4000	39.38	0	NA	NA
Ammonia (Suphala)	40000	65.08	0	NA	NA
HP.Nitric Acid (NOx) in ppm	51000	14.66	0	NA	NA
Dust from (Suphala plant)	40000	29.84	0	NA	NA

Part-D

HAZARDOUS WASTES

1) From Process

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
5.1 Used or spent oil	43.42	99.2	MT/A
18.1 Spent catalyst	0	219.76	MT/A
17.1 Process acidic residue, filter cake, dust	10	30.997	MT/A

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
35.3 Chemical sludge from waste water treatment	2101.21	3829.54	MT/A

Part-E

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
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Chalk (Sale)	4506.06	2414.180	MT/A
Gypsum (Sale)	69743.09	16826.670	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	498.89	876.29	MT/A
Non metal waste sold	560.28	629.86	MT/A
Plastic Waste Disposed as per PWM 2016 Rules	2670	3600	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	23.500	MT/A
35.3 Chemical sludge from waste water treatment	2101.21	3649.65	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	3829.54	MT/A	A Typical analysis of Sludge from Effluent Treatment Plant , Constituents Value , % w/w . 1) Moisture Content- 48.28, 2) Total P2O5-32.19 ,3)Water soluble P2O5-0.49, 4)CO2- 3.19, 5)Acid Insoluble- 4.0

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:- 22.53, Dry basis analysis 1)Calcium carbonate as CaCO3 :-97.36 ,
GYPSUM	0	MT/A	The typical analysis of Solid Waste, Gypsum (Calcium Sulphate) is as given below: Constituents Value , % w/w 1) Free Moisture 18.95. Analysis on Dry Basis 2) Total P2O5: 0.13, 3) W.S.P2O5: 0.06, 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 : Replacement of two CT Cell Fan with energy efficient blades in Ammonia-V plant Energy Saving Electricity of 17 KWH .	0	0	0	17	10	20.24

SAP: 0.6 MT/Day Reduction in steam consumption achieved by Installing Horizontal pump for Molten sulphur unloading from Tanker to Clean Sulphur Tank.Saving of Rs. 9.636 Lakhs/annum	0	0	600	0	5.0	9.6
SGP : Dry instrument air connection given to GT-HRSG plant.. One compressor of GT section stopped . Savings: Rs.24.32 lakhs/annum	0	0	0	37	3.5	24.32
UREA : Old Steam Traps replaced with New Steam Traps in Urea plant. (Total 47 nos). Steam Savings - 46 kg/hr.	0	0	46	0	1.16931	20.71
UREA: Spent oil generated from HP Ammonia Pumps Sealing unit reused.Reduction in Fresh Oil (Enklo 220) Consumption - 18 drums / year	0	0.010	0	0	0.17306	4.44
STP/ETP: Installation of two nos. of VFD at GPS Sewage Transfer pump. Energy Saving 380 KWH/Day	0	0	0	380	10	15.89
STP/ETP :Replacement of 11kV switchgear without taking shutdown for 10 days resulted in saving of 100,000M3 of water. Otherwise this quantity of water needs to be drawn from BMC.	1000	0	0	0	0.10	102
STP/ETP :Control valve on flushing tank water inlet line installed. Overflow of 75M3/dayr. of water is completely stopped. Results in saving of 27,375M3/year of water.	75	0	0	0	0.50	7.20
GTG/HRSG : GTG-2 Exhaust Expansion bellow replaced..Gas savings: 720 Nm3/day.	0	0	720	0	4.5	85.53
Ammonia-I : Feed to fuel let down provided in Ammonia-I to avoid one shutdown and startup of Ammonia-I Plant: Startup shutdown cost of Ammonia-I during factory fuel header jobs avoided. Energy savings	0	0	0	0	1.0	108
ELECTRICAL WORKSHOP : 20 Nos. conventional lighting timers replaced with Astro based smart lighting timer for entire Street Light & High mast Tower lights of Trombay Complex.. Saving of approx. 14904	0	0	0	14904	1.632	1.24
ELECTRICAL WORKSHOP 40 Nos HPSV 250W highbay light fitting replaced with 100 W LED Highbay Light Fittings in RCF Central Store areas..Saving 14400 KWH	0	0	0	14440	0.9624	1.2

TS Dept : Reduced auto startup Set point of IAC in Ammonia-I. Saving of electrical energy to the tune of 66 MWH. Savings: Rs. 5.5 Lakhs/annum	0	0	0	0.66	0	5.55
Suphala Plant : Installation of additional new HE606 ventury scrubber with the capacity of 1,00,000 m3/hr.. Improved the reliability and capacity of reaction scrubbing system. Stack ammonia and Nox em	0	0	6000	0	20	245

Part-H

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

[A] Investment made during the period of Environmental Statement

<i>Detail of measures for Environmental Protection</i>	<i>Environmental Protection Measures</i>	<i>Capital Investment (Lacks)</i>
Waste disposal & treatment cost (includes ETP /STP sludge & Sulphur sludge disposal cost.)	Recycling of Hazardous Waste	90.62
Cost for air emissions Maintenance of Air & Stack monitoring Instruments (Wireless , Stack monitoring, filters, agents etc.)	Maintenance of Monitoring Equipments	38.49
External Party monitoring for Environment Parameters in and around the Factory.	Monitoring of Various Parameters by MoEFCC approved party	2.79
Operation and Maintenance, material and services, and related personnel costs for running ETP , Old STP and New STP (Trombay Unit) for 2022-23 is	Operation and Maintenance ETP, Old STP and New STP	9207.62
Cost for Recycling of Plastic Waste as per PWM 2016 as Brand Owner	CAs per the Plastic Waste Management Rule 2016	54.64
Cost for Maintenance of ISO Standards & Certificates in RCF, Trombays IMS training IMS External Audit	IMS Awareness & Audits from External Accrediated Parties for ISO Standards training & Display Board	0.60
Cost for Maintenance of Real Time Display Board	Display Board for Displaying Real Time Environment Data for Public Display	1.59

[B] Investment Proposed for next Year

<i>Detail of measures for Environmental Protection</i>	<i>Environmental Protection Measures</i>	<i>Capital Investment (Lacks)</i>
Waste disposal & treatment cost (includes ETP /STP sludge & Sulphur sludge disposal cost.)	Recycling of Hazardous Waste	57.00
Cost for air emissions Maintenance of Air & Stack monitoring Instruments (Wireless ,Stack monitoring, filters, agents etc.)	Maintenance of Monitoring Equipments	25.00
External Party monitoring for Environment Parameters in and around the Factory.	Monitoring of Various Parameters by MoEFCC approved party	4.00
Operation and Maintenance, material and services, and related personnel costs for running ETP , Old STP and New STP (Trombay Unit) for 2023-24 is	Operation and Maintenance ETP, Old STP and New STP	9000.00
Cost for Recycling of Plastic Waste as per PWM 2016 as Brand Owner	CAs per the Plastic Waste Management Rule 2016	70.00
Cost for Maintenance of ISO Standards & Certificates in RCF, Trombays IMS training IMS External Audit	IMS Awareness & Audits from External Accrediated Parties for ISO Standards training & Display Board	1.25
Cost for Maintenance of Real Time Display Board	Displaying Real Time Environment Data for Public Display	1.65

Cost for Installation and Maintenance of Air pollution Mitigation equipment in Diamond Garden & Anna Bahu Sathe Garden at Chembur initiated by MPCB

Air Pollution Control Machine Installed as instructed by MPCB for Controlling Air Pollution around Designated Chembur Area for Public Display

40.0

Cost for Installation and Maintenance Energy Saving Scheme

Cost for Installation and Maintenance Energy Saving Scheme

8000.0

Part-I

Any other particulars for improving the quality of the environment.

Particulars

• • For Mitigation the issue of poor air quality in Mumbai city, RCF in collaboration with Govt. of Maharashtra, BMC and MPCB also took the initiative to help in reduction of Air Pollution in Mumbai City. As recommended by MPCB, two Air purification Units Costing Rs. 40 Lakhs from M/s. Amida Cleantech's have been installed at Sahityaratan Lokshahir Annabhau Sathe Udyan and Shri Narayan Gajanan Acharya Udyan popularly known as Diamond Garden. This shows the commitment of RCF, Trombay to keep the

Name & Designation

Vikram Jawale, Executive Director , RCF Ltd., Trombay Unit

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Submitted On:

17-09-2024