

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPARTMENT

No. Dy.Ch.E./1318/SWM/Project, dtd. 12-07-2018

Office of the Chief Engineer (SWM)

Love Grove Complex,

89, Dr. Annie Besant Road,

Worli,

Mumbai-400018.

To,

Additional Principal Chief Conservator of Forests (C),

Ministry of Environment, Forest and Climate Change,

Regional Office (WZ),

E-5, Kendriya Paryavaran Bhawan,

E-5 Arera Colony, Link Road-3,

Ravishankar Nagar,

Bhopal – 462 016

Sub: Submission of Environmental Statement Form V for the financial year ending with 31st March 2018 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Ref: Revised Environmental Clearance issued by State Level Environmental Impact Assessment Authority (SEIAA) vide no. SEAC-2014/CR-162/TC2 dtd 05.12.2014.

Sir,

This has reference to the conditions of revised Environmental clearance issued for proposed modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

In this context, the MCGM is hereby submitting the hard copy of Environmental Statement Form V for the financial year ending with 31st March 2018 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Submitted please.

Yours Faithfully,



Chief Engineer

(Solid Waste Management)

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPARTMENT

ANNEXURE

ENVIRONMENTAL STATEMENT FORM-V

(See rule 14)

Environmental Statement for the financial year ending with **31st March 2018**

PART-A

- i. Name and address of the owner/
occupier of the industry operation
or process. **Municipal Corporation of Greater Mumbai**
Integrated Solid Waste Management Site,
Off Eastern Express Highway, Near
Kannamwar Nagar,
Kanjur (E), Mumbai 400042.
**Operator- M/s. Antony Lara Enviro
Solutions Pvt. Ltd.**
- ii. Industry category Primary- (STC Code) Secondary- (STC Code) -NA
- iii. Production category – Processing of Municipal Solid Waste
Total capacity up to 7,500 Tons /Day
3,000 to 6,500Tons/day by Bioreactor landfill
technique & 1,000 Tons /day by Windrow
Composting
- iv. Year of establishment -**2009**
- v. Date of the last environmental statement submitted. - **08.06.2017 for Year 2016-17.**

PART –B

Water and River Material Consumption

i. **Water consumption in m³/day**

- Process:
- i) 27.0 m³/day (Spraying of Bio-enzyme and Piian to minimize the odor nuisance)
 - ii) 2.0 m³/day for Leachate Treatment Plant
 - iii) 50.0 m³/day for Dust Suppression
 - iv) 10.0 m³/day for Wheel washing of MSW carrying vehicles

Cooling: 0.5 m³/day for wash box heat cooling

Domestic: 200 Nos. of staff and workers×40 Liters /day= 8.0 m³/day

i) Name of Products	Process water consumption per unit of products	
	During the Previous financial year April 2016-March 2017	During the current financial year April 2017- March 2018
1.(a) Composted Material (Soil conditioner)	Not applicable (Process of Bio-degradation is not completed hence bio-mining for finished goods are not done.)	Not applicable (Process of Bio-degradation is not completed hence bio-mining for finished goods are not done.)
2. City Compost (Generated during 27.05.2017-16.03.2018.) City Compost (Generated during 17.03.2018 to 30.03.2018)	Nil	0.5m ³ /Ton 0.7m ³ /Ton

ii. Raw material consumption

Name of Raw materials*	Name of Products	Consumption of Raw material per unit of output	
		During the Previous Financial Year April 2016 -March 2017	During the Current Financial Year April 2017-March2018
i)Municipal Solid Waste (un-segregated)	Composted Material (Soil conditioner from BLF Cells)	10,73,231.602 Tons**	1078817.530Tons**
ii) Municipal Solid Waste (un-segregated)	City Compost (Generated during trial period 27.05.2017-16.03.2018.)	Nil	34.69 Tons/Ton of city compost (generated during period 27.05.2017 - 16.03.2018)
iii) Municipal Solid Waste (un-segregated)	City Compost (generated during 17.03.2018-31.03.2018)	Nil	32.76 Tons/Ton of city compost (generated during period 17.03.2018 - 31.03.2018)
iv)Soil for cover	Will be Reused after Bio-mining	95,235 Tons	51,420 Tons

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

** Processed product/output is yet to be recovered from BLF Cells as per the technology of BLF Cells hence only consumption of Raw material in total has been given herewith.

PART-C

Pollutants Discharged to environment/unit of output

(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (mass/day)	Concentration of Pollutants Discharged mass/volume	Percentage of Variation from Prescribed Standards with Reasons.
(a) Water	Nil	Nil	Nil
(b) Air	Nil	Nil	Nil

As per NABL accredited Laboratory reports, all the parameters analyzed are within prescribed limits.

PART-D

HAZARDOUS WASTES

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

Hazardous Wastes	Total Quantity (Kg)	
	During the Previous Financial Year April 2016-March 2017	During the Current Financial Year April 2017-March 2018
1. From Process	NIL	NIL
2. From Pollution Control Facilities	NIL	NIL

PART – E

Solid Waste

		Total Quantity (Kg/Tons)	
		During the previous financial year April 2016-March 2017	During the current financial year April 2017-March 2018
a. From process		NIL	NIL
b. From Pollution Control Facility		NIL	NIL
c.(1)Quantity recycled or re-utilized within the unit.		NIL	NIL
(2)Sold	Plastics	NIL	132 Tons
	Non- ferrous - Glass	NIL	2 Tons
	RDF	NIL	583 Tons
	Others	NIL	2 Tons
	Metal	NIL	4 Tons
(3) Disposed Land filled material*		NIL	NIL

* At ISWM Facility at Kanjur only processing of the Municipal Solid Waste is done.

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.

Hazardous waste is not generated or received at this Integrated Solid Waste Management Site at Kanjur, Mumbai.

The Municipal Solid waste is received for its processing in Bio-reactor Landfill and compost Plant having characteristics as below

Characteristics of solid waste:

Sr.No	Particulars	Percentage
1.	Compostable material	33.0%
2.	Total Recyclables- (Plastics, paper, thermocol, rubber, leather, glass, metals)	4.0%
3.	RDF	39.0%
4.	Total Rejects	24.0%

PART-G

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

Conservation of natural resources-

Due to the scientific design of bioreactor landfill with the arrangement of impervious lining at the bottom along with leachate collection arrangement has protected the ground water from contamination.

Due to Scientific land filling, the emission of greenhouse gases admeasuring 2878 Tons/Year Methane i.e. equivalent CO₂71943 Tons /year is controlled and due to controlled flaring of land fill gas smell nuisance is minimized, thus adverse impact on air quality is minimized.

The use of culture-based bio-enzyme for spraying on unloaded MSW at landfill site before spreading, compacting and blanketing with soil cover, the generation of smell nuisance is controlled and enhances the Bio-degradation.

The arrangement of Mist spraying, around MSW unloading area, leachate treatment plant by using diluted Piiian solution helps in minimizing odor nuisance from VOC/Mercaptans/ H₂S etc.

Spreading of soil cover blanket on inactive area of MSW helps in controlling odor and enhances biological activity due to the controlled temperature inside MSW scientific landfill.

Leachate generated in Bio-composting is recycled and sprayed scientifically inside stacked material for effective, speedy bio-composting and increase in methane gas production.

The segregation into Recyclables, RDF and composting of Organic rich MSW at the compost plant helps improving economy of the project and the composted material obtained is used by vendors in soil improvement, thus natural resources are conserved.

The leachate is collected in 2 Nos. of impervious ponds. Leachate Treatment Plant installed on ISWM Project Site, Kanjur is fully working. This will help in conservation/ protection of surface water and ground water in surrounding areas.

During the year new 1650 plants were planted and the regular maintenance of about 6674 numbers of peripheral plants along the boundary wall of the project in two rows has helped in arresting the smell spreading during the winter season.

About 1,20,70,900 liters of rain water were collected, and the water was used for process.

Impact of abatement measures on cost is as shown below:

Particular	Rs. in Lakh
Gas Flaring	9.08
Bio-enzyme	55.50
Misting	28.80
LTP	43.51
Captive Power generation	68.27
Expenditure on environmental monitoring & analysis for checking compliance	27.19
Dust suppression	13.15
Plantation	12.79
Website Maintenance for information to Public	1.50
Use of Meteorological App for local meteorological data	0.01
Total	259.80

PART – H

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

Sr. No.	Particulars	Projected Cost in lakhs
1	Power generation Unit proposed 1MW	800.00
2	Plantation	02.00
3	Rain water harvesting	80.00
4	Additional gas flaring station (1 No.)	20.00

PART -I

MISCELLANEOUS:

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

Recycle of carbon from stabilized composted solid waste into soil will help in improving quality of soil.

ds/10/1/2018
Chief Engineer
(Solid Waste Management)

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPARTMENT

No. Dy. Ch. E. /1318/SWM/Project, dtd. 12.07.2018

Office of the Chief Engineer (SWM)

Love Grove Complex,

89, Dr. Annie Besant Road,

Worli,

Mumbai-400018.

To,
Scientist & Incharge,
Central Pollution Control Board,
Parivesh Bhavan,
Opposite VMC ward office No.10,
Shubanpura,
Vadodra- 390 023

- Sub: Submission of Environmental Statement Form V for the financial year ending with 31st March 2018 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.
- Ref: Revised Environmental Clearance issued by State Level Environmental Impact Assessment Authority (SEIAA) vide no. SEAC-2014/CR-162/TC2dtd 05.12.2014.

Sir,

This has reference to the conditions of revised Environmental clearance issued for proposed modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

In this context, the MCGM is hereby submitting the hard copy of Environmental Statement Form V for the financial year ending with 31st March 2018 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Submitted please.

Yours Faithfully,

*Asst. Engr
32/10/18*

**Chief Engineer
(Solid Waste Management)**

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPARTMENT

ANNEXURE

ENVIRONMENTAL STATEMENT FORM-V (See rule 14)

Environmental Statement for the financial year ending with **31st March 2018**

PART-A

- i. Name and address of the owner/
occupier of the industry operation
or process. **Municipal Corporation of Greater Mumbai**
Integrated Solid Waste Management Site,
Off Eastern Express Highway, Near
Kannamwar Nagar,
Kanjur (E), Mumbai 400042.
**Operator- M/s. Antony Lara Enviro
Solutions Pvt. Ltd.**
- ii. Industry category Primary- (STC Code) Secondary- (STC Code) -NA
- iii. Production category – Processing of Municipal Solid Waste
Total capacity up to 7,500 Tons /Day
3,000 to 6,500 Tons/day by Bioreactor landfill
technique & 1,000 Tons /day by Windrow
Composting
- iv. Year of establishment -**2009**
- v. Date of the last environmental statement submitted. - **08.06.2017 for Year 2016-17.**

PART –B

Water and River Material Consumption

i. **Water consumption in m³/day**

- Process:
- i) 27.0 m³/day (Spraying of Bio-enzyme and Piiian to minimize the odor nuisance)
 - ii) 2.0 m³/day for Leachate Treatment Plant
 - iii) 50.0 m³/day for Dust Suppression
 - iv) 10.0 m³/day for Wheel washing of MSW carrying vehicles

Cooling: 0.5 m³/day for wash box heat cooling

Domestic: 200 Nos. of staff and workers × 40 Liters /day = 8.0 m³/day

i) Name of Products	Process water consumption per unit of products	
	During the Previous financial year April 2016-March 2017	During the current financial year April 2017- March 2018
1.(a) Composted Material (Soil conditioner)	Not applicable (Process of Bio-degradation is not completed hence bio-mining for finished goods are not done.)	Not applicable (Process of Bio-degradation is not completed hence bio-mining for finished goods are not done.)
2. City Compost (Generated during 27.05.2017-16.03.2018.) City Compost (Generated during 17.03.2018 to 30.03.2018)	Nil	0.5m ³ /Ton 0.7m ³ /Ton

ii. Raw material consumption

Name of Raw materials*	Name of Products	Consumption of Raw material per unit of output	
		During the Previous Financial Year April 2016 -March 2017	During the Current Financial Year April 2017-March2018
i)Municipal Solid Waste (un-segregated)	Composted Material (Soil conditioner from BLF Cells)	10,73,231.602 Tons**	1078817.530Tons**
ii) Municipal Solid Waste (un-segregated)	City Compost (Generated during trial period 27.05.2017-16.03.2018.)	Nil	34.69 Tons/Ton of city compost (generated during period 27.05.2017 - 16.03.2018)
iii) Municipal Solid Waste (un-segregated)	City Compost (generated during 17.03.2018-31.03.2018)	Nil	32.76 Tons/Ton of city compost (generated during period 17.03.2018 - 31.03.2018)
iv)Soil for cover	Will be Reused after Bio-mining	95,235 Tons	51,420 Tons

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

** Processed product/output is yet to be recovered from BLF Cells as per the technology of BLF Cells hence only consumption of Raw material in total has been given herewith.

PART-C

Pollutants Discharged to environment/unit of output (Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (mass/day)	Concentration of Pollutants Discharged mass/volume	Percentage of Variation from Prescribed Standards with Reasons.
(a) Water	Nil	Nil	Nil
(b) Air	Nil	Nil	Nil

As per NABL accredited Laboratory reports, all the parameters analyzed are within prescribed limits.

PART-D

HAZARDOUS WASTES

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

Hazardous Wastes	Total Quantity (Kg)	
	During the Previous Financial Year April 2016-March 2017	During the Current Financial Year April 2017-March 2018
1. From Process	NIL	NIL
2. From Pollution Control Facilities	NIL	NIL

PART – E

Solid Waste

		Total Quantity (Kg/Tons)	
		During the previous financial year April 2016-March 2017	During the current financial year April 2017-March 2018
a. From process		NIL	NIL
b. From Pollution Control Facility		NIL	NIL
c.(1)Quantity recycled or re-utilized within the unit.		NIL	NIL
(2)Sold	Plastics	NIL	132 Tons
	Non- ferrous - Glass	NIL	2 Tons
	RDF	NIL	583 Tons
	Others	NIL	2 Tons
	Metal	NIL	4 Tons
(3) Disposed Land filled material*		NIL	NIL

* At ISWM Facility at Kanjur only processing of the Municipal Solid Waste is done.

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.

Hazardous waste is not generated or received at this Integrated Solid Waste Management Site at Kanjur, Mumbai.

The Municipal Solid waste is received for its processing in Bio-reactor Landfill and compost Plant having characteristics as below

Characteristics of solid waste:

Sr.No	Particulars	Percentage
1.	Compostable material	33.0%
2.	Total Recyclables- (Plastics, paper, thermocol, rubber, leather, glass, metals)	4.0%
3.	RDF	39.0%
4.	Total Rejects	24.0%

PART-G

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

Conservation of natural resources-

Due to the scientific design of bioreactor landfill with the arrangement of impervious lining at the bottom along with leachate collection arrangement has protected the ground water from contamination.

Due to Scientific land filling, the emission of greenhouse gases admeasuring 2878 Tons/Year Methane i.e. equivalent CO₂71943 Tons /year is controlled and due to controlled flaring of land fill gas smell nuisance is minimized, thus adverse impact on air quality is minimized.

The use of culture-based bio-enzyme for spraying on unloaded MSW at landfill site before spreading, compacting and blanketing with soil cover, the generation of smell nuisance is controlled and enhances the Bio-degradation.

The arrangement of Mist spraying, around MSW unloading area, leachate treatment plant by using diluted Piiian solution helps in minimizing odor nuisance from VOC/Mercaptans/ H₂S etc.

Spreading of soil cover blanket on inactive area of MSW helps in controlling odor and enhances biological activity due to the controlled temperature inside MSW scientific landfill.

Leachate generated in Bio-composting is recycled and sprayed scientifically inside stacked material for effective, speedy bio-composting and increase in methane gas production.

The segregation into Recyclables, RDF and composting of Organic rich MSW at the compost plant helps improving economy of the project and the composted material obtained is used by vendors in soil improvement, thus natural resources are conserved.

The leachate is collected in 2 Nos. of impervious ponds. Leachate Treatment Plant installed on ISWM Project Site, Kanjur is fully working. This will help in conservation/ protection of surface water and ground water in surrounding areas.

During the year new 1650 plants were planted and the regular maintenance of about 6674 numbers of peripheral plants along the boundary wall of the project in two rows has helped in arresting the smell spreading during the winter season.

About 1,20,70,900 liters of rain water were collected, and the water was used for process.

Impact of abatement measures on cost is as shown below:

Particular	Rs. in Lakh
Gas Flaring	9.08
Bio-enzyme	55.50
Misting	28.80
LTP	43.51
Captive Power generation	68.27
Expenditure on environmental monitoring & analysis for checking compliance	27.19
Dust suppression	13.15
Plantation	12.79
Website Maintenance for information to Public	1.50
Use of Meteorological App for local meteorological data	0.01
Total	259.80

PART – H

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

Sr. No.	Particulars	Projected Cost in lakhs
1	Power generation Unit proposed 1MW	800.00
2	Plantation	02.00
3	Rain water harvesting	80.00
4	Additional gas flaring station (1 No.)	20.00

PART -I

MISCELLANEOUS:

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

Recycle of carbon from stabilized composted solid waste into soil will help in improving quality of soil.

Handwritten signature

**Chief Engineer
(Solid Waste Management)**

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPARTMENT

No. Dy. Ch.E./1318/SWM/Project, dtd. 12.07.2018

Office of the Chief Engineer (SWM)

Love Grove Complex,

89, Dr. Annie Besant Road,

Worli,

Mumbai-400018.

To,

The Member Secretary,

Maharashtra Pollution Control Board,

Kalpataru Point, 2nd, 3rd, & 4th floor,

Opp. Cine Planet,

Near Sion Circle,

Sion (East),

Mumbai- 400 022.

Sub: Submission of Environmental Statement Form V for the financial year ending with 31st March 2018 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Ref: Revised Environmental Clearance issued by State Level Environmental Impact Assessment Authority (SEIAA) vide no. SEAC-2014/CR-162/TC2dtd 05.12.2014.

Sir,

This has reference to the conditions of revised Environmental clearance issued for proposed modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

In this context, the MCGM is hereby submitting the hard copy of Environmental Statement Form V for the financial year ending with 31st March 2018 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Submitted please.

Yours Faithfully,



Chief Engineer

(Solid Waste Management)

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPARTMENT

ANNEXURE

ENVIRONMENTAL STATEMENT FORM-V

(See rule 14)

Environmental Statement for the financial year ending with **31st March 2018**

PART-A

- i. Name and address of the owner/
occupier of the industry operation
or process. **Municipal Corporation of Greater Mumbai**
Integrated Solid Waste Management Site,
Off Eastern Express Highway, Near
Kannamwar Nagar,
Kanjur (E), Mumbai 400042.
**Operator- M/s. Antony Lara Enviro
Solutions Pvt. Ltd.**
- ii. Industry category Primary- (STC Code) Secondary- (STC Code) -NA
- iii. Production category – Processing of Municipal Solid Waste
Total capacity up to 7,500 Tons /Day
3,000 to 6,500 Tons/day by Bioreactor landfill
technique & 1,000 Tons /day by Windrow
Composting
- iv. Year of establishment -**2009**
- v. Date of the last environmental statement submitted. - **08.06.2017 for Year 2016-17.**

PART -B

Water and River Material Consumption

i. **Water consumption in m³/day**

- Process: i) 27.0 m³/day (Spraying of Bio-enzyme and Piiian to minimize the odor nuisance)
ii) 2.0 m³/day for Leachate Treatment Plant
iii) 50.0 m³/day for Dust Suppression
iv) 10.0 m³/day for Wheel washing of MSW carrying vehicles

Cooling: 0.5 m³/day for wash box heat cooling

Domestic: 200 Nos. of staff and workers × 40 Liters /day = 8.0 m³/day

i) Name of Products	Process water consumption per unit of products	
	During the Previous financial year April 2016-March 2017	During the current financial year April 2017- March 2018
1.(a) Composted Material (Soil conditioner)	Not applicable (Process of Bio-degradation is not completed hence bio-mining for finished goods are not done.)	Not applicable (Process of Bio-degradation is not completed hence bio-mining for finished goods are not done.)
2. City Compost (Generated during 27.05.2017-16.03.2018.) City Compost (Generated during 17.03.2018 to 30.03.2018)	Nil	0.5m ³ /Ton 0.7m ³ /Ton

ii. Raw material consumption

Name of Raw materials*	Name of Products	Consumption of Raw material per unit of output	
		During the Previous Financial Year April 2016 -March 2017	During the Current Financial Year April 2017-March2018
i)Municipal Solid Waste (un-segregated)	Composted Material (Soil conditioner from BLF Cells)	10,73,231.602 Tons**	1078817.530Tons**
ii) Municipal Solid Waste (un-segregated)	City Compost (Generated during trial period 27.05.2017-16.03.2018.)	Nil	34.69 Tons/Ton of city compost (generated during period 27.05.2017 - 16.03.2018)
iii) Municipal Solid Waste (un-segregated)	City Compost (generated during 17.03.2018-31.03.2018)	Nil	32.76 Tons/Ton of city compost (generated during period 17.03.2018 - 31.03.2018)
iv)Soil for cover	Will be Reused after Bio-mining	95,235 Tons	51,420 Tons

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

** Processed product/output is yet to be recovered from BLF Cells as per the technology of BLF Cells hence only consumption of Raw material in total has been given herewith.

PART-C

Pollutants Discharged to environment/unit of output

(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (mass/day)	Concentration of Pollutants Discharged mass/volume	Percentage of Variation from Prescribed Standards with Reasons.
(a) Water	Nil	Nil	Nil
(b) Air	Nil	Nil	Nil

As per NABL accredited Laboratory reports, all the parameters analyzed are within prescribed limits.

PART-D

HAZARDOUS WASTES

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

Hazardous Wastes	Total Quantity (Kg)	
	During the Previous Financial Year April 2016-March 2017	During the Current Financial Year April 2017-March 2018
1. From Process	NIL	NIL
2. From Pollution Control Facilities	NIL	NIL

PART – E

Solid Waste

		Total Quantity (Kg/Tons)	
		During the previous financial year April 2016-March 2017	During the current financial year April 2017-March 2018
a. From process		NIL	NIL
b. From Pollution Control Facility		NIL	NIL
c.(1)Quantity recycled or re-utilized within the unit.		NIL	NIL
(2)Sold	Plastics	NIL	132 Tons
	Non- ferrous - Glass	NIL	2 Tons
	RDF	NIL	583 Tons
	Others	NIL	2 Tons
	Metal	NIL	4 Tons
(3) Disposed Land filled material*		NIL	NIL

* At ISWM Facility at Kanjur only processing of the Municipal Solid Waste is done.

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.

Hazardous waste is not generated or received at this Integrated Solid Waste Management Site at Kanjur, Mumbai.

The Municipal Solid waste is received for its processing in Bio-reactor Landfill and compost Plant having characteristics as below

Characteristics of solid waste:

Sr.No	Particulars	Percentage
1.	Compostable material	33.0%
2.	Total Recyclables- (Plastics, paper, thermocol, rubber, leather, glass, metals)	4.0%
3.	RDF	39.0%
4.	Total Rejects	24.0%

PART-G

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

Conservation of natural resources-

Due to the scientific design of bioreactor landfill with the arrangement of impervious lining at the bottom along with leachate collection arrangement has protected the ground water from contamination.

Due to Scientific land filling, the emission of greenhouse gases admeasuring 2878 Tons/Year Methane i.e. equivalent CO₂71943 Tons /year is controlled and due to controlled flaring of land fill gas smell nuisance is minimized, thus adverse impact on air quality is minimized.

The use of culture-based bio-enzyme for spraying on unloaded MSW at landfill site before spreading, compacting and blanketing with soil cover, the generation of smell nuisance is controlled and enhances the Bio-degradation.

The arrangement of Mist spraying, around MSW unloading area, leachate treatment plant by using diluted Piiian solution helps in minimizing odor nuisance from VOC/Mercaptans/ H₂S etc.

Spreading of soil cover blanket on inactive area of MSW helps in controlling odor and enhances biological activity due to the controlled temperature inside MSW scientific landfill.

Leachate generated in Bio-composting is recycled and sprayed scientifically inside stacked material for effective, speedy bio-composting and increase in methane gas production.

The segregation into Recyclables, RDF and composting of Organic rich MSW at the compost plant helps improving economy of the project and the composted material obtained is used by vendors in soil improvement, thus natural resources are conserved.

The leachate is collected in 2 Nos. of impervious ponds. Leachate Treatment Plant installed on ISWM Project Site, Kanjur is fully working. This will help in conservation/ protection of surface water and ground water in surrounding areas.

During the year new 1650 plants were planted and the regular maintenance of about 6674 numbers of peripheral plants along the boundary wall of the project in two rows has helped in arresting the smell spreading during the winter season.

About 1,20,70,900 liters of rain water were collected, and the water was used for process.

Impact of abatement measures on cost is as shown below:

Particular	Rs. in Lakh
Gas Flaring	9.08
Bio-enzyme	55.50
Misting	28.80
LTP	43.51
Captive Power generation	68.27
Expenditure on environmental monitoring & analysis for checking compliance	27.19
Dust suppression	13.15
Plantation	12.79
Website Maintenance for information to Public	1.50
Use of Meteorological App for local meteorological data	0.01
Total	259.80

PART – H

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

Sr. No.	Particulars	Projected Cost in lakhs
1	Power generation Unit proposed 1MW	800.00
2	Plantation	02.00
3	Rain water harvesting	80.00
4	Additional gas flaring station (1 No.)	20.00

PART –I

MISCELLANEOUS:

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

Recycle of carbon from stabilized composted solid waste into soil will help in improving quality of soil.


Chief Engineer
(Solid Waste Management)

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPARTMENT

No. Dy. Ch. E. / 1318 / SWM / Project, dtd. 12.07.2018

Office of the Chief Engineer (SWM)

Love Grove Complex,

89, Dr. Annie Besant Road,

Worli,

Mumbai-400018.

To,
The Member Secretary,
S.E.I.A.A.
Environment Department,
Government of Maharashtra,
15th floor, New Adm. Building,
Mantralaya,
Mumbai – 400 032.

Sub: Submission of Environmental Statement Form V for the financial year ending with 31st March 2018 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Ref: Revised Environmental Clearance issued by State Level Environmental Impact Assessment Authority (SEIAA) vide no. SEAC-2014/CR-162/TC2dtd 05.12.2014.

Sir,

This has reference to the conditions of revised Environmental clearance issued for proposed modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

In this context, the MCGM is hereby submitting the hard copy of Environmental Statement Form V for the financial year ending with 31st March 2018 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Submitted please.

Yours Faithfully,

decatson
9210192

Chief Engineer
(Solid Waste Management)

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPARTMENT

ANNEXURE

ENVIRONMENTAL STATEMENT FORM-V

(See rule 14)

Environmental Statement for the financial year ending with **31st March 2018**

PART-A

- i. Name and address of the owner/
occupier of the industry operation
or process. **Municipal Corporation of Greater Mumbai**
Integrated Solid Waste Management Site,
Off Eastern Express Highway, Near
Kannamwar Nagar,
Kanjur (E), Mumbai 400042.
**Operator- M/s. Antony Lara Enviro
Solutions Pvt. Ltd.**
- ii. Industry category Primary- (STC Code) Secondary- (STC Code) -NA
- iii. Production category – Processing of Municipal Solid Waste
Total capacity up to 7,500 Tons /Day
3,000 to 6,500Tons/day by Bioreactor landfill
technique & 1,000 Tons /day by Windrow
Composting
- iv. Year of establishment -**2009**
- v. Date of the last environmental statement submitted. - **08.06.2017 for Year 2016-17.**

PART –B

Water and River Material Consumption

i. Water consumption in m³/day

Process: i) 27.0 m³/day (Spraying of Bio-enzyme and Piiian to minimize the odor nuisance)
ii) 2.0 m³/day for Leachate Treatment Plant
iii) 50.0 m³/day for Dust Suppression
iv) 10.0 m³/day for Wheel washing of MSW carrying vehicles

Cooling: 0.5 m³/day for wash box heat cooling

Domestic: 200 Nos. of staff and workers×40 Liters /day= 8.0 m³/day

i) Name of Products	Process water consumption per unit of products	
	During the Previous financial year April 2016-March 2017	During the current financial year April 2017- March 2018
1.(a) Composted Material (Soil conditioner)	Not applicable (Process of Bio-degradation is not completed hence bio-mining for finished goods are not done.)	Not applicable (Process of Bio-degradation is not completed hence bio-mining for finished goods are not done.)
2. City Compost (Generated during 27.05.2017-16.03.2018.) City Compost (Generated during 17.03.2018 to 30.03.2018)	Nil	0.5m ³ /Ton 0.7m ³ /Ton

ii. Raw material consumption

Name of Raw materials*	Name of Products	Consumption of Raw material per unit of output	
		During the Previous Financial Year April 2016 -March 2017	During the Current Financial Year April 2017-March2018
i)Municipal Solid Waste (un-segregated)	Composted Material (Soil conditioner from BLF Cells)	10,73,231.602 Tons**	1078817.530Tons**
ii) Municipal Solid Waste (un-segregated)	City Compost (Generated during trial period 27.05.2017-16.03.2018.)	Nil	34.69 Tons/Ton of city compost (generated during period 27.05.2017 - 16.03.2018)
iii) Municipal Solid Waste (un-segregated)	City Compost (generated during 17.03.2018-31.03.2018)	Nil	32.76 Tons/Ton of city compost (generated during period 17.03.2018 - 31.03.2018)
iv)Soil for cover	Will be Reused after Bio-mining	95,235 Tons	51,420 Tons

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

** Processed product/output is yet to be recovered from BLF Cells as per the technology of BLF Cells hence only consumption of Raw material in total has been given herewith.

PART-C

Pollutants Discharged to environment/unit of output (Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (mass/day)	Concentration of Pollutants Discharged mass/volume	Percentage of Variation from Prescribed Standards with Reasons.
(a) Water	Nil	Nil	Nil
(b) Air	Nil	Nil	Nil

As per NABL accredited Laboratory reports, all the parameters analyzed are within prescribed limits.

PART-D

HAZARDOUS WASTES

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

Hazardous Wastes	Total Quantity (Kg)	
	During the Previous Financial Year April 2016-March 2017	During the Current Financial Year April 2017-March 2018
1. From Process	NIL	NIL
2. From Pollution Control Facilities	NIL	NIL

PART – E

Solid Waste

		Total Quantity (Kg/Tons)	
		During the previous financial year April 2016-March 2017	During the current financial year April 2017-March 2018
a. From process		NIL	NIL
b. From Pollution Control Facility		NIL	NIL
c.(1)Quantity recycled or re-utilized within the unit.		NIL	NIL
(2)Sold	Plastics	NIL	132 Tons
	Non-ferrous - Glass	NIL	2 Tons
	RDF	NIL	583 Tons
	Others	NIL	2 Tons
	Metal	NIL	4 Tons
(3) Disposed Land filled material*		NIL	NIL

* At ISWM Facility at Kanjur only processing of the Municipal Solid Waste is done.

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.

Hazardous waste is not generated or received at this Integrated Solid Waste Management Site at Kanjur, Mumbai.

The Municipal Solid waste is received for its processing in Bio-reactor Landfill and compost Plant having characteristics as below

Characteristics of solid waste:

Sr.No	Particulars	Percentage
1.	Compostable material	33.0%
2.	Total Recyclables- (Plastics, paper, thermocol, rubber, leather, glass, metals)	4.0%
3.	RDF	39.0%
4.	Total Rejects	24.0%

PART-G

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

Conservation of natural resources-

Due to the scientific design of bioreactor landfill with the arrangement of impervious lining at the bottom along with leachate collection arrangement has protected the ground water from contamination.

Due to Scientific land filling, the emission of greenhouse gases admeasuring 2878 Tons/Year Methane i.e. equivalent CO₂71943 Tons /year is controlled and due to controlled flaring of land fill gas smell nuisance is minimized, thus adverse impact on air quality is minimized.

The use of culture-based bio-enzyme for spraying on unloaded MSW at landfill site before spreading, compacting and blanketing with soil cover, the generation of smell nuisance is controlled and enhances the Bio-degradation.

The arrangement of Mist spraying, around MSW unloading area, leachate treatment plant by using diluted Piiian solution helps in minimizing odor nuisance from VOC/Mercaptans/ H₂S etc.

Spreading of soil cover blanket on inactive area of MSW helps in controlling odor and enhances biological activity due to the controlled temperature inside MSW scientific landfill.

Leachate generated in Bio-composting is recycled and sprayed scientifically inside stacked material for effective, speedy bio-composting and increase in methane gas production.

The segregation into Recyclables, RDF and composting of Organic rich MSW at the compost plant helps improving economy of the project and the composted material obtained is used by vendors in soil improvement, thus natural resources are conserved.

The leachate is collected in 2 Nos. of impervious ponds. Leachate Treatment Plant installed on ISWM Project Site, Kanjur is fully working. This will help in conservation/ protection of surface water and ground water in surrounding areas.

During the year new 1650 plants were planted and the regular maintenance of about 6674 numbers of peripheral plants along the boundary wall of the project in two rows has helped in arresting the smell spreading during the winter season.

About 1,20,70,900 liters of rain water were collected, and the water was used for process.

Impact of abatement measures on cost is as shown below:

Particular	Rs. in Lakh
Gas Flaring	9.08
Bio-enzyme	55.50
Misting	28.80
LTP	43.51
Captive Power generation	68.27
Expenditure on environmental monitoring & analysis for checking compliance	27.19
Dust suppression	13.15
Plantation	12.79
Website Maintenance for information to Public	1.50
Use of Meteorological App for local meteorological data	0.01
Total	259.80

PART – H

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

Sr. No.	Particulars	Projected Cost in lakhs
1	Power generation Unit proposed 1MW	800.00
2	Plantation	02.00
3	Rain water harvesting	80.00
4	Additional gas flaring station (1 No.)	20.00

PART -I

MISCELLANEOUS:

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

Recycle of carbon from stabilized composted solid waste into soil will help in improving quality of soil.

*dstatsonc
92/0196*

**Chief Engineer
(Solid Waste Management)**