Make it better together

23d September 2024

To,
The Karnataka State Pollution Control Board,
Plot No. 42(B -2),
Naubad Industrial Area,
BIDAR – 585 402.

Sub: Submission of Environmental statement in FORM-V for the FY 2023-2024,M/s Sai Life Sciences Limited., Unit-IV, plot No.79A,79B, 80A, 80B, 81A,82&130A,Kolhar industrial area, Bidar Taluk and District-585403,Karnataka State.

Ref-1: Consent for operation (CFO-Air & Water) No: AW-332061.

Respected Sir,

With reference to the above subject, we are here by submitting the Environmental statement in FORM-V for the FY 2023-2024.Please find the enclosed annexures in hard copy with respect to the above cited subject.

Enclosed copy:

FORM – V

Kindly acknowledge for the same.

Thanking you.

Yours faithfully,
For Sai Life Sciences Limited

SAI LIFE SCIENCES LTD. BIDAR UNIT-IV

Authorized Signatory

Cc To: The Member secretary, KSPCB, Parisara bhavan, Church street Bangalore- 560001

ENVIRONMENTAL STATEMENT
FY 2023-2024

SAI LIFE SCIENCES LIMITED.,
Plot Nos. 79A, 79B, 80A, 80B, 81A, 82 & 130A,
Kolhar Industrial Area,
Bidar Taluk & District
Karnataka – 585403.

ENVIRONMENTAL STATEMENT
FORM-V

PART-A

I.	Name and address of the owner/occupier of the industry, Operation or process.	Sai Life Sciences Limited., Plot Nos. 79A, 79B, 80A, 80B, 81A, 82 & 130A, Kolhar Industrial Area, Bidar Taluk & District Karnataka – 585403.
II.	Industry category Primary-(STC Code) Secondary- (STC Code)	Red category
III.	Production category -Units	FY 2023-2024, Production details are attached as Annexure-I
IV.	Year of establishment	1999
V.	Date of the last environmental statement submitted	28-July-2023

PART-B

I. Water and Raw Material Consumption:

Sl.No	Area of use		Consented(KLD)	Actual used(KLD)
A.	Domestic	Source 1.Bore well 2.KIADB	45.00	17.8
B.	(a).Process (B).Scrubbers		100.00	68.9
C.	QC Laboratory		10	1.3
D.	Gardening		35.00	5.9
E.	Boiler Feed & RO Plant		180.00	111.2
F.	Cooling Tower*		170.00	130.8
	Total		**540.00**	**339.8**

- The cooling towers water consumption including ZLDS treated water.
- The water consumption for green belt development is 23.7 KLD (Fresh water 5.9 KLD and domestic treated water :17.8 KLD)

Name of Products	Process water consumption per unit of products	
	During the previous financial year FY 2022-2023	During the current financial year FY 2023-2024
Production details are attached as Annexure-I	296.1 Kl water consumed for 1 ton of product	292 Kl water consumed for 1 ton of product

II. Raw material consumption

Name of raw materials*	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year FY 2022-2023	During the current financial year FY 2023-2024
The raw material list is attached as annexure-II	Production details are as Annexure-I	123.14 MT Raw material consumed for 1 ton of product	164.05 MT Raw material consumed for 1 ton of product

PART-C

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

Pollutants	Quantity of Pollutants Discharged (Kl/day)	Concentration of Pollutants Discharged. (Mg/Ltr.)	Percentage of Variation from Prescribed standards with reasons.(As per CFO)
(A).Waste water	RO-Permeate (Treated water) Average -91.8 Kl/day	The effluent handling through zero liquid discharge system has helped us in recovering treated water is being used in cooling tower as Make up water. Treated water quality parameters report is attached as annexure-3.	No Deviation. Values are within the prescribed standard. Refer to Annexure-3
(b).Air Stack emission monitoring & Ambient air quality monitoring	The Stack emission and ambient air quality monitoring reports data attached as annexure-4		Stack emission and Ambient air quality parameters are well within the prescribed limits stipulated by regulatory authorities. Refer to annexure 4

PART-D

HAZARDOUS WASTES

(As specified under Hazardous Wastes (Management & Handling Rules, 2016).

Hazardous Wsate	Category No	UOM	Authorized quantity per annum	Total quantity of generated (MT/A)	
				During the previous financial year FY 2022-2023	During the current financial year FY 2023-2024
Process residue & Wastes	28.1	MT	279.74	112.643	118.377
Spent carbon or filter medium	36.2	MT	165.00	24.869	30.711
Spent catalyst	28.2	MT	5.26	4.815	5.100
Contaminated aromatic, aliphatic or napthenic solvents may or may not be fit for reuse(MEE Stripper Solvent)	20.1	MT	3500.00	1098.081	1086.814
Spent carbon	28.3	MT	16.3	12.458	15.085
Off specification products	28.4	MT	8.0	0.6780	6.710
Spent Solvent	28.6	MT	7000	4246.254	5551.377
Empty barrels / Containers /contaminated with hazardous chemical wastes	33.1	No's	60000	18446 (No's)	50.921
		MT	600		
Liners contaminated with hazardous chemical wastes	33.1	MT	10	3.308	3.856
Chemical Sludge from Waste Water Treatment (ATFD salt)	35.3	MT	1400	528.395	478.851

Chemical Sludge from Waste Water Treatment (ETP sludge)	35.3	MT	350	156.294	231.786
Any process or Distillation Residue	36.1	MT	70	5.141	0.233
Used oil	5.1	MT	37.2	4.22	7.01

PART – E
SOLID WASTES

Solid waste	Total Quantity	
	During the previous financial year FY 2022-2023	During the current financial year FY 2023-2024
(a). From Process	MS Scarp – 52.043 MT/A	107.409 MT/A
	SS Scarp –10.475 MT/A	20.425 MT/A
	GI Scrap – 12.065 MT/A	8.740 MT/A
	MS Drums(Used) –4378 No's/A	6997 No's/A
	Paper waste -1.23 MT/A	**
(b) From Pollution Control facility	Coal ash / Fly ash- 1514.32 MT/A	Coal ash / Fly ash -1560 MT/A
(c). Quantity recycled or re-Utilized within the unit (wastes from Canteen &Garden)	Food & Garden waste-5.271 MT/A	Food & Garden waste-6.2 MT/A

** The moisture content of compost (organic manure) was decreased by using paper waste in an organic waste digester.

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 disposal practice:**

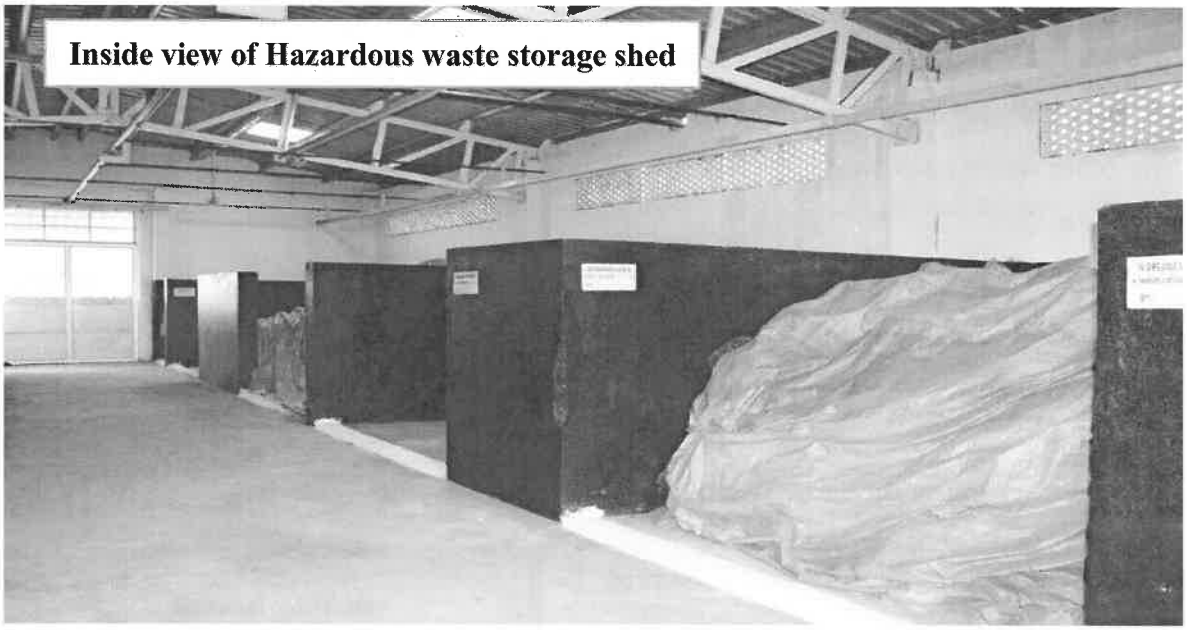
- The hazardous waste generated at site are collected, labelled, segregated and stored in dedicated storage area with hard s flooring.
- The hazardous waste from process in the form of Process residue wastes, contaminated silica gel and spent carbon from process of production are packed in HDPE leak proof bags.
- The hazardous wåste from process in the form of off specification products, Spent Catalyst are proof HDPE bags/ carboys.
- Chemical Sludge (MEE salt / ETP sludge) from ZLD treatment plant are packed in LDPE leak proof bags.

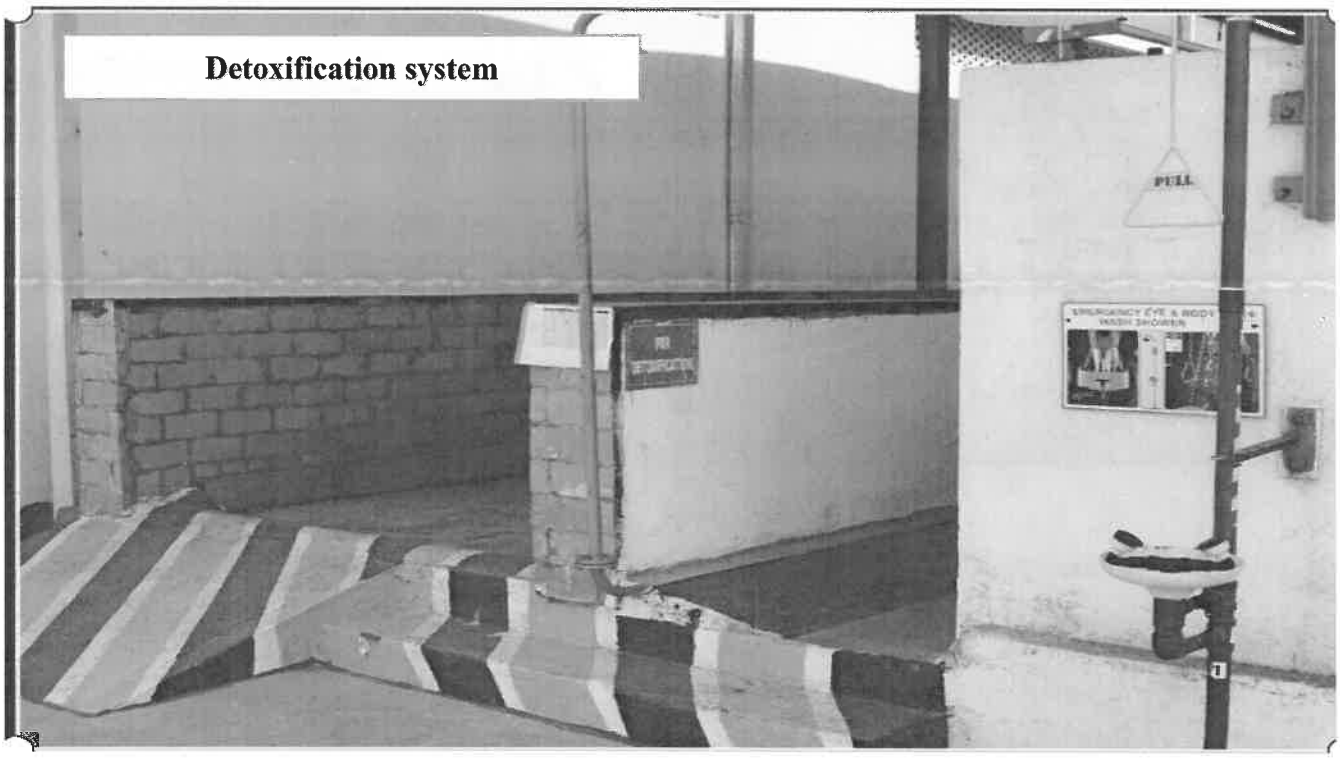
- The hazardous wastes from process in the form of used oil, any process or Distillation Residue, Spent Solvent and contaminated aromatic, aliphatic or naphthenic solvents may or may not be fit for reuse solvents are storage in MS Drums / MS containers.
- The other waste such as empty HDPE containers /Liners are detoxified in house and sent to recyclers.
- This is being disposed to pollution control board approved Co-Processing / Pre-processing / Authorised Recycler facilities through authorized hazardous waste transporter.
- Hazardous wastes characteristics reports are enclosed **(Refer to annexure-6)**

The photograph of the same is attached here with for your reference.

Outside view of Hazardous waste storage shed

Display boards





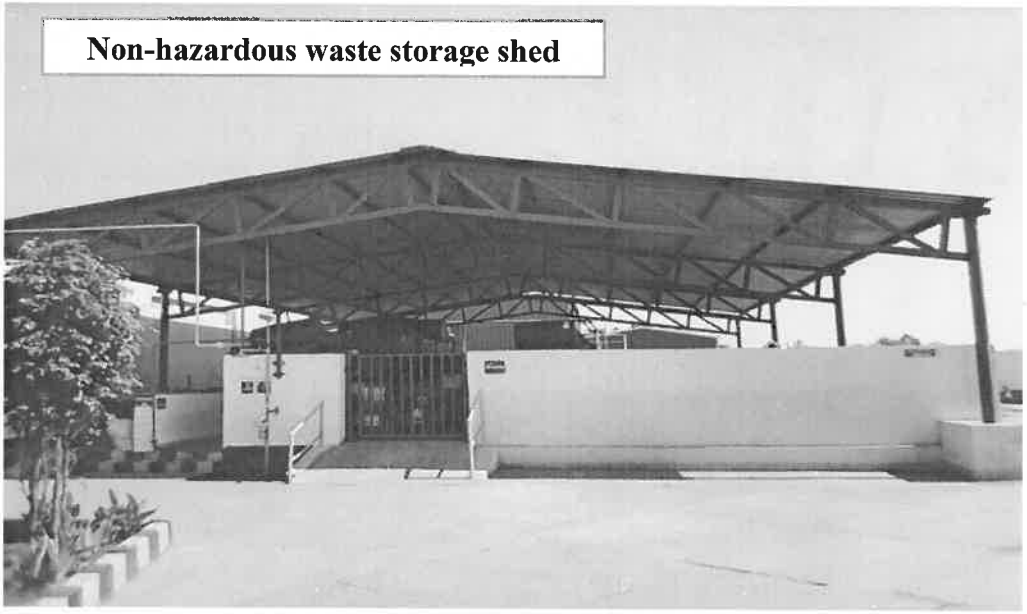
2. Solid waste disposal practice (Non-hazardous waste) :

- The Solid wastes generated from facilities in the form of MS Scarp, SS Scarp. GI Scarp, MS drums and paper waste are stored in dedicated area and sent to recyclers.

- The Solid wastes from boiler plant in the form of coal ash / fly ash sent to bricks manufacturing industry.

- The Solid wastes from canteen waste and garden waste is converted in to organic compost.

Non-hazardous waste storage shed



Organic Waste digester

- Installed of Organic Waste digester (200 kgs/day) to decompose the food waste from canteen and dry leaves from plant premises.
- Composting is a typical digestion process, which converts organic matter into compost.
- Organic waste digester system has helped us in recovering organic compost.
- The composting enhance Gardens ability to grow healthy plant

The photograph of the same is attached here with for your reference

PART-G

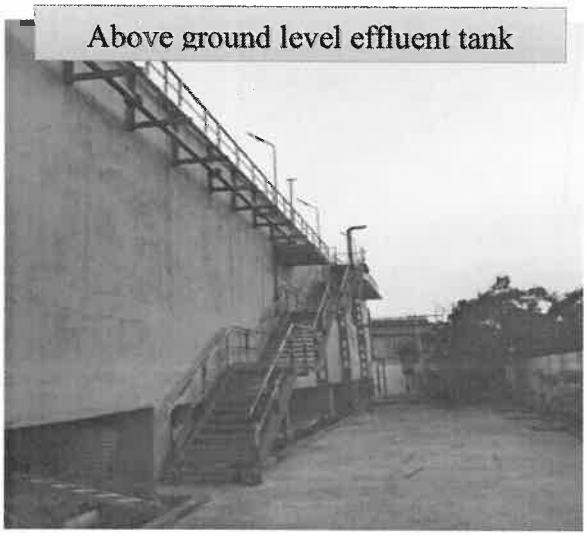
Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

A. Water pollution / Land pollution control measures:

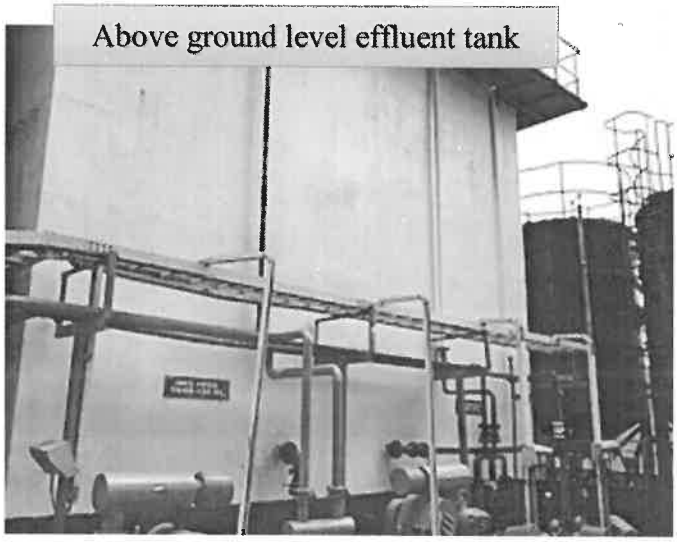
- The entire operational areas (Production blocks & ETP area) and hazard chemical storage tank areas provided with hard flooring and acid resistance impervious linings.

- The Effluent storage tanks and Chemical storage tanks are located above ground and the integrity of these tanks are checked at regular intervals. The photograph of the same is attached here with for your reference.

Above ground level effluent tank

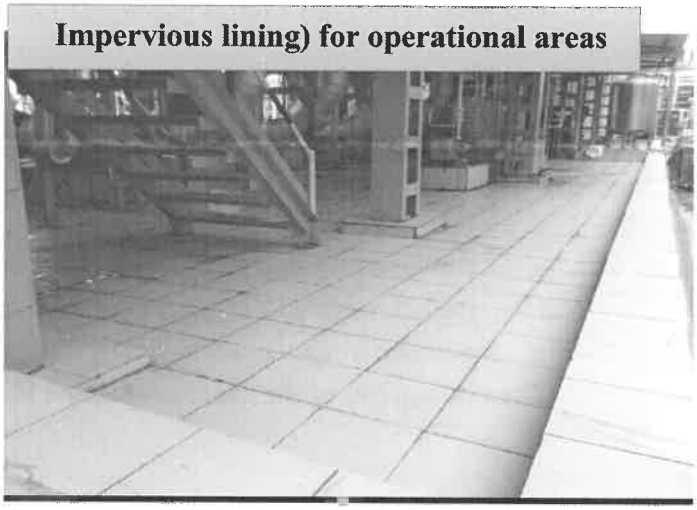


Above ground level effluent tank



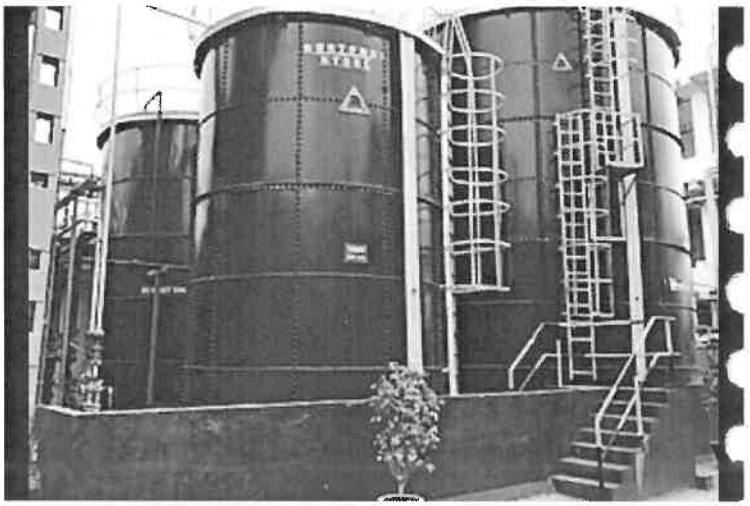
Impervious lining for Effluent tanks

Impervious lining) for operational areas



Chemicals storage tanks (Above the ground) & Secondary containment

Effluent storage tank (Above the ground) & Secondary containment

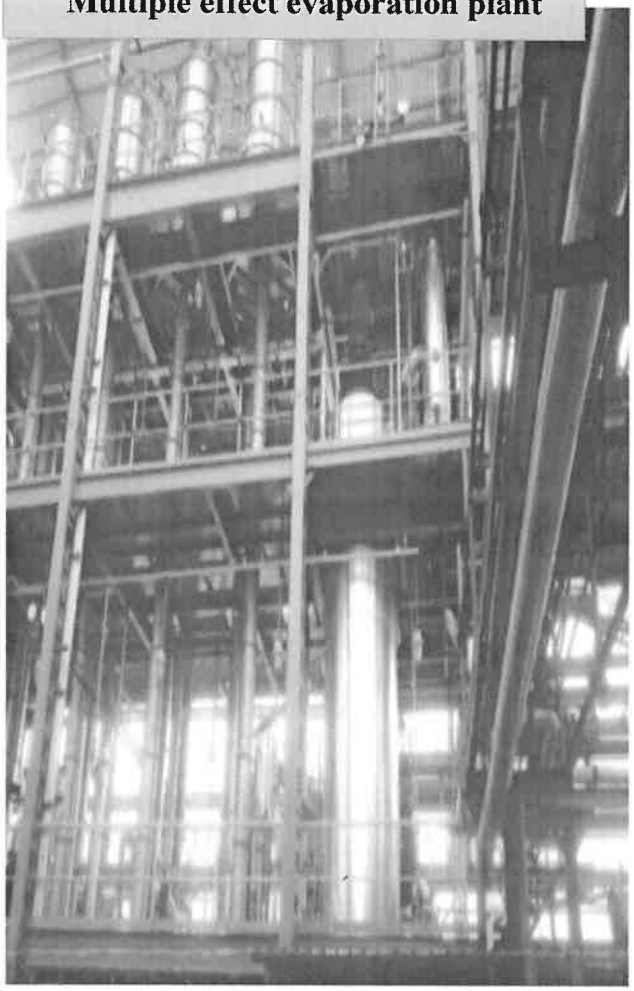


- All the chemical storage tank and Effluent collection tanks provided with adequate secondary containment to prevent any spills leaking into the environment.
- We have systematic method for collection and treatment of all types of effluent. Our facility is equipped with Zero Liquid Discharge (ZLDS) .The ZLDS facility includes following components:

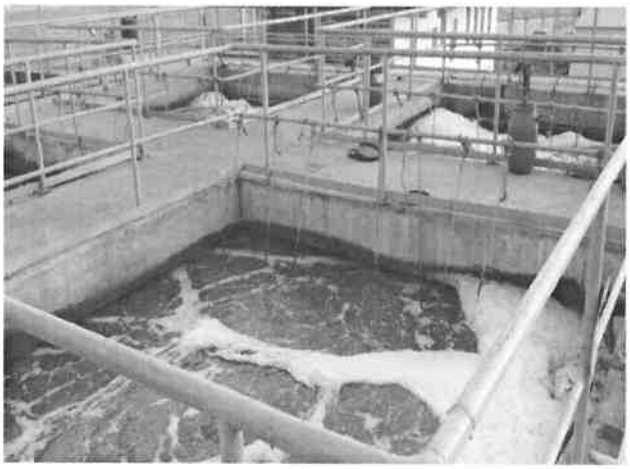
a. Stripper
b. Multiple Effect Evaporator (MEE)
c. Agitated Thin Film Dryer (ATFD)
d. Primary & biological treatment
e. Reverse Osmosis (RO) system
f. Reject recycled RO plant (RRRO)
g. Sewage treatment plant (STP)

The photograph of the same is attached here with for your reference.

Multiple effect evaporation plant

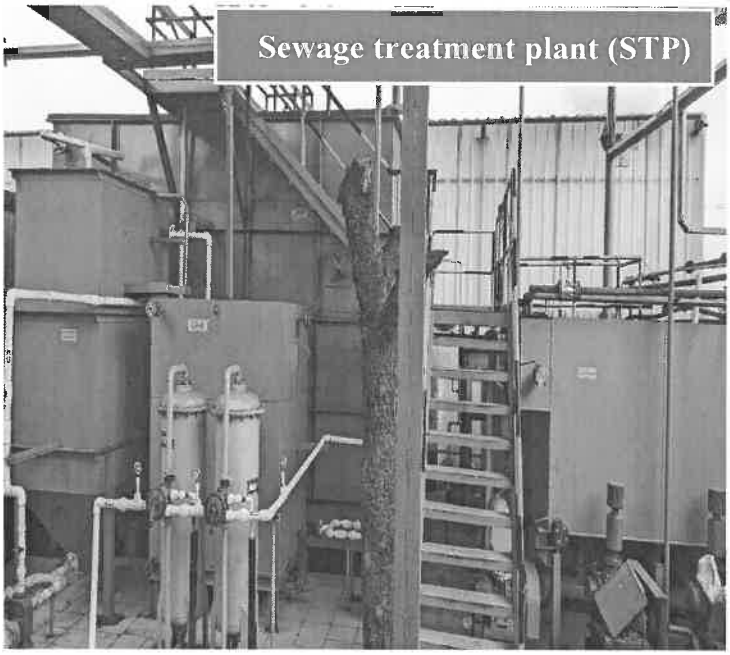


Biological treatment plant



Reverse Osmosis (RO) system

Sewage treatment plant (STP)



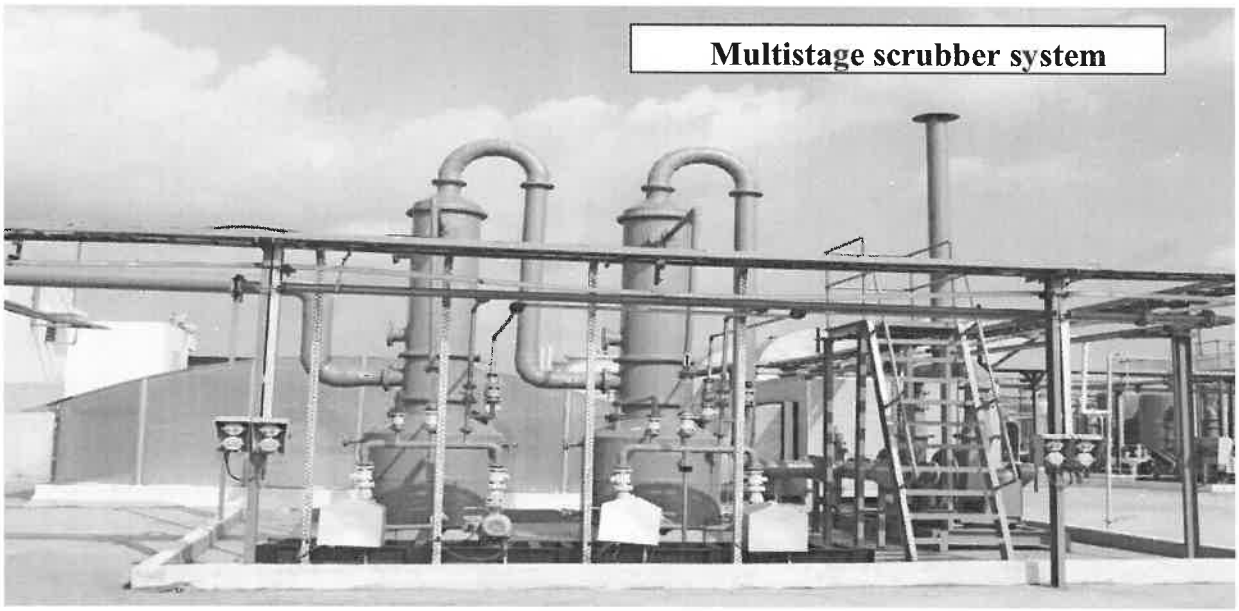
RRRO Plant

- The effluent handling through zero liquid discharge system has helped us in recovering treated water is being used in cooling tower as make up water. This recycling of treated effluent has helped us achieving water conservation.
- RO rejects again re treating in RO reject recycle plant capacity-50 KLD. Hence RO reject generation come down to 50% in total generation.
- The hazardous waste generated at site are collected, labelled, segregated and stored in dedicated storage area with hard impervious flooring.
- The hazardous waste generated from the process is sent for processing to cement industries wherein it is used as an alternate fuel. The other waste such as empty containers are detoxified in house and sent to recyclers.
- The Pollution abatement practices adopted by us save natural resources. Ultimately reducing the manufacturing cost.
- The Sewage effluent collected from various blocks/areas pumped into STP Plant for treatment purpose, recovering treated sewage water is being used in gardening purpose.
- All the chemical storage tank and Effluent collection tanks provided with adequate secondary containment to prevent any spills leaking into the environment. Soil analysis reports attached as **annexure no-9**

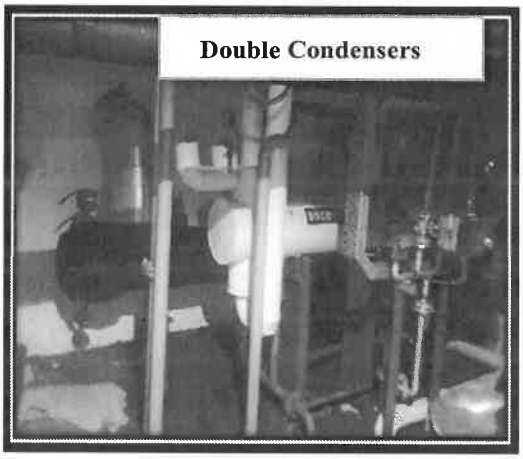
B. Air pollution control measures:

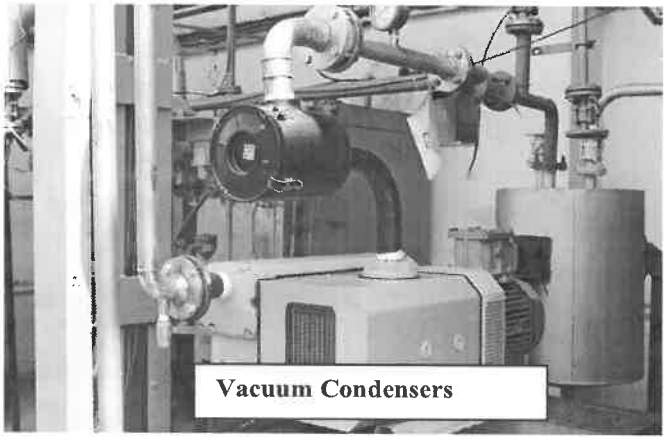
- We have used the combination of robust engineering and technology for minimizing the pollution and protection of environment. All our facilities and equipment's at site are equipped with pollution control devices
- Our production blocks, dispensing area, acid storage tanks are equipped with multistage scrubbers which scrubs the acidic/alkaline emissions from reaching the atmosphere.

The photograph of same is attached herewith for your reference.



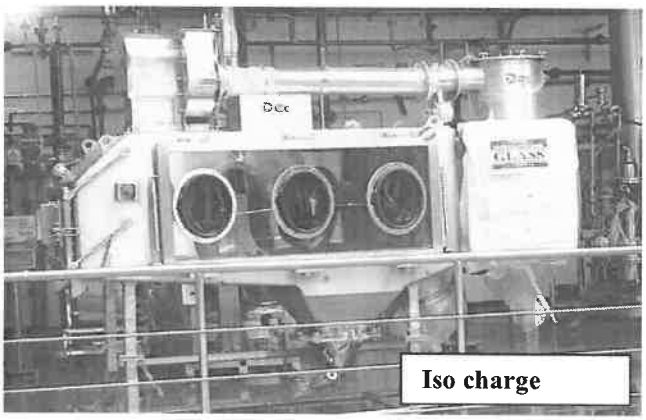
- Specific operation and maintenance procedures are available and are undertaken regularly to ensure that scrubbers are functioning as per the requirement. The emission monitoring of scrubbers is conducted to ensure that emissions are within the prescribed limit and is submitted to board on monthly basis.
- All our critical manufacturing operations are carried out through closed systems and the reactors, vacuum systems also are equipped with primary and secondary condensers with RT water and +5°C chilled water utility to prevent emission of VOCs. The photograph of the same is attached here with for your reference.

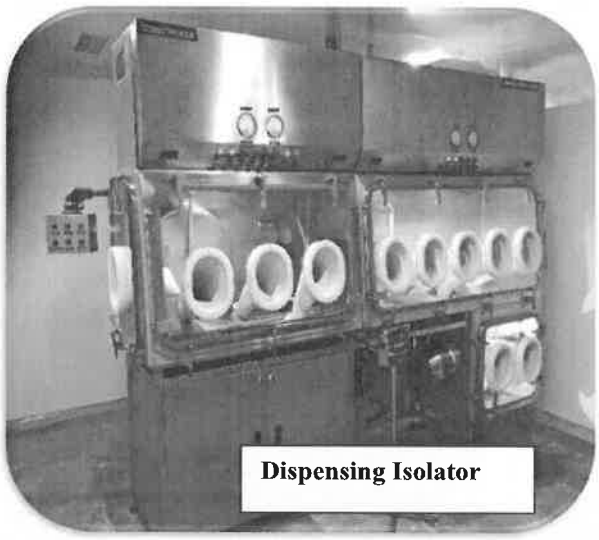

Double Condensers

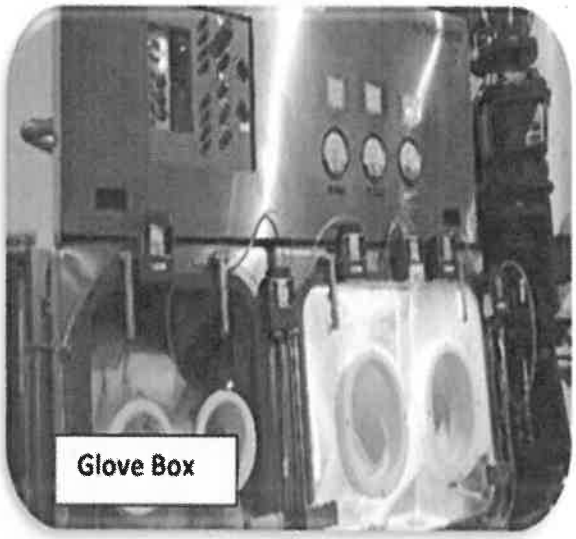

Vacuum Condensers

- We have installed state of the art containment systems to contain the pollutant concentrations (ambient air concentration) up to a level of ~1 micro g/ cum. We have installed Powder Transfer System (PTS), Iso-charge, Glove Boxes, Drum containment system (DCS) and Dispensing isolator. These advanced containment systems protect the employee as well as environment by limiting the concentration of pollutants in ambient air around 1 to 10 micro g/cum. The photographs of the containment systems are attached herewith for your reference.


Drum Containment system


Iso charge



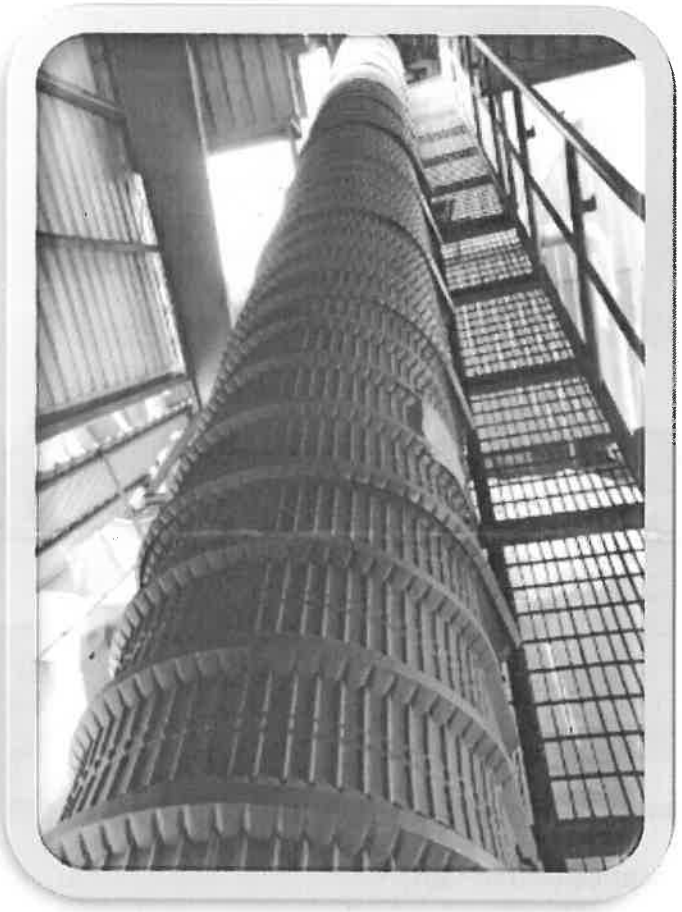


Pollution control equipment at Solvent storage tank:

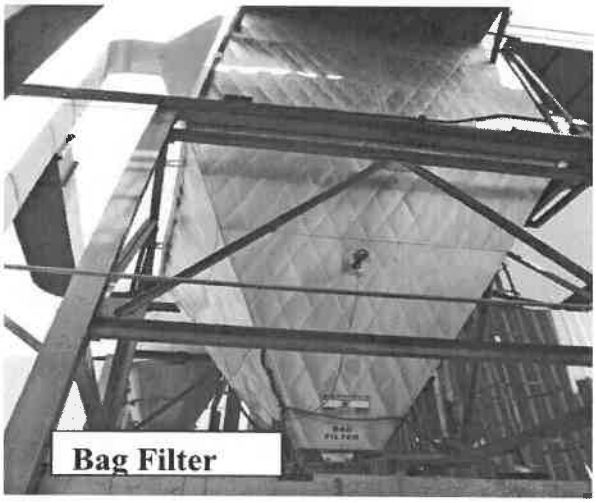
- We have installed vent condenser for storage tank, which stores low boiling solvent to minimize vaporization loses during storage. We have a 'Photo Ionization Detector' (PID) meter in site and we Conduct VOC monitoring regularly to identify possible emission,
- The reports of VOC monitoring are also being submitted to board on monthly basis. Gasses detection systems are installed in raw material stores.

Pollution control equipment at coal handling & Boiler:

Our boiler works on fluidized bed technology for effective combustion and has pulsating fiber glass bag filters for efficient emission control. The emission parameters are regularly monitored through a board approved third party laboratory and the reports are also submitted to board on monthly basis. **The photograph of Bag filter is attached herewith for your reference**



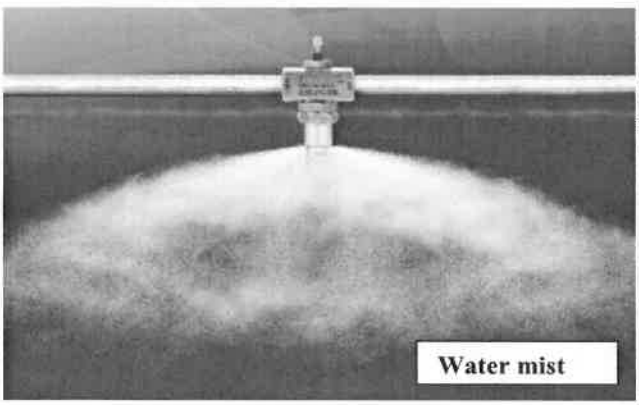
Cyclone Separator

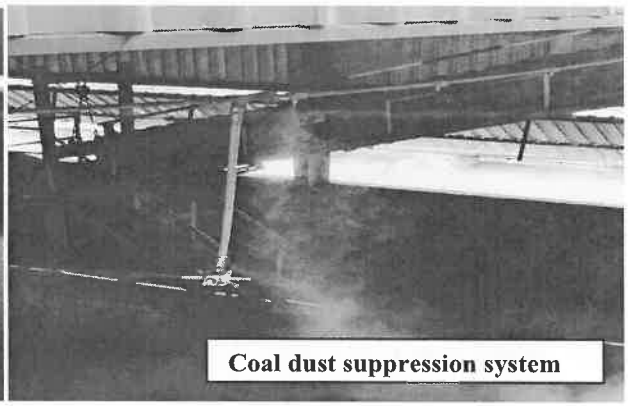


Bag Filter

- Our coal storage shed area is closed yard equipped with water-based dust suppression system which suppresses any form of dust generation during unloading of coal from truck as well as during loading of coal to boiler. The coal is transferred to boiler using closed conveyor belt.

The photograph of the coal shed, and dust suppression system is attached herewith for your reference

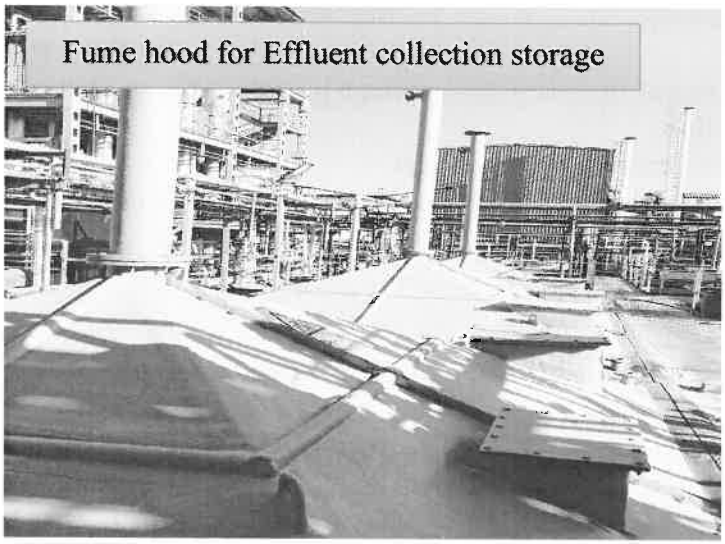




Provided of fume hood at ETP- HTDS effluent collection tank

We have three fume hoods are installed at ETP- HTDS effluent collection tanks, namely high TDS collection tank - I (HTDS-I), high TDS collection tank - II (HTDS-II) & pre-treated high TDS storage tank (MEE Feed Tank) to prevent emission of VOCs.

The photograph of Fume hood is attached herewith for your reference



C. Sound Pollution control measures:

- ❖ All DG sets are provided with acoustic enclosures.
- ❖ Used proper lubrication to avoid excessive noise generation.
- ❖ Preventive maintenance is extended to all equipment including pollution control equipment the same is performed by qualified team of maintenance.

Sound level monitoring reports are enclosed **(Refer to annexure-5)**

PART – H

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

Water conservation facilities

a. Provided PCAs taps or PCAs with sensor taps to all rest rooms for minimize the fresh water.
b. Provided Spray guns to all wash area to conserve water.
c. Provided spray ball to Reactor for cleaning
d. Hydro jet machine use for reactor cleaning.
e. All cooling towers provided to float valves for control of overflow.
f. Overhead tanks provided to level sensors and pneumatic valves for control water overflow.
g. Half-yearly EHS internal audit of all the sections through the plant premises.
h. Green belt :

Developed the greenbelt in & around the plant and social forestry. A total of 6118 trees have been planted.

Below mentioned, 40 different tree species have been planted.

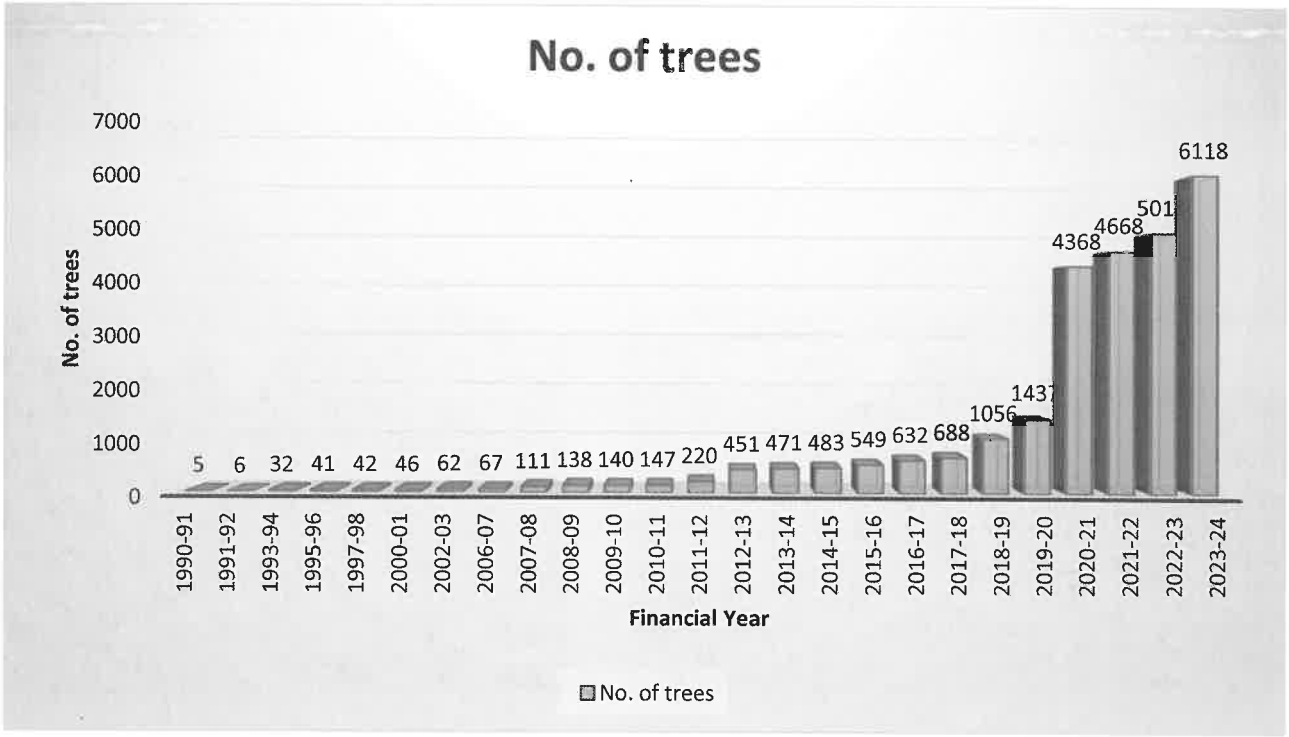
Tree species in Unit-IV			
S.No	**English Name**	**Botanical Name**	**No of tree**
1	Areca palm	Dypsis lutescens	62
2	Ashoka	Saraca asoca	28
3	Avocado	Persea americana	1
4	Badam Tree	Terminalia Catappa	350
5	Banyan	Ficus benghalensis	1
6	Black plum	Syzygium cumini	26
7	Bougainvillea glabra	Bougainvillea	170
8	Cashew	Anacardium occidentale	313
9	Coconut	Cocos nucifera	1
10	Conocarpous	Conocarpous	318
11	Custard apple	Annona reticulata	25
12	Dracaena	Dracaena reflexa	23
13	Drumstic	Moringaceae	1
14	Eucalyptus citriodora	Corymbia citriodora	20
15	Ficus religiosa	Peepal tree	200
16	Flowering plants	NA	4
17	Forest trees	Forest trees	31
18	Guava	Psidium guajava	99
19	Gmelina asiatica	Gmelina parvifolia.	150
20	Honduran mahogany	Swietenia macrophylla	200
21	Jackfruit	Artocarpus heterophyllus	10
22	Jasmine	Jasminum	2
23	malabar neem	Melia dubia	65
24	Mango	Mangifera indica	439
25	Manila plam	Adonidia merrillii	28
26	Mini plam	Phoenix robelinii	16

27	Muntingia	Muntingia calabura	6
28	Neem	Azadirachta indica	731
29	Platanus	Sycamore	3
30	Pongame	Millettia pinnata	2109
31	Red Ixora	Ixora coccinea	1
32	Sapota	Pouteria sapota	15
33	Silver oak	Grevillea robusta	17
34	Subabul	Leucaena leucocephala	317
35	Sandalwood	Santalum album	50
36	Tamarind tree	Tamarindus indica	156
37	Teak	Tectona grandis	60
38	Temple tree	Plumeria Rubra	7
39	Trachycarpus fortunei	Windmill palm	3
40	Weeping fig	Ficus benjamina	60
Total trees			**6118**

Number of trees planted: 6118 No's
Survival of trees: 6043 No's
Rate of survival - 98.7 %

We have taken steps to improve our green belt area by earmarking additional lands for plantation and green cover. The green belt covered up to 44% of total area.

The graphical representation of plantation details is given below



PART – I
MISCELLANEOUS:

- Storm water shall not be allowed to mix with effluent and floor washing.
- As a part of commitment to improve the work environment, we have developed green belts inside the facility premises and at adjacent areas.
- To create awareness we celebrated world Environment day and also we initiated plantation program on World Environmental day.

The solvent tank farm vents are monitoring at regular intervals and complied with the discharge standards stipulated in G.S.R 541 (E) Dated: 06.08.2021**(Refer to annexure-7)**

Piezowell

- 2 no's Piezowell installed within the plant premises for quality monitoring of ground water.
- The ground water quality is monitored by NABL/MOEF approved laboratories and reports are being submitted to Regional office twice in year.
- The photograph of the same is attached here with for your reference

Piezo well quality report is enclosed **(Refer to annexure-8)**

Environment Management System Improvement

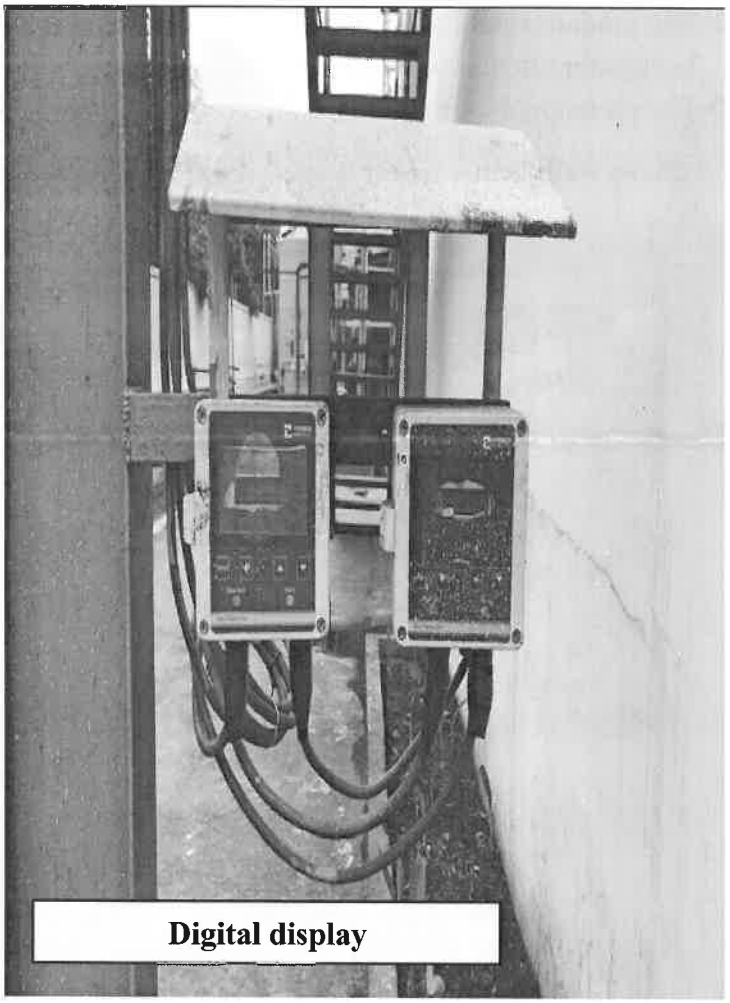
- Half-Yearly SHE inspection of all the sections through the plant premises.
- Awareness promotion through various environmental training, environmental competitions, presentations etc. on World Environment Day etc.

OCEMS system

- We have provided online continuous monitoring (OCEMS) for treated effluent and stack emission. This real time data connected to KSPCB and CPCB server.
- Our OCEMS related flow meter and SPM sensors calibrated by recognized laboratories. Calibration reports **attached as Annexure no-10**

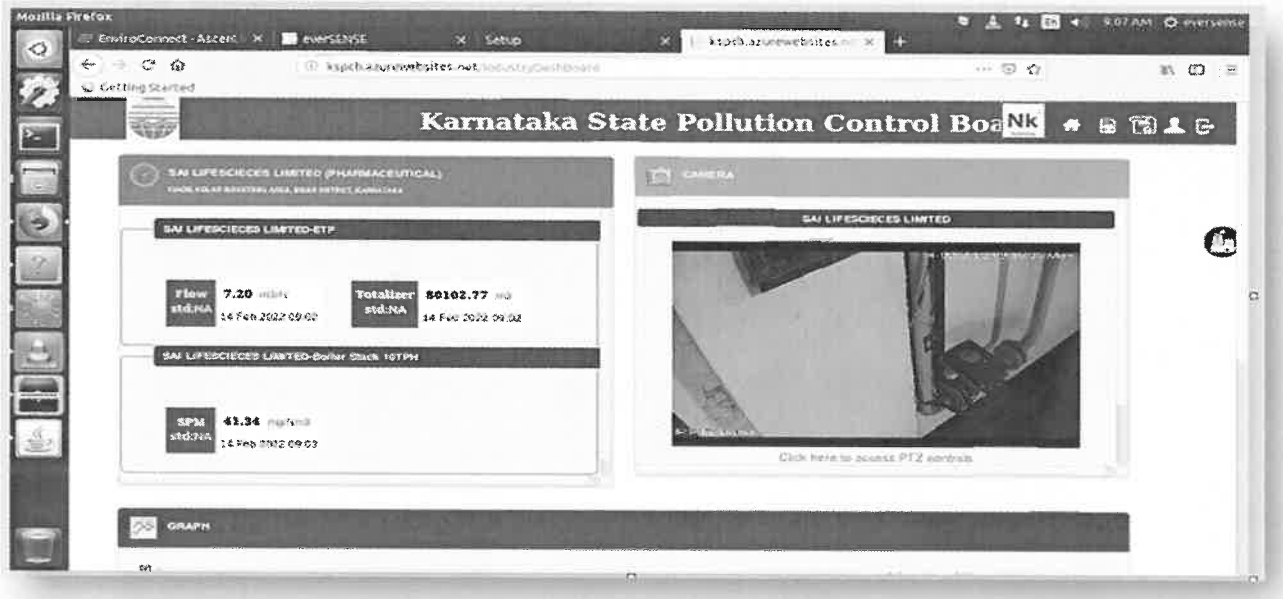
The photographs of the same is attached here with for your reference.

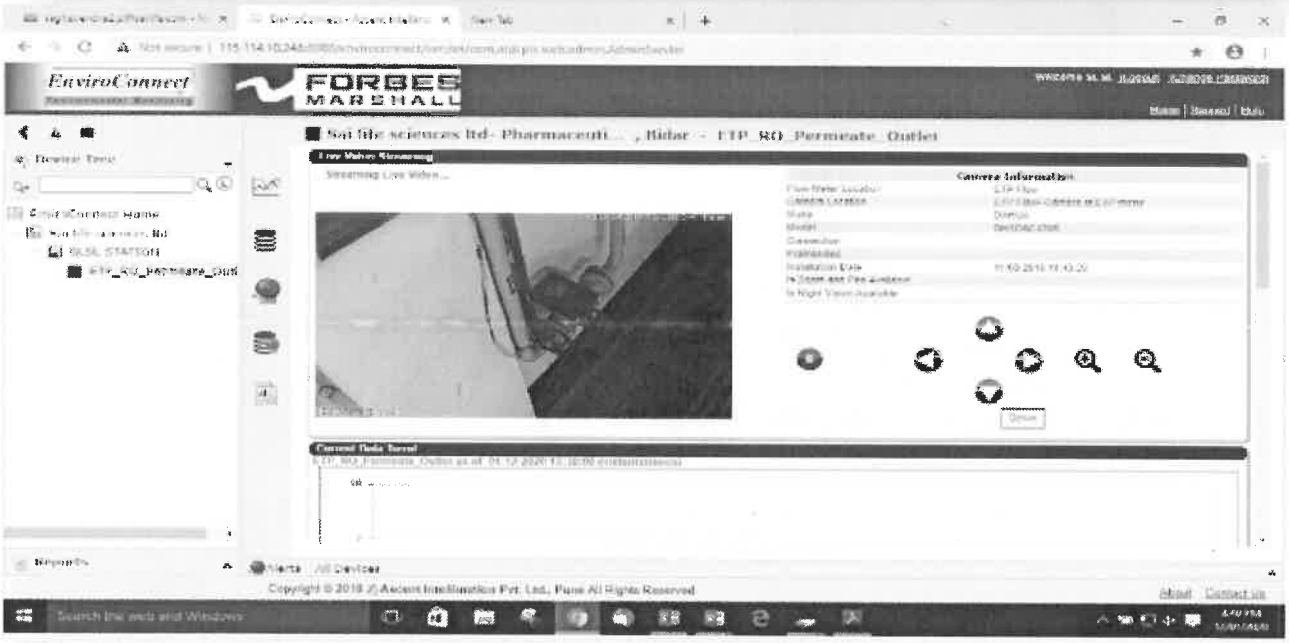
Sensors installation at chimney

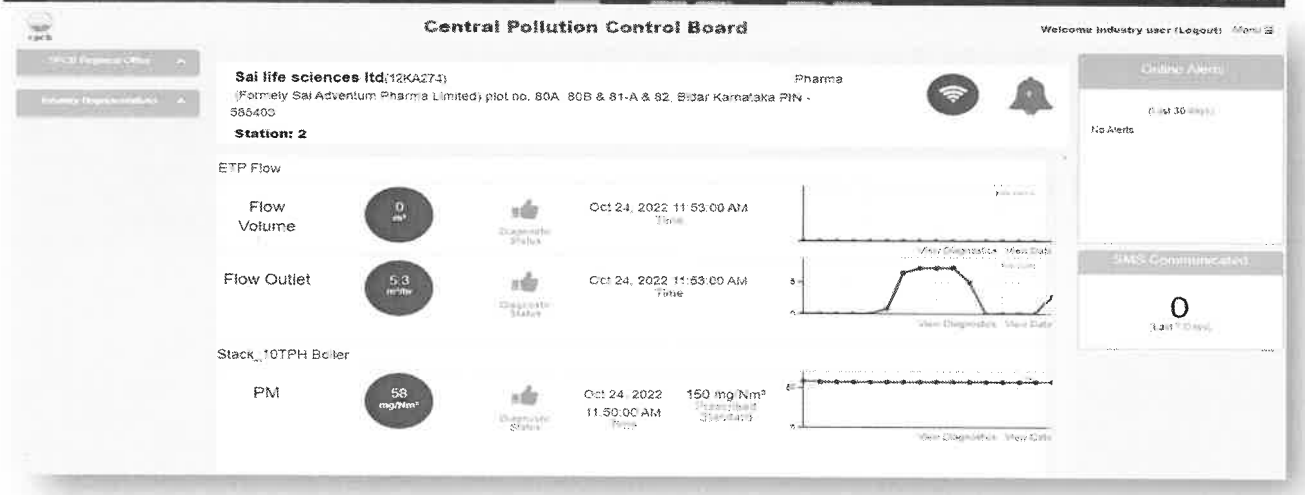


Digital display

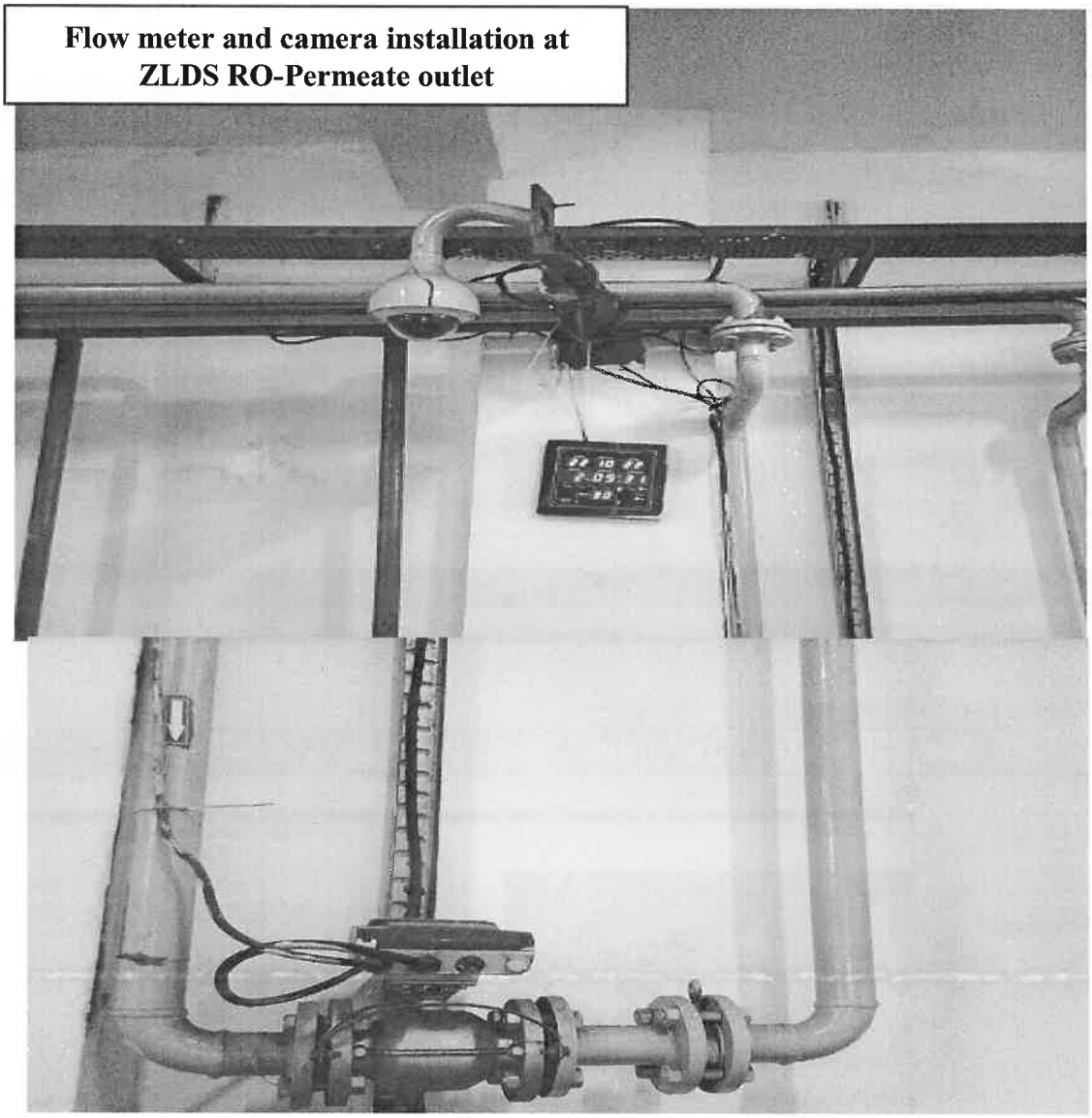
Web portal screenshot for CPCB and KSPCB live data streaming







Flow meter and camera installation at ZLDS RO-Permeate outlet



Environment management programmes taken for the FY 2023-2024

Sl. No	Environment management programmes	Spent Amount (Rs.)
1	Increase the capacity of domestic wastewater treatment plant	2800000
2	Installing the SOx, NOx analyser for a 10 TPH Boiler	2000000
3	Installation of 50KLD RO reject plant	3000000
4	PB-02 scrubber replacement	1600000
5	ZLD system spares maintenance	9380000
Total Spent amount for Environment management programs		**18780000**

Annexure-I
Products manufactured for the FY 2023-2024

Sl. No.	Products	CFO Quantity MT/Annum	Manufacturing Quantity (MT/A)
1	Benzidine Triol (B Triol)	0.15	0.05983
2	Bilastine API	30	20.134
3	BCX-2477	0.3	0.1697
4	Dapsone	3	2.74336
5	DFQ	10	1.07018
6	BOC – Ketone	3	0.8969
7	R&D Products	30	26.387
8	GSK - DCHU (1,3-dicyclohexylurea Stage-A)	2	0.00
9	GSK-807	20	2.0863
10	GSK-898	15	2.65774
11	Imepitoin	35	6.0
12	Tosylate Stage E	5	3.466
13	NBI – 77810	45	0.00
14	Ribavirin	1.2	0.00
15	Isoproterenol	0.006	0.00
16	Doxercalciferol	0.001	0.00
17	ACT-674509 B	4	0.00
18	BAY – 1142524	1	0.00
19	Rapastinel	5	0.00
20	Compound 2- ASTEX	1	0.00
21	Palbo Intermediate-1	1	0.00
22	Palbo Intermediate-2	1	0.00
23	T Diol	1	0.00
	Total	**213.657**	**65.671**

Annexure-II
Raw material consumption for the FY 2023-2024

SL .No	Name of the Raw material	Quantity (MT/A)
1.	1,4-dioxane	18.77
2.	Acetic acid	20.10
3.	Acetic anhydride	9.65
4.	Acetone	61.60
5.	Acetonitrile	164.88
6.	Acetophenone	0.00
7.	Acetyl chloride	2.66
8.	Activated carbon	2.43
9.	Activatedcarbonpowder	0.33
10.	Activated charcoal	1.51
11.	Activatedcharcoalnoritcgpsuper	0.62
12.	Activatedneutralcarbon	0.55
13.	Addzyme015	0.01
14.	Alcohol dehydrogenase	5.41
15.	Alluminiumchloride	0.45
16.	Ally bromide	1.38
17.	Aluminiumoxideneutral	0.76
18.	Amino transaminase	0.78
19.	Ammonia	0.19
20.	Ammonia solution	31.84
21.	Ammonium carbonate	0.07
22.	Ammonium chloride	3.56
23.	Aqueous methylamine	0.00
24.	Ãÿ-nicotinamideadeninedinucleotide,oxidizedform	0.00
25.	Azobisisobutyronitrile	985.59
26.	Bis(4-chlorophenyl)sulfone	5.25
27.	Bis(triphenylphosphine)palladium(ii)chloride	0.06
28.	Borontriflourideetherate	3.14
29.	Brettphospalladacyclegen.3	0.00
30.	Butylvinylether	0.87
31.	Celite (hyflow)	7.73
32.	Cesiumcarbonate	0.01
33.	Cesiumfluoride	0.71
34.	Chloral hydrate	6.25
35.	Chloroform	2.12
36.	Citric acid	1.55
37.	Citricacidmonohydrate	6.90
38.	Cobalt(ii)chloridehexahydrate	0.05
39.	Copper(i)iodide	0.01
40.	Copper(i)oxide	0.16
41.	Copper powder	0.05

42.	Coppersulphatepentahydrate	4.55
43.	Cyclohexane	4.18
44.	Cyclopropanol	0.00
45.	Dextrose monohydrate	0.43
46.	Dibutyltinoxide	1.18
47.	Dichloro[1,1-bis(ditertbutylphosphinoferrocene)palladium(ii)	0.01
48.	Dichloromethane	841.01
49.	Dicobaltoctacarbonyl	0.21
50.	Diethylphosphite	13.50
51.	Diisobutylaluminiumhydride	2.10
52.	Diisopropylamine	0.72
53.	Diisopropylether[isopropylether]	16.96
54.	Dimethyl2-(2-methoxyphenoxy)malonate	1.45
55.	Dimethyl2,2'-(((2-	0.57
56.	Dimethylformamide	206.81
57.	Dimethylsulfideboraneindms	0.12
58.	Dimethylsulfoxide	17.90
59.	Diphenylphospine	0.12
60.	Disodiumhydrogenphosphate	0.05
61.	Ditertbutyldicarbonate	3.19
62.	Di-tert-butyl oxalate	0.26
63.	Dma-2-triazolylacrylmethylester(seed material)	0.00
64.	D-mannose	1.67
65.	D-ribose	0.48
66.	Ethanol	152.83
67.	Ethyl2-bromo-2-methylpropanoate	0.48
68.	Ethyl2-bromoacetate	0.95
69.	Ethyl acetate	283.16
70.	Ethylaluminiumdichloride	0.16
71.	Ethylene glycol	0.56
72.	Ethylformate	0.51
73.	Ethylmagnesiumbromide	1.33
74.	Ethylmagnesiumbromide(2.0min2-methylthf)	0.67
75.	Ethylmethylketone	1.61
76.	Ethyloxalylchloride	0.00
77.	Ethyltriphenylphosphoniumbromide	0.38
78.	Formic acid	0.04
79.	Glucose dehydrogenase	8.22
80.	Glutaricanhydride	0.10
81.	Glycine	2.73
82.	Hexane	561.45
83.	Hydrazine hydrate	0.26
84.	Hydrobromicacid	0.32
85.	Hydrochloric acid	0.64

86.	Hydrochloric acid-(c.p)(ironcontentnmt10ppm)	38.12
87.	Hydrochloricacid,5.5molarsolutioninisopropylalcohol	6.00
88.	Hydrochloricacid-cp	173.10
89.	Hydrochloricacidin2-propanol	0.82
90.	Hydrocholoricacid	0.41
91.	Hydrogen peroxide	1.61
92.	Hydroxylamine hydrochloride	0.67
93.	Imidazole	0.17
94.	Iodine	0.00
95.	Isobutylchloroformate	0.16
96.	Isobutylmethylketone	26.90
97.	Isoniipecoticacid	19.44
98.	Isopropyl acetate	0.62
99.	Isopropyl alcohol	1.65
100.	Isopropyl alcohol[2-propanol]	818.44
101.	Isopropyl amine	0.86
102.	Isopropylmagnesiumchloride	12.13
103.	Isopropylmagnesiumchloride-	8.73
104.	Kromasil100-16-c18	0.00
105.	Lewatitmonoplustp260	0.03
106.	Lipase-tl	0.18
107.	Liquid bromine	0.67
108.	Liquid nitrogen	882.53
109.	Lithium4,6-dichloropyradizine-3-carboxylatemonohydrate	0.06
110.	Lithiumborohydride2.0minthf	0.48
111.	Lithiumchlorideanhydrous	0.08
112.	Lithiumdiisopropylamide2minthf	4.02
113.	Lithiumhydroxideanhydrous	0.01
114.	Lithiumhydroxidemonohydrate	0.39
115.	Lithiumtritertbutoxyaluminiumhydride1minthf	0.90
116.	L-lactic acid	0.01
117.	L-malicacid	73.84
118.	L-menthol	0.05
119.	L-proline	2.18
120.	Magnesiummetalturnings	0.09
121.	Maleicacid	0.00
122.	Manganese dioxide	1.02
123.	M-chloroperbenzoicacid	0.02
124.	Methanesulfonylchloride	0.76
125.	Methanol	2470.15
126.	Methyl4-bromobutyrate	0.41
127.	Methyl4-methylbenzenesulfinate	0.23
128.	Methyl acrylate	0.02
129.	Methylbromoacetate	0.73

130.	Methylchloroformate	1.33
131.	Methylcyanoacetate	0.01
132.	Methyl cyclohexane	25.46
133.	Methyl-d3-aminehydrochloride	0.03
134.	Methyl iodide	0.25
135.	Methylmagnesiumchloride	5.45
136.	Methylmagnesiumchlorideinthf	0.11
137.	Methyl paraben	0.19
138.	Methylsulfonylacetonitrile	0.43
139.	Methyltertiarybutylether	501.77
140.	Methyltertiary-butylether	0.96
141.	Methylvinylsulfone	0.11
142.	Mixed xylene	1.10
143.	Molecularsieves4apowder	0.25
144.	Monochlorobenzene	49.35
145.	Mono-methyloxalylchloride	4.42
146.	Morpholine	0.70
147.	N-(3-dimethylaminopropyl)-n'-	0.03
148.	Tetramethylethylenediamine	0.16
149.	Tetramethylchloroformamidinium-hexafluorophosphate	0.13
150.	Diisoproppylethylamine	1.13
151.	Diisopropylethylamine	0.99
152.	Dimethylacetamide	1.63
153.	Dimethylhydroxylaminehydrochloride	0.01
154.	Bromosuccinimide	0.63
155.	Methylmorpholine	0.00
156.	N-acetyl glycine	0.00
157.	N-boc-cis-4-hydroxy-l-prolinemethylester	0.15
158.	N-bromosuccinimide(ncsbyic	0.52
159.	N-butanol	26.96
160.	N-butyllithium,2.50minhexane	5.15
161.	N-butyllithium1.60molarinhexane	0.20
162.	N-chlorosuccinimide	0.53
163.	N-heptane	300.68
164.	Nickel(ii)chloridehexahydrate	0.02
165.	Nitric acid	0.68
166.	N-methylmorpholinen-oxide50%aqeous.soln	1.01
167.	N-methylpyrrolidinone(nmp)	0.00
168.	N-propyl acetate	111.24
169.	N-propylmagnesiumchloride1.0min2-methylthf	1.96
170.	O1-tert-butylo2-ethyl(2r,5s)-5-aminopiperidine-1,2-	0.11
171.	O-phenylenediamine	14.85
172.	Orthophenylenediamine(opda)	0.00
173.	Orthophosphoricacid	1.59

174.	Oxalylchloride	1.37
175.	P-anisidine	0.00
176.	Paraformaldehyde	0.00
177.	Phenylchloroformate	0.16
178.	Phenyltrimethylammoniumtribromide	0.20
179.	Phosphorousoxychloride	0.89
180.	Phosphorustribromide	0.08
181.	Phthalicanhydride	0.05
182.	Piper zine	0.74
183.	Pivaloylacetonitrile	0.16
184.	Potassium acetate	0.01
185.	Potassium bicarbonate	4.77
186.	Potassiumcarbonatepowder	10.70
187.	Potassiumcarbonatereagentgrade	0.00
188.	Potassiumhydrogensulphate	1.11
189.	Potassiumhydroxide	7.82
190.	Potassiumhydroxideflacks	29.53
191.	Potassium iodide	0.00
192.	Potassiummethoxidepowder	0.16
193.	Potassiumosmatedihydrate	0.00
194.	Potassium permanganate	0.40
195.	Potassiumphosphatedibasic	0.53
196.	Potassiumtert-butoxide	0.95
197.	Potassiumtert-butoxide1.0mintertiarybutanol	0.56
198.	Potassiumtertiarybutoxidepowder	0.22
199.	Pottasiumphosphatetribasic	1.70
200.	Propylphosphonicanhydridesolution	0.55
201.	P-toluenesulfonicacidmonohydrate	11.15
202.	P-toluenesulfonylchloride	6.79
203.	Pyridine	6.49
204.	Pyridinehydrobromide	0.00
205.	Pyridiniumchlorochromate	0.01
206.	Pyridiniumparatoluenesulfonate	0.05
207.	Pyridoxal-5'-phosphatemonohydrate	0.01
208.	R-(+)-tertbutylsulfinamide	0.10
209.	Refined glycerine	0.56
210.	R-methyloxazaborolidine	0.63
211.	S(+)-5-hydroxydecyne[(s)-1-decyn-5-ol(scv)]	0.08
212.	Sec.butylamine	0.14
213.	Semicarbazidehydrochloride	0.00
214.	Serinol	4.18
215.	Silica gel(100x200mesh)	0.00
216.	Silicagel100x200mesh	10.42
217.	Silicagel230-400mesh	1.40

218.	Silicagel60-120mesh	9.10
219.	Silicycleâ®siliametsâ®metalscavengersthiol	0.15
220.	Sodium acetate	10.93
221.	Sodiumazide	0.06
222.	Sodium bicarbonate	19.23
223.	Sodiumbis(2-methoxyethoxy)alumuniumhydride	0.20
224.	Sodium bisulphate	0.22
225.	Sodium bisulphite	0.30
226.	Sodiumborohydride	36.62
227.	Sodium carbonate	14.01
228.	Sodium chloride	39.81
229.	Sodiumdiformylamide	0.04
230.	Sodiumdihydrogenphosphate	0.04
231.	Sodiumhexametaphosphate	0.74
232.	Sodium hydride	0.46
233.	Sodium hydroxide	0.02
234.	Sodiumhydroxideflakes	57.43
235.	Sodiumhydroxiesolution	0.30
236.	Sodium hypochlorite	36.10
237.	Sodium iodide	0.02
238.	Sodiummetabisulphite	0.35
239.	Sodium metal	0.14
240.	Sodiummethoxide	3.38
241.	Sodium nitrite	0.06
242.	Sodiumsulfite	15.88
243.	Sodium sulphate	7.27
244.	Sodiumtertiaryburoxide	2.80
245.	Sodiumtertiarybutoxide	0.17
246.	Sodiumthiosulfateanhydrous	0.03
247.	Sodiumthiosulphatepentahydrate	1.42
248.	Sodiumtriacetoxyborohydride	0.00
249.	Sulpholane	6.67
250.	Sulphuricacidcpgrade	9.25
251.	T3pinacetonitrile	0.61
252.	Tert-butyl3-oxoazetidine-1-carboxylate	2.14
253.	Tertbutylamine	1.85
254.	Tertbutyldimethylsilylchloride	0.26
255.	Tert-butyldimethylsilyltrifluoromethanesulfonate	0.00
256.	Tert-butylhydroperoxide	0.04
257.	Tertiarybutanol	0.01
258.	Tetrabutylammoniumiodide	0.43
259.	Tetrabutylphosponiumbromide	0.02
260.	Tetrahydrofuran	413.76
261.	Tetrahydrofurananhydours	0.24

262.	Thionylchloride	16.82
263.	Thiophenol	1.16
264.	Thiourea	1.76
265.	Tin(iv)chloride	0.04
266.	Titasyntet	0.35
267.	phenylmethane	801.37
268.	Trans-1,4-diaminocylcohexane	0.88
269.	Treatedethylacetate	2.98
270.	Trichloroacetonitrile	1.41
271.	Triethylamine	35.28
272.	Triethylaminetrihydrofluoride	0.03
273.	Triethylsilane	0.24
274.	Trifluoroaceticacid	0.20
275.	Trifluoromethanesulfonicanhydride	12.79
276.	Triisopropylborate	0.35
277.	Trimethylchlorosilane	0.00
278.	Trimethylorthoformate	0.95
279.	Trimethylsilylchloride	0.01
280.	Trimethylsilylcyanide	0.03
281.	Trimethylsilyltrifluoromethanesulphonate	2.71
282.	Triphenylchloromethane	1.09
283.	Triphenylphosphine	0.01
284.	Ureahydrogenperoxide	0.13
285.	Vinyl acetate	2.39
286.	Ymc-triartprepc18-s12nms-10?m	0.00
287.	Zincchlorideanhydrous	0.22
288.	Zinc cyanide	0.12
289.	Zinc dust	0.09
	Total Raw material consumption (MT/A)	**10773.48**

Different types of gases consumption for the FY 2023-2024

SL .No	Name of the Gas	Quantity (No's/Annum)
1.	Argon gas cylinder	959
2.	Carbon dioxide cylinder	8
3.	Ethylene gas cylinder	442
4.	Ethylene oxide gas	4025
5.	Helium gas cylinder	58
6.	Hydrogen gas cylinder	901
7.	Nitrogen gas cylinder	1804
8.	Zero air cylinder	85

Annexure-3

Ro-Permeate (ZLDS-Treated water) water analysis report for the FY 2023-2024.

S.NO	Parameters	Units	MOEF notification G.S.R .541E Standard	Mini mum	Maxim um	Avera ge	Percentage of Variation from Prescribed standards with reasons
1	pH	-	**6 -8.5**	6.72	8.1	7.42	No Deviation. Values are within the prescribed standard.
2	Chemical Oxygen Demand	PPM	**250**	24	72	45.75	
3	Biological Oxygen Demand for 3 days at 27*C	PPM	**30**	15	25	19.75	
4	Ammonical Nitrogen	PPM	**100**	41	60	49.00	
5	Total Suspended Solids	PPM	**100**	Nil			
6	Oil & Grease	PPM	**10**	Nil			
7	Bioassay test	-	**90% survival of fish after first 96 hours in 100% effluent**	Pass			

Annexure-4

Ambient Air Quality & Stack Monitoring Report for the FY 2023-2024

AMBIENT AIR QUALITY MONITORING REPORTS: 2023-2024							
Location	**Parameters**	**Units**	**NAAQ Standards**	**Minimum**	**Maximum**	**Average**	**Percentage of Variation from Prescribed standards with reasons**
Location -1 Near main gate security area	PM 10	µg/m3	**100**	66.70	84.30	76.58	Ambient air quality parameters are well within the prescribed limits stipulated by regulatory authorities.
	PM 2.5	µg/m3	**60**	13.90	29.50	23.17	
	SO_2	µg/m3	**80**	6.73	24.20	14.63	
	NO_2	µg/m3	**80**	10.77	21.30	15.22	
	Carbon Monoxide(CO)	mg/m^3	**2.0**	0.40	1.60	0.81	
	Lead (Pb)	$µg/m^3$	**1.0**	0.30	0.80	0.59	
	Arsenic(As)	ng/m^3	**6.0**	BDL	BDL	BDL	
	Nickel(Ni)	ng/m^3	**20.0**	BDL	BDL	BDL	
	Ozone(O_3)	$µg/m^3$	**100**	5.80	13.40	8.99	
	Ammonia(NH3)	$µg/m^3$	**400.0**	6.20	10.30	8.22	
	Benzene(C_6H_6)	$µg/m^3$	**5.0**	BDL	BDL	BDL	
	Benzo(a),pyrene (Bap)	ng/m^3	**1.0**	BDL	BDL	BDL	
Location -2 Near Ware house	PM 10	µg/m3	**100**	60.70	78.90	68.92	
	PM 2.5	µg/m3	**60**	14.40	27.20	20.36	
	SO_2	µg/m3	**80**	8.90	23.40	14.41	
	NO_2	µg/m3	**80**	11.90	19.70	14.81	
	Carbon Monoxide(CO)	mg/m^3	**2.0**	0.50	1.40	0.76	
	Lead (Pb)	$µg/m^3$	**1.0**	0.30	0.90	0.60	
	Arsenic(As)	ng/m^3	**6.0**	BDL	BDL	BDL	
	Nickel(Ni)	ng/m^3	**20.0**	BDL	BDL	BDL	
	Ozone(O_3)	$µg/m^3$	**100**	5.90	12.40	8.65	
	Ammonia(NH3)	$µg/m^3$	**400.0**	5.90	11.20	7.72	
	Benzene(C_6H_6)	$µg/m^3$	**5.0**	BDL	BDL	BDL	
	Benzo(a),pyrene (Bap)	ng/m^3	**1.0**	BDL	BDL	BDL	
Location -3 Near ETP & Boiler area	PM 10	µg/m3	**100**	62.10	82.70	71.78	
	PM 2.5	µg/m3	**60**	15.90	27.60	22.16	
	SO_2	µg/m3	**80**	9.50	23.20	16.11	
	NO_2	µg/m3	**80**	9.77	20.60	14.46	
	Carbon Monoxide(CO)	mg/m^3	**2.0**	0.43	1.20	0.70	
	Lead (Pb)	$µg/m^3$	**1.0**	0.40	0.80	0.60	
	Arsenic(As)	ng/m^3	**6.0**	BDL	BDL	BDL	
	Nickel(Ni)	ng/m^3	**20.0**	BDL	BDL	BDL	
	Ozone(O_3)	$µg/m^3$	**100**	5.90	12.10	8.13	
	Ammonia(NH3)	$µg/m^3$	**400.0**	6.30	11.50	8.46	

	Benzene(C_6H_6)	µg/m^3	**5.0**	BDL	BDL	BDL	
	Benzo(a),pyrene (Bap)	ng/m^3	**1.0**	BDL	BDL	BDL	
Location -4 PB-09	PM 10	µg/m3	**100**	58.40	74.60	66.01	
	PM 2.5	µg/m3	**60**	13.90	25.70	20.19	
	SO_2	µg/m3	**80**	9.67	22.10	15.12	
	NO_2	µg/m3	**80**	7.47	20.20	13.81	
	Carbon Monoxide(CO)	mg/m^3	**2.0**	0.47	1.40	0.78	
	Lead (Pb)	µg/m^3	**1.0**	0.40	0.80	0.57	
	Arsenic(As)	ng/m^3	**6.0**	BDL	BDL	BDL	
	Nickel(Ni)	ng/m^3	**20.0**	BDL	BDL	BDL	
	Ozone(O_3)	µg/m^3	**100**	5.80	12.40	9.18	
	Ammonia(NH3)	µg/m^3	**400.0**	5.90	10.40	8.51	
	Benzene(C_6H_6)	µg/m^3	**5.0**	BDL	BDL	BDL	
	Benzo(a),pyrene (Bap)	ng/m^3	**1.0**	BDL	BDL	BDL	

Stack emission monitoring report for the FY 2023-2024

Location	Parameters	Limits	Units	Minimum	Maximum	Average	Percentage of Variation from Prescribed standards with reasons
500 KVA DG SET	PM	150	mg/Nm3	69.8	78.6	73.6	Stack emissions are well within the prescribed limits stipulated by regulatory authorities.
	SO_X	100	mg/Nm3	14.8	19.4	17.2	
	NO_X	50	ppm	12.3	18.1	14.9	
750 KVA DG SET	PM	150	mg/Nm3	75.7	83.7	79.7	
	SO_X	100	mg/Nm3	19.9	25.6	22.6	
	NO_X	50	ppm	13.4	21.4	17.5	
DG SET-1010 KVA-1 (DDGS-07)	PM	75	mg/Nm3	44.9	51.6	48.1	
	NO_X	710	ppm	25.1	28.7	27.1	
	CO	150	mg/Nm3	17.4	22.5	19.6	
	NMHC	100	mg/Nm3	8	12	10.0	
DG SET-1010 KVA-2 (DDGS-08)	PM	75	mg/Nm3	40.7	48.1	43.9	
	NO_X	710	ppm	22.1	26.2	24.4	
	CO	150	mg/Nm3	15.9	23.1	19.2	
	NMHC	100	mg/Nm3	6	10	8.0	
DG SET-2250 KVA (DDGS-09)	PM	75	mg/Nm3	49.6	55.8	52.7	
	NO_X	710	ppm	27.8	31.2	29.5	
	CO	150	mg/Nm3	18.9	26.7	23.0	
	NMHC	100	mg/Nm3	7	15	11.3	
THERMIC FLUID HEATER-1	PM	150	mg/Nm3	64.1	78.2	71.7	
	SO_X	100	mg/Nm3	19.7	24.1	21.6	
	NOx	50	mg/Nm3	14.2	19.5	16.8	

THERMIC FLUID HEATER-2	PM	150	mg/Nm3	68.7	74.9	72.1
	SO_X	100	mg/Nm3	19.1	23.4	21.3
	NOx	50	mg/Nm3	15.6	21.6	18.1
10 TPH BOILER	PM	150	mg/Nm3	73.4	99.7	84.5
	SO_X	600	mg/Nm3	15.9	34.2	23.9
	NO_X	300	ppm	13.1	28.1	20.2
5 TPH BOILER	PM	150	mg/Nm3	69.4	90.2	79.0
	SO_X	600	mg/Nm3	13.8	28.6	20.6
	NO_X	300	ppm	11.6	26.4	17.4
2 TPH BOILER	PM	150	mg/Nm3	65.1	83.1	73.2
	SO_X	600	mg/Nm3	17.2	26.4	21.2
	NO_X	300	ppm	15.6	20.2	18.0

Scrubber emission monitoring report for the FY 2023-2024								
Scrubber Id	**Location**	**Parameter**	**Standards**	**Units**	**Minimum**	**Maximum**	**Average**	**Percentage of Variation from Prescribed standards with reasons**
DSCR-01	PB-1	Acid mist	35 Max	mg/Nm3	22.4	30.2	26.15	Scrubber emissions are well within the prescribed limits stipulated by regulatory authorities
DSCR-28	PB-2	Acid mist	35 Max	mg/Nm3	20.8	30.9	24.42	
DSCR-14	PB-3	Acid mist	35 Max	mg/Nm3	21.9	32.4	26.38	
DSCR-19	PR&D	Acid mist	35 Max	mg/Nm3	23.4	31.2	27.02	
DSCR-20	PR&D	Acid mist	35 Max	mg/Nm3	22.3	29.5	27.28	
DSCR-04	PB -4	Acid mist	35 Max	mg/Nm3	17.4	24.2	21.12	
DSCR-05	PB -4	Acid mist	35 Max	mg/Nm3	19.8	27.4	22.62	
DSCR-21	PB -6	Acid mist	35 Max	mg/Nm3	18.5	25.3	22.00	
DSCR-06	PB -6	Acid mist	35 Max	mg/Nm3	19.8	28.9	25.02	
DSCR-07	PB -6	Acid mist	35 Max	mg/Nm3	17.9	28.1	23.30	
DSCR-02-01	PB -6	Acid mist	35 Max	mg/Nm3	19.7	29.6	24.97	
DSCR-09	PB -7	Acid mist	35 Max	mg/Nm3	17.2	27.9	23.83	
DSCR-10	PB -7	Acid mist	35 Max	mg/Nm3	18.9	28.2	23.12	
DSCR-11	PB -7	Acid mist	35 Max	mg/Nm3	22.4	28.8	25.42	
DSCR-12	PB -7	Acid mist	35 Max	mg/Nm3	19.5	28.1	22.75	

DSCR-16	PB -8	Acid mist	35 Max	mg/Nm3	17.5	25.6	21.07
DSCR-17	PB -8	Acid mist	35 Max	mg/Nm3	19.9	27.9	23.37
DSCR-27	QC	Acid mist	35 Max	mg/Nm3	21.9	29.1	24.33
DSCR-18	Ware house	Acid mist	35 Max	mg/Nm3	20.2	28.5	25.47
DSCR-08	Ware house	Acid mist	35 Max	mg/Nm3	25.5	31.2	28.07
DSCR-13	Ware house	Acid mist	35 Max	mg/Nm3	20.4	32.4	26.77
DSCR-22	ETP	Acid mist	35 Max	mg/Nm3	22.6	30.1	27.20
DSCR-23	PB-09	Acid mist	35 Max	mg/Nm3	22.6	31.4	26.03
DSCR-24	PB-10	Acid mist	35 Max	mg/Nm3	23.9	29.6	26.38
DSCR-25	PB-10	Acid mist	35 Max	mg/Nm3	22.5	30.4	26.40
DSCR-26	PB-12	Acid mist	35 Max	mg/Nm3	19.6	31.2	26.62

Annexure-5
Sound level monitoring Report for the FY 2023-2024

Month	Time	Limits	Near Security Main gate	Near DG Area	Near Compressor room	Near Boiler House	Near ETP Area	Near Canteen	Near Service Gate-2	Near Service Gate-3	Production Block	Workshop Area
Apr-23	Night	**70**	59.6	68.4	67.8	66	67	53.8	66.9	61.6	65.9	66.2
	Day	**75**	63.8	67.7	71.5	72.8	67	51.9	64.7	63.1	69.6	68
May-23	Night	**70**	57.8	69.8	66.5	67.9	65.2	50.3	63.8	59.2	63.9	65
	Day	**75**	66.2	69.5	70.3	73.2	65.1	53.4	61.5	60.9	67.4	65.6
Jun-23	Night	**70**	55.9	68.7	68	69.6	66.1	48.7	66.4	58.4	66	64.5
	Day	**75**	64.3	68.8	69.2	71.8	64.6	52	60	61.1	65.5	62.5
Jul-23	Night	**70**	57.8	69.7	67.7	68.6	63.9	49.4	64	60.6	67	62.4
	Day	**75**	66.4	70.7	71	73.4	65.3	54.2	63	62.7	66.9	63.8
Aug-23	Night	**70**	56.2	67.5	66	65.9	62	47.9	62.2	58.8	64	60.4

	Day	**75**	68.2	72.3	73.3	71.1	63.6	56.7	64.3	64.5	68.1	62.1
Sep-23	Night	**70**	53.7	66.3	67.8	68.9	60	49.8	60.5	60.9	62.1	58.8
	Day	**75**	65.8	73.8	74.1	70.7	61.6	54.6	61.6	63.1	66.4	59.8
Oct-23	Night	**70**	55.6	68.1	66.5	67.8	57.9	48.6	55	57.2	65.2	56.8
	Day	**75**	68.2	72.5	73.2	72.6	60.2	53.6	64.2	61.4	67.9	60.3
Nov-23	Night	**70**	56	67.8	67.7	66.3	63.6	48.2	64.5	61	65.8	66
	Day	**75**	67.7	70	71.9	74.3	64.8	52.5	64.2	63.5	68.6	65.3
Dec-23	Night	**70**	59.6	67.9	69.3	68.5	64.6	48.6	64.4	63.3	64.5	63.4
	Day	**75**	66.3	67.4	70.2	69.3	64	50.3	62.8	63.1	67.4	64.6
Jan-24	Night	**70**	61.3	69.7	68.3	67.1	63.3	46.7	61.3	59.8	62.6	60.9
	Day	**75**	67.6	68.1	72.3	70.5	63.5	52.7	65.1	66	69.4	66.2
Feb-24	Night	**70**	59.5	69.3	67.9	68.6	61.8	47.8	59.2	57.7	64.8	58.7
	Day	**75**	69	70.5	73.1	71.8	61.2	53.4	63.3	64.6	67.4	67.8
2Mar-24	Night	**70**	61.3	67.2	66.5	67.6	59.3	50.6	60.6	56.2	66.5	61.1
	Day	**75**	66.6	72.1	72.2	70	61.9	55.6	65.8	67.2	69.9	69.2

- **Sound level standards Day time: 75 dB**
  Night time: 70 dB

ANNEXURE-06

MOTHER EARTH ENVIRON TECH PRIVATE LIMITED

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MEEPL

TC-8956

Reg. No.: RI91/10468

Site:Plot No.217, 2 nd Phase KIADB Industrial Area, Harohalli, Kanakapura Tq, Ramanagara Dist, Karanataka-562112.
Head Office: Survey No.13,Challaghatta village, Kengeri Hobli, Bengaluru South Taluk,Bengaluru-560074.
Ph. No.: 7338464597, +91 80 26712303, Fax: 080-26712305
Website: motherearthenviron.com, E-mail: lab@motherearthenviron.com, motherearthenvirontech@gmail.com

LABORATORY

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-056

To,

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

We are here with enclosing the analysis report of **Chemical Sludge from Waste Water Treatment (MEE/ATFD Salt)** with Report No.: **MEEPL/LAB/20-21/CA/R-056** and the sample was received on 09/10/2020.

Thanking you,

For Mother Earth Enviro Tech Pvt Ltd

15/10/2020

Authorized Signatory
Siva Sankar Ollipilli
Assistant Manager (Laboratory)

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LABORATORY

TEST REPORT

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-056

Waste Generator Details:

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

Sample ID	MEEPL/LAB/20-21/CA-056	**Sample Received By**	Mr. Siva Sankar
Sample Description	Chemical Sludge from Waste Water Treatment (MEE/ATFD Salt)	**Sample Condition**	Received in Polythene cover
Sampling Done by	Client	**Analysis Start Date**	09/10/2020
Sample Received Date	09/10/2020	**Analysis End Date**	14/10/2020
Sampling procedure	MEEPL/SOP/LAB/SA-001	**Report Date**	15/10/2020

S. No.	Parameter		Result
1	Physical State		Solid
2	Color		Brown
3	Texture		Wet Cake
4	Compatibility Test	Is there any violent chemical change (in air) (Normally unstable) (Yes/No)	No
5		Reacts violent with water (Yes/No)	No
6		Generation of toxic fumes with water/acid/basic (Yes /No)	No
7		Forms potentially explosive mixture with water (Yes/No)	No
8		Explosive when subjected to a strong initiating force (Yes/No)	No
9		Explosive at normal temperature & pressure (Yes/No)	No

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Website: motherearthenviron.com, E-mail: lab@motherearthenviron.com, motherearthenvirontech@gmail.com

Report No: MEEPL/LAB/20-21/CA/R-056

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
10	pH @28.2°C	-	USEPA;9045C,(1995)	5.65	4 to 12
11	Loss on drying at 105°C	%	MEEPL/SOP/LAB/SW-002; Issue No.: 00; Issue Date: 02.09.2019	17.86	---
12	Loss on Ignition at 550°C (Dry Basis)	%	MEEPL/SOP/LAB/SW-003; Issue No.: 00; Issue Date: 02.09.2019	**38.19**	<= 20% Non biodegradable <=
13	Flash Point	°C	USEPA;1020A(1992)	>65	65.5
14	Paint Filter Liquid Test	-	USEPA-9095A(1996)	Pass	Pass
15	Bulk Density	g/cc	ASTM D 5057-10,(2017)	1.10	---
16	Calorific Value	Cal/gm	IS: 1350 (Part-II),(Reff.2013)	1984	< 2500
17	Reactive Cyanide	mg/Kg	USEPA9010C(2004)& APHA23rd Edi; 4500 CN-E (2017)	BDL	<250
18	Reactive Sulfide	mg/Kg	USEPA 9030 B (1996)& 9034 (1996)	BDL	<500
19	Ammonical Nitrogen as NH3 (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<1000
20	Ammonical Nitrogen as NH3 (TCLP)	mg/L	APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<50
21	Extractable Organics	%w/w	USEPA-3540C (1996)	BDL	< 4.0
22	Water soluble inorganics	%w/w	APHA 23rd Edi;2540 B&E (2017)	**48.70**	< 20
23	Water soluble organics	%w/w	APHA 23rd Edi;2540 B&E (2017)	**40.90**	< 10
24	Zinc as Zn (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	1269	---
25	Zinc as Zn (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	**55.0**	<10
26	Cadmium as Cd (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	BDL	---

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Website: motherearthenviron.com, E-mail: lab@motherearthenviron.com, motherearthenvirontech@gmail.com

Report No: MEEPL/LAB/20-21/CA/R-056

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
27	Cadmium as Cd (TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B (2007), AAS	BDL	<1.0
28	Cadmium as Cd (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	BDL	< 0.2
29	Total Chromium as Cr 3+ (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	10.9	---
30	Chromium as Cr 3+(TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B-2007	0.52	< 5.0
31	Hexavalent Chromium as Cr6+ (Total)	mg/Kg	USEPA 1998,SW846; 7196 A&APHA;3500 Cr B (2017)	BDL	---
32	Hexavalent Chromium as Cr6+ (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA;3500 Cr B (2017)	BDL	< 0.5
33	Copper as Cu (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	717	---
34	Copper as Cu (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	**39.8**	<10
35	Nickel as Ni (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	11.1	---
36	Nickel as Ni (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	0.78	<3.0
37	Lead as Pb (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	9.32	---
38	Lead as Pb (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&USEPA7000B (2007), AAS	0.38	<5.0
39	Lead as Pb (WLT)	mg/L	CPCB TSDFProtocol(2010-11)&USEPA-7000B(2007)	0.38	<2.0
40	Cyanide (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500CN- K	BDL	<2.0
41	Cyanide (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500CN- K	BDL	<20
42	Fluoride as F- (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 F-D	**80.6**	<50

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Report No: MEEPL/LAB/20-21/CA/R-056

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
43	Nitrate Nitrogen as N (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 NO3 B	**12043**	<30
44	Nitrate Nitrogen as N (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500 NO3 B	**10842**	<1000

BDL - Below Detection Limit,
SW 846 -Test methods for Evaluating Solid waste, Physical/chemical methods, USEPA,
IS - Indian Standard,
ASTM - American standard of testing material,
APHA -Standard methods for the examination of water and waste water, 23rd Edition, 2017,
WLT - Water Leaching Test,
TCLP -Toxicity Characteristics Leaching Procedure,
STLC - Solubility Threshold Limit Concentration.

Note:

- Reports pertained only to the submitted sample
- Test reports shall not be reproduced without permission of the laboratory
- Any correction invalidates this test report

*****End of Report*****

15/10/2020
Suresh Kumara K M
Chemist
(Laboratory)

15/10/2020
Siva Sankar Ollipilli
Assistant Manager
(Laboratory)

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LABORATORY
TEST REPORT

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-056A

Waste Generator Details:

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

Sample ID	MEEPL/LAB/20-21/CA-056	**Sample Received By**	Mr. Siva Sankar
Sample Description	Chemical Sludge from Waste Water Treatment (MEE/ATFD Salt)	**Sample Condition**	Received in Polythene cover
Sampling Done by	Client	**Analysis Start Date**	09/10/2020
Sample Received Date	09/10/2020	**Analysis End Date**	14/10/2020
Sampling procedure	MEEPL/SOP/LAB/SA-001	**Report Date**	15/10/2020

.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
1	Sulfide (TCLP)	mg/Kg	CCR- Appendix II of section 66261 of Title 22 &APHA23rd Edi, 4500 S^2F(2017)	BDL	<5
2	Zinc as Zn(STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22 &USEPA 7000B-2007	116	<250
3	Hexavalent Chromium as Cr6+ (STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22&APHA;3500 Cr B (2017)	BDL	< 5.0
4	Copper as Cu (STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22 &USEPA-7000B(2007)	44.1	<25
5	Nickel as Ni (STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22&USEPA7000B (2007), AAS	0.87	<20

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JAS-ANZ

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Report No: MEEPL/LAB/20-21/CA/R-056A

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
6	Total Phenols (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 5530B&D	BDL	<100
7	Fluoride as F- (STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22 & APHA 23rd Edition,2017; 4500 F-D	**87.9**	<50

BDL - Below Detection Limit,
SW 846 -Test methods for Evaluating Solid waste, Physical/chemical methods, USEPA,
IS - Indian Standard
ASTM - American standard of testing material
APHA -Standard methods for the examination of water and waste water, 23rd Edition, 2017,
WLT - Water Leaching Test
TCLP -Toxicity Characteristics Leaching Procedure
STLC - Solubility Threshold Limit Concentration

Note:

- This Test Report is Continuation to the Report No.: MEEPL/LAB/20-21/CA/R-056
- Reports pertained only to the submitted sample
- Test reports shall not be reproduced without permission of the laboratory
- Any correction invalidates this test report

*****End of Report*****

Checked 15/10/2020
Suresh Kumara K M
Chemist
(Laboratory)

15/10/2020
Siva Sankar Ollipilli
Assistant Manager
(Laboratory)

MEEPL

MOTHER EARTH ENVIRON TECH PRIVATE LIMITED

(A Division of Chaitra Groups)
An Integrated Management System Certified Company
Quality Management System-ISO 9001:2015
Environmental Management System – ISO 14001:2015
Occupational Health and Safety Management System- ISO 45001:2018
An NABL (ISO/IEC 17025:2017) Accredited Laboratory

TC-8956

Reg. No.: RI91/10468

Site:Plot No.217, 2 nd Phase KIADB Industrial Area, Harohalli, Kanakapura Tq, Ramanagara Dist, Karanataka-562112.
Head Office: Survey No.13,Challaghatta village, Kengeri Hobli, Bengaluru South Taluk,Bengaluru-560074.
Ph. No.: 7338464597, +91 80 26712303, Fax: 080-26712305
Website: motherearthenviron.com, E-mail: lab@motherearthenviron.com, motherearthenvirontech@gmail.com

LABORATORY

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-059

To,

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

We are here with enclosing the analysis report of **Chemical Sludge from Waste Water Treatment (ETP Sludge)** with Report No.: **MEEPL/LAB/20-21/CA/R-059** and the sample was received on 09/10/2020.

Thanking you,

For Mother Earth Enviro Tech Pvt Ltd

15/10/2020

Authorized Signatory
Siva Sankar Ollipilli
Assistant Manager (Laboratory)

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LABORATORY
TEST REPORT

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-059

Waste Generator Details:

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

Sample ID	MEEPL/LAB/20-21/CA-059	**Sample Received By**	Mr. Siva Sankar
Sample Description	Chemical Sludge from Waste Water Treatment (ETP Sludge)	**Sample Condition**	Received in Polythene cover
Sampling Done by	Client	**Analysis Start Date**	09/10/2020
Sample Received Date	09/10/2020	**Analysis End Date**	14/10/2020
Sampling procedure	MEEPL/SOP/LAB/SA-001	**Report Date**	15/10/2020

S. No.	Parameter		Result
1	Physical State		Solid
2	Color		Black
3	Texture		Wet Cake
4	Compatibility Test	Is there any violent chemical change (in air) (Normally unstable) (Yes/No)	No
5		Reacts violent with water (Yes/No)	No
6		Generation of toxic fumes with water/acid/basic (Yes /No)	No
7		Forms potentially explosive mixture with water (Yes/No)	No
8		Explosive when subjected to a strong initiating force (Yes/No)	No
9		Explosive at normal temperature & pressure (Yes/No)	No

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Report No: MEEPL/LAB/20-21/CA/R-059

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
10	pH @28.2°C	-	USEPA;9045C,(1995)	8.34	4 to 12
11	Loss on drying at 105°C	%	MEEPL/SOP/LAB/SW-002; Issue No.: 00; Issue Date: 02.09.2019	**86.67**	---
12	Loss on Ignition at 550°C (Dry Basis)	%	MEEPL/SOP/LAB/SW-003; Issue No.: 00; Issue Date: 02.09.2019	**58.59**	<= 20% Non biodegradable <=
13	Flash Point	°C	USEPA;1020A(1992)	>65	65.5
14	Paint Filter Liquid Test	-	USEPA-9095A(1996)	Pass	Pass
15	Bulk Density	g/cc	ASTM D 5057-10,(2017)	**0.92**	---
16	Calorific Value	Cal/gm	IS: 1350 (Part-II),(Reff.2013)	BDL	< 2500
17	Reactive Cyanide	mg/Kg	USEPA9010C(2004)& APHA23rd Edi; 4500 CN-E (2017)	BDL	<250
18	Reactive Sulfide	mg/Kg	USEPA 9030 B (1996)& 9034 (1996)	BDL	<500
19	Ammonical Nitrogen as NH3 (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA 23rdEdition,2017;4500 NH3 B,C	BDL	<1000
20	Ammonical Nitrogen as NH3 (TCLP)	mg/L	APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<50
21	Extractable Organics	%w/w	USEPA-3540C (1996)	BDL	< 4.0
22	Water soluble inorganics	%w/w	APHA 23rd Edi;2540 B&E (2017)	0.36	< 20
23	Water soluble organics	%w/w	APHA 23rd Edi;2540 B&E (2017)	0.83	< 10
24	Zinc as Zn (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	1473	---
25	Zinc as Zn (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	1.24	<10
26	Cadmium as Cd (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	BDL	---

Report No: MEEPL/LAB/20-21/CA/R-059

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
27	Cadmium as Cd (TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B (2007), AAS	BDL	<1.0
28	Cadmium as Cd (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	BDL	< 0.2
29	Total Chromium as Cr 3+ (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	9.73	---
30	Chromium as Cr 3+(TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B-2007	0.01	< 5.0
31	Hexavalent Chromium as Cr6+ (Total)	mg/Kg	USEPA 1998,SW846; 7196 A&APHA;3500 Cr B (2017)	BDL	---
32	Hexavalent Chromium as Cr6+ (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA;3500 Cr B (2017)	BDL	< 0.5
33	Copper as Cu (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	164	---
34	Copper as Cu (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	0.85	<10
35	Nickel as Ni (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	7.26	---
36	Nickel as Ni (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	0.04	<3.0
37	Lead as Pb (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	8.14	---
38	Lead as Pb (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&USEPA7000B (2007), AAS	0.07	<5.0
39	Lead as Pb (WLT)	mg/L	CPCB TSDFProtocol(2010-11)&USEPA-7000B(2007)	0.04	<2.0
40	Cyanide (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500CN- K	BDL	<2.0
41	Cyanide (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500CN- K	BDL	<20
42	Fluoride as F- (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 F-D	0.69	<50

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Report No: MEEPL/LAB/20-21/CA/R-059

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
43	Nitrate Nitrogen as N (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 NO3 B	6.43	<30
44	Nitrate Nitrogen as N (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500 NO3 B	15.4	<1000

BDL - Below Detection Limit,
SW 846 -Test methods for Evaluating Solid waste, Physical/chemical methods, USEPA,
IS - Indian Standard,
ASTM - American standard of testing material,
APHA -Standard methods for the examination of water and waste water, 23rd Edition, 2017,
WLT - Water Leaching Test,
TCLP -Toxicity Characteristics Leaching Procedure,
STLC - Solubility Threshold Limit Concentration.

Note:

- Reports pertained only to the submitted sample
- Test reports shall not be reproduced without permission of the laboratory
- Any correction invalidates this test report

*****End of Report*****

15/10/2020

Suresh Kumara K M
Chemist
(Laboratory)

15/10/2020

Siva Sankar Ollipilli
Assistant Manager
(Laboratory)

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LABORATORY
TEST REPORT

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-059A

Waste Generator Details:

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

Sample ID	MEEPL/LAB/20-21/CA-059	**Sample Received By**	Mr. Siva Sankar
Sample Description	Chemical Sludge from Waste Water Treatment (ETP Sludge)	**Sample Condition**	Received in Polythene cover
Sampling Done by	Client	**Analysis Start Date**	09/10/2020
Sample Received Date	09/10/2020	**Analysis End Date**	14/10/2020
Sampling procedure	MEEPL/SOP/LAB/SA-001	**Report Date**	15/10/2020

.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
1	Sulfide (TCLP)	mg/Kg	CCR- Appendix II of section 66261 of Title 22 &APHA23rd Edi, 4500 S^2F(2017)	BDL	<5
2	Zinc as Zn(STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22 &USEPA 7000B-2007	39.1	<250
3	Hexavalent Chromium as Cr6+ (STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22&APHA;3500 Cr B (2017)	BDL	< 5.0
4	Copper as Cu (STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22 &USEPA-7000B(2007)	0.30	<25
5	Nickel as Ni (STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22&USEPA7000B (2007), AAS	0.44	<20

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Report No: MEEPL/LAB/20-21/CA/R-059A

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
6	Total Phenols (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 5530B&D	BDL	<100
7	Fluoride as F- (STLC)	mg/L	CCR- Appendix II of section 66261 of Title 22 & APHA 23rd Edition,2017; 4500 F-D	7.44	<50

BDL - Below Detection Limit,
SW 846 -Test methods for Evaluating Solid waste, Physical/chemical methods, USEPA,
IS - Indian Standard
ASTM - American standard of testing material
APHA -Standard methods for the examination of water and waste water, 23rd Edition, 2017,
WLT - Water Leaching Test
TCLP -Toxicity Characteristics Leaching Procedure
STLC - Solubility Threshold Limit Concentration

Note:

- This Test Report is Continuation to the Report No.: MEEPL/LAB/20-21/CA/R-059
- Reports pertained only to the submitted sample
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*****End of Report*****

15/10/2020
Suresh Kumara K M
Chemist
(Laboratory)

15/10/2020
Siva Sankar Ollipilli
Assistant Manager
(Laboratory)

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LABORATORY

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-057

To,

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

We are here with enclosing the analysis report of **Contaminated Silica Gel** with Report No.: **MEEPL/LAB/20-21/CA/R-057** and the sample was received on 09/10/2020.

Thanking you,

For Mother Earth Enviro Tech Pvt Ltd

15/10/2020

Authorized Signatory
Siva Sankar Ollipilli
Assistant Manager (Laboratory)

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LABORATORY

TEST REPORT

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-057

Waste Generator Details:

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

Sample ID	MEEPL/LAB/20-21/CA-057	**Sample Received By**	Mr. Siva Sankar
Sample Description	Contaminated Silica Gel	**Sample Condition**	Received in Polythene cover
Sampling Done by	Client	**Analysis Start Date**	09/10/2020
Sample Received Date	09/10/2020	**Analysis End Date**	14/10/2020
Sampling procedure	MEEPL/SOP/LAB/SA-001	**Report Date**	15/10/2020

S. No.	Parameter		Result
1	Physical State		Solid
2	Color		Light Brown
3	Texture		Crystalline
4	Compatibility Test	Is there any violent chemical change (in air) (Normally unstable) (Yes/No)	No
5		Reacts violent with water (Yes/No)	No
6		Generation of toxic fumes with water/acid/basic (Yes /No)	No
7		Forms potentially explosive mixture with water (Yes/No)	No
8		Explosive when subjected to a strong initiating force (Yes/No)	No
9		Explosive at normal temperature & pressure (Yes/No)	No

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Report No: MEEPL/LAB/20-21/CA/R-057

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
10	pH @28.2°C	-	USEPA;9045C,(1995)	**3.36**	4 to 12
11	Loss on drying at 105°C	%	MEEPL/SOP/LAB/SW-002; Issue No.: 00; Issue Date: 02.09.2019	**30.85**	---
12	Loss on Ignition at 550°C (Dry Basis)	%	MEEPL/SOP/LAB/SW-003; Issue No.: 00; Issue Date: 02.09.2019	3.17	<= 20% Non biodegradable <=
13	Flash Point	°C	USEPA;1020A(1992)	>65	65.5
14	Paint Filter Liquid Test	-	USEPA-9095A(1996)	Pass	Pass
15	Bulk Density	g/cc	ASTM D 5057-10,(2017)	**0.60**	---
16	Calorific Value	Cal/gm	IS: 1350 (Part-II),(Reff.2013)	BDL	< 2500
17	Reactive Cyanide	mg/Kg	USEPA9010C(2004)& APHA23rd Edi; 4500 CN-E (2017)	BDL	<250
18	Reactive Sulfide	mg/Kg	USEPA 9030 B (1996)& 9034 (1996)	BDL	<500
19	Ammonical Nitrogen as NH3 (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<1000
20	Ammonical Nitrogen as NH3 (TCLP)	mg/L	APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<50
21	Extractable Organics	%w/w	USEPA-3540C (1996)	BDL	< 4.0
22	Water soluble inorganics	%w/w	APHA 23rd Edi;2540 B&E (2017)	0.56	< 20
23	Water soluble organics	%w/w	APHA 23rd Edi;2540 B&E (2017)	1.59	< 10
24	Zinc as Zn (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	21.6	---
25	Zinc as Zn (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	0.30	<10
26	Cadmium as Cd (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	0.17	---

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S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
27	Cadmium as Cd (TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B (2007), AAS	BDL	<1.0
28	Cadmium as Cd (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	BDL	< 0.2
29	Total Chromium as Cr 3+ (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	0.78	---
30	Chromium as Cr 3+(TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B-2007	0.08	< 5.0
31	Hexavalent Chromium as Cr6+ (Total)	mg/Kg	USEPA 1998,SW846; 7196 A&APHA;3500 Cr B (2017)	BDL	---
32	Hexavalent Chromium as Cr6+ (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA;3500 Cr B (2017)	BDL	< 0.5
33	Copper as Cu (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	46.0	---
34	Copper as Cu (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	2.00	<10
35	Nickel as Ni (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	4.59	---
36	Nickel as Ni (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	0.07	<3.0
37	Lead as Pb (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	4.79	---
38	Lead as Pb (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&USEPA7000B (2007), AAS	0.06	<5.0
39	Lead as Pb (WLT)	mg/L	CPCB TSDFProtocol(2010-11)&USEPA-7000B(2007)	0.04	<2.0
40	Cyanide (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500CN- K	BDL	<2.0
41	Cyanide (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500CN- K	BDL	<20
42	Fluoride as F- (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 F-D	3.31	<50

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Report No: MEEPL/LAB/20-21/CA/R-057

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
43	Nitrate Nitrogen as N (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 NO3 B	**96.9**	<30
44	Nitrate Nitrogen as N (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500 NO3 B	913	<1000

BDL - Below Detection Limit,
SW 846 -Test methods for Evaluating Solid waste, Physical/chemical methods, USEPA,
IS - Indian Standard,
ASTM - American standard of testing material,
APHA -Standard methods for the examination of water and waste water, 23rd Edition, 2017,
WLT - Water Leaching Test,
TCLP -Toxicity Characteristics Leaching Procedure,
STLC - Solubility Threshold Limit Concentration.

Note:

- Reports pertained only to the submitted sample
- Test reports shall not be reproduced without permission of the laboratory
- Any correction invalidates this test report

*****End of Report*****

15/10/2020

Suresh Kumara K M
Chemist
(Laboratory)

15/10/2020

Siva Sankar Ollipilli
Assistant Manager
(Laboratory)

MOTHER EARTH ENVIRON TECH PRIVATE LIMITED

(A Division of Chaitra Groups)
An Integrated Management System Certified Company
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MEEPL

TC-8956

Reg. No.: RI91/10468

Site:Plot No.217, 2 nd Phase KIADB Industrial Area, Harohalli, Kanakapura Tq, Ramanagara Dist, Karanataka-562112.
Head Office: Survey No.13,Challaghatta village, Kengeri Hobli, Bengaluru South Taluk,Bengaluru-560074.
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Website: motherearthenviron.com, E-mail: lab@motherearthenviron.com, motherearthenvirontech@gmail.com

LABORATORY

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-058

To,

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

We are here with enclosing the analysis report of **Process Residues & Wastes** with Report No.: **MEEPL/LAB/20-21/CA/R-058** and the sample was received on 09/10/2020.

Thanking you,

For Mother Earth Enviro Tech Pvt Ltd

15/10/2020

Authorized Signatory
Siva Sankar Ollipilli
Assistant Manager (Laboratory)

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LABORATORY

TEST REPORT

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-058

Waste Generator Details:

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

Sample ID	MEEPL/LAB/20-21/CA-058	**Sample Received By**	Mr. Siva Sankar
Sample Description	Process Residues & Wastes	**Sample Condition**	Received in Polythene cover
Sampling Done by	Client	**Analysis Start Date**	09/10/2020
Sample Received Date	09/10/2020	**Analysis End Date**	14/10/2020
Sampling procedure	MEEPL/SOP/LAB/SA-001	**Report Date**	15/10/2020

S. No.	Parameter		Result
1	Physical State		Solid
2	Color		Mixed Colors
3	Texture		Lumps & Powder
4	Compatibility Test	Is there any violent chemical change (in air) (Normally unstable) (Yes/No)	No
5		Reacts violent with water (Yes/No)	No
6		Generation of toxic fumes with water/acid/basic (Yes /No)	No
7		Forms potentially explosive mixture with water (Yes/No)	No
8		Explosive when subjected to a strong initiating force (Yes/No)	No
9		Explosive at normal temperature & pressure (Yes/No)	No

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Report No: MEEPL/LAB/20-21/CA/R-058

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
10	pH @28.2°C	-	USEPA;9045C,(1995)	**2.89**	4 to 12
11	Loss on drying at 105°C	%	MEEPL/SOP/LAB/SW-002; Issue No.: 00; Issue Date: 02.09.2019	21.74	---
12	Loss on Ignition at 550°C (Dry Basis)	%	MEEPL/SOP/LAB/SW-003; Issue No.: 00; Issue Date: 02.09.2019	**29.45**	<= 20% Non biodegradable <=
13	Flash Point	°C	USEPA;1020A(1992)	>65	65.5
14	Paint Filter Liquid Test	-	USEPA-9095A(1996)	Pass	Pass
15	Bulk Density	g/cc	ASTM D 5057-10,(2017)	1.16	---
16	Calorific Value	Cal/gm	IS: 1350 (Part-II),(Reff.2013)	BDL	< 2500
17	Reactive Cyanide	mg/Kg	USEPA9010C(2004)& APHA23rd Edi; 4500 CN-E (2017)	BDL	<250
18	Reactive Sulfide	mg/Kg	USEPA 9030 B (1996)& 9034 (1996)	BDL	<500
19	Ammonical Nitrogen as NH3 (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<1000
20	Ammonical Nitrogen as NH3 (TCLP)	mg/L	APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<50
21	Extractable Organics	%w/w	USEPA-3540C (1996)	BDL	< 4.0
22	Water soluble inorganics	%w/w	APHA 23rd Edi;2540 B&E (2017)	**21.05**	< 20
23	Water soluble organics	%w/w	APHA 23rd Edi;2540 B&E (2017)	9.10	< 10
24	Zinc as Zn (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	176	---
25	Zinc as Zn (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	2.52	<10
26	Cadmium as Cd (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	0.74	---

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Report No: MEEPL/LAB/20-21/CA/R-058

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
27	Cadmium as Cd (TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B (2007), AAS	BDL	<1.0
28	Cadmium as Cd (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	BDL	< 0.2
29	Total Chromium as Cr 3+ (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	10.4	---
30	Chromium as Cr 3+(TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B-2007	0.03	< 5.0
31	Hexavalent Chromium as Cr6+ (Total)	mg/Kg	USEPA 1998,SW846; 7196 A&APHA;3500 Cr B (2017)	BDL	---
32	Hexavalent Chromium as Cr6+ (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA;3500 Cr B (2017)	BDL	< 0.5
33	Copper as Cu (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	183604	---
34	Copper as Cu (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	1665	<10
35	Nickel as Ni (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	24.9	---
36	Nickel as Ni (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	0.28	<3.0
37	Lead as Pb (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	7.26	---
38	Lead as Pb (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&USEPA7000B (2007), AAS	0.09	<5.0
39	Lead as Pb (WLT)	mg/L	CPCB TSDFProtocol(2010-11)&USEPA-7000B(2007)	0.04	<2.0
40	Cyanide (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500CN- K	BDL	<2.0
41	Cyanide (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500CN- K	BDL	<20
42	Fluoride as F- (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 F-D	1.88	<50

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TC-8956

Reg. No : RI91/10468

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Website: motherearthenviron.com, E-mail: lab@motherearthenviron.com, motherearthenvirontech@gmail.com

Report No: MEEPL/LAB/20-21/CA/R-058

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
43	Nitrate Nitrogen as N (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 NO3 B	**3504**	<30
44	Nitrate Nitrogen as N (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500 NO3 B	**3461**	<1000

BDL - Below Detection Limit,
SW 846 -Test methods for Evaluating Solid waste, Physical/chemical methods, USEPA,
IS - Indian Standard,
ASTM - American standard of testing material,
APHA -Standard methods for the examination of water and waste water, 23rd Edition, 2017,
WLT - Water Leaching Test,
TCLP -Toxicity Characteristics Leaching Procedure,
STLC - Solubility Threshold Limit Concentration.

Note:

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*****End of Report*****

15/10/2020

Suresh Kumara K M
Chemist
(Laboratory)

15/10/2020

Siva Sankar Ollipilli
Assistant Manager
(Laboratory)

A Luthra Group Company
GUJARAT ENVIRO PROTECTION &
INFRASTRUCTURE Ltd.
ISO 14001 CERTIFIED

FINGER PRINT ANALYSIS REPORT

Industry Name : SAI LIFE SCIENCES LIMITED **DATE :** 18/01/2018

Waste Name : SPENT CARBON **Code:** CV2W1S0070

Waste Code: WS00000007

Category Of Waste as Per Moef Schedule :	Schedule 1 : ☐☐ ☐	Schedule 2 : #A _____ #B _____ #C _____ #D _____ #E _____ ©

No	Parameter	Unit	Method	Value
1	Physical State	-	-	SOLID
2	Color	-	-	BLACK
3	Odour	-	-	MILD
4	Texture	-	-	Powder
5	Water Reactive	-	-	NON REACTIVE
6	Air Reactive		-	NON REACTIVE
7	pH	10 % W/V	USEPA, SW-846; METHOD 9040,9041 AND 9045	4.06
8	Moisture Content (at 105` C)	%	USEPA, SW-846; METHOD 1010 AND 1020	6.5
9	Loss on Ignition (at 550` C)	%	USEPA, SW-846; METHOD 1010 AND 1020	18.31
10	Ash Content (at 800 ` C)	%	USEPA ; SW-846 ,METHOD - 1010 & 1020	80.04
11	Calorific Value	cal/gm	USEPA,SW-846; METHOD 1010 AND 1020 /IS:1359 - 19	2900.06
12	Total Sulfur	%	USEPA ; SW - 846 ,MEHOD - 9010,9011,9012	0
13	Chloride	%	USEPA ; SW - 846 METHOD - 5050	0.95
14	reaction with acid		-	NON REACTIVE
15	Reaction with Alkali		-	NON REACTIVE

BDL : Below Detectable Limit -
Other Heavy Metals Analysis can be carried out as required.

For GUJARAT ENVIRO PROTECTION & INFRASTRUCTURE LTD.(UNIT- RANIPET)

Gujarat Enviro Protection & Infrastructure Ltd. CIN No:- U74999MH1999PLC285408 RANIPET

Authorised Signatory

Note :

1. This Report is for Privet Use Only And Should Not be Used For Publicity Or Litigation.
2. Authenticity Of This Report Could be Validated With Office Copy at GEPIL.

FINGER PRINT ANALYSIS REPORT

A Luthra Group Company
GUJARAT ENVIRO PROTECTION &
INFRASTRUCTURE Ltd.
ISO 14001 CERTIFIED

Industry Name : SAI LIFE SCIENCES LIMITED

DATE : 18/01/2018
Code: CV2W1S0070
Waste Code: WO00000034

Waste Name : Organic Residue + Striper Distillate

Category Of Waste as Per Moef Schedule :	Schedule 1 : ☐ ☐ ☐	Schedule 2 : #A _____ #B _____ #C _____ #D _____ #E _____ ©

No	Parameter	Unit	Method	Value
1	Physical State	-	-	SOLID
2	Color	-	-	BROWNISH
3	Odour	-		MILD
4	Texture	-	-	Lumps
5	Water Reactive	-	-	NON REACTIVE
6	Air Reactive		-	NON REACTIVE
7	pH	10 % W/V	USEPA, SW-846; METHOD 9040,9041 AND 9045	6.31
8	Moisture Content (at 105` C)	%	USEPA, SW-846; METHOD 1010 AND 1020	0.09
9	Loss on Ignition (at 550` C)	%	USEPA, SW-846; METHOD 1010 AND 1020	85.88
10	Ash Content (at 800 ` C)	%	USEPA ; SW-846 ,METHOD - 1010 & 1020	13.12
11	Calorific Value	cal/gm	USEPA,SW-846; METHOD 1010 AND 1020 /IS:1359 - 19	8481.75
12	Total Sulfur	%	USEPA ; SW - 846 ,MEHOD - 9010,9011,9012	0
13	Chloride	%	USEPA ; SW - 846 METHOD - 5050	0
14	reaction with acid		-	NON REACTIVE
15	Reaction with Alkali		-	NON REACTIVE

BDL : Below Detectable Limit -
Other Heavy Metals Analysis can be carried out as required.

For GUJARAT ENVIRO PROTECTION & INFRASTRUCTURE LTD.(UNIT- RANIPET)

Gujarat Enviro Protection & Infrastructure Ltd. CIN No is U74999MH1999PLC285408 RANIPET

Authorised Signatory

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Unit Location: Plot No. S-60, Phase-III, SIPCOT Industrial Complex, Ranipet-632405, Dist.:Vellore,Tamilnadu Phone:04172-291443
E-mail : ranipet@luthraindia.com
Website : www.gepil.in | www.luthraindia.com

Corporate Office: 252/2, GI.D.C. Pandesara, Surat - 394221, Gujarat
Phone :+91 261 2890606-7-8 Fax : +91 261 2890600
Regd.office: 370,SVP Road, Shop 8, Cigaretwala Bldg, Opp. CBI, Prathana Samaj, Nr. Harkishandas Hospital, Mumbai - 400004

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MOTHER EARTH ENVIRON TECH PRIVATE LIMITED

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Website: motherearthenviron.com, E-mail: lab@motherearthenviron.com, motherearthenvirontech@gmail.com

LABORATORY

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-057

To,

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

We are here with enclosing the analysis report of **Contaminated Silica Gel** with Report No.: **MEEPL/LAB/20-21/CA/R-057** and the sample was received on 09/10/2020.

Thanking you,

For Mother Earth Enviro Tech Pvt Ltd

15/10/2020

Authorized Signatory
Siva Sankar Ollipilli
Assistant Manager (Laboratory)

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LABORATORY

TEST REPORT

Date: 15.10.2020

Report No: MEEPL/LAB/20-21/CA/R-057

Waste Generator Details:

Sai Life Sciences Limited,
79-B, 80-A, 80-B, 81-A & 82,
Kolhar Industrial Area,
Bidar – 585 403, Karnataka.

Sample ID	MEEPL/LAB/20-21/CA-057	**Sample Received By**	Mr. Siva Sankar
Sample Description	Contaminated Silica Gel	**Sample Condition**	Received in Polythene cover
Sampling Done by	Client	**Analysis Start Date**	09/10/2020
Sample Received Date	09/10/2020	**Analysis End Date**	14/10/2020
Sampling procedure	MEEPL/SOP/LAB/SA-001	**Report Date**	15/10/2020

S. No.	Parameter		Result
1	Physical State		Solid
2	Color		Light Brown
3	Texture		Crystalline
4	Compatibility Test	Is there any violent chemical change (in air) (Normally unstable) (Yes/No)	No
5		Reacts violent with water (Yes/No)	No
6		Generation of toxic fumes with water/acid/basic (Yes /No)	No
7		Forms potentially explosive mixture with water (Yes/No)	No
8		Explosive when subjected to a strong initiating force (Yes/No)	No
9		Explosive at normal temperature & pressure (Yes/No)	No

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Report No: MEEPL/LAB/20-21/CA/R-057

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
10	pH @28.2°C	-	USEPA;9045C,(1995)	**3.36**	4 to 12
11	Loss on drying at 105°C	%	MEEPL/SOP/LAB/SW-002; Issue No.: 00; Issue Date: 02.09.2019	**30.85**	---
12	Loss on Ignition at 550°C (Dry Basis)	%	MEEPL/SOP/LAB/SW-003; Issue No.: 00; Issue Date: 02.09.2019	3.17	<= 20% Non biodegradable <=
13	Flash Point	°C	USEPA;1020A(1992)	>65	65.5
14	Paint Filter Liquid Test	-	USEPA-9095A(1996)	Pass	Pass
15	Bulk Density	g/cc	ASTM D 5057-10,(2017)	**0.60**	---
16	Calorific Value	Cal/gm	IS: 1350 (Part-II),(Reff.2013)	BDL	< 2500
17	Reactive Cyanide	mg/Kg	USEPA9010C(2004)& APHA23rd Edi; 4500 CN-E (2017)	BDL	<250
18	Reactive Sulfide	mg/Kg	USEPA 9030 B (1996)& 9034 (1996)	BDL	<500
19	Ammonical Nitrogen as NH3 (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<1000
20	Ammonical Nitrogen as NH3 (TCLP)	mg/L	APHA 23rd Edition,2017;4500 NH3 B,C	BDL	<50
21	Extractable Organics	%w/w	USEPA-3540C (1996)	BDL	< 4.0
22	Water soluble inorganics	%w/w	APHA 23rd Edi;2540 B&E (2017)	0.56	< 20
23	Water soluble organics	%w/w	APHA 23rd Edi;2540 B&E (2017)	1.59	< 10
24	Zinc as Zn (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	21.6	---
25	Zinc as Zn (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	0.30	<10
26	Cadmium as Cd (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	0.17	---

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Report No: MEEPL/LAB/20-21/CA/R-057

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
27	Cadmium as Cd (TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B (2007), AAS	BDL	<1.0
28	Cadmium as Cd (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	BDL	< 0.2
29	Total Chromium as Cr 3+ (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	0.78	---
30	Chromium as Cr 3+(TCLP)	mg/L	USEPA 1311 (1992)(Extraction)&USEPA7000B-2007	0.08	< 5.0
31	Hexavalent Chromium as Cr6+ (Total)	mg/Kg	USEPA 1998,SW846; 7196 A&APHA;3500 Cr B (2017)	BDL	---
32	Hexavalent Chromium as Cr6+ (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&APHA;3500 Cr B (2017)	BDL	< 0.5
33	Copper as Cu (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	46.0	---
34	Copper as Cu (WLT)	mg/L	CPCB TSDF Protocol,(2010-11)&USEPA-7000B(2007)	2.00	<10
35	Nickel as Ni (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	4.59	---
36	Nickel as Ni (WLT)	mg/L	CPCB TSDF Protocol(2010-11)&USEPA-7000B(2007)	0.07	<3.0
37	Lead as Pb (Total)	mg/Kg	USEPA - 3050 B(1996) & 7000B-2007	4.79	---
38	Lead as Pb (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&USEPA7000B (2007), AAS	0.06	<5.0
39	Lead as Pb (WLT)	mg/L	CPCB TSDFProtocol(2010-11)&USEPA-7000B(2007)	0.04	<2.0
40	Cyanide (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500CN- K	BDL	<2.0
41	Cyanide (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500CN- K	BDL	<20
42	Fluoride as F- (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 F-D	3.31	<50

MOTHER EARTH ENVIRON TECH PRIVATE LIMITED

(A Division of Chaitra Groups)
An Integrated Management System Certified Company
Quality Management System-ISO 9001:2015
Environmental Management System – ISO 14001:2015
Occupational Health and Safety Management System- ISO 45001:2018
An NABL (ISO/IEC 17025:2017) Accredited Laboratory

MEEPL

TC-8956

Reg. No.: RPI/10468

Site:Plot No.217, 2 nd Phase KIADB Industrial Area, Harohalli, Kanakapura Tq, Ramanagara Dist, Karanataka-562112.
Head Office: Survey No.13,Challaghatta village, Kengeri Hobli, Bengaluru South Taluk,Bengaluru-560074.
Ph. No.: 7338464597, +91 80 26712303, Fax: 080-26712305
Website: motherearthenviron.com, E-mail: lab@ motherearthenviron.com, motherearthenvirontech@gmail.com

Report No: MEEPL/LAB/20-21/CA/R-057

S.No.	Parameter	Unit	Method	Result	Std. for Landfill Disposal
43	Nitrate Nitrogen as N (WLT)	mg/L	CPCB TSDFProtocol(2010- 11) &APHA 23rd Edition,2017; 4500 NO3 B	**96.9**	<30
44	Nitrate Nitrogen as N (TCLP)	mg/L	USEPA 1311 (1992), (Extraction)&APHA 23rd Edition,2017; 4500 NO3 B	913	<1000

BDL - Below Detection Limit,
SW 846 -Test methods for Evaluating Solid waste, Physical/chemical methods, USEPA,
IS - Indian Standard,
ASTM - American standard of testing material,
APHA -Standard methods for the examination of water and waste water, 23rd Edition, 2017,
WLT - Water Leaching Test,
TCLP -Toxicity Characteristics Leaching Procedure,
STLC - Solubility Threshold Limit Concentration.

Note:

- Reports pertained only to the submitted sample
- Test reports shall not be reproduced without permission of the laboratory
- Any correction invalidates this test report

*****End of Report*****

15/10/2020

Suresh Kumara K M
Chemist
(Laboratory)

15/10/2020

Siva Sankar Ollipilli
Assistant Manager
(Laboratory)

ANNEXURE-07

Sai Life Sciences Limited
Unit-IV

TANK FARM VENTS MONITORING REPORT

Reference SOP No. & Title: 07-23 & Work Place Monitoring

Date of Sampling : 25-Mar-2024

Sl. No.	Area	Description of the Solvent storage tank	Parameter	Limiting value (mg/Nm3)	Concentration (ppm) A	Molecular Weight of Vapour compound (g/mol) B	Concentration in (mg/Nm3) C	Sampled by
01	PBO 20PPE Solvent tanks farm area	Toluene	Toluene	100	17.9	92.13842	73.6285	03/25/24
02	ware house above ground solvent tanks	Di-chloro methane	Di-chloro methane	200	42.6	84.93198	161.5224	03/25/24
03	ware house under -ground solvent tanks	Toluene	Toluene	100	9.5	92.13842	39.0766	03/25/24
04	ware house under -ground solvent tanks	Toluene	Toluene	100	3.5	92.13842	14.3966	03/25/24
05	ware house under -ground solvent tanks	Acetone	Toluene	2000	110.5	58.07914	286.5065	03/25/24
					NA			
								03/25/2024

Remarks: * Concentrations of all parameters are found within limiting value.

03/25/2024

NA

03/25/24

Reviewed by:

Sign & Date 03/25/24

ANNEXURE-08

SHRI KRISHNA AQUA ENGINEERING WORKS
ISO 9001:2015, ISO 45001:2018
Environmental Lab, Pollution Control Consultants
"Shri Krishna" Building, 1st Cross, Pragati Colony,
Vidyanagar, **HUBLI** - 580 021. Tel. : (Lab) 0836-2375678,
Mobile : +91 94480 51534, +91 94800 28018,
E-mail - radhabengeri@gmail.com, krishnapandhari@gmail.com

TEST REPORT
WATER ANALYSIS REPORT
(SAMPLE DRAWN BY INDUSTRY)

Report No : SKAEW/W/2023/EG/NOV/27		**Report Date :**	**18.11.2023**
Issued to : M/s. Sai Life Sciences Limited, Unit-4, 80-A, 80-B, 81-A & 82, Kolhar IndustrialArea,Bidar-585403		**Customer reference :**	**Walking customer**
Date of Submission :	**13.11.2023**	**Date of sample receipt :**	**13.11.2023**
Sample Nature / Name :	**Bore well water**	**Analysis start date :**	**15.11.2023**
Sample Condition :	**Satisfactory**	**Analysis completion date :**	**18.11.2023**
Sample particulars :	**Bore well water - 1**	**Sampling protocol : APHA 22nd Edition**	
Environmental Condition :	**-----**		

Results

Sl.No	Parameters	Protocol	Unit	Result	Standard : IS-10500 :2012	
					DL	PL
01	pH Value	APHA 22nd Edition 4500-H*, B	....	7.54	6.5-8.5	No Relaxation
02	Conductivity	APHA 22nd Edition 2510, B	µ mhos	802	.....	....
03	Turbidity	APHA 22nd Edition 2130, B	NTU	Nil	1	5.0
04	Total Hardness	APHA 22nd Edition 2340 C	mg/L	248	200	600
05	Total Alkalinity	APHA 22nd Edition 2320, B	mg/L	93	200	600
06	Chlorides (Cl)	APHA 22nd Edition 4500-Cl, B	mg/L	.204	250	1000
07	Fluoride as F	APHA 22nd Edition 4500 F-D	mg/L	0.76	1.0	1.5
08	Iron (Fe)	APHA 22nd Edition 3500 B	mg/L	0.19	0.30	No Relaxation
09	Total dissolved Solids	APHA 22nd Edition 2540 C	mg/L	567	500	2000
10	Nitrates as NO_3^-	APHA 22nd Edition 4500 b	mg/L	37	45	No Relaxation
11	Sulphates as SO4	APHA 22nd Edition 4500 c	mg/L	71	200	400
12	Calcium as Ca	APHA 22nd Edition 3500 B	mg/L	59	75	200
13	Magnesium asMg	APHA 22nd Edition 3500 Mg B	mg/L	21	30	200

INFERENCE	Report Status:-The above tested results are within the limits

Verified By
Mr. Sadanand B

checked by
20-NOV-23

Authorized signatory
Mrs. Radha M Bengeri

** End of the Report**

SHRI KRISHNA AQUA ENGINEERING WORKS
ISO 9001:2015, ISO 45001:2018
Environmental Lab, Pollution Control Consultants
"Shri Krishna" Building, 1st Cross, Pragati Colony,
Vidyanagar, **HUBLI** - 580 021. Tel. : (Lab) 0836-2375678,
Mobile : +91 94480 51534, +91 94800 28018,
E-mail - radhabengeri@gmail.com, krishnapandhari@gmail.com

TEST REPORT
WATER ANALYSIS REPORT
(SAMPLE DRAWN BY INDUSTRY)

Report No : SKAEW/W/2023/EG/NOV/28		Report Date :	18.11.2023
Issued to : M/s. Sai Life Sciences Limited, Unit-4, 80-A, 80-B, 81-A & 82, Kolhar IndustrialArea,Bidar-585403		Customer reference :	Walking customer
Date of Submission :	13.11.2023	Date of sample receipt :	13.11.2023
Sample Nature / Name :	Bore well water	Analysis start date :	15.11.2023
Sample Condition :	Satisfactory	Analysis completion date :	18.11.2023
Sample particulars :	Bore well water - 2	Sampling protocol : APHA 22nd Edition	
Environmental Condition :	-----		

Results

Sl.No	Parameters	Protocol	Unit	Result	Standard : IS-10500 :2012	
					DL	PL
01	pH Value	APHA 22nd Edition 4500-H*, B	....	7.89	6.5-8.5	No Relaxation
02	Conductivity	APHA 22nd Edition 2510, B	µ mhos	836	.....	....
03	Turbidity	APHA 22nd Edition 2130, B	NTU	Nil	1	5.0
04	Total Hardness	APHA 22nd Edition 2340 C	mg/L	252	200	600
05	Total Alkalinity	APHA 22nd Edition 2320, B	mg/L	57	200	600
06	Chlorides (Cl)	APHA 22nd Edition 4500-Cl, B	mg/L	219	250	1000
07	Fluoride as F	APHA 22nd Edition 4500 F-D	mg/L	0.54	1.0	1.5
08	Iron (Fe)	APHA 22nd Edition 3500 B	mg/L	0.18	0.30	No Relaxation
09	Total dissolved Solids	APHA 22nd Edition 2540 C	mg/L	532	500	2000
10	Nitrates as NO_3^-	APHA 22nd Edition 4500 b	mg/L	34	45	No Relaxation
11	Sulphates as SO4	APHA 22nd Edition 4500 c	mg/L	42	200	400
12	Calcium as Ca	APHA 22nd Edition 3500 B	mg/L	49	75	200
13	Magnesium asMg.	APHA 22nd Edition 3500 Mg B	mg/L	23	30	200

INFERENCE	Report Status:-The above tested results are within the limits

checked by

30-Nov-23

Verified By
Mr. Sadanand B

Authorized signatory
Mrs. Radha M Bengeri

** End of the Report**

SHRI KRISHNA AQUA ENGINEERING WORKS
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Mobile : +91 94480 51534, +91 94800 28018,
E-mail - radhabengeri@gmail.com, krishnapandhari@gmail.com

TEST REPORT
WATER ANALYSIS REPORT
(SAMPLE DRAWN BY INDUSTRY)

Report No : SKAEW/W/2023/EG/NOV/29		Report Date :	18.11.2023
Issued to : M/s. Sai Life Sciences Limited, Unit-4, 80-A, 80-B, 81-A & 82, Kolhar IndustrialArea,Bidar-585403		Customer reference :	Walking customer
Date of Submission :	13.11.2023	Date of sample receipt :	13.11.2023
Sample Nature / Name :	Bore well water	Analysis start date :	15.11.2023
Sample Condition :	Satisfactory	Analysis completion date :	18.11.2023
Sample particulars :	Bore well water - 3	Sampling protocol : APHA 22nd Edition	
Environmental Condition :	-----		

Results

Sl.No	Parameters	Protocol	Unit	Result	Standard : IS-10500 :2012	
					DL	PL
01	pH Value	APHA 22nd Edition 4500-H+, B	....	8.04	6.5-8.5	No Relaxation
02	Conductivity	APHA 22nd Edition 2510, B	µ mhos	869	.....	....
03	Turbidity	APHA 22nd Edition 2130, B	NTU	Nil	1	5.0
04	Total Hardness	APHA 22nd Edition 2340 C	mg/L	283	200	600
05	Total Alkalinity	APHA 22nd Edition 2320, B	mg/L	79	200	600
06	Chlorides (Cl)	APHA 22nd Edition 4500-Cl, B	mg/L	239	250	1000
07	Fluoride as F	APHA 22nd Edition 4500 F-D	mg/L	0.81	1.0	1.5
08	Iron (Fe)	APHA 22nd Edition 3500 B	mg/L	0.26	0.30	No Relaxation
09	Total dissolved Solids	APHA 22nd Edition 2540 C	mg/L	568	500	2000
10	Nitrates as NO_3^-	APHA 22nd Edition 4500 b	mg/L	32	45	No Relaxation
11	Sulphates as SO4	APHA 22nd Edition 4500 c	mg/L	46	200	400
12	Calcium as Ca	APHA 22nd Edition 3500 B	mg/L	62	75	200
13	Magnesium asMg	APHA 22nd Edition 3500 Mg B	mg/L	16	30	200

INFERENCE	Report Status:-The above tested results are within the limits

Verified By
Mr. Sadanand B

Checked by
30-Nov-23

Authorized signatory
Mrs. Radha M Bengeri

** End of the Report*

SHRI KRISHNA AQUA ENGINEERING WORKS
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Mobile : +91 94480 51534, +91 94800 28018,
E-mail - radhabengeri@gmail.com, krishnapandhari@gmail.com

TEST REPORT
WATER ANALYSIS REPORT
(SAMPLE DRAWN BY INDUSTRY)

Report No : SKAEW/W/2023/EG/NOV/25		**Report Date :**	**18.11.2023**
Issued to : M/s. Sai Life Sciences Limited, Unit-4, 80-A, 80-B, 81-A & 82, Kolhar IndustrialArea,Bidar-585403		**Customer reference :**	**Walking customer**
Date of Submission :	**13.11.2023**	**Date of sample receipt :**	**13.11.2023**
Sample Nature / Name :	**Bore well water**	**Analysis start date :**	**15.11.2023**
Sample Condition :	**Satisfactory**	**Analysis completion date :**	**18.11.2023**
Sample particulars :	**Piezo well-1**	**Sampling protocol : APHA 22nd Edition**	
Environmental Condition :	**-----**		

Results

Sl.No	Parameters	Protocol	Unit	Result	Standard : IS-10500 :2012	
					DL	PL
01	pH Value	APHA 22nd Edition 4500-H*, B	....	7.75	6.5-8.5	No Relaxation
02	Conductivity	APHA 22nd Edition 2510, B	µ mhos	843	.....	....
03	Turbidity	APHA 22nd Edition 2130, B	NTU	Nil	1	5.0
04	Total Hardness	APHA 22nd Edition 2340 C	mg/L	232	200	600
05	Total Alkalinity	APHA 22nd Edition 2320, B	mg/L	86	200	600
06	Chlorides (Cl)	APHA 22nd Edition 4500-Cl, B	mg/L	168	250	1000
07	Fluoride as F	APHA 22nd Edition 4500 F-D	mg/L	0.62	1.0	1.5
08	Iron (Fe)	APHA 22nd Edition 3500 B	mg/L	0.13	0.30	No Relaxation
09	Total dissolved Solids	APHA 22nd Edition 2540 C	mg/L	521	500	2000
10	Nitrates as NO_3^-	APHA 22nd Edition 4500 b	mg/L	30	45	No Relaxation
11	Sulphates as SO4	APHA 22nd Edition 4500 c	mg/L	56	200	400
12	Calcium as Ca	APHA 22nd Edition 3500 B	mg/L	37	75	200
13	Magnesium asMg	APHA 22nd Edition 3500 Mg B	mg/L	14	30	200

INFERENCE	**Report Status:-The above tested results are within the limits**

Verified By
Mr. Sadanand B

Checked by
30-Nov-23

Authorized signatory
Mrs. Radha M Bengeri

** End of the Report**

SHRI KRISHNA AQUA ENGINEERING WORKS
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TEST REPORT

WATER ANALYSIS REPORT

(SAMPLE DRAWN BY INDUSTRY)

Report No : SKAEW/W/2023/EG/NOV/26		Report Date :	18.11.2023
Issued to : M/s. Sai Life Sciences Limited, Unit-4, 80-A, 80-B, 81-A & 82, Kolhar IndustrialArea,Bidar-585403		Customer reference :	Walking customer
Date of Submission :	13.11.2023	Date of sample receipt :	13.11.2023
Sample Nature / Name :	Bore well water	Analysis start date :	15.11.2023
Sample Condition :	Satisfactory	Analysis completion date :	18.11.2023
Sample particulars :	Piezo well - 2	Sampling protocol : APHA 22nd Edition	
Environmental Condition :	-----		

Results

Sl.No	Parameters	Protocol	Unit	Result	Standard : IS-10500 :2012	
					DL	PL
01	pH Value	APHA 22nd Edition 4500-H+, B	....	7.93	6.5-8.5	No Relaxation
02	Conductivity	APHA 22nd Edition 2510, B	µ mhos	798	.....	....
03	Turbidity	APHA 22nd Edition 2130, B	NTU	Nil	1	5.0
04	Total Hardness	APHA 22nd Edition 2340 C	mg/L	210	200	600
05	Total Alkalinity	APHA 22nd Edition 2320, B	mg/L	72	200	600
06	Chlorides (Cl)	APHA 22nd Edition 4500-Cl, B	mg/L	210	250	1000
07	Fluoride as F	APHA 22nd Edition 4500 F-D	mg/L	0.59	1.0	1.5
08	Iron (Fe)	APHA 22nd Edition 3500 B	mg/L	0.21	0.30	No Relaxation
09	Total dissolved Solids	APHA 22nd Edition 2540 C	mg/L	504	500	2000
10	Nitrates as NO_3^-	APHA 22nd Edition 4500 b	mg/L	27	45	No Relaxation
11	Sulphates as SO4	APHA 22nd Edition 4500 c	mg/L	51	200	400
12	Calcium as Ca	APHA 22nd Edition 3500 B	mg/L	53	75	200
13	Magnesium asMg	APHA 22nd Edition 3500 Mg B	mg/L	20	30	200

INFERENCE	Report Status:-The above tested results are within the limits

Verified By
Mr. Sadanand B

Checked by
30-Nov-23

Authorized signatory
Mrs. Radha M Bengeri

** End of the Report**

ANNEXURE-09

SHRI KRISHNA AQUA ENGINEERING WORKS
ISO 9001:2015, ISO 45001:2018
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"Shri Krishna" Building, 1st Cross, Pragati Colony, Vidyanagar, HUBLI - 580 021. Tel. : (Lab) 0836-2375678, Mobile : +91 94480 51534, +91 94800 28018, E-mail - radhabengeri@gmail.com, krishnapandhari@gmail.com

TEST REPORT

SOIL ANALYSIS REPORT

(Sample Drawn By Industry)

Test Report No : SKAEW/S/2023/EG/DEC/28	Report Date : 16.12.2023
Issued to : M/s. Sai Life Sciences Limited,Unit-4, 80-A, 80-B, 81-A & 82, Kolhar Industrial Area,Bidar-585403	Customer reference : Walking customer
Date of Submission : 11.12.2023	Date of sample receipt : 12.12.2023
Sample Nature / Name : Soil Sample	Analysis start date : 13.12.2023
Sample Condition : Satisfactory	Analysis completion date : 16.12.2023
Sample particulars : Near ETP Area	Sampling Protocol : NA
Environmental Condition :	

Results

Sl.No	Parameters	Test Result	Unit
1	pH 20% Suspension	6.94	.....
2	Electrical Conductivity 20% Suspension	66	Mmhos/cm
3	Water content	49	%
4	Gravel	38	%
5	Sand	22	%
6	Clay	25	%
7	Silt	17	%
8	Sodium	32	mg/kg
9	Potassium	37	mg/kg
10	Calcium	30	mg/kg
11	Magnesium	18	mg/kg

End of the Report

Checked by

29-Dec-23

Reviewed By
(Chemist)
Sadanand B

Authorised Signatory
(Technical Manager)
Mrs. Radha M Bengeri

SHRI KRISHNA AQUA ENGINEERING WORKS
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Mobile : +91 94480 51534, +91 94800 28018,
E-mail - radhabengeri@gmail.com, krishnapandhari@gmail.com

TEST REPORT

SOIL ANALYSIS REPORT
(Sample Drawn By Industry)

Test Report No : SKAEW/S/2023/EG/DEC/29	Report Date : 16.12.2023
Issued to : M/s. Sai Life Sciences Limited,Unit-4, 80-A, 80-B, 81-A & 82, Kolhar Industrial Area,Bidar-585403	Customer reference : Walking customer
Date of Submission : 11.12.2023	Date of sample receipt : 12.12.2023
Sample Nature / Name : Soil Sample	Analysis start date : 13.12.2023
Sample Condition : Satisfactory	Analysis completion date : 16.12.2023
Sample particulars : Near Production Block Area-8	Sampling Protocol : NA
Environmental Condition :	

Results

Sl.No	Parameters	Test Result	Unit
1	pH 20% Suspension	7.46	.....
2	Electrical Conductivity 20% Suspension	81	Mmhos/cm
3	Water content	19	%
4	Gravel	27	%
5	Sand	30	%
6	Clay	39	%
7	Silt	15	%
8	Sodium	28	mg/kg
9	Potassium	35	mg/kg
10	Calcium	29	mg/kg
11	Magnesium	36	mg/kg

End of the Report

Checked by

29-Dec-23

Reviewed By
(Chemist)
Sadanand B

Authorised Signatory
(Technical Manager)
Mrs. Radha M Bengeri

SHRI KRISHNA AQUA ENGINEERING WORKS
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E-mail - radhabengeri@gmail.com, krishnapandhari@gmail.com

TEST REPORT

SOIL ANALYSIS REPORT

(Sample Drawn By Industry)

Test Report No : SKAEW/S/2023/EG/DEC/27	Report Date : 16.12.2023
Issued to : M/s. Sai Life Sciences Limited,Unit-4, 80-A, 80-B, 81-A & 82, Kolhar Industrial Area,Bidar-585403	Customer reference : Walking customer
Date of Submission : 11.12.2023	Date of sample receipt : 12.12.2023
Sample Nature / Name : Soil Sample	Analysis start date : 13.12.2023
Sample Condition : Satisfactory	Analysis completion date : 16.12.2022
Sample particulars : Near Boiler Area	Sampling Protocol : NA
Environmental Condition :	

Results

Sl.No	Parameters	Test Result	Unit
1	pH 20% Suspension	7.34	.....
2	Electrical Conductivity 20% Suspension	56	Mmhos/cm
3	Water content	23	%
4	Gravel	32	%
5	Sand	19	%
6	Clay	35	%
7	Silt	25	%
8	Sodium	24	mg/kg
9	Potassium	40	mg/kg
10	Calcium	36	mg/kg
11	Magnesium	24	mg/kg

End of the Report

Checked by

29-Dec-23

Reviewed By
(Chemist)
Sadanand B

Authorised Signatory
(Technical Manager)
Mrs. Radha M Bengeri

SHRI KRISHNA AQUA ENGINEERING WORKS
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E-mail - radhabengeri@gmail.com, krishnapandhari@gmail.com

TEST REPORT

SOIL ANALYSIS REPORT

(Sample Drawn By Industry)

Test Report No : SKAEW/S/2023/EG/DEC/26	Report Date : 16.12.2023
Issued to : M/s. Sai Life Sciences Limited,Unit-4, 80-A, 80-B, 81-A & 82, Kolhar Industrial Area,Bidar-585403	Customer reference : Walking customer
Date of Submission : 11.12.2023	Date of sample receipt : 12.12.2023
Sample Nature / Name : Soil Sample	Analysis start date : 13.12.2023
Sample Condition : Satisfactory	Analysis completion date : 16.12.2023
Sample particulars : Near Admin Block Area	Sampling Protocol : NA
Environmental Condition :	

Results

Sl.No	Parameters	Test Result	Unit
1	pH 20% Suspension	7.52	.....
2	Electrical Conductivity 20% Suspension	70	Mmhos/cm
3	Water content	38	%
4	Gravel	42	%
5	Sand	23	%
6	Clay	19	%
7	Silt	11	%
8	Sodium	39	mg/kg
9	Potassium	26	mg/kg
10	Calcium	33	mg/kg
11	Magnesium	35	mg/kg

End of the Report

Checked by

29-Dec-23

Reviewed By
(Chemist)
Sadanand B

Authorised Signatory
(Technical Manager)
Mrs. Radha M Bengeri

ANNEXURE-10

CALIBRATION CERTIFICATE

Certificate No: NKSS/CEMS/SLSL/2024/04 **Date of Issue: 21-05-2024**
Customer : M/s. Sai Life Sciences Limited, Bidar, Karnataka.

Instrument Details:

Instrument: Online Stack SPM Analyzer
Make : Forbes Marshall
Model : DCEM 21XX
Serial No. : FMDCEM21XX 20131 RCU

Station Name : 10 TPH Boiler
Date of Calibration : 19-05-2024
Due Date : 18-05-2025

Calibration Details:(Test Data)

Calibration Date	Zero % Opacity	100% Opacity	Remarks
19-05-2024	1.1 %	99.5%	Dust monitor model no DCEM 21XX is calibrated successfully

Result: The Calibration of above instrument is performed and it meets the acceptance criteria.

Operational Checks: -

Normalizing inputs	Temperature	**Ok**	Serial Comms.	**Ok**	Plant Status	**Ok**
	Span Check 100 %	**Ok**	Data Valid	**Ok**	Contact	**Ok**
	Alarm Level 1&2	**Ok**	Alarm Led	**Ok**		

M. Venkatesh

Calibrated By:
Venkatesh
Sr. Engineer - Service

NK SQUARE SOLUTIONS

T. P. Kishore

Reviewed By:
Prabu Kishore
Asst. Manager- Service

CALIBRATION CERTIFICATE

CERTIFICATE NO		**NKSS/FLOW/SLSL/2024/01**	
CUSTOMER / END USER		**M/s. Sai Life Sciences Limited**	
LOCATION/STATION NAME		**RO Permeate Outlet**	
Date of Cal.	**18-05-24**	**Next Cal. Date**	**17-05-25**
SERIAL NUMBER	I5405560	**INSTRUMENT**	MAGNATIC FLOW METER
Make & Model	OPTIFLUX 4000	**CONVERTER**	IFC050
TYPE	INTIGRAL/EXTERNAL	**CAL. METHOD**	ELECTRONIC SIMULATER
DN SIZE in MM	50	**GKL VALUE**	4.495
FLOW RATE	25 m3/hr	**COMMUNICATIONS**	RS485, 4-20 mA, Pulse

This is to certify that the instrument described above was calibrated with our facilities and according to the manufacturer's procedures with electronic simulator

Switch Position	Calculated Current Output In mA	Calculated Flow Reading In m3/Hr	Observed Flow Reading In m3/Hr	Deviation %	Accepted Dev.In %
0	0.00	0.00	0.00	0.00	0
A	5.55	2.42	2.41	0.46	±0.4
B	7.10	4.84	4.83	0.25	±0.4
C	10.20	9.68	9.70	-0.16	±0.4
D	19.49	24.21	24.22	-0.04	±0.4

This Calibration of the sensor is checked several times over several minutes of testing. The calibration dates are entered with the serial number, & customer details in our permanent calibration database.

Note: This Instrument is calibrated with reference to MagFlow Simulator MS1 for Electromagnetic Flow meter (Krohne).

Calibration done by:

Venkatesh

Authorized by

NK SQUARE SOLUTIONS