Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

Environmental Audit Report for the financial Year ending the 31st March 2019

Unique Application Number
MPCB-ENVIRONMENT_STATEMENT-0000019434

Submitted Date
24-09-2019

Company Information

Company Name
Deepak Fertilisers and Petrochemicals Corporation Limited

Application UAN number
0000023473

Address
Plot K-1 to K-8, MIDC Industrial Area, Taloja,

Plot no
Plot K-1 to K-8, MIDC Industrial Area,

Taluka
Panvel

Village
Pale Khurd

Capital Investment (In lakhs)
244628

Scale
Large

City
Panvel

Pincode
410208

Person Name
Deepak Pande

Designation
Senior General Manager - EHS

Telephone Number
02250684221

Fax Number
-

Email
deepak.pande@dfpcl.com

Region
SRO-Taloja

Industry Category
Red

Industry Type
R25 Basic chemicals and electro chemicals and its derivatives including manufacturing of acid

Last Environmental statement submitted online
yes

Consent Number
BO/CAC-Cell/UAN No. 0000013159/7thCAC/1702000537-A

Consent Issue Date
01-09-2017

Consent Valid Upto
30-09-2020

Product Information

Product Name	***Consent Quantity***	***Actual Quantity***	***UOM***
Ammonia	140400	63683	MT/A
Weak Nitric Acid (WNA)	445500	429557	MT/A
Methanol	99996	51199	MT/A
Concentrated Nitric Acid (CNA)	129600	129600	MT/A
Multiple grade NPK fertiliser	600000	507663	MT/A
"Tech. Gr. Ammonium Nitrate" plus Ammonium Nitrate Melt	444000	444000	MT/A
Liquid Carbon Dioxide (CO2)	72000	28392	MT/A
Iso Propyl Alcohol (IPA)	70200	62719	MT/A
Iso Propyl Alcohol (For drum filling operation)	15000	5819	MT/A
Di Iso Propyl Ether (DIPE for drum filling operation)	15000	2159	MT/A

Bentonite Sulphur Pastilles	25000	19484	MT/A

By-product Information

By Product Name	Consent Quantity	Actual Quantity	UOM
Propane	33000	9997	MT/A
Calcium Phosphate	210	150.5	MT/A
Crude DIPE	1440	0	MT/A
Hydrogen gas	960	51	MT/A
Crude IPA/NPA Mixture	1080	407.7	MT/A

1) Water Consumption in m3/day

Water Consumption for	Consent Quantity in m3/day	Actual Quantity in m3/day
Process	2358	1183
Cooling	18813	13760
Domestic	172	135
All others	0	0
Total	21355	15078

1) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Daily Qty of treated effluent (Plot K-1 & K-8 ETP) - Consented Quantity is including Sewage	4131.78	2910	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	7.6	7.6	Ton/Ton
Weak Nitric Acid (WNA)	2.64	2.64	Ton/Ton
Methanol	6.5	6.5	Ton/Ton
Concentrated Nitric Acid (CNA)	1.7	1.7	Ton/Ton
"Tech. Gr. Ammonium Nitrate" plus Ammonium Nitrate Melt	0.23	0.208	Ton/Ton
Multiple Grade NPK fertilizer	0.39	0.39	Ton/Ton
Liquid Carbon Dioxide (CO2)	0.68	0.68	Ton/Ton
Iso Propyl Alcohol (IPA)	13.16	13.16	Ton/Ton
Bentonite Sulphur pastilles	0.092	0.093	Ton/Ton

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
Natural gas for Ammonia (SM3/MT)	1010.58	1047	Ton/Ton
Natural gas for Methanol (SM3/MT)	844.3	860	Ton/Ton
Ammonia for WNA	0.291	0.291	Ton/Ton
WNA for CNA	0.995	0.997	Ton/Ton
RGP for IPA	0.974	0.964	Ton/Ton
Ammonia for "Tech. Gr. Ammonium Nitrate" plus Ammonium Nitrate Melt	0.216	0.216	Ton/Ton

WNA for "Tech. Gr. Ammonium Nitrate" plus Ammonium Nitrate Melt	0.801	0.800	Ton/Ton
Ammonia for Multiple grade NPK fertilizer	0.155	0.151	Ton/Ton
WNA for Multiple grade NPK fertilizer	0.155	0.174	Ton/Ton
Phosphoric Acid for Multiple grade NPK fertilizer	0.255	0.247	Ton/Ton
Sulphuric Acid for Multiple grade NPK fertilizer	0.053	0.050	Ton/Ton
Sulphur for Bentonite Sulphur pastilles	0.922	0.922	Ton/Ton
Bentonite for Bentonite Sulphur pastilles	0.096	0.096	Ton/Ton

4) Fuel Consumption

Fuel Name	***Consent quantity***	***Actual Quantity***	***UOM***
Natural Gas	182377.47	127667	MT/A
HSD (High Speed Diesel) at Plot K-1 & K-8	5110	45.64	KL/A

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***		
	Quantity	***Concentration***	***%variation***	***Standard***	***Reason***
pH	-	7.95	0	6.0 to 8.5	NA
Suspended Solids	140	48	0	100 ppm	NA
Biological Oxygen Demand (BOD)	68	23	0	100 ppm	NA
Chemical Oxygen Demand (COD)	200	69	0	250 ppm	NA
Oil & Grease	1.5	0.53	0	10 ppm	NA
Total Dissolved Solids (TDS)	4249	1460	0	2100 ppm	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***		
	Quantity	***Concentration***	***%variation***	***Standard***	***Reason***
1. Ammonia Primary Reformer (SO2)	4.97	1.9	0	-	NA
1. Ammonia Primary Reformer (NOx)	36.2	25	0	50 ppm	NA
1. Ammonia Primary Reformer (NH3)	0.25	30.4	0	50 ppm	NA
2. Boiler A/B (NOx)	13.6	11.4	0	50 ppm	NA
3. Methanol Primary Reformer (NOx)	4.8	3.3	0	50 ppm	NA
4. CNA Plant (NOx)	0.03	8.03	0	50 ppm	NA
5. WNA-1 Plant (NOx)	-	0.0012	0	3 Kg/MT of WNA	NA
6. WNA-II Plant (NOx)	-	0.0013	0	3 Kg/MT of WNA	NA
7. WNA-III Plant (NOx)	-	0.0005	0	3 Kg/MT of WNA	NA
8. WNA-IV Plant (NOx)	-	0.0007	0	3 Kg/MT of WNA	NA
9. ANP Prilling Tower (TPM)	68.9	18.3	0	150 mg/NM3	NA
9. ANP Prilling Tower (NOx)	117	16.7	0	50 ppm	NA

9. ANP Prilling Tower (NH3)	0.330	21.5	0	50 ppm	NA
10. LDAN Prilling Tower (TPM)	94.5	24.7	0	100 mg/NM3	NA
10. LDAN Prilling Tower (NOx)	111	15.9	0	50 ppm	NA
10. LDAN Prilling Tower (NH3)	0.259	16.9	0	50 ppm	NA
15. Boiler D (NOx)	8.2	8.0	0	50 ppm	NA
15. Boiler - D (SO2)	0	0	0	-	NA
16. CES-A Engine Exhaust Boiler (NOx)	36.1	23.9	0	50 ppm	NA
16. CES-A Engine Exhaust Boiler (SO2)	0	0	0	-	NA
17. CES-B Engine Exhaust Boiler (NOx)	28.3	17.5	0	50 ppm	NA
17. CES-B Engine Exhaust Boiler (SO2)	0	0	0	-	NA
21 & 22 HRSG-1 (NOx)	21.2	12.2	0	50 ppm	NA
21 & 22 HRSG-1 (SO2)	0	0	0	-	NA
23 & 24 HRSG-2 (NOx)	23.8	12.9	0	50 ppm	NA
23 & 24 HRSG-2 (SO2)	0	0	0	-	NA
25 & 26 HRSG-3 (NOx)	26.3	15	0	50 ppm	NA
25 & 26 HRSG-3 (SOx)	0	0	0	-	NA
27 & 28 HRSG-4 (NOx)	-	-	0	50 ppm	NA
27 & 28 HRSG-4 (SOx)	-	-	0	-	NA
29 & 30 HRSG-5 (NOx)	25.8	12.7	0	50 ppm	NA
29 & 30 HRSG-5 (SOx)	0	0	0	-	NA
32. 780 Weak Nitric Acid Plant (NOx-Kg/MT of WNA)	0.00014	-	0	3 Kg/MT of WNA	NA
32. 780 Weak Nitric Acid Plant(NH3 Kg/Hr)	0.68	17.4	0	3 Kg/Hr	NA
33. 600 TPD LDAN Prilling Tower (TPM)	50.2	26.2	0	100 mg/NM3	NA
33. 600 TPD LDAN Prilling Tower (NOx)	87.4	18.7	0	50 ppm	NA
33. 600 TPD LDAN Prilling Tower (NH3)	28.1	21.1	0	50 ppm	NA
34. 300 TPD HDAN Scrubber (TPM)	20.2	12.3	0	100 mg/ Nm3	NA
34. 300 TPD HDAN Scrubber (NOx)	49.2	16	0	50 ppm	NA
34. 300 TPD HDAN Scrubber (NH3)	16.4	14.4	0	50 ppm	NA
35. 300 TPD HDAN Prilling Tower (TPM)	18.4	11.5	0	100 mg/Nm3	NA
35. 300 TPD HDAN Prilling Tower (NOx)	54	17.9	0	50 ppm	NA
35. 300 TPD HDAN Prilling Tower (NH3)	21	18.8	0	50 ppm	NA
36 & 37. 40 & 15 TPH Boiler (SOx)	0	0	0	-	NA
36 & 37. 40 & 15 TPH Boiler (NOx)	114.1	33.9	0	50 ppm	NA
38. Pastillator (TPM)	0.1	11	0	100 mg/Nm3	NA
38. Pastillator (SOx)	0.2	6	0	50 ppm	NA
39. Batch and feed Tank (TPM)	0.04	11	0	100 mg/Nm3	NA
39. Batch and feed Tank (SOx)	0.23	8.2	0	-	NA
46. NPK Process Stacks - 02 Nos) (TP M)	61	9.8	0	150 mg/Nm3	NA
46. NPK Process Stacks - 02 Nos) (NOx)	144	12.3	0	50 ppm	NA

46. NPK Process Stacks - 02 Nos) (NH3)	0.15	8.5	0	50 ppm	NA

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	84.8	45.55	KL/A
5.2 Wastes or residues containing oil	0.208	0.07	MT/A
18.1 Spent catalyst	13.77	32.67	MT/A
33.1 Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	54	30	Nos./Y
35.3 Chemical sludge from waste water treatment	308.32	382.85	MT/A
5.2 Wastes or residues containing oil	0	44	Nos./Y

2) From Pollution Control Facilities

Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/A

SOLID WASTES

1) From Process

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
Ash due to coal and lime treatment	3624.81	3431.65	MT/A

2) From Pollution Control Facilities

Non Hazardous Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
NA	0	0	MT/A

3) Quantity Recycled or Re-utilized within the unit

Waste Type	Total During Previous Financial year	Total During Current Financial year	UOM
0	0	0	MT/A

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
5.1 Used or spent oil	45.55	KL/A	NA
5.2 Wastes or residues containing oil	0.07	MT/A	NA
18.1 Spent catalyst	32.67	MT/A	NA
33.1 Empty barrels/containers/liners contaminated with hazardous chemicals /wastes	30	Nos./Y	NA
35.3 Chemical sludge from waste water treatment	382.85	MT/A	NA
5.2 Wastes or residues containing oil	44	Nos./Y	NA

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
Ash due to coal and lime treatment	3431.65	MT/A	NA

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)
RO plant	600	NA	NA	NA	1300	NA

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	Environmental Protection Measures	Capital Investment (Lacks)
Plantation of 41770 Saplings for Green Belt Development on MIDC road,inside plant and degraded forest land	Tree Plantation	20.68
AMC for Online Emission & Effluent Quality Monitoring System	Operating AMC Cost for Continuous Monitoring of Emission & Effluent Quality Parameters.	3.90
Online real time monitoring system up gradation	Online monitoring of pollutants	1300
Positive Discharge of treated effluent from ETP to MIDC chamber.	Prevention of groundwater pollution	100

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
Plantation of 1200 Saplings in the premises & MIDC	Tree Plantation	9.0
Pilot plant trial of AN recovery using heat pump technology.	Recovery of polluting chemical at source.	11
Provision of cartridge filter at ETP.	Improve quality of treated effluent.	2

Any other particulars in respect of environmental protection and abatement of pollution.

Particulars

NA

Name & Designation

Deepak Pande - Senior General Manager (EHS)