



# NATCO PHARMA LIMITED

Regd Off: 'NATCO HOUSE', Road No. 2, Banjara Hills, Hyderabad-500 034. Telangana, INDIA  
Tel : +91 40 23547532, Fax : +91 40 23548243 CIN : L24230TG1981PLC003201, www.natcopharma.co.in.  
GSTIN : 33AAACN6927A1ZW

Date:23.04.2021  
Chennai-Manali

To

The Joint Chief Environmental Engineer (M),  
First Floor, 950/1, Poonamallee High Road,  
Arumbakkam,  
Chennai-600 106

Respected Sir,

SUB: Submission of Environmental Statement in Form-V – Reg.

Here with we have attached our **Environmental Statement in Form-V** for the financial year **2020 -2021** to your good office for your kind perusal.

**Attachments:**

1. Environmental Statement in Form-V.
2. Annexure-I & II (Raw Material Details).
3. Annexure-III (Treated Effluent's ROA)
4. Annexure-IV (Stack Monitoring Survey ROA by TNPCB)
5. Annexure-V (Hazardous Wastes Analysis report by TNWML)



*C. Balakrishnan*

With regards,

*23.04.21*  
G. Vasanth  
Sr. GM-Operations.



The RvA is a signatory to the IAF MLA

Manufacturing Site :  
Chemical Division - Chennai.

**(ISO 14001:2015 & ISO 45001:2018 Certified)**

S.No. 74/7B, Vaikkadu TPP Salai, Manali, Chennai, Tamilnadu - 600 103.  
Tel. +91 044 29011779, 29000434, +91-7299009981/82/83/84



**Natco Pharma Limited Chennai Division**

**FORM V- Index**

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**FORM V**

(See Rule – 14)

**ENVIRONMENTAL STATEMENT REPORT FOR THE FINANCIAL YEAR ENDING  
THE 31<sup>ST</sup> MARCH 2021****PART A**

1	<b>Name and address of the owner / occupier of the Industry operation or process</b>	Mr. G.VASAN (Sr.GM-Operations) NATCO PHARMA LIMITED, 74/7B, VAIKKADU TPP SALAI, MANALI, CHENNAI – 600103.
2	<b>Industry Category Primary – (STC Code) Secondary – (SIC Code)</b>	17 Red Category (Scale of Industry: Large)
3	<b>Production Capacity</b>	5266.5 Kgs per annum
4	<b>Year of Establishment</b>	19.10.2010
5	<b>Date of last Environment statement submitted</b>	05.08.2020

**PART B****WATER AND RAW MATERIAL CONSUMPTION**

(I)

Process	: 1.64 KLD
Utilities & Kettle Washings	: 27.0 KLD
Scrubber Make up	: 2.00 KLD
Domestic	: 20.00 KLD
Cooling & Boiler Feed	: 15.00 KLD
Gardening (for green belt)	: 35.00 KLD

Name of Products	Process Water Consumption Per Unit of Product output in kl	
	During the previous financial year (2019-2020)	During the current financial year (2020-2021)
Chlorambucil	0.144	0.81
Fulvestrant	0.948	0.98
Melphalan	0.0588	0.93
Geftinib	2.939	8.65
Imatinib Methane Sulfonate	7.33	23.81
Doxorubicin Hydrochloride	0.086	0
Temozolomide	0	1.95

## (II) Raw Material Consumption:

Name of Raw material	Name of Products	Consumption of Raw material per unit of Output	
		During the Previous financial year (2019-2020)	During the current financial year (2020-2021)
( Report Enclosed in Annexure-I)	( Report Enclosed in Annexure-I)	( Report Enclosed in Annexure-I)	( Report Enclosed in Annexure-II)

## PART C

## POLLUTION DISCHARGED TO ENVIRONMENT / UNIT OF OUTPUT

(Parameter as specified in the consent issued)

(a) Water : (Analysis carried out by TNPCB LAB, AMBATTUR) dated : 18.12.2020

Report Enclosed in Annexure-III

Description	Quantity of Pollutants Discharged, (mass/day) (Kgs/ day)	Concentrations of Pollutants in ZLD (mass / volume) (mg/Lit)	Percentage of Variation from Prescribed standards with reasons
pH	Completely reused for the utilities & Cooling tower, Boiler through Zero Liquid Discharge plant in ETP.	6.52	All the values are within the prescribed standard limits
Total Suspended Solids		4	
Total Dissolved Solids		92	
Chlorides		51	
Sulphates		1	
Oil and Grease		<1	
BO D for 3 Days at 27°C		2	
C O D		8	
Phosphate		<0.15	
Cyanide		<0.005	
Phenolic Compounds		<0.005	
Sulphide		<1	
Hexavalent chromium		<0.01	
Lead		<0.0015	
Mercury	NA		

b). Air: (Stack Monitoring carried out by TNPCB LAB, Chennai) Dated:19.12.2020

Report Enclosed in Annexure-IV

S. No	Description of Chimney/Stack	Concentration of Pollutants discharged (mass / volume) (mg/Nm <sup>3</sup> )			Quantity of Pollutants discharged (mass /day) (Kgs/day)		
		PM	SO <sub>2</sub>	NO <sub>x</sub>	PM	SO <sub>2</sub>	NO <sub>x</sub>
1.	Boiler 3 tons	40	598	64	7.23	108.04	64
2.	DG 1010KVA	22	BDL	671	0.86	BDL	26.36

**PART D**

**Hazardous Wastes**

(As specified under Hazardous Wastes / Management & Handling Rules, 1989)

S.No	Hazardous Wastes	Total Quantity (MT)	
		During the current financial year (2019-2020) Generation	During the current financial year (2020-2021) Generation
1.	From Process		
(i)	Organic Solid Waste/ Process Residues	1.093	2.042
(ii)	In-Organic Solid Waste/Process Residues	1.300	1.918
2.	From pollution control facilities		
(i)	Evaporation Salts	6.491	2.165
(ii)	Chemical sludge from waste water treatment	5.736	7.57
3.	Spent Solvents	3.547	4.802

**PART E**

**Non-Hazardous Solid Wastes**

S.No	Non- Hazardous Wastes	Total Quantity (MT)	
		During the Previous financial year (2019-2020)	During the current financial year (2020-2021)
1.	From Process		
(i)	Wooden Packing Materials, carton boxes, metal scraps, used glass wares & Plastics	6.5	5.0
2.	From pollution control facilities		
(i)	Wooden pallets & Waste papers	4.0	3.0

All Non-hazardous wastes are disposed through scrap dealers.

## PART F

### Report Enclosed in Annexure-V

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for categories of wastes

#### **Hazardous waste:**

The generated quantity of Hazardous waste from plant is being collected in close drums and then stored at Hazardous waste storage room. As per Hazardous Waste (Management, Handling & Transboundary Movement) Rule, 2016. These hazardous wastes are Disposal to authorized recycler. The comprehensive analysis report of hazardous waste are given below.

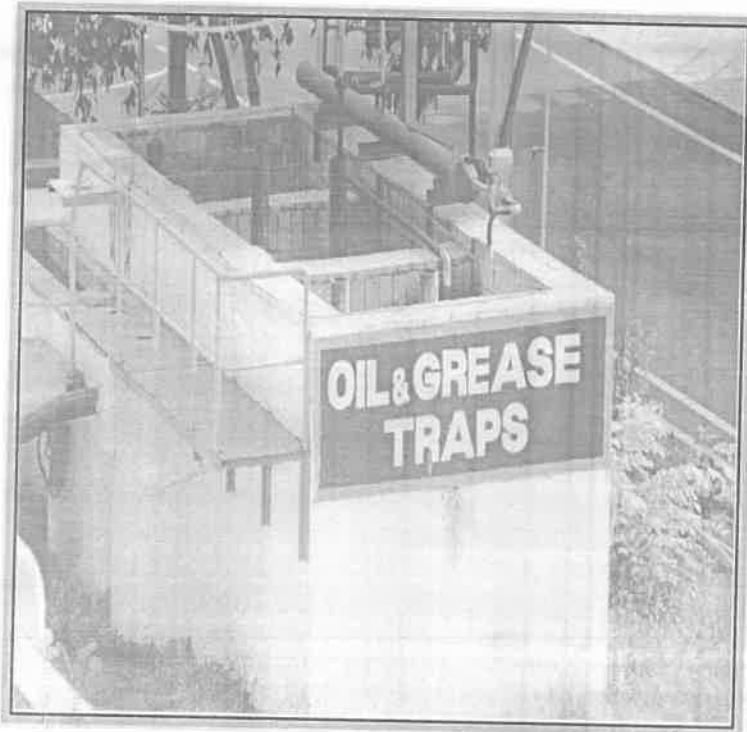
S.NO	Parameters	Hazardous waste			
		Process Residue & waste (Organic solid Waste)	Process Residue & waste (Inorganic solid Waste)	Chemical Sludge from waste water treatment (ETP Sludge)	Evaporation Salts
1.	pH	6.92	7.25	7.50	7.05
2.	Calorific value	7832 Cal/gm	<200 Cal/gm	3014 Cal/gm	<200 Cal/gm
3.	Bulk Density	0.25 gm/cc	0.80 gm/cc	1.15 gm/cc	1.25 gm/cc
4.	Flash Point °C	>60	>60	>60	>60
5.	LOD @ 105 °C	25.3 %	15.3 %	42.3 %	24.3 %
6.	Loss on Ignition @ 550 °C (Dry basis)	99.6 %	5.18 %	34.3 %	7.65 %
7.	Water soluble Organics	< 0.1 %	< 0.15 %	0.80 %	3.18 %
8.	Lead	<5 mg/Kg	<5 mg/kg	52.3 mg/kg	<5 mg/kg
9.	Copper	<5 mg/Kg	<5 mg/kg	20.6 mg/kg	<5 mg/kg
10.	Mode of Disposal	Incineration (TNWML)	Direct Landfill (TNWML)	Incineration (TNWML)	Landfill after treatment (TNWML)

## PART G

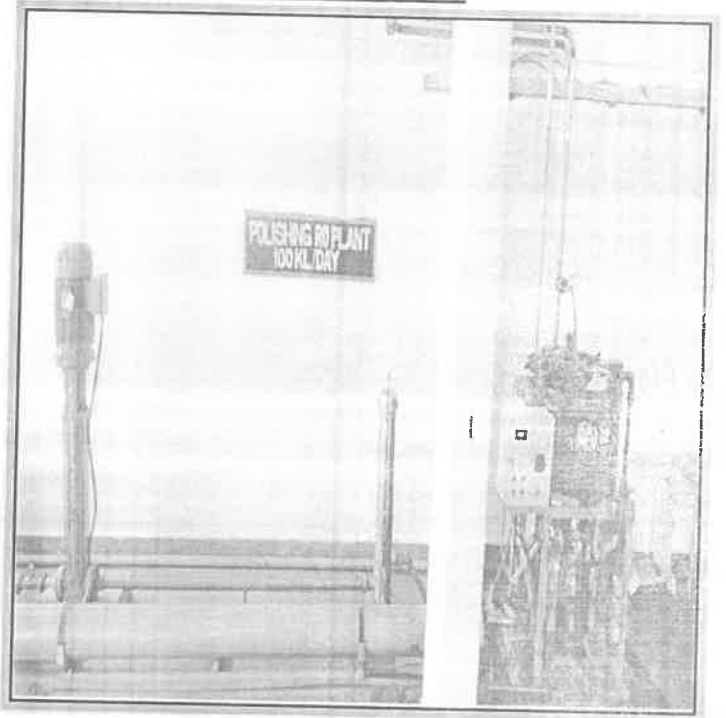
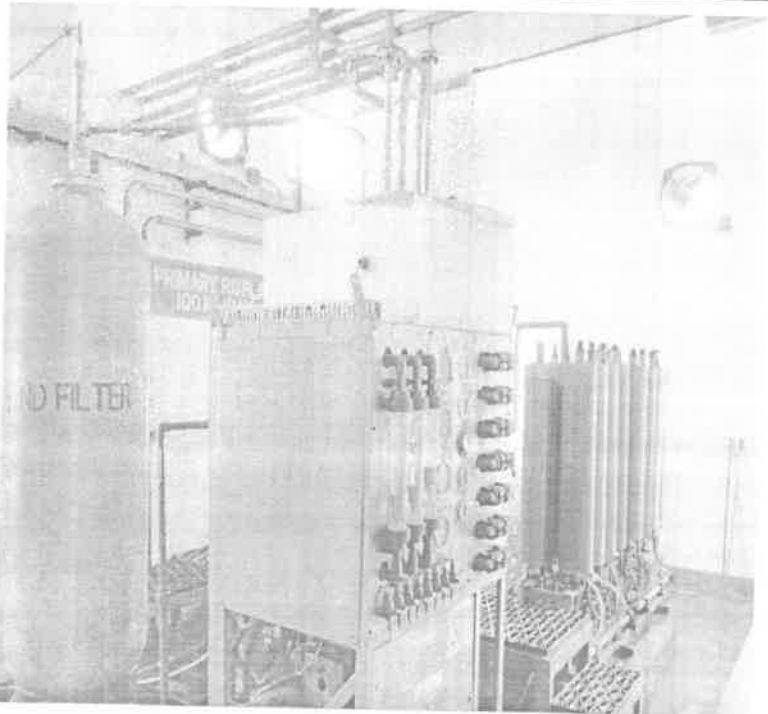
Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of productions:

Total water consumption by the unit is below the consented limit (100.64 KLD). The effluent generation has not exceed 57 KLD “Zero Liquid Discharge” methods are adopted to treat the effluent generated in the plant. Low TDS & High effluents are being segregated at source. Low TDS effluent are sent to ETP for primary treatment. After the primary treatment, the treated water is being sent to Reverse Osmosis plant for recovery of fresh water (Permeate) and recovered permeate water are totally recycled for the plant utilities. RO rejects are being sent to evaporation system to treat along with High TDS effluents.

## Low TDS Treatment Plant

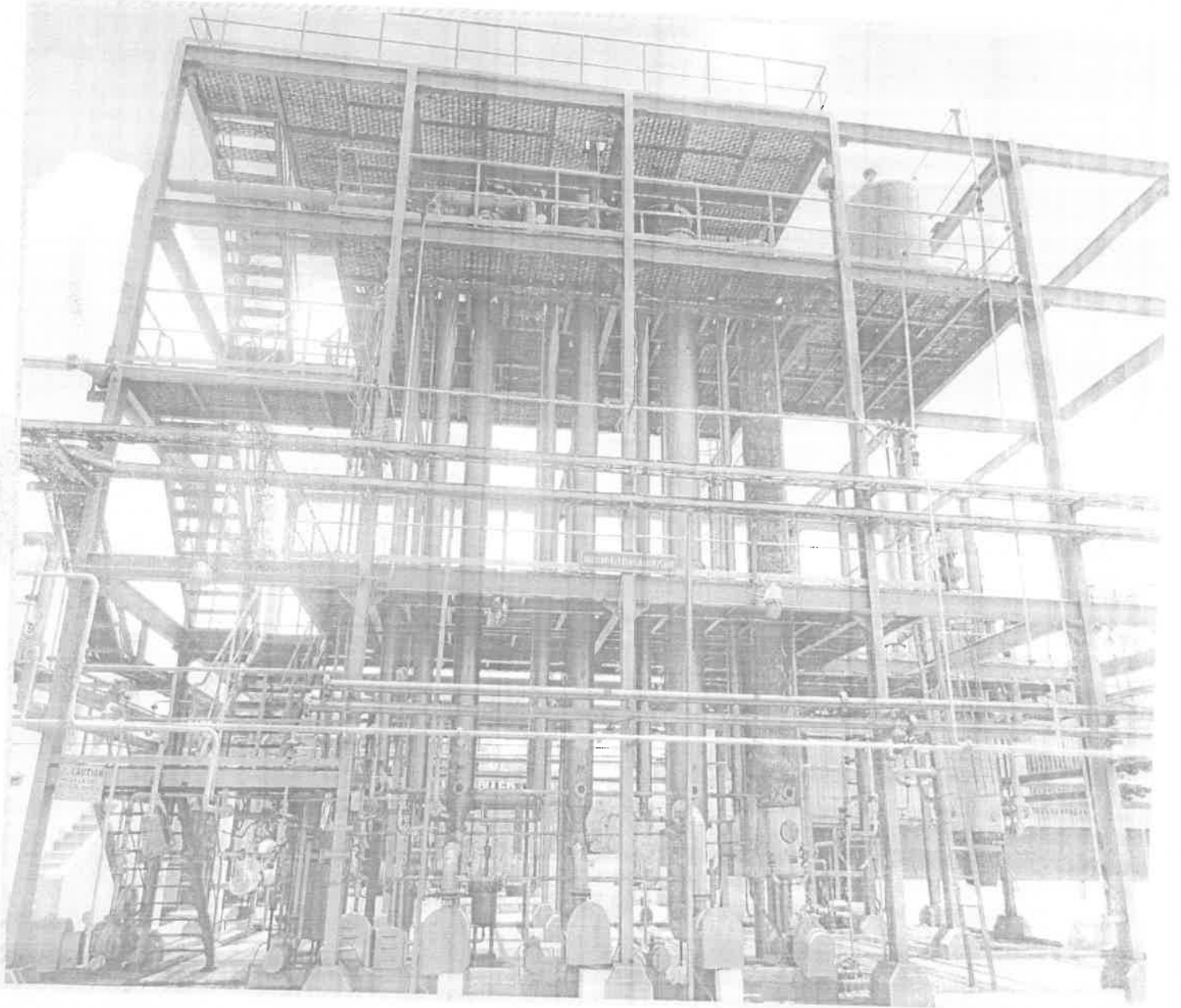


## Primary & Secondary Reverse Osmosis plant



## Four stage Multi Effect Evaporator

High TDS effluents and R.O. reject water are sent to Multi Effect -Evaporation Plant followed by Agitated Thin Film Drier (ATFD). The salts generated from AFTD are sent to TNWML. ATFD Steam condensate has collected and recycled to process utilities. The domestic waste water has treated and the recovered sludge sent to TNMWL as per TNPCB direction.





Agitated Thin Film Drier



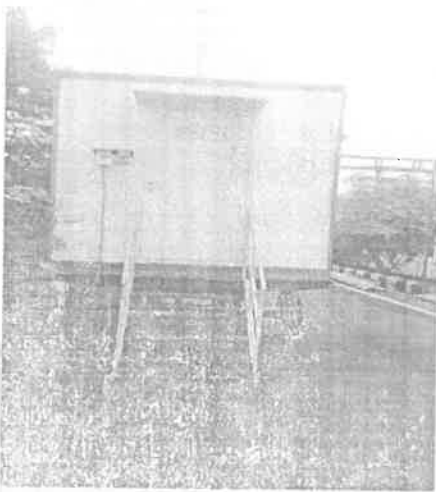
Decanter



## On-line Ambient Air Quality Monitoring station

The gaseous emissions SO<sub>2</sub>, NO<sub>x</sub>, CO and particulate matter (RSPM) are being monitored continuously with the AAQMS station provided in the site and the data's are being connected to TNPCB and CPCB in online. Apart from this the Boiler & DG Stack Emissions are being measured through NABL approved laboratory at regular intervals on monthly basis & also yearly stack monitoring survey (Boiler & DG) are getting done by TNPCB District Environmental lab and all the results are being complied with prescribed standards and submitted of report to TNPCB.

### **Ambient Air Quality (Natco Mobile van Station – SNAP Shot) For (NO<sub>x</sub>, So<sub>2</sub>, RSPM & CO) & For (VOC-MEEP, ETP & Production area)**



Mobile Van-AAQMS



AAQ Analyzers



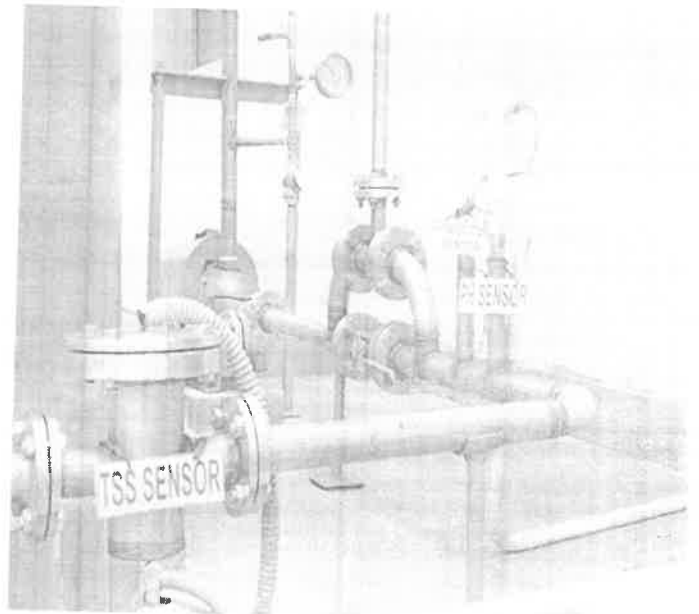
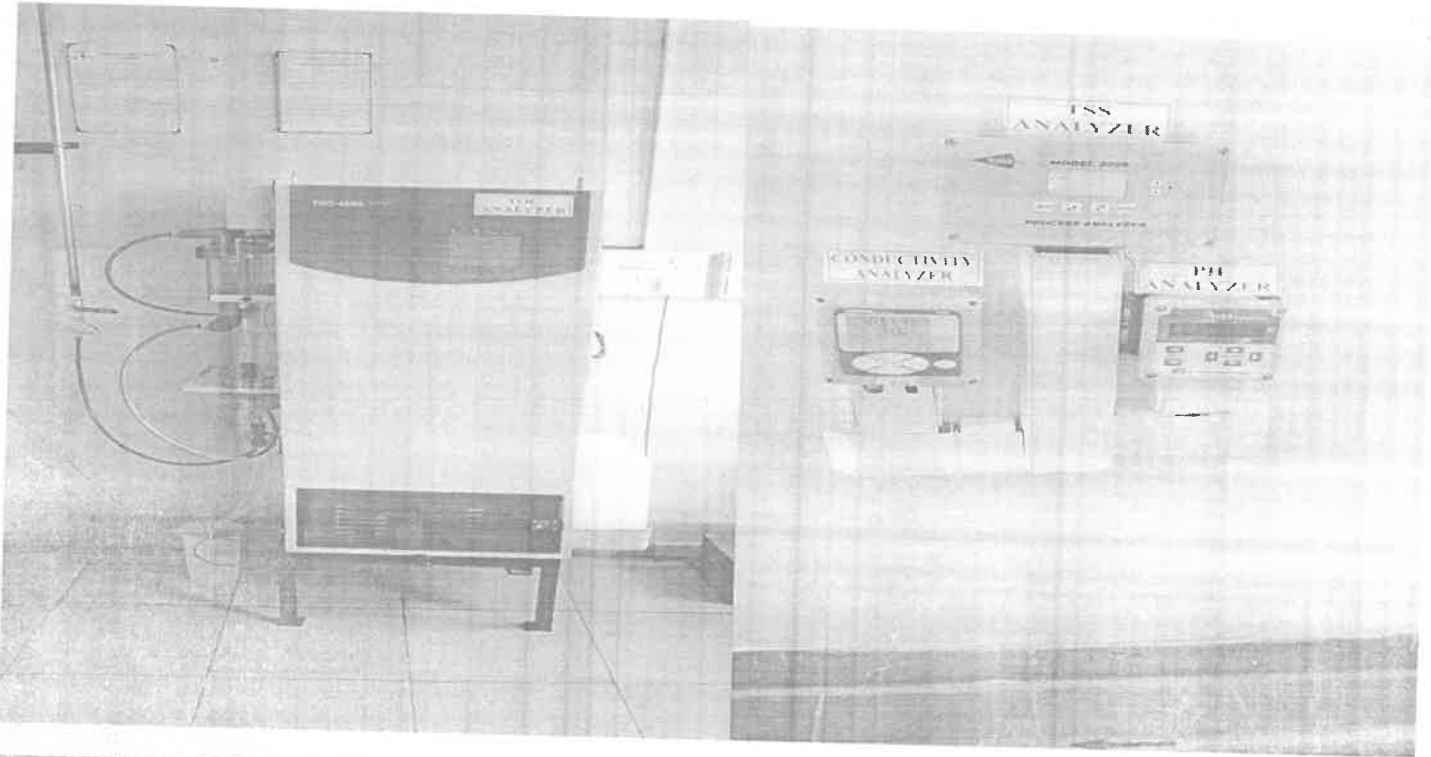
VOC Analyzers



## Online Water Quality Watch System

To ensure the Zero Liquid Discharge System (ZLDS) EMFM provided in ETP inlet & treated water discharge, Parameters such as pH, TSS, TDS, BOD, COD, EMFM (Flow meter) and CCTV are connected to online and the real time monitoring data connectivity has been established to TNPCB - Water Quality Watch and Central Pollution Control Board (CPCB), also the results are found being complied with TNPCB/CPCB prescribed standards at any point of time

### Photos of analyzers & WOW parameters

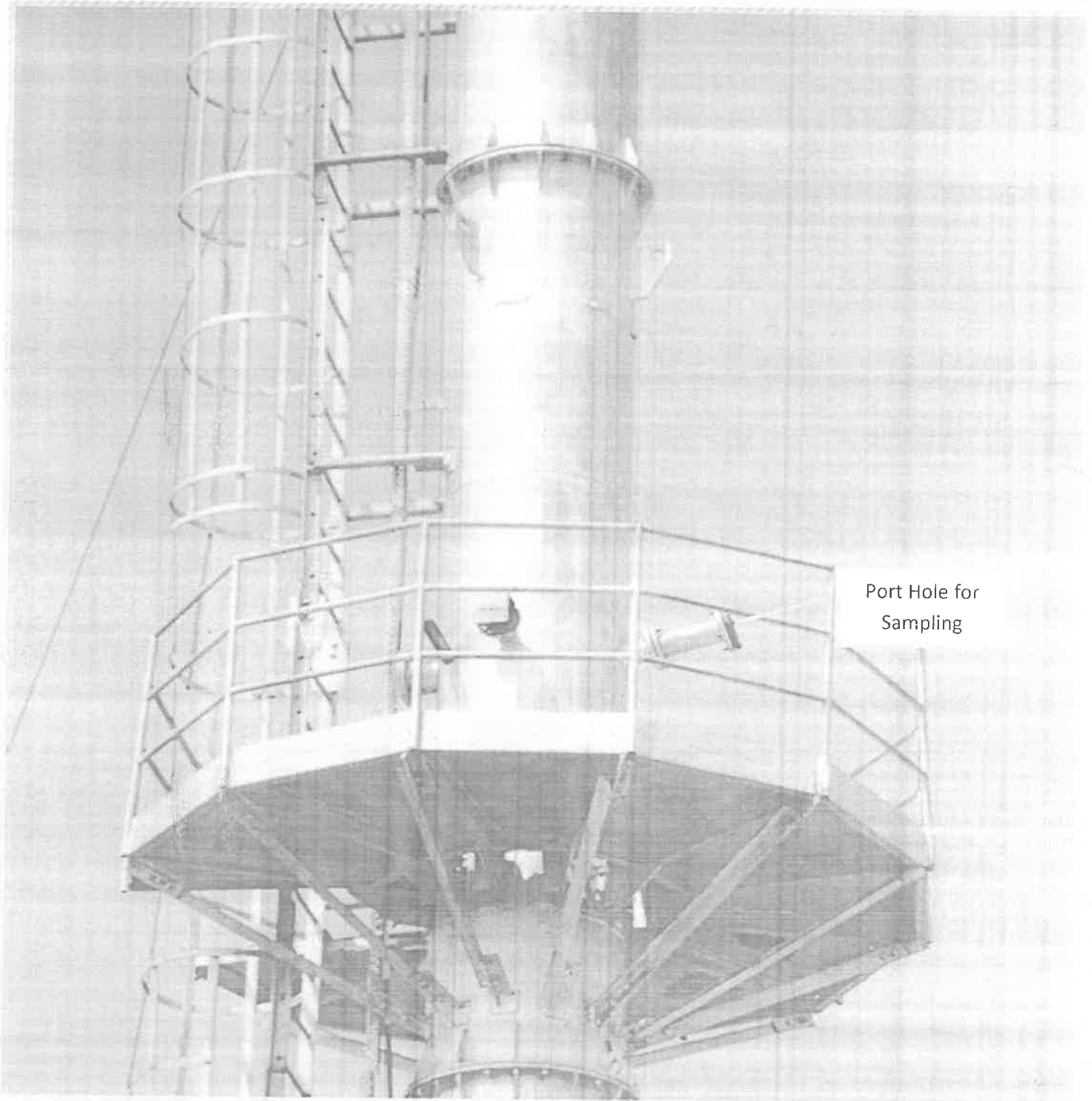


## Hazardous Waste storage shed

Hazardous and toxic waste generated during the process are stored properly in the shed in closed drums. As per TNPCB directions, the unit has sent all the generated waste to TNWML for incineration & land filling as per agreement with TNWML. Hazardous waste authorization has obtained by the unit and all the solid/hazardous waste are disposed to TNWML periodically as per Hazardous Waste (Management & Handling) rules.



**Air pollution control measure**  
**Boiler Stack monitoring system**

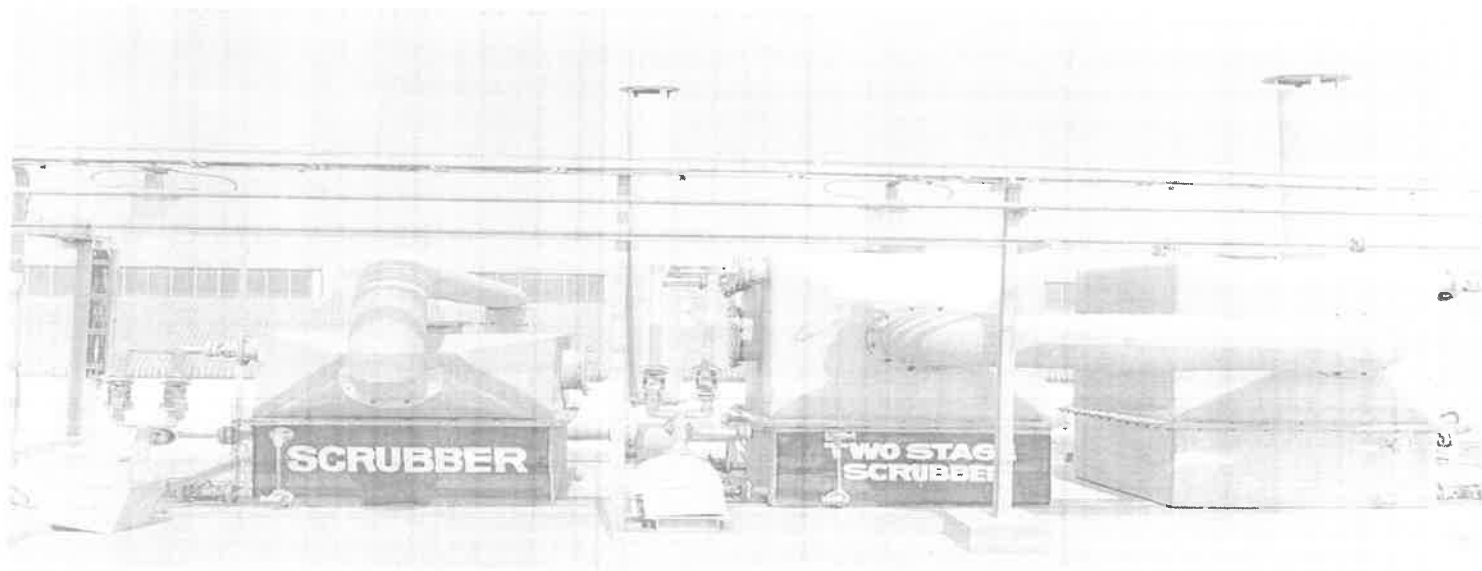


## DG Acoustic Panel



## Process emission control measure

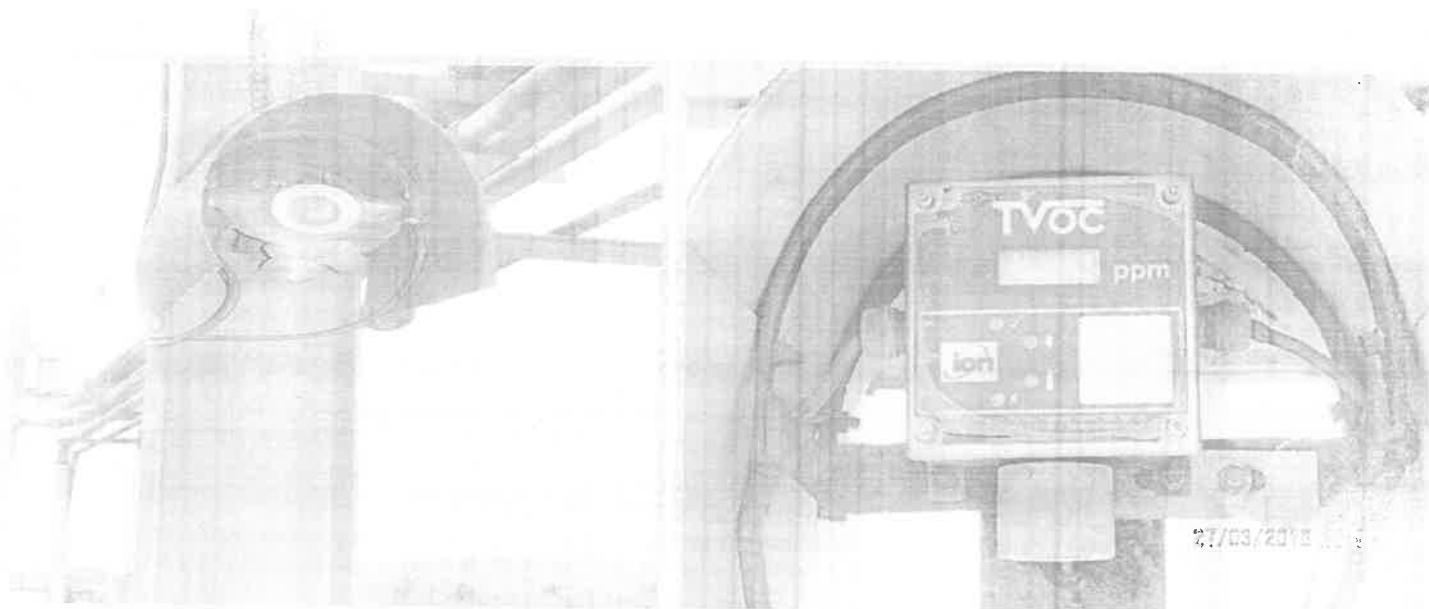
The scrubbers (Two-stage & Single stage scrubber) installed are operated efficiently to control the process emissions with proper neutralizing (alkali) media. Scrubbing solution for pH is being measured continually and monitored regularly to have better control. Scrubber are provided to incinerator to control the air emission. Incinerator has not operation, since from the inception. The scrubber effluent is being sent to ETP for further treatment.



### **On-line continuous VOC Monitoring system**

Necessary arrangements such as VOC analyser, LEL (Lower Explosive Limit) analyser are installed for monitoring of vent exhaust from solvent recovery system and in the work environment. The prescribed standards given by the board has being complied and results uplinked online data connected to care air Centre (TNPCB).

Also Portable VOC analyzer are used to check the exposure in work environment in daily basis and readings are below the limit. Fugitive emissions in the work zone environment, product, and raw materials storage area are being monitored regularly by installing VOC analyzer in the area and the prescribed standards given by the board has being complied & the results uplinked online data connected to care air Centre (TNPCB).







GPS Point	
Latitude	Longitude
13°11'21.60"N	80°16'1.91"E





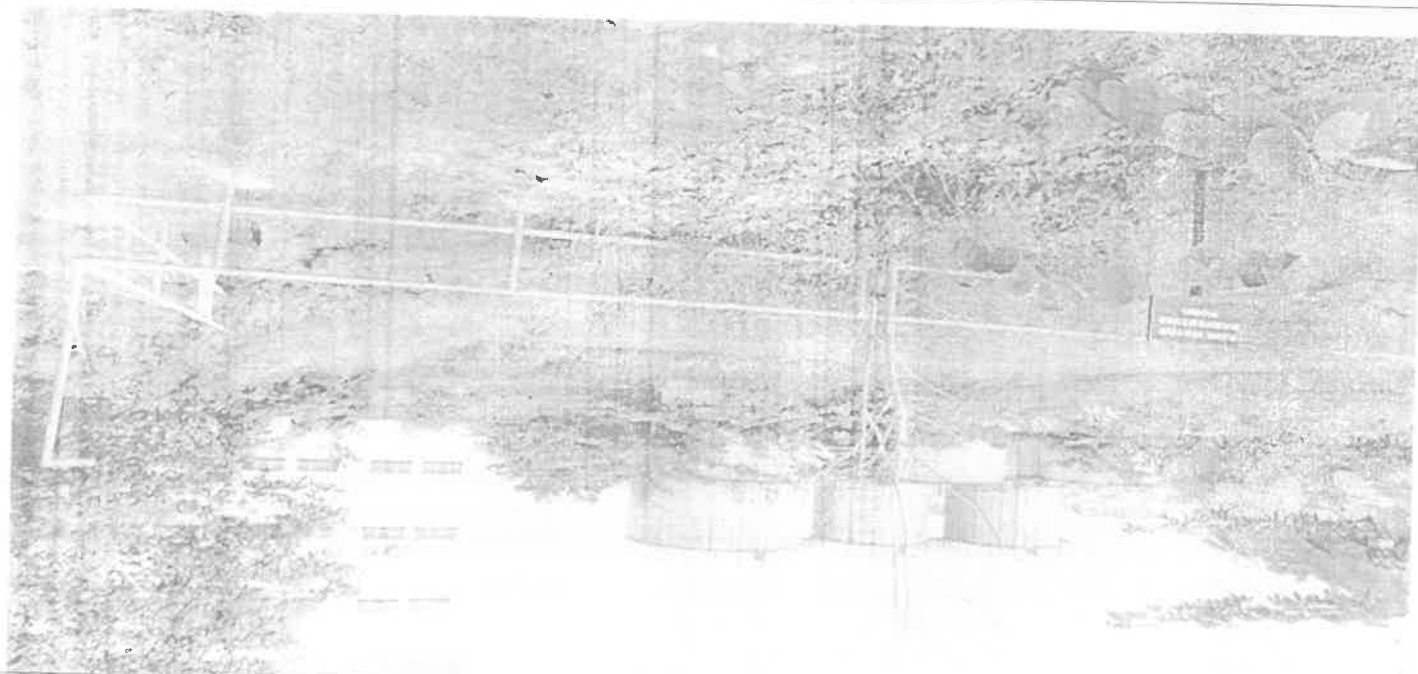
GPS Point	
Latitude	Longitude
13°11'32.15"N	80°15'57.79"E



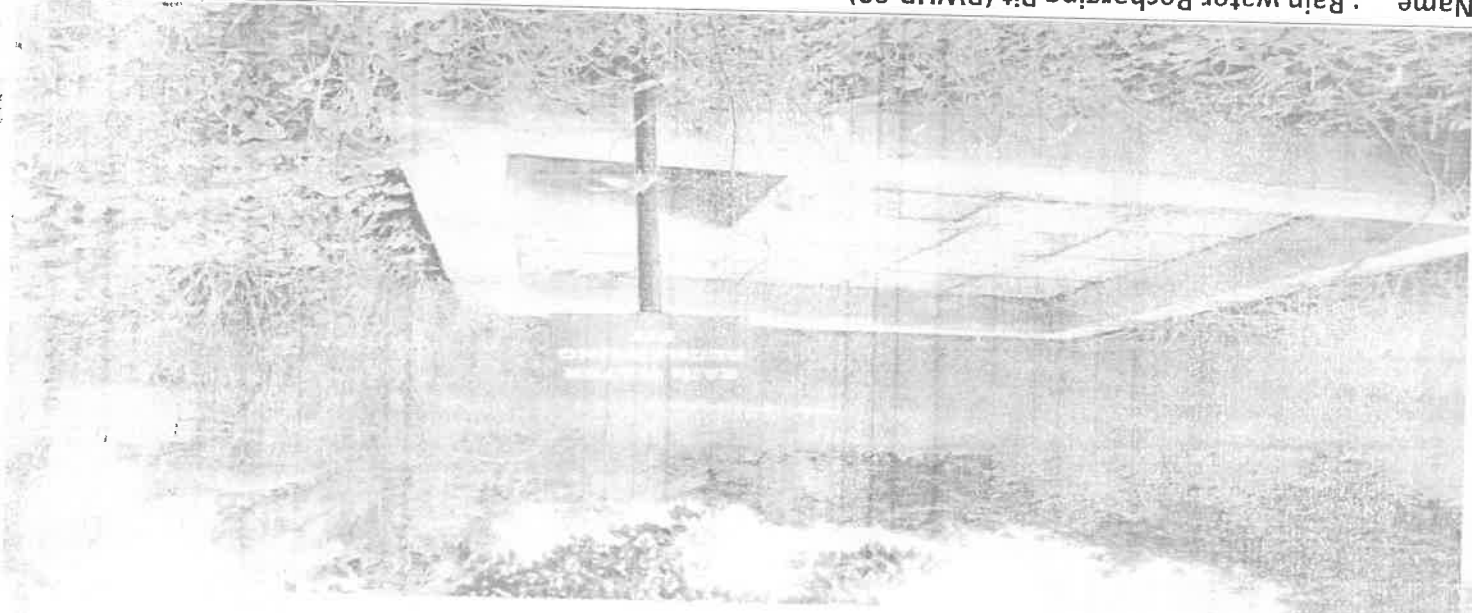
GPS Point	
Latitude	Longitude
13°11'12.55"N	80°16'0.42"E

## Rainwater Harvesting Measures

Rain Water harvesting Tanks have been constructed at the plant for collection of rain water during winter season and recharge of ground water. Rain Water harvesting which increases the ground water level in and around the premises.



Name : Rain water harvesting pond (RWH-P-01)  
 Size : 28 X 28 X 2.3 m (LBD)  
 Purpose : Recharging & Reuse for Greenbelt  
 Area : Plant North East Corner  
 Capacity : 1800 m<sup>3</sup>



Name : Rain water Recharging Pit (RWH-P-02)  
 Size : 2.4 X 3 X 2.5 m (LBD)  
 Purpose : Recharging of ground water  
 Area : Behind Admin Block - North Bay  
 Capacity : 23 m<sup>3</sup>/hr (Peak hour harvesting)

## PART H

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

1. Rainwater Harvesting Tanks have been constructed at the plant area for recharge of ground water.
2. Extensive of green belt development in the additional areas in and around the plant and along the plant boundary.Plantation of saplings in and around premises.
3. Awareness programs are planned to conduct among employees to protection on environment / water conservation.
4. As awareness program, slogans on Pollution control, environmental protection, Tree Plantation and energy conservation displayed at the prominent.

## PART I

### Miscellaneous

Any other particulars for improving the quality of the environment

The total extent of land available within the unit premises is 105704 Sq.meters, in that company has developed 49325 Sq.mts (**46.66 %**) of green belt. In that, Greenbelt has developed & maintained in 10285 Sq.mt in Open Space Reservation (OSR) Land. Also additional 150 trees developed in private land in about 9190sqm land which is adjacent to our entrance from Minjur highway road.

Nearly 300 No's of conocarapas trees were planted in the company boundaries.

The industry is being monitored continuously Fugitive Emissions and Volatile Organic Compounds (VOC's) in the process scrubbers by NABL approved laboratory.

For Natco Pharma Ltd

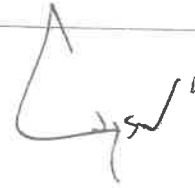
  
G. Vafan  
(Sr. GM-Operations)

## Annexure-I

### LIST OF RAW MATERIALS AND THEIR CONSUMPTION FOR THE FINANCIAL YEAR 2019-2020

S.No	Name of the Raw material	Consumed Quantity per annum (Kgs)	Product Name
1	1,4 Dioxane	0.028	Doxorubicin Hydrochloride
2	2-propanol	20.11	Imatinib Methane Sulfonate
3	Hydrobromic Acid (48%W/W)	102.49	Geftinib
4	5% sodium hydroxide	201.12	Imatinib Methane Sulfonate
5	Acetone	0.676	Melphalan, Doxorubicin Hydrochloride
6	Activated Carbon	6.32	Imatinib Methane Sulfonate
7	Ammonia Solution	718.03	Imatinib Methane Sulfonate
8	Aq. Ammonia Solution	10.25	Geftinib
9	Aqueous 1N Sodium Hydroxide	0.019	Fulvestrant
10	Aqueous Ammonia	0.003	Chlorambucil
11	Aqueous N- Hydrochloric Acid	0.015	Fulvestrant
12	Bromine	0.002	Doxorubicin Hydrochloride
13	Carbon	0.0003	Chlorambucil
14	Carbon Activated	1.475	Geftinib, Melphalan
15	Conc. Hydrochloric Acid	0.005	Chlorambucil
16	Conc. Hydrochloride	24.53	Imatinib Methane Sulfonate
17	Cyclohexane	0.0018	Chlorambucil
18	Dimethyl Formamide	1.615	Geftinib
19	Ethyl Acetate	70.612	Fulvestrant, Imatinib Methane Sulfonate, Melphalan
20	Hexane	0.0012	Chlorambucil
21	Hiflow Supercell	0.0011	Melphalan
22	Hydrochloric Acid	0.537	Melphalan
23	Hydrogen bromide in methanol	0.007	Doxorubicin Hydrochloride
24	Hyflow	2.011	Imatinib Methane Sulfonate
25	Isopropyl Alcohol	79.27	Geftinib, Imatinib Methane Sulfonate
26	Isopropyl Ether	30.169	Imatinib Methane Sulfonate
27	Methanol	44.650	Imatinib Methane Sulfonate, Melphalan, Fulvestrant, Geftinib, Doxorubicin Hydrochloride.
28	n-Butanol	3.627	Imatinib Methane Sulfonate
29	Nitric Acid	28.76	Imatinib Methane Sulfonate
30	Potassium Carbonate	18.539	Geftinib
31	Potassium Hydroxide	80.55	Imatinib Methane Sulfonate
32	Sodium Bicarbonate	0.0074	Doxorubicin Hydrochloride, Fulvestrant
33	Sodium Hydride (60% in mineral oil)	0.0003	Fulvestrant

34	Sodium Hydroxide	553.21	Imatinib Methane Sulfonate
35	Sodium Sulfate	2.526	Fulvestrant, Imatinib Methane Sulfonate
36	Stannous Chloride	58.11	Imatinib Methane Sulfonate
37	Sulphuric Acid	375.39	Imatinib Methane Sulfonate
38	Tetrahydrofuran	0.0156	Fulvestrant
39	Toluene	16.994	Gefitinib



## Annexure-II

LIST OF RAW MATERIALS AND THEIR CONSUMPTION FOR THE FINANCIAL YEAR 2020-2021			
S.No	Name of the RM	Qty (Kgs/Annum)	Products
1	4- N,N-di-(2- hydroxyethyl)-aminophenylbutyrate	1.62	Chlorambucil
2	Cyclohexane	25.92	Chlorambucil
3	Phosphorous oxychloride	86.41	Chlorambucil,Melphalan
4	Conc. HCl	51.56	Chlorambucil,Melphalan,Fulvestrant.Imatinib Methane Sulfonate
5	Aqueous ammonia	1732.74	Chlorambucil,Gefitinib,Imatinib Methane Sulfonate
6	Hexane	7.09	Chlorambucil
7	Carbon	18.73	Chlorambucil,Gefitinib,Imatinib Methane Sulfonate
8	(7 alpha, 17 beta)-7-[9-[- methyl sulfonyl)oxy]nonyl]estra-1,3,5 (10)-triene-3,17-diol	1.57	Fulvestrant
9	pentanethiol4,4,5,5,5-pentafluoro-1-	1.00	Fulvestrant
10	Sodium hydride (60% in mineral oil)	0.39	Fulvestrant
11	Tetrahydrofuran	38.28	Fulvestrant,Temozolomide,Imatinib Methane Sulfonate
12	Ethyl acetate	1969.17	Fulvestrant,Melphalan.Imatinib Methane Sulfonate
13	Sodium sulfate	18.80	Fulvestrant,Imatinib Methane Sulfonate
14	Methanol	236.63	Fulvestrant,Melphalan,Temozolomide,Gefitinib,,Imatinib Methane Sulfonate
15	m- chloro perbenzoic acid	1.00	Fulvestrant
16	Methylene chloride	84.02	Fulvestrant,Temozolomide
17	Sodium bicarbonate	0.20	Fulvestrant
18	((N-phthalimidoyl)-4-[Bis(2-hydroxyethyl)- amino]-L-phenylalanine	2.98	Melphalan
19	Sodium acetate	4.65	Melphalan
20	Hiflow	5.69	Melphalan,Imatinib Methane Sulfonate
21	Acetone	148.80	Melphalan
22	5- aminoimidazole-4- carboxamide	5.66	Temozolomide
23	4- nitro phenyl chloroformate	9.00	Temozolomide
24	Triethylamine	8.97	Temozolomide
25	Methyl amine	0.50	Temozolomide
26	Sodium nitrite	1.00	Temozolomide
27	Tartaric acid	1.00	Temozolomide

28	Dimethyl sulfoxide (DMSO)	50.00	Temozolomide
29	Quinazoline derivative	25.95	Gefitinib
30	48%W/W HBr	181.65	Gefitinib
31	Acetic anhydride	103.80	Gefitinib
32	Thionyl chloride	8.65	Gefitinib
33	DMF	37.45	Gefitinib
34	Isopropyl alcohol	121.58	Gefitinib, Imatinib Methane Sulfonate
35	Toulene	1505.10	Gefitinib
36	O-Toluidine	48.69	Imatinib Methane Sulfonate
37	Sulfuric acid	888.83	Imatinib Methane Sulfonate
38	Nitric acid	68.10	Imatinib Methane Sulfonate
39	Cyanamide	21.43	Imatinib Methane Sulfonate
40	n-Butanol	64.29	Imatinib Methane Sulfonate
41	IPE	333.34	Imatinib Methane Sulfonate
42	Sodium hydroxide	5.00	Imatinib Methane Sulfonate
43	2-dimethylamino-1-(pyridyl)-2-propane-1-one	21.91	Imatinib Methane Sulfonate
44	2-propanol	285.72	Imatinib Methane Sulfonate
45	Stannous chloride	137.62	Imatinib Methane Sulfonate
46	Caustic soda lye	1801.11	Imatinib Methane Sulfonate, Fulvestrant
47	Chloroform	238.10	Imatinib Methane Sulfonate
48	4-(4-methyl piperazino methyl) benzoyl chloride dihydrochloride	87.38	Imatinib Methane Sulfonate
49	potassium hydroxide	190.72	Imatinib Methane Sulfonate
50	Methane sulfonic acid	5.48	Imatinib Methane Sulfonate

*Legend*