



HIKAL

Ref No: HL/ENV/2021-22/32

To

28th Sep 2021

Member Secretary
Karnataka State Pollution Control Board,
Hazardous Waste Cell, Parisara bhavan, 4th floor,
#49, Church street,
Bangalore - 560 001

Dear Sir,

**Subject : Submission of Environmental Statement in Form-V by M/s Hikal Ltd.
82/A, KIADB Industrial area, Jigani, Anekal , Bangalore-560105**

Please find enclosed herewith the Environmental Statement details for the year of
2020 -2021. Kindly acknowledge the receipt of the same

Thanking you,

Yours faithfully,

For HIKAL LIMITED

Suresh S
Pharma Manufacturing Head

CC:

The Environmental Officer,
Karnataka State Pollution Control Board,
Regional Office (South)-Anekal
"Nisarga Bhavan", Thimmaiah Main Road
7th 'D' Main, 3rd Stage, 2nd Block, Shivanagar, Basaveshwaranagar,
Bangalore - 560 079



Hikal Ltd.

Factory Unit I: 82/A, KIADB Indl. Area, Jigani, Anekal Taluk, Bangalore - 560 105, India. Tel.: +91-80-3986 1100, +91-8110-421100, Fax: +91-80-2782

Admin. Office: Great Eastern Chambers, 6th Floor, Sector 11, CBD Belapur, Navi Mumbai - 400 614, India, Tel.: +91-22-3097 3100, Fax : +91-22-275

Regd. Office: 717, Maker Chamber - 5, Nariman Point, Mumbai - 400 021, India. Tel. : +91-22-3926 7100, +91-22-6630 1801, Fax : +91-22-22833913

www.hikal.com info@hikal.com CIN: L24200MH1988PTC048028

ENVIRONMENT STATEMENT

IN FORM – V

**M/s HIKAL LTD.
NO – 82/A, KIADB
JIGANI INDUSTRIAL AREA,
ANEKAL TALUK
BANGALORE – 560 105**

SEPTEMBER – 2021



FORM V

(See rule 14)

**ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE
31ST MARCH 2021****PART A**

- (i) Name and address of the owner/occupier
Of the industry operation or process : Mr. SAMEER HIREMATH
M/s. HIKAL LTD,
NO - 82/A, KIADB,
JIGANI IND AREA
ANEKAL TALUK
BANGALORE- 560105.
- (ii) Industry category primary-(STC Code)
Secondary-(STC Code) : RED- LARGE
- (iii) Production capacity-units (consented) :

Sl.no	Name of the Products	Total(Tons/Annum)
1	GABAPENTIN	2000
2	BUPROPION HCL	75
3	CINNARIZENE	20
4	ONDANSETRON HCL	1
5	ACEBUTALOL	15
6	P-BENZYLOXY ANILINE HCL	40
7	ONDANSETRON API	1
8	OXYPENTIFILLINE	75
9	TRIPROLIDINE HCL	4
10	GEMFIBROZIL	180
11	DECOQUINATE	275
12	LEVETRACETAM	10
13	VERAPAMIL	20
14	VALPROIC ACID	50
15	SODIUM VALAPROATE	50
16	DI-VALPROEX SODIUM	20
17	MAGNESIUM VALPROATE	10
18	TOPIRAMATE	20
19	TERTIARY LUCINE	12
20	FLUNARAZINE	12
21	VENLAFLAXINE HCL	40
22	NEOTAME	50
23	PIRACETAM	650



24	ETIRACETAM FRESH	500
25	ETIRACETAM RACEMIC	150
26	TPCA.HCL	10
27	CMMDT	10
28	TRI-FLUROMETHYL CINNAMIC ACID	10
29	MEMANTINE HCl	10
30	PIPERAZINENITRO HCl	50
31	SEVELAMER CARBONATE	100
32	COLESEVALAM HYDROCHLORIDE	100
33	PREGABLIN	100
34	SITAGLIPTIN	10
35	VILDAGLIPTIN	10
36	LACOSAMIDE	20
37	VALOCYCLOVIR HYDROCHLORIDE	50
38	OLMESARTAN	10
39	DONEPEZIL HYDROCHLORIDE DIHYDRATE	2
40	QUETIAPINE FUMURATE	40
41	PRASUGREL (TPPO)	10
42	BUTRAPHANOL	0.3
43	METHIMAZOLE	5
44	FAVIPIRAVIR	60
45	APIXABAN	0.5

Products Manufactured:

Sl no	PRODUCTS	QTY MANUFACTURED IN TPA
1	GABAPENTIN	749.6
2	BURPROPION HCL	56.1
3	CINNARIZINE	4.08
4	ONDANSETRON HCL	1
5	ONDANSETRON API	0.9
6	OXYPENTIFYLLINE	5
7	TRIPOLIDINE - HCL	0.9
8	GEMFIBROZIL	124.7
9	DECOQUINATE	102.7
10	FLUNARAZINE	0.6
11	PIRACETAM	39.4
12	ETIRACETAM FRESH	45.9
13	ETIRACETAM RACEMIC	45
14	PREGABLIN	10.7
15	QUETIAPINE FUMURATE	1.2
	Total Tonnage	1187.78

(iv) Year of establishment

: OCTOBER-2002

(v) Date of the last environmental statement

: SEPTEMBER-2020



PART B**Water and Raw Material Consumption:****(1) Water consumption m³/d**

Process : 85.3 m³/d
 Boiler & Cooling : 246.5 m³/d
 Domestic : 21.1 m³/d

Sl.no	Name of products	Process water consumption per unit of product output	
		During the current financial year 2019-20	During the current financial year 2020-21
1	GABAPENTIN	5.9	5.9
2	BUPROPION HCL	6.5	6.5
3	ONDANSETRON HCL	61.3	61.3
4	ONDANSETRON API	41.5	41.5
5	OXYPENTIFYLLINE	---	---
6	TRIPROLIDINE HCL	82.5	82.5
7	GEMFIBROZIL	24.6	24.6
8	DECOQUINATE	0.006	0.006
9	FLUNARAZINE	---	14.6
10	PIRACETAM	---	0.85
11	ETIRACETAM FRESH	---	0.85
12	ETIRACETAM RACEMIC	---	---
13	PREGABLIN	---	13.43
14	QUETIAPINE FUMURATE	---	11.50
15	CINNARIZINE	---	7.69



(2.) Raw material consumption:**(a) Gabapentin:**

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Lactum	GABAPENTIN	1.7	1.7
Toluene		4.0	4.0
Acetone		4.7	4.7
Noah flakes		1.2	1.2
Methanol		3.9	3.9
IPA		5.4	5.4
Sod. carbonate		0.2	0.2
HCl-30%		2.0	2.0
Carbon		0.003	0.003
Hyflosupercel		0.009	0.009

(b) Bupropion HCl:

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Bupropion-1	BUPROPION HCL	1.3	1.3
TBA		2.0	2.0
Acetone		0.4	0.4
NaoH flakes		0.2	0.2
Methanol		2.2	2.2
IPA		2.3	2.3
HCl-30%		1.1	1.1
Hyflosupercel		0.01	0.01
Carbon		0.04	0.04
Toluene		2.3	2.3

(c) Ondansetron HCl:

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
ONDT-6	ONDANSETRON HCL	2.5	2.5
2-Methyl Immediazole		2.5	2.5
IPA		14.7	14.7
HCl-30%		7.6	7.6
NaOH flakes		2.7	2.7
CHCL3		14.2	14.2
Carbon		0.2	0.2
Hyflosupercel		0.3	0.3



(d) Ondansetron API:

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
ONDT-HCl	ONDANSETRON API	1.4	1.4
TEA		0.6	0.6
IPA		1.2	1.2
Methanol		16.6	16.6

(e) Oxypentifylline:

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Dimethyl Formamide	OXYPENTIFYLLINE	2.3	2.3
Theobromine		0.8	0.8
Potassium carbonate		1.8	1.8
Chlorobromo propane		1.2	1.2
Methanol		1.6	1.6
IPA		1.6	1.6
Carbon		0.04	0.04
Methyl acetoacetate		0.9	0.9
HCl		0.3	0.3

(f) Gemfibrozil:

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Gem-1(intermediate)	GEMFIBROZIL	1.4	1.4
Methanol		7.6	7.6
NaOH		0.6	0.6
30% HCl		1.1	1.1
Carbon		0.1	0.1
Hyflosupercel		0.03	0.03
Toluene		0.6	0.6
Isobutanol		2.1	2.1



(g) Decoquinat:

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Deco stage-4	DECOQUINATE	1.1	1.1
Toluene		0.9	0.9
Methanol		2.6	2.6
Pd/catalyst		0.003	0.003
Hydrogen gas		0.02	0.02
EMME		0.4	0.4
Diphyl		3.1	3.1

(h) Triprolidine HCl:

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
TRI-3(intermediate)	TRIPROLIDINE HCL	1.1	1.1
H ₂ SO ₄		5.3	5.3
Formic Acid		0.3	0.3
NaOH flakes		5.6	5.6
NaCl		0.3	0.3
Oxalic acid		0.4	0.4
Acetone		17.3	17.3
Toluene		8.9	8.9
Carbon		0.1	0.1
Hyflosupercel		0.04	0.04
Aq.Ammonia		2.4	2.4
Ethyl acetate		3.7	3.7
HCl in IPA		0.8	0.8



(i) Flunarazine

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
4,4 di fluoro benzophenone piperazine	FLUNARAZINE	—	1
Cinamic alcohol		—	0.65
Sodium Borohydride		—	0.08
Triethyl amine (TEA)		—	0.65
Methanol		—	8.15
Activated carbon		—	0.06
Huflo Supercel		—	0.06
HCL In IPA		—	1.085
Toluene		—	6.11
Piperazine Anhydrous		—	2
IPA		—	9.3
HCL		—	5.7
Catalyst-B		—	0.035
Catalyst-A		—	0.04
Caustic Soda		—	0.45

(j) Etiracetam

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Ethyl 2- pyrrolidone N acetate (PAE)	ETIRACETAM	—	1.27
Methanol		—	0.68
Ammonia		—	0.29
RO water		—	0.85



(k) Pregablin

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
S Ester	PREGABLIN	—	1.54
KOH		—	0.70
Methanol		—	20.21
Raney Nickle Catalyst		—	0.23
Activated carbon		—	0.02
Acetic Acid		—	0.91
Hyflosupercel		—	0.03
Hydrogen gas cylinders (42 cum)		—	0.00
IPA		—	4.57
Water for Cleaning equipments		—	5.71
Scrubber water make up		—	1.43

(l) Etiracetam Fresh

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Ethyl 2 (2)-Pyrrolidone butarate (2PBE)	ETIRACETAM	---	1.54
Methanol		---	1.94
Sodium Methoxide		---	0.02
Ammonia		---	0.39



(m) Etiracetam Racemic

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Etiracetam -L060	ETIRACETAM RACEMIC	—	1.36
Methanol		—	2.45
Sodium Methoxide		—	0.01

(n) Quetapine Fumarate

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
QTP-2	QUETAPINE FUMARATE	—	0.81
N,N Dimethyl aniline		—	0.26
Phosphorus oxy chloride (POCL3)		—	0.65
Toluene		—	8.97
NaHCO3		—	0.01
NaCl		—	1.21
Water		—	14.68
Piperzine anhydrous		—	1.08
IPA HCl		—	0.68
Acetone		—	1.26
Sodium Sulphate		—	0.08
Hyflow		—	0.04
QTP-IV HCl (11-piperazinyldibenzo(b,f)(1,4)thiazepine hydrochloride)		—	1.00
2-(chloroethoxy) ethanol		—	0.49
Sodium carbonate		—	0.64
Sodium Hydroxide		—	0.16
Sodium iodide		—	0.01
N-Methyl-2-pyrrolidone		—	0.46
Toluene		—	2.57
Fumaric acid		—	0.18
Hyflow		—	0.01
Activated charcoal		—	0.02



Methanol		—	7.83
Water for cleaning equipments		—	4.29
Scrubber water make up		—	2.15

(o) Cinnarizine

Name of the Raw materials	Name of the Products	Consumption of raw material per unit	
		During the current financial year 2019-20	During the current financial year 2020-21
Benzydrol	CINNARIZINE	---	0.94
Piperzine Anhydrous		---	2.14
Triethyl Amine		---	0.48
Catalyst - E		---	0.01
Catalyst B		---	0.02
Toluene		---	10.35
Hyflo		---	0.05
Caustic soda		---	1.28
Carbon		---	0.07
Methanol		---	1.79
MEK		---	3.19
HCl		---	5.73
Cinnamic Acid		---	0.64



PART C**Pollution discharged to environment/unit of output.**

(1) Pollution	Qty of pollutants Discharged (Mass/day)	Concentration of pollutants in discharges (mass/volume)	percentage of variation from prescribed stand- ards with reason
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(a) Water:

COD:	0.79 kg/day	39.7 mg/liter	Nil
BOD:	0.12 kg/day	6.2 mg/liter	Nil
TSS:	0.25 kg/day	12.4mg/liter	Nil

(b) Air :**Acid mist & SO₂**

Process stack-1	0.06 & 0.07 kg/day	1.48 & 1.9 mg/Nm ³	Nil
Process stack-2	0.06 & 0.07 kg/day	1.35 & 1.6 mg/Nm ³	Nil
Process stack-3	0.04 & 0.07 kg/day	1.12 & 1.9 mg/Nm ³	Nil
Process stack-4	0.05 & 0.08 kg/day	1.31 & 1.9 mg/Nm ³	Nil
Process stack-5	0.04 & 0.07 kg/day	1.17 & 2.0 mg/Nm ³	Nil
Process stack-6	0.05 & 0.08 kg/day	1.38 & 2.0 mg/Nm ³	Nil
Process stack-7	0.06 & 0.07 kg/day	1.37 & 1.7 mg/Nm ³	Nil

SO₂

Boiler-1	6.62 kg/day	55.2 mg/Nm ³	Nil
Boiler/TFH-2	167 kg/day	348 mg/Nm ³	Nil
Cogen Boiler	124.68 kg/day	133.2 mg/Nm ³	Nil
DG-1 (275KV)	0.04 kg/day	17.90 mg/Nm ³	Nil
DG-2 (750KV)	0.21 kg/day	21.40 mg/Nm ³	Nil
DG-3 (1500KV)	0.45 kg/day	25.10 mg/Nm ³	Nil

Particulate matter

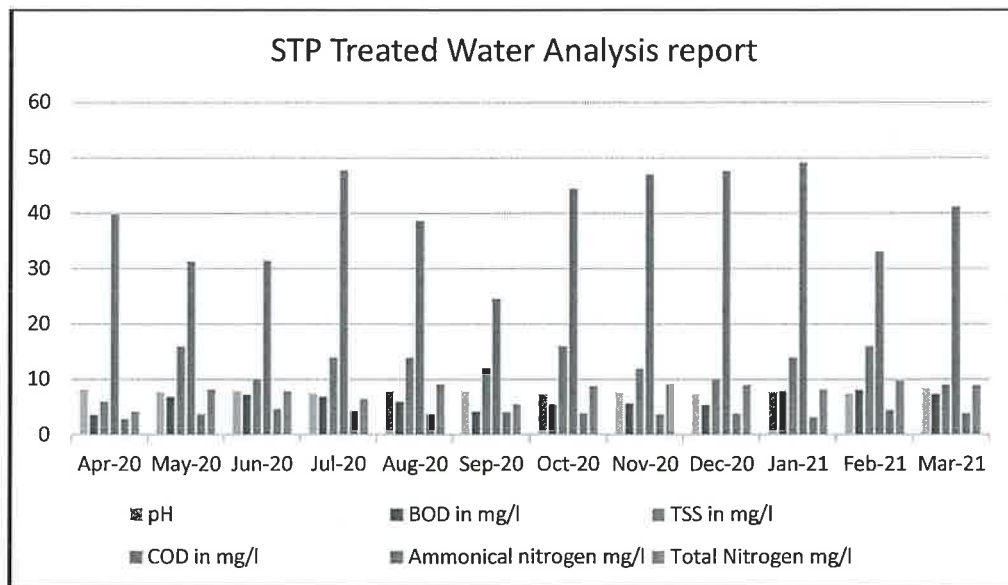
Cogen Boiler	53.42 kg/day	57.07 mg/Nm ³	Nil
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NOTE: AAQM monitoring, Noise, Stack & water monitoring compilation details has been attached:

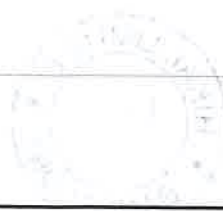
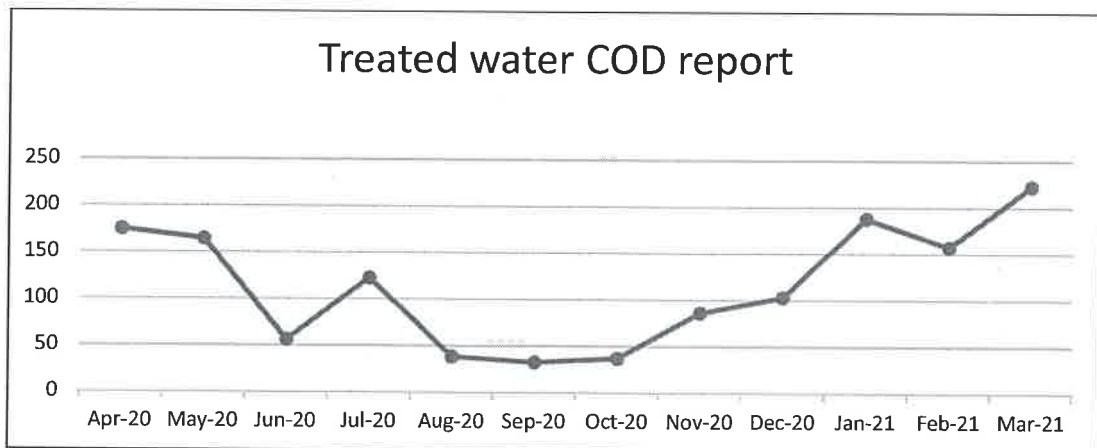


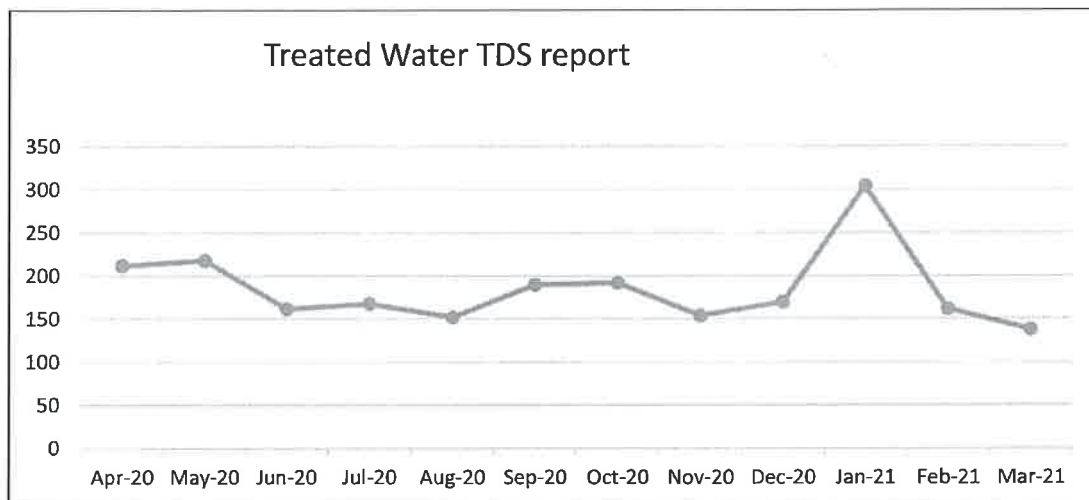
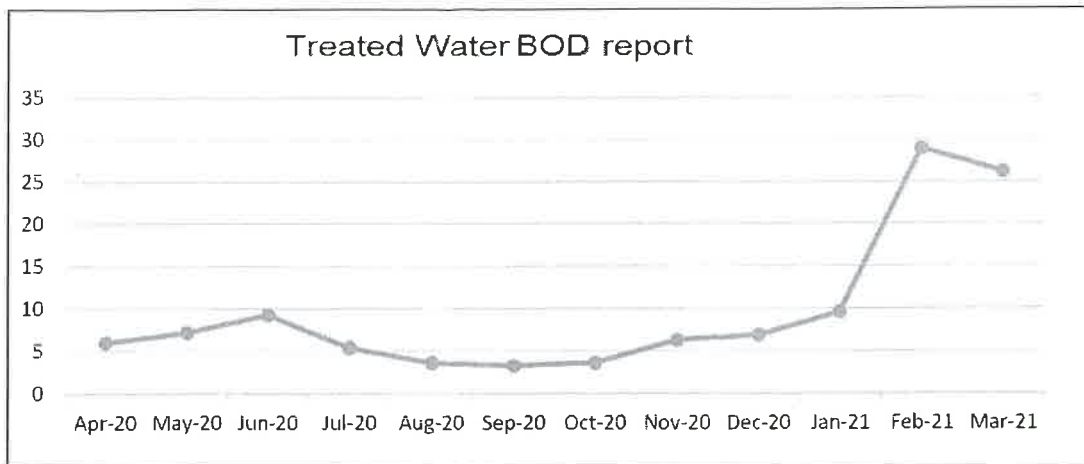
STP Treated Water Analysis Report for the year from April-2020 to March-2021

Parameters	pH	BOD in mg/l	TSS in mg/l	COD in mg/l	Ammonical nitrogen mg/l	Total Nitrogen mg/l
KSPCB Limits	6.5-8.5	20	20	50	5	10
Apr-20	8.1	3.6	6	39.8	2.9	4.2
May-20	7.7	6.9	16	31.3	3.8	8.2
Jun-20	7.9	7.2	10	31.4	4.7	7.9
Jul-20	7.5	6.9	14	47.8	4.25	6.5
Aug-20	7.8	6	14	38.6	3.7	9.1
Sep-20	7.8	4.2	12	24.6	4.1	5.6
Oct-20	7.25	5.4	16	44.4	3.9	8.8
Nov-20	7.6	5.7	12	47	3.7	9.2
Dec-20	7.3	5.4	10	47.6	3.85	9
Jan-21	7.7	7.8	14	49.1	3.2	8.2
Feb-21	7.4	8.1	16	33.1	4.5	9.8
Mar-21	8.3	7.4	9	41.2	3.9	8.9

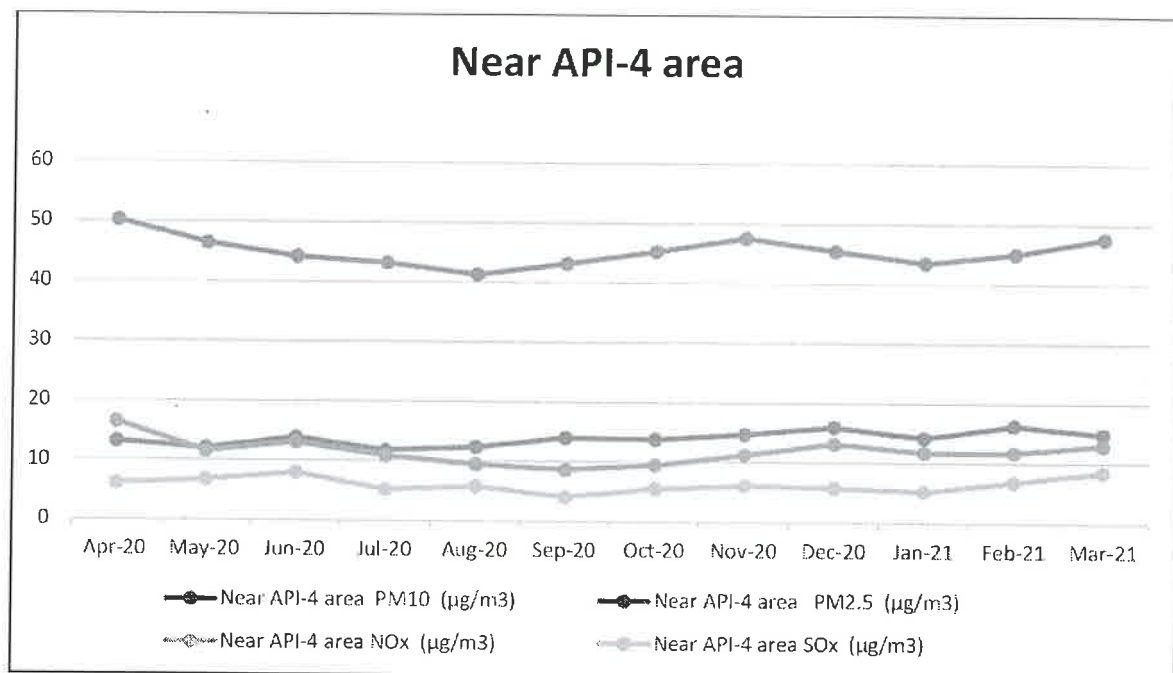


Treated Water (RO permeate) Analysis Report From Apr-2020 TO Mar-2021				
Parameters	pH	COD in mg/l	BOD in mg/l	TDS in mg/l
Date	Results			
Apr-20	6.6	175.1	6	212
May-20	6.6	164.6	7.2	218
Jun-20	6.8	56.4	9.3	162
Jul-20	6.5	122.8	5.4	168
Aug-20	6.3	38.6	3.6	152
Sep-20	7	32.8	3.3	190
Oct-20	6.8	37	3.6	192
Nov-20	6.8	86.2	6.3	154
Dec-20	6.85	103.1	6.9	170
Jan-21	6.8	188.2	9.6	304
Feb-21	6.5	157.2	28.9	162
Mar-21	6.8	222.7	26.2	138
Average	6.69	115	9.6	185

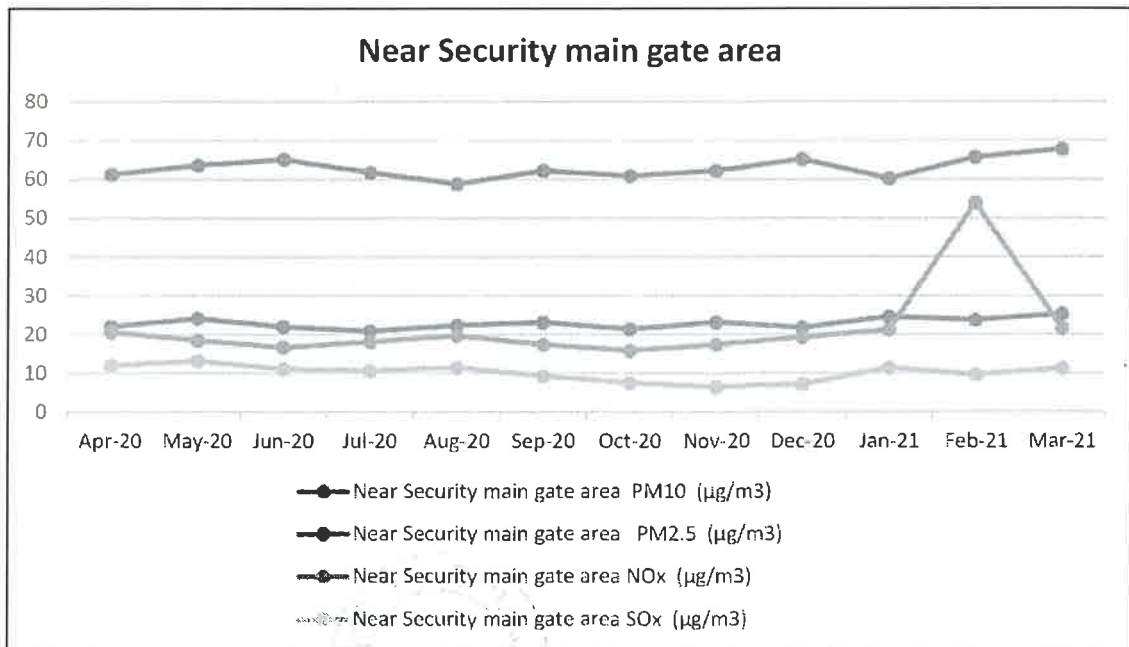




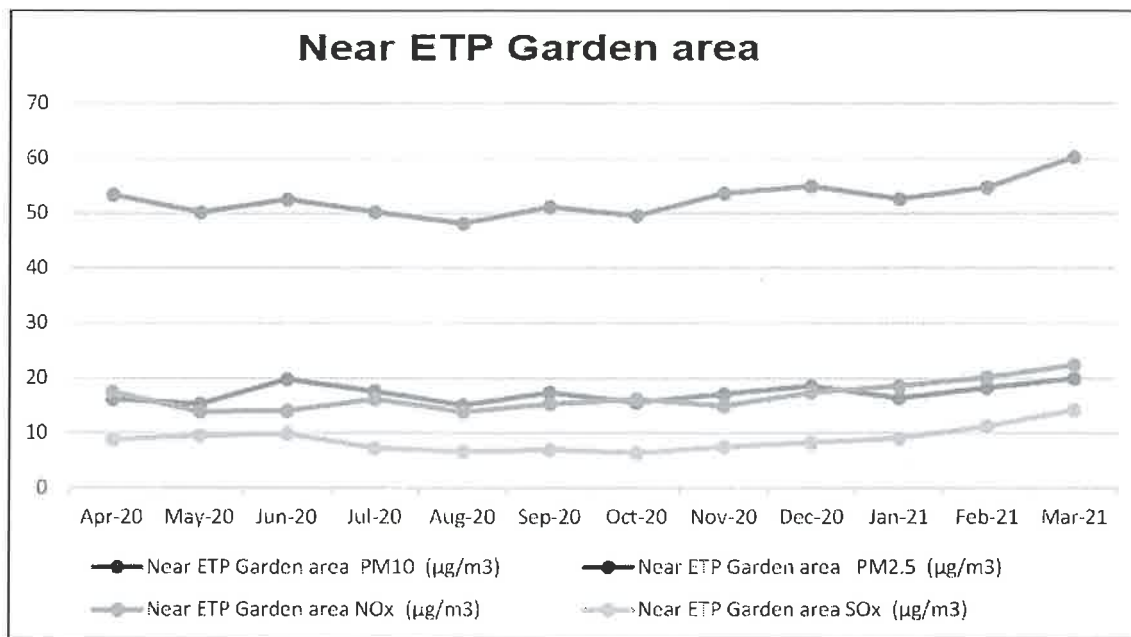
AAQM Location	Near API-4 area			
MONTH	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	SO _x ($\mu\text{g}/\text{m}^3$)
Apr-20	50.3	13.2	16.5	6.1
May-20	46.5	12.1	11.6	6.8
Jun-20	44.2	13.9	13.1	8
Jul-20	43.2	11.8	10.9	5.2
Aug-20	41.3	12.4	9.5	5.8
Sep-20	43.2	14	8.7	4.1
Oct-20	45.3	13.8	9.5	5.5
Nov-20	47.6	14.7	11.3	6.1
Dec-20	45.5	16	13.2	5.8
Jan-21	43.5	14.2	11.8	5.2
Feb-21	45	16.3	11.8	6.9
Mar-21	47.6	14.9	13	8.5



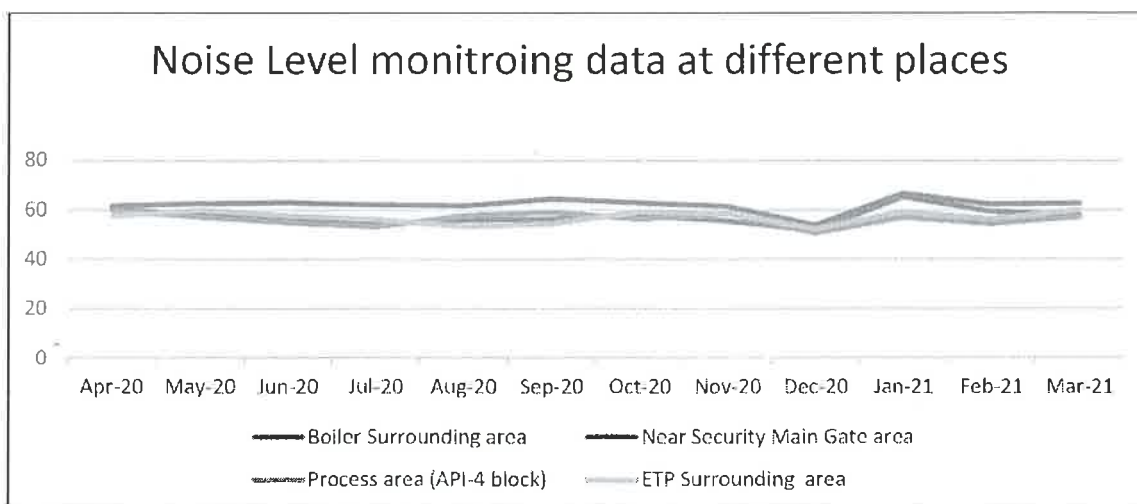
AAQM Location	Near Security main gate area			
MONTH	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	NO _x (µg/m ³)	SO _x (µg/m ³)
Apr-20	61.3	22	20.6	11.9
May-20	63.7	24.1	18.5	13.2
Jun-20	65.2	22	16.7	11.1
Jul-20	61.9	20.8	18.1	10.6
Aug-20	58.9	22.4	19.7	11.5
Sep-20	62.3	23.1	17.4	9.3
Oct-20	60.9	21.4	15.8	7.5
Nov-20	62.3	23.2	17.4	6.5
Dec-20	65.3	21.8	19.3	7.2
Jan-21	60.3	24.6	21.2	11.4
Feb-21	65.8	23.7	54	9.6
Mar-21	67.9	25.3	21.5	11.2



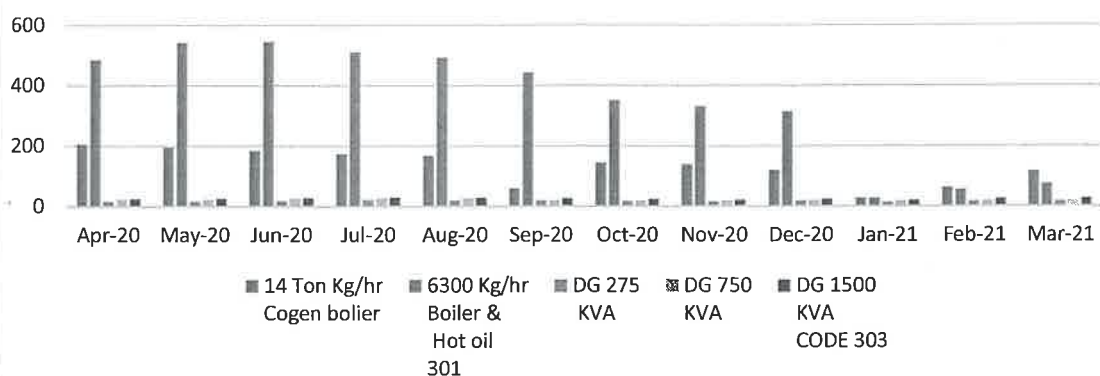
AAQM Location	Near ETP Garden area			
MONTH	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	NO _x (µg/m ³)	SO _x (µg/m ³)
Apr-20	53.4	16.2	17.5	8.8
May-20	50.2	15.3	13.9	9.6
Jun-20	52.6	19.8	14.1	9.9
Jul-20	50.3	17.6	16.2	7.3
Aug-20	48.2	15.1	13.9	6.6
Sep-20	51.2	17.4	15.3	7
Oct-20	49.6	15.6	16.2	6.4
Nov-20	53.7	17.1	15	7.5
Dec-20	55	18.6	17.4	8.3
Jan-21	52.7	16.4	18.6	9.1
Feb-21	54.8	18.3	20.2	11.3
Mar-21	60.3	20	22.4	14.2



Noise level monitoring data at different places in the plant					
Month / Location	Limit dB(A)	Boiler surrounding area dB(A)	Near security main gate area dB(A)	Process area (API -4 block) dB(A)	ETP surrounding area dB(A)
Apr-20	75dB(A)	60.5	61.7	59.8	57.6
May-20	75dB(A)	58	62.8	57.2	60.1
Jun-20	75dB(A)	56.6	63.2	55	57.8
Jul-20	75dB(A)	54.2	62.2	53.2	56.3
Aug-20	75dB(A)	56	61.8	57.9	53.3
Sep-20	75dB(A)	56.5	64.6	59.2	54.5
Oct-20	75dB(A)	58	63	56.4	59.4
Nov-20	75dB(A)	55.6	61.5	58.7	58.9
Dec-20	75dB(A)	51.7	53.9	50.7	52.4
Jan-21	75dB(A)	65.5	66.9	57.1	59.3
Feb-21	75dB(A)	59.5	62.4	54.5	56.4
Mar-21	75dB(A)	58	62.8	57.2	60.1



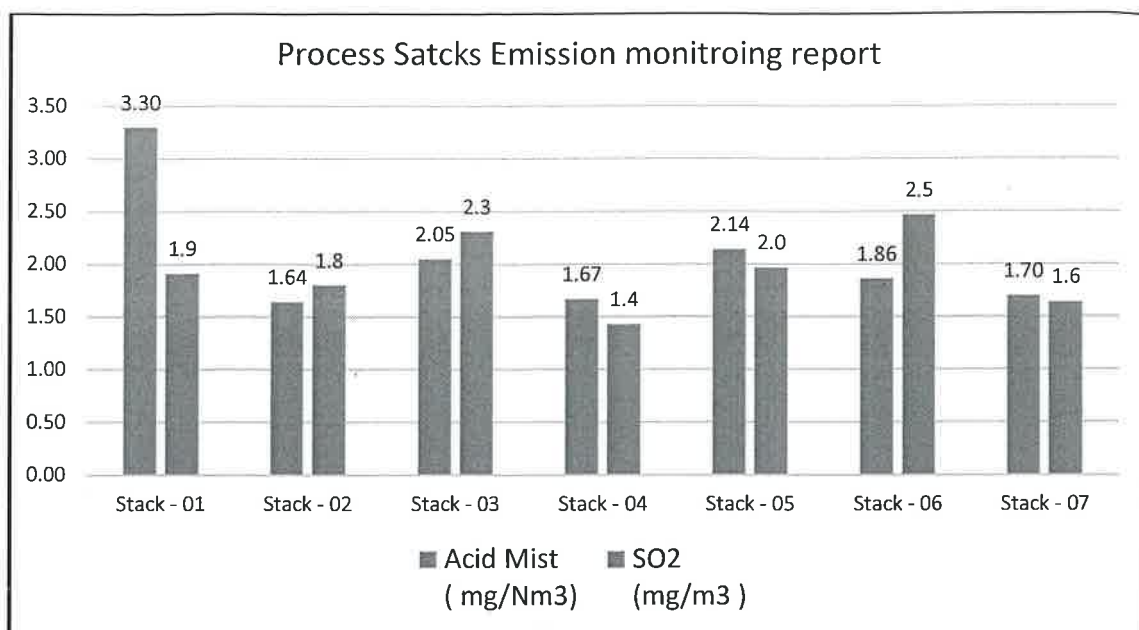
Stack Emission (SO₂ in Mg/Nm³) monitoring Data



Stack emission (SO₂ in mg/Nm³) monitoring data April 2020 - March 2021

Month / Location	14 TPH Cogen boiler	6300 Kg/hr Boiler & Hot oil 301	DG 275 KVA	DG 750 KVA	DG 1500 KVA CODE 303
Apr-20	206.3	486	16.5	23.7	25.1
May-20	195.9	541.7	17.3	23.1	27.1
Jun-20	184.5	545.44	19.1	25.3	27.9
Jul-20	174.6	512.3	22.5	27	30
Aug-20	168.4	493.47	20.3	25.4	28.5
Sep-20	60.3	444.12	19.5	20.3	25.4
Oct-20	144.1	350.2	17.4	19.1	22.7
Nov-20	138.6	331	15.4	17.6	20.6
Dec-20	119.2	314.2	18.6	20.3	22.5
Jan-21	27.8	28.1	13.5	16.7	19.5
Feb-21	63.2	55.1	16.9	18.5	25.3
Mar-21	115.9	73.9	17.3	19.2	27.1





Process stacks average emissions monitoring report from April-2020 to Mar-2021							
Parameter	Stack - 01	Stack - 02	Stack - 03	Stack - 04	Stack - 05	Stack - 06	Stack - 07
Acid Mist (mg/Nm3)	1.48	1.35	1.12	1.31	1.17	1.38	1.38
SO ₂ (mg/m3)	1.9	1.6	1.9	1.9	2.0	2.0	1.7



PART D**HAZARDOUS WASTES**

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

(a) From Process:

Sl.no	Description of waste	Cat. no.	Total Quantity	
			During the current financial year 2019-20	During the current financial year 2020-21
1	Used oil	5.1	1.05 MT	1.10MT
2	Oil soaked cotton waste, & oil filters	5.2	0.175 MT	0.196MT
3	Sludge & filters contaminated with oil	3.3	0.2 MT	0.18 MT
4	Spent carbon & Hyflow mixture, & carbon soot.	28.3	71.49 MT	71.915 MT
5	Spent solvent from process	28.6	232.5 MT	240 MT
6	Distillation residue from contaminated organic solvent	36.4	191.99 MT	337.34 MT
7	E-waste	----	220 Kgs	1370 Kgs

(b) From pollution Control facilities:

Sl.no	Description of waste	Cat. no.	Total Quantity	
			During the current financial year 2019-20	During the current financial year 2020-21
1	Chemical sludge from waste water treatment	35.3	133.26 MT	194.28 MT
2	Evaporation residues(MEE Salt)	37.3	1255.05 MT	1405.7 MT



PART E**Solid waste****(a) From process:**

S.no	Description of waste	Cat. no.	Total Quantity	
			During the current financial year 2019-20	During the current financial year 2020-21
1	Spent carbon & Hyflow mixture, & carbon soot.	28.3	71.49 MT	71.915 MT
2	Briquette Boiler Ash	----	784.6 MT	1029

(b) From pollution Control facilities:

S.no	Description of waste	Cat. no.	Total Quantity (MT)	
			During the current financial year 2019-20	During the current financial year 2020-21
1	Chemical sludge from waste water treatment	35.3	133.26	194.28 MT
2	Evaporation residues(MEE Salt)	37.3	1255.05	1405.7 MT

(c)

- (1) Qty recycled or re-utilized within the unit : 256 MT & 1700 No's
 (2) Sold : 46.87 MT & 150003 No's
 (3) Disposed : 3119.9 MT



PART F

Characterization (in terms of composition and quantum) of hazardous as well as solid wastes and disposal practice adopted for both these categories of wastes.

Sl.no	Description of waste	composition	Disposal practice
1	Chemical sludge from WWT (ETP Sludge)	Solid	Sent to M/s Mother Earth Environ Tech Pvt LTD for Secured landfill
2	Evaporation Residues (MEE salt)	Solid	Sent to M/s Mother Earth Environ Tech Pvt LTD for Secured landfill
3	Spent carbon & Hyflow mixture, & carbon soot.	Solid	Sent to KSPCB authorized party for Incineration / Co-processing in Cement kiln.
4	Spent solvent from process	Liquid	Stored in secured manner & reprocessed inside the industry.
5	Distillation residue from contaminated organic solvent	Liquid/Tarry	Sent to KSPCB authorized party for Incineration / Co-processing in Cement kiln.
6	Used oil	Liquid	Sent to KSPCB authorized party for re-processing
7	Oil Soaked Cotton waste & Used Oil filters	Solid	Sent to KSPCB authorized party for Incineration / Co-processing in Cement kiln.



PART- G

Impact of the pollution abatement measures taken on conservational of natural resources and on the cost of production.

Effluent recycling systems comprising of Reverse osmosis plant, multiple effect evaporation and drying systems are installed in our unit to achieve Zero Liquid discharge to eliminate water pollution. By installing the above systems we have totally avoided the need for effluent discharge and also the recovered water from effluent recycling plant is reused in our cooling towers as make up water which has resulted in conservation of natural resources i.e. fresh raw water intake to cooling tower make up is avoided.

PART -H

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

During the last financial year we have invested around 36.0 Lakhs for the pollution equipment's up gradation and for protection of environment. Following are the invest details done last financial year:

1. Hydro Jet cleaning of MEE plant to improve efficiency of the plant - 2.0 Lakhs.
2. Replacement of RO plant membrane and disc to improve the RO permeate quality- 29.0 Lakhs.
3. Increasing of steam condensate recovery purpose and reduction of effluent generation invested Rs:5.0

PART- I

Any other particular for improving the quality of the environment.

We have planted around 400 saplings this year in the Lake periphery and other areas of our plant/neighboring areas in addition to exiting green belt maintained in our premises. Also we always have continuous improvement programs in place to conserve energy and natural resources which in turn will contribute for greenhouse gas emission reductions. We are initiated to wealth out of waste projects to reduce the waste and recover the product and reused as a raw material.



