O/C

BEIL INFRASTRUCTURE LIMITED
(formerly known as Bharuch Enviro Infrastructure Limited)
Unit - Dahej

Ref: BEIL/DHJ/2024-25/10

Date: 27.05.2024
PCB ID # 40137

The Member Secretary
Gujarat Pollution Control Board
Paryavaran Bhavan, Sector – 10 / A
Gandhinagar – 382 010

Dear Sir,

Sub: Environmental Statement for the year 2023-24

We are forwarding herewith Environmental Statement for our TSDF Facility (Centralized Secured Landfill Facility), Common Incineration plant, Multi Effect Evaporator plant and Drum Decontamination facility situated at BEIL, Plot No D-43 G.I.D.C, Dahej, Ta: Vagra. Dist. Bharuch for the period of the year 2023-24

We are forwarding a copy of the Manifest regarding collection and disposal of waste from our member industries to GPCB Bharuch on a regular basis. For your reference we have attached here with Borewell results as Annexure 1, Soil result as Annexure 2, Dioxin- Furan result as Annexure 3 and Ambient Air-Stack result as Annexure 4.

We have received the following CTE & CCA Amendment from GPCB during the last year.

1. CCA Amendment vide consent no. H-129052 for Cell 7,8,9,10.
2. CTE Amendment vide consent no. CTE-133310 for Pre-processing Facility.

Also, we would like to bring your kind attention that our laboratory has been accredited by NABL & approved by MoEF&CC. We also have implemented ISO 14001:2015 & ISO 45001:2018 certification for Environmental Management system and Occupational Health and safety standards.

We hope that the above is in order.

Thanking you
Yours faithfully
For, **BEIL Infrastructure Ltd**

Authorized Signatory

CC:

1. **Regional Office**
   Gujarat Pollution Control Board, Bharuch.
2. **Unit Head- Hazardous waste cell**
   Gujarat Pollution Control Board, Gandhinagar.

Bharuch 29/5/24
Post Received
Gujarat Pollution Control Board
BHARUCH

CIN NO. U45300GJ1997PLC032696
Works Office : Plot No. D-43, Dahej Amod Road, GIDC Estate, Dahej, T. Va
Phone : (02641) 291129, E-mail : mistryrg@beil.co.in
Regd. Office : Plot No. 9701-16, GIDC Estate, Post Box No. 82, Ankleshwa
Phones (02646) 253135, 225228 Fax : (02642) 222849 E-mail : dalwadibd@

ENVIRONMENTAL STATEMENT

Environmental Statement for the financial year ending 31st March 2024

PART - A

<table>
<tr><td rowspan="2">01</td><td colspan="2" rowspan="2">Name and address of the owner/occupier of the industry/operation or process</td><td>Director – Mr. Ashok Panjwani
Operator – Mr. B.D. Dalwadi</td></tr>
<tr><td>BEIL Infrastructure Ltd
Plot # D-43, GIDC, Dahej, Ta : Vagra
Dist : Bharuch</td></tr>
<tr><td>02</td><td>Industry Category</td><td>Primary – STC Code</td><td>-</td></tr>
<tr><td></td><td></td><td>Secondary–SIC Code</td><td>-</td></tr>
<tr><td>03</td><td>Production capacity</td><td colspan="2">Units
<table>
<tr><th>No.</th><th>Product</th><th>Capacity</th></tr>
<tr><td>1.</td><td>Secured landfill site</td><td>1,65,400 MT Cell-1 (Closed)
3,12,960 MT Cell 2& 5 (Partially Closed
1,65,689 MT Cell-3 (Capacity reach)
1,75,385 MT Cell-4 (Capacity reach)
2,61,312 MT Cell-6 (Capacity reach)
1,19,468 MT Cell-7 (Operation)
1,05,942 MT Cell-8 (Operation)
94,708 MT Cell-9 (Operation)
1,29,815 MT Cell-10 (Operation)</td></tr>
<tr><td>2.</td><td>Multiple Effect Evaporator (MEE)</td><td>200 KLD</td></tr>
<tr><td>3.</td><td>De-Contaminated & De-toxified packing material (drum, carboy, liners etc.)</td><td>2,10,240 Nos/Year</td></tr>
<tr><td>4.</td><td>De-contaminated & Detoxification of tankers</td><td>36,000 Nos/Yr</td></tr>
<tr><td>5.</td><td>Incineration Facility</td><td>12 Million Kcal/Hr</td></tr>
<tr><td colspan="3">It is a TSDF Facility (Common Secured Landfill Facility)</td></tr>
</table></td></tr>
<tr><td>04</td><td>Year of establishment</td><td colspan="2">2015</td></tr>
<tr><td>05</td><td colspan="2">Date of the last Environmental Statement submitted</td><td>26.06.2023</td></tr>
</table>

PART – B

Water and Raw material Consumption

01. Water consumption m^3/day

01	Water Consumption	272.93 m^3/day
02	Process	38.01 m^3/day
03	Domestic	31.44 m^3/day
04	Biodegradable	203.46 m^3/day

Sr. No.	Name of Products (*)			Process Water Consumption per unit of product output	
				During the previous financial year	During the current financial year
	Sr. No.	Facility	Actual Qty. during the year 2023-24		
	1.	Secured landfill site	3,64,852.72 MT (received)	Note: There is no manufacturing activity as this is a TSDF Facility	
	2.	MEE	41,229 MT (Evaporated)		
	3.	De-Contaminated & Disposal system	93,989 Nos.		
	4.	De-contaminated & Detoxification of tankers	--		
	5.	Incineration	15352.45 MT (Incinerated)		

(*) Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw material used.

02 Raw Material Consumption

Sr. No.	Name of Products (*)	Consumption of raw material (in Kgs)	
		During the previous financial year	**During the current financial year**
1.	(Common secured Landfill Facility & Common Incinerator Facility)	Fly Ash: 61,98,490 Cement: 85,12,900 Lime: 7,09,514 Caustic: 2,80,440	Fly Ash: 47,84,900 Cement: 19,63,900 Lime: 25,95,980.000 Caustic: 17,76,209.550 Activated carbon: 10056
It is a TSDF Facility (Common Secured Landfill & Incineration Facility)			

PART - C

Pollution discharged to environment/unit of output

(Parameters as specified in the Consent issued)

<table>
<tr><th>Sr. No.</th><th>Pollution</th><th colspan="2">Quantity of pollutants discharged (Mass/day)</th><th>Concentrations of pollutants in discharges (mass / volume)</th><th>Percentage of variation from prescribed Standards with reasons</th></tr>
<tr><td>A</td><td>Water</td><td colspan="4">BEIL, Dahej is a ZLD unit, the leachate generated is being treated in MEE and MEE condensate is treated in ETP (MAP+ RO). The permeate is used within the premises.</td></tr>
<tr><td>B</td><td>Air</td><td colspan="4">
<table>
<tr><td colspan="4">Incinerator stack</td></tr>
<tr><td>PM</td><td>34.96 Kg/day</td><td>30.9 mg/m3</td><td>-38.20%</td></tr>
<tr><td>HCl</td><td>8.49 Kg/day</td><td>30.32 mg/m3</td><td>-85.00%</td></tr>
<tr><td>SO2</td><td>12.68 Kg/day</td><td>45.28 mg/m3</td><td>-94.40%</td></tr>
<tr><td>NOx (NO and NO2)</td><td>26.48 Kg/day</td><td>94.60 mg/m3</td><td>-94.15%</td></tr>
<tr><td>CO</td><td>15.39 Kg/day</td><td>54.98 mg/m3</td><td>-86.4%</td></tr>
</table>
<table>
<tr><td colspan="4">Spray dryer stack</td></tr>
<tr><td>PM</td><td>20.90 Kg/day</td><td>43.1 mg/m^3</td><td>-71.27%</td></tr>
<tr><td>NOx</td><td>5.53 Kg/day</td><td>11.40 mg/m^3</td><td>-77.19%</td></tr>
</table>
<table>
<tr><td colspan="4">Stabilization scrubber stack</td></tr>
<tr><td>PM</td><td>5.52 Kg/day</td><td>12.71 mg/m^3</td><td>-91.53%</td></tr>
<tr><td>HCL</td><td>-</td><td>Not detectable</td><td>-</td></tr>
</table>
*Detection Limit: PM : 10 mg/Nm3, HCl :0.2 mg/Nm3, Cl_2 :0.2 mg/Nm3

Drum Decontamination scrubber stack:

PM, HCL & Cl_2 were below detection limit.

*Detection Limit: HCl :0.2 mg/Nm3, Cl_2 :0.2 mg/Nm3
</td></tr>
</table>

Part – D
Hazardous Waste

(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.)

Hazardous Wastes		Total Quantity (MT)	
		During the previous financial year 2022-23	**During the current financial year 2023-24**
A	From Process	(*)	(*)
	From pollution control facilities (generation)	**6,039.66 MT** MEE salt & ETP Sludge **7772.20 KL** of leachate water generated from landfilling treated in the MEE plant. **26,518 KL** Condensate generated from MEE and treated in the ETP plant. **2.975** MT Residue generated from the drum- decontamination plant. **0.038 KLPA** Used Oil generated. **798.97 MT** Qty Ash generated from the Combustion chamber. **1621.96 MT** from scrubber (Lime Ash)	**5171.32 MT** MEE salt & ETP Sludge. **9790.82 KL** of leachate water generated from landfilling treated in the MEE plant. **23,920 KL** Condensate generated from MEE and treated in the ETP plant. **2.740 MT** Residue generated from the drum- decontamination plant. **0.085 KLPA** Used Oil generated. **2433.27 MT** Qty Ash generated from the Combustion chamber & WHRB. **5462.29 MT** from scrubber (Lime Ash)
B	Quantity re-cycled or re-utilized within the unit	**20,940 KL** RO Permeate generated and reused in gardening and other industrial activities. **1621.96 MT** of Lime ash generated from incinerator used for pre-treatment (stabilization) of Landfill waste.	**14,998 KL** RO Permeate generated and reused in gardening and other industrial activities. **5462.29 MT** of Lime ash generated from incinerator used for pre-treatment (stabilization) of Landfill waste.
	Total quantity disposed of for landfill	**Received- 2,27,519.72 MT** **Disposed- 2,43,002.19 MT**	**Received- 3,64,852.72 MT** **Disposed- 3,55,733.66 MT**
	Total quantity incinerated	**3,072.49 MT**	**15,352.56 MT**

(*)	This being a TSDF Facility (Common Secured Landfill Facility), different types of wastes permitted by GPCB, are collected from member industries, and disposed at the landfill site as per CPCB guideline. Please see the attached Table for quantity disposed at the site.

Part – E
Solid Waste

	Hazardous Wastes	Total Quantity (MT)	
		During the previous financial year 2021-22	During the current financial year 2022-23
a	From Process	(*)	(*)
b	From pollution control facilities (MEE salt & ETP Sludge)		
(*)	This being a TSDF Facility (Common Secured Landfill Facility), different types of wastes permitted by GPCB, are collected from member industries, and disposed at the landfill site as per CPCB guideline. Please see the attached Table for quantity disposed at the site.		

Part – F

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

BEIL is receiving accepted types of waste for secured landfilling. If waste is not meeting criteria for direct landfilling, necessary treatment like neutralization / stabilization etc. are given. Leachate generated is treated at in-house MEE followed by Spray Dryer.

Part – G

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

The Company has implemented Environmental Management System Standards ISO 14001:2015 & ISO 45001:2018 and helped in improving overall environmental condition and Safety of the unit.

This being a TSDF Facility (Common Secured Landfill Facility), & Common Incinerator Facility), there is no processing activity. We are collecting solid / hazardous wastes from our members and treating & disposing off. We are drawing samples from every truck coming to our site and a Quick Analysis is done for pH, Moisture Content and Organic Content, Paint Filter Liquid Test etc. Also, we are verifying whether waste is uniform and is not having any obnoxious smell. Also, detailed analysis of solid / hazardous waste samples is done at the laboratory. During monsoon period, the site is kept covered. We have also provided a storage facility for keeping the solid / hazardous wastes collected during monsoon. Leachate generated from the landfill is treated in in-house MEE at BEIL Dahej.

Landfill Site (Cell-I): - Capped
Landfill Site (Cell II & V): - Partially capped
Landfill Site (Cell III & Cell IV): - Capacity Reach
Landfill Site (Cell VI): - Capacity Reach
Landfill Site (Cell VII): - Capacity Reach
Landfill Site (Cell VIII): - Operational
Landfill Site (Cell IX): - Operational
Landfill Site (Cell X): - Operational

BEIL has installed multiple effect evaporation system (MEE), which is energy efficient compared to other evaporation system. We have Received CCA on 16.12.2017 and it is in operation.

BEIL Infrastructure Limited have installed one incinerator with capacity of 12 million K cal/Hr along with Heat recovery system. Generated steam is being utilized in Multi Effect Evaporation system (MEE). The system provided consists of Rotary kiln, Secondary Combustion Chamber, WHRB, Spray dryer adsorber (SDA), Bag Filter, Wet Scrubber, ID Fan, Chimney & Continuous Monitoring System.

We have installed solar panels above capped portion of landfill. We have generated 2,74,675 kWH unit during the year 2023-24.

Part – H

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

- GPCB XGN Online manifest system implemented for all industries.
- Laboratory at BEIL is NABL accredited.
- BEIL is also going for recognition of MoEF for Laboratory.
- Total investment for environmental protection including abatement of pollution, prevention of pollution is rupees 1,60,68,507.4 during the year 2023-2024. Details are as following:
    - ✓ Tarpaulin covering with LDPE sheet.
    - ✓ In Bag House of MEE plant damaged Begs had been replaced.
    - ✓ Installation and maintenance work related to CEMS.

Part – I

Any other particulars for improving the quality of the environment.

- BEIL has implemented Environmental Management System Standards ISO 14001:2015 & ISO 45001:2018. Implementation of ISO 14001:2015 & ISO 45001:2018 has helped in improvement of the environmental protection and Safety.
- The design of secured landfill is done under the guidance of IIT, New Delhi. After construction of each cell, inspection is done by Professor from IITD.
- Lot of NGOs, community members, journalists, students, and industrialists are visiting BEIL and appreciating the operations. BEIL is exhibiting various details in front of the landfill. All the visitors are welcome.
- BEIL is maintaining a proper Manifest system as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. This helps in keeping proper records.
- Laboratory has been augmented. Laboratory got recognition of NABL.
- Green belt is developed around the periphery.
- We have installed solar panels above capped portion of landfill. We have generated 2,74,675 kWH unit during the year 2023-24.

For, **BEIL Infrastructure Limited, Dahej**

Authorized Signatory

BEIL INFRASTRUCTURES LIMITED DAHEJ

BEIL INFRASTRUCTURE LTD
DAHEJ

LANDFILLING DETAILS

Quantity of solid / hazardous waste received and disposed off
During April- 2023 to March – 2024

Sr No	Month	Received Quantity	Disposed Quantity
All quantity in MT			
1	**April- 2023**	25,107.58	25,107.58
2	**May- 2023**	23,766.31	23,766.31
3	**June -2023**	22,632.06	7,898.40
4	**July -2023**	12,568.61	0
5	**August -2023**	11,853.91	0
6	**September -2023**	7,624.91	0
7	**October -2023**	33,349.06	36,349.06
8	**November-2023**	41,443.20	44,105.23
9	**December -2023**	51,690.25	56,690.25
10	**January- 2024**	43,396.86	53,396.86
11	**February- 2024**	44,684.52	51,684.52
12	**March - 2024**	46,735.45	56735.44
TOTAL		**3,64,852.72**	**3,55,733.65**

Closing stock: 9,119.06 MT

BEIL INFRASTRUCTURE LTD. DAHEJ

Decontamination & detoxify facility
During April- 2023 to March – 2024

Opening Stock- 4,929 Nos.

Month	No. of Drums Received	No. of Drums De-contaminated	No. of Drums dispatches
April- 2023	4126	5791	5920
May- 2023	4843	7357	4756
June -2023	4957	6300	4877
July -2023	6038	5456	4901
August -2023	4740	4696	5078
September -2023	12001	10737	9992
October -2023	14392	15325	15950
November-2023	15139	14236	12012
December -2023	11017	12351	12997
January- 2024	3402	5779	6525
February- 2024	4787	3404	3337
March - 2024	5707	2557	2976
Total	**91,149**	**93,989**	**89,321**

Closing Stock- 6,757 Nos.

WASTE GENERATION DETAILS

Cat.:34.1- Residue generated from Drum- decontamination plant

During April- 2023 to March – 2024

Month	Residue Generation (MT)
April- 2023	0.100
May- 2023	0.120
June -2023	0.170
July -2023	0.210
August -2023	0.280
September -2023	0.310
October -2023	0.500
November-2023	0.350
December -2023	0.250
January- 2024	0.150
February- 2024	0.250
March - 2024	0.50
Total	**2.740**

BEIL INFRASTRUCTURE LTD
DAHEJ

Wastewater generated from Landfill (Leachate) sent to MEE at BEIL, Dahej during April- 2023 to March – 2024

Month	Generated Leachate from land filling Treated in in-house MEE (KL)
April- 2023	858.00
May- 2023	821.00
June -2023	690.00
July -2023	716.40
August -2023	719.20
September -2023	696.00
October -2023	519.70
November-2023	489.00
December -2023	960.23
January- 2024	877.60
February- 2024	833.70
March - 2024	1609.99
Total	**9790.82**

WASTE GENERATION AND DISPOSED DETAILS
MEE Salts & Chemical Sludge from wastewater treatment (MEE plant)

Month	Generation of MEE Salts	Generation of chemical Sludge
April- 2023	509.22	35.1
May- 2023	326.74	29.63
June -2023	399.96	27.62
July -2023	316.00	22.56
August -2023	399.85	28.17
September -2023	512.26	34.64
October -2023	429.91	21.4
November-2023	374.87	18.8
December-2023	504.82	22.27
January-2024	428.15	10.68
February-2024	318.00	13.5
March-2024	374.95	12.21
Total	**4894.74**	**276.58**

WASTE GENERATION AND DISPOSED DETAILS

Cat.: 5.1 – Used / spent Oil

Month	Opening stock	Generation	Disposed	Closing Stock
				All quantity in litres
April- 2023	25	0	0	25
May- 2023	25	15	0	40
June -2023	40	5	0	45
July -2023	45	10	0	55
August -2023	55	5	0	60
September -2023	60	10	0	70
October -2023	70	0	0	70
November-2023	70	10	0	80
December -2023	80	15	0	95
January- 2024	95	5	0	100
February- 2024	100	10	0	110
March - 2024	110	0	0	110
Total		**85**	**0**	

INCINERATION DETAILS

QUANTITY OF INCINERABLE WASTE RECEIVED AND DISPOSED OFF
DURING APRIL- 2023 TO MARCH- 2024

Opening Stock: 3633.03 MT

Month	Waste Received (MT)	Waste Incinerated (MT)
April- 2023	829.32	1325.92
May- 2023	581.27	723.21
June -2023	986.24	786.67
July -2023	945.60	1219.19
August- 2023	1358.10	901.96
September- 2023	958.46	1527.34
October- 2023	1454.18	1701.09
November-2023	1334.50	1446.25
December -2023	1263.99	291.50
January- 2024	1146.67	1615.61
February- 2024	1065.49	1904.36
March - 2024	1418.84	1909.41
Total	**13,342.71**	**15,352.56**
Closing stock - 1623.18 MT		