



Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

FORM V

Environmental Audit Report for the financial Year ending the 31st March 2016

Company Information

Company Name

Deepak Fertilisers and Petrochemicals Corporation Limited

Application UAN number

MPCB-CONSENT-0000009758

Address

MIDC Industrial Area, Talaja

Plot no

Plot K-1 to K-8

Taluka

Panvel

Village

Talaja

Capital Investment (In lakhs)

193040.42

Scale

Large Scale

City

Talaja

Pincode

410208

Person Name

Shripad Jagannath Lele

Designation

Associate Vice President - EHS

Telephone Number

787555951

Fax Number

022-2741 2413

Email

shripad.lele@dfpcl.com

Region

SRO-Navi Mumbai II

Industry Category

Red

Industry Type

Chemicals

Last Environmental statement submitted online

yes

Consent Number

Format 1.0/BO/CAC-Cell/EIC NO.NM- 5331-14/22nd CAC/692

Consent Issue Date

21.01.2015

Consent Valid Upto

31.08.2016

Product Information

Product Name	Consent Quantity	Actual Quantity	UOM
Ammonia	140400	106074	MT/A
Weak Nitric Acid (WNA)	445500	335292	MT/A
Methanol	99996	0	MT/A
Concentrated Nitric Acid (CNA)	129600	105064	MT/A
LDAN + Ammonium Nitrate melt	144000	109763	MT/A
Ammonium Nitrate Phosphate (ANP)	324900	159549	MT/A
Liquid Carbon Dioxide	72000	33452	MT/A
Iso Propyl Alcohol (IPA)	70200	59022	MT/A
IPA (For drum filling operation)	15000	12155	MT/A
DIPE (for drum filling operation)	15000	2729	MT/A
Bentonite Sulphur Pastilles	25000	14543	MT/A
Ammonium Nitrate Prills (Low Density)	200000	128420	MT/A
Ammonium Nitrate Prills (High Density)	100000	99904	MT/A

By-product Information

By Product Name	Consent Quantity	Actual Quantity	UOM
Propane	33000	13858	MT/A
Calcium Phosphate	210	141	MT/A
Hydrogen gas	960	258	MT/A

1) Water Consumption in m3/day

Water Consumption for Process	Consent Quantity in m3/day	Actual Quantity in m3/day
Cooling	18813	9104
Domestic	172	102
All others	0	0
Total	21355	10724

1) Effluent Generation in CMD / MLD

Particulars	Consent Quantity	Actual Quantity	UOM
Daily Qty of treated effluent.(Plot K-1 and K-8 ETP) - Consented quantity is including domestic sewage.	4031.58	2172	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	6.221	7.103	Ton/Ton
Weak Nitric Acid (WNA)	3.007	2.787	Ton/Ton
Methanol	3.9	0	Ton/Ton
Concentrated Nitric Acid (CNA)	1.479	1.504	Ton/Ton
LDAN + Ammonium Nitrate melt	0.220	0.215	Ton/Ton
Ammonium Nitrate Phosphate (ANP)	0.074	0.154	Ton/Ton
Liquid Carbon Dioxide	1.218	1.212	Ton/Ton
Iso Propyl Alcohol (IPA)	11.749	12.683	Ton/Ton
Bentonite Sulphur Pastilles	0	0	Ton/Ton
Ammonium Nitrate at Plot K-7 (HDAN)	0.19	0.15	Ton/Ton
Ammonium Nitrate at Plot K-8 (LDAN)	0.12	0.12	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)	1019.048	1032.168	Ton/Ton
Natural gas for Methanol (SM3/MT)	854.852	0	Ton/Ton
Ammonia for WNA	0.292	0.291	Ton/Ton
WNA for CNA	1.000	0.994	Ton/Ton
RGP for IPA	1.174	1.221	Ton/Ton
Ammonia for LDAN	0.216	0.216	Ton/Ton
WNA for LDAN	0.806	0.800	Ton/Ton

Ammonia for ANP	0.190	0.191	Ton/Ton
WNA for ANP	0.431	0.421	Ton/Ton
Phosphoric acid for ANP	0.240	0.243	Ton/Ton
Sulphuric acid for ANP	0.058	0.060	Ton/Ton
Sulphur for Bentonite Sulphur Pastilles	0.922	0.922	Ton/Ton
Bentonite for Bentonite Sulphur Pastilles	0.097	0.095	Ton/Ton
Liquid Ammonia for Ammonium Nitrate Prills	0.217	0.217	Ton/Ton
Weak Nitric Acid for Ammonium Nitrate Prills	0.804	0.802	Ton/Ton
Additive for Ammonium Nitrate Prills (LDAN)	0.395	0.477	Ton/Ton
Coating Agent for Ammonium Nitrate Prills (LDAN)	0.008	0.001	Ton/Ton

4) Fuel Consumption

Fuel Name	Consent quantity	Actual Quantity	UOM
Natural Gas	15191	12269	MT/A
Natural Gas Through Pipeline	50280000	47003106	MT/A
HSD (High Speed Diesel) at Plot K-1 and K-8	2190	9.04	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	Standard	Reason
	Quantity	Concentration	%variation		
pH	7.45	7.41	0	6.0 to 8.5	NA
Suspended Solids	63.3	29.41	0	100 ppm	NA
BOD	55.09	25.36	0	100 ppm	NA
COD	196.23	90.34	0	250 ppm	NA
Oil & Grease	2.31	1.06	0	10 ppm	NA
TDS	2584.37	1189.86	0	2100 ppm	NA
Ammonical Nitrogen	26.84	12.36	0	50 ppm	NA
Dissolved phosphate	7.92	3.65	0	5 ppm	NA
Total Kj Nitrogen	30.97	14.26	0	100 ppm	NA
Nitrate Nitrogen	11.15	5.13	0	10 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	Standard	Reason
	Quantity	Concentration	%variation		
1. Ammonia Primary Reformer (SO2)	15.44	8.77	0	100 ppm	NA
1. Ammonia Primary Reformer (NOx)	12.16	10.23	0	50 ppm	NA
1. Ammonia Primary Reformer (NH3)	0.373	24.37	0	50 ppm	NA
2. Boiler A/B (NOx)	5.23	12.65	0	50 ppm	NA
3. Methanol Primary Reformer (NOx)	0	0	0	50 ppm	NA

4. CNA Plant (NOx)	11.79	2.33	0	50 ppm	NA
5. WNA-1 Plant (NOx)	0.00165	0.5403	0	3 Kg/MT of WNA	NA
6. WNA-II Plant (NOx)	0.0162	5.31	0	3 Kg/MT of WNA	NA
7. WNA-III Plant (NOx)	0.0015	0.490	0	3 Kg/MT of WNA	NA
8. WNA-IV Plant (NOx)	0.0112	5.53	0	3 Kg/MT of WNA	NA
9. ANP Prilling Tower (TPM)	132.57	34.46	0	150 mg/Nm3	NA
9. ANP Prilling Tower (NOx)	100.447	13.7	0	50 ppm	NA
9. ANP Prilling Tower (NH3)	0.512	33.47	0	50 ppm	NA
10. LDAN Prilling Tower (TPM)	74.06	30.25	0	150 mg/Nm3	NA
10. LDAN Prilling Tower (NOx)	55.66	12.12	0	50 ppm	NA
10. LDAN Prilling Tower (NH3)	0.58	37.97	0	50 ppm	NA
11. ANP Cyclone Separator (TPM)	57.77	42.17	0	150 mg/Nm3	NA
11. ANP Cyclone Separator (NOx)	17.85	7.00	0	50 ppm	NA
11. ANP Cyclone Separator (NH3)	0.462	30.17	0	50 ppm	NA
12. ANP Vacuum Pump (TPM)	0.15	23.5	0	150 mg/Nm3	NA
12. ANP Vacuum Pump (NOx)	0.09	7.53	0	50 ppm	NA
12. ANP Vacuum Pump (NH3)	0.525	34.3	0	50 ppm	NA
13. LDAN Venturi Scrubber (TPM)	47.63	37.88	0	150 mg/Nm3	NA
13. LDAN Venturi Scrubber (NOx)	18.21	8.35	0	50 ppm	NA
13. LDAN Venturi Scrubber (NH3)	0.472	30.83	0	50 ppm	NA
14. Boiler - C (NOx)	7.87	13.3	0	50 ppm	NA
15. Boiler D (NOx)	5.72	8.62	0	50 ppm	NA
15. Boiler - D (SO2)	0	0	0	100 ppm	NA
16. CES-A Engine Exhaust Boiler (NOx)	13.75	9.55	0	50 ppm	NA
16. CES-A Engine Exhaust Boiler (SO2)	0	0	0	100 ppm	NA
17. CES-B Engine Exhaust Boiler (NOx)	13.23	9.13	0	50 ppm	NA
17. CES-B Engine Exhaust Boiler (SO2)	0	0	0	100 ppm	NA
18. CO2 Liquifier (CO2)	0.18	21.75	0	100 ppm	NA
19. CO2 Stripper (CO2)	0.21	24.67	0	100 ppm	NA
20. CO2 Combined (CO2)	0.16	19.02	0	100 ppm	NA
21 & 22 HRSG-1 (NOx)	5.13	8.39	0	50 ppm	NA
21 & 22 HRSG-1 (SO2)	0	0	0	100 ppm	NA
23 & 24 HRSG-2 (NOx)	5.57	7.6	0	50 ppm	NA
23 & 24 HRSG-2 (SO2)	0	0	0	100 ppm	NA
25. G P Vent (TPM)	3.14	33.95	0	150 mg/Nm3	NA
25. G P Vent (NOx)	1.84	10.4	0	50 ppm	NA
26. 780 Weak Nitric Acid Plant(TPM)	0.35	14.8	0	150 mg/Nm3	NA
26. 780 Weak Nitric Acid Plant(NOx-Kg/MT of WNA)	0.00167	9.3	0	3 Kg/MT of WNA	NA
26. 780 Weak Nitric Acid Plant(NH3 Kg/Hr)	1.28	25.58	0	3 Kg/Hr	NA

27. 600 TPD LDAN Prilling Tower (TPM)	63.78	31.4	0	150 mg/Nm3	NA
27. 600 TPD LDAN Prilling Tower (NOx)	40.14	10.35	0	50 ppm	NA
27. 600 TPD LDAN Prilling Tower (NH3)	33.73	34.8	0	50 ppm	NA
28. 300 TPD HDAN Scrubber (TPM)	45.91	30	0	150 mg/Nm3	NA
28. 300 TPD HDAN Scrubber (NOx)	18.91	10.93	0	50 ppm	NA
28. 300 TPD HDAN Scrubber (NH3)	18.77	28.55	0	50 ppm	NA
29. 300 TPD HDAN Prilling Tower (TPM)	48.52	33.33	0	150 mg/Nm3	NA
29. 300 TPD HDAN Prilling Tower (NOx)	20.63	12.15	0	50 ppm	NA
29. 300 TPD HDAN Prilling Tower (NH3)	18.12	29.2	0	50 ppm	NA
30 & 31. 40 & 15 TPH Boiler (SOx)	0	0	0	100 ppm	NA
30 & 31. 40 & 15 TPH Boiler (NOx)	40.81	12.38	0	50 ppm	NA
32. Pastillator (TPM)	0.05	11.45	0	150 mg/Nm3	NA
32. Pastillator (SOx)	0.47	6.63	0	100 ppm	NA
33. Batch and feed Tank (TPM)	0.05	34.23	0	150 mg/Nm3	NA
33. Batch and feed Tank (SOx)	0.51	13.83	0	100 ppm	NA
34. DG Set (500 KVA x 2 Nos) Ammonia and WNA Plant (TPM)	0.81	61.53	0	150 mg/Nm3	NA
34. DG Set (500 KVA x 2 Nos) Ammonia and WNA Plant (NOx)	0.77	11.83	0	50 ppm	NA
35. DG Sets (1000 KVA x 2 Nos - Methanol and ANP Plant (TPM)	1.49	59.88	0	150 mg/Nm3	NA
35. DG Sets (1000 KVA x 2 Nos - Methanol and ANP Plant (NOx)	0.9	10.43	0	50 ppm	NA
36. DG Set - 200 KVA -IPA Plant (TPM)	0.65	57.4	0	150 mg/Nm3	NA
36. DG Set - 200 KVA -IPA Plant (NOx)	0.69	11.5	0	50 ppm	NA
37. DG Set - 1500 KVA (TPM)	0.17	54.53	0	150 mg/Nm3	NA
37. DG Set - 1500 KVA (NOx)	0.23	12.7	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 /spent oil	40.41	71.9	KL/A
5.2 Wastes/residue containing oil	0.13	0.173	MT/A
18.1 Spent catalyst	12.27	5.07	MT/A
31.1 Residues and wastes*	7.38	12.91	MT/A
33.3 Discarded containers / barrels / liner	0	21	Nos./Y
5.2 Wastes/residue containing oil	0	20	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
NA	0	0	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 /spent oil	71.9	KL/A	NA
5.2 Wastes/residue containing oil	0.173	MT/A	NA
18.1 Spent catalyst	5.07	MT/A	NA
31.1 Residues and wastes*	12.91	MT/A	NA
33.3 Discarded containers / barrels / liner	21	Nos./Y	NA
5.2 Wastes/residue containing oil	20	Nos./Y	NA

2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
NA	0	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)
NA	NA	NA	NA	NA	NA	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 5000 Saplings for Green Belt Development	Tree Plantation in the Premises & MIDC	5.0
Weather Monitoring Station	Monitoring of weather conditions on a continuous basis	1.5
Provision of Online Emission & Effluent Quality Monitoring System	Continuous Monitoring of Emission & Effluent parameters as per CPCB directives	250

[B] Investment Proposed for next Year

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
Plantation of 5000 Saplings in the premises & MIDC	Tree Plantation	5.0

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

Particulars

NA

Name & Designation

Shripad J. Lele - Associate Vice President (EHS)