

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH AT NEW DELHI**

O.A NO. 434 OF 2023

IN THE MATTER OF:

DAVINDER PAL SINGH

...APPLICANT

VERSUS

STATE OF PUNJAB & ORS.

...RESPONDENTS

I N D E X

NEXT D.O.H-15.01.2025

S.No.	Particulars	Page
1.	Compliance Report filed on behalf of the Respondent No. 2	1-24
2.	Proof of Service	25



(Sachar Anand)
Advocate for the Respondent No.2
14, 1st Floor, National Park
Lajpat Nagar-IV, New Delhi-110024
Phone No.-9958792346
Email- sachar_anand@yahoo.co.in

Place: New Delhi
Dated: 10.01.2025

07 JAN 2025

07 JAN 2025

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH AT NEW DELHI



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COMPLIANCE REPORT FILED ON BEHALF OF RESPONDENT
NO. 2

I, Rajat Oberoi, Commissioner, Municipal Corporation, Patiala do hereby solemnly affirm and declare as under: -

1. That this compliance report is being filed before this Hon'ble Commission in compliance to the directions passed by the Hon'ble Tribunal vide order dated 07.08.2024.
2. That the total daily waste generation of Patiala city is 219 Tonne per Day (TPD)(as on 31/12/2024) and the processing capacity of Municipal Corporation Patiala presently is 195 TPD. The bifurcation of processing of waste is in tabulated form as below:

Waste Category	Waste Generation (TPD)	Processed (TPD)	Waste sent to dump
Wet waste	133	121 (90%)	12 (10%)
Dry waste	86	74 (86%)	12 (14%)
Total	219	195 (89%)	24 (11%)

3. That the Municipal Corporation Patiala generates 133 TPD of wet waste and out of this 121 TPD of wet waste is being processed in different manner. The details of processing of wet waste in tabulated form is as under: -

Category	Generation	Processing Type	Processed (TPD)	Waste sent to dump
Household	106	Compost Pits	32	8
		Cattle Feeding (Gaushala)	4	
		Cattle Feeding (Stray)	2	
		Wet Waste composter	5	
		Windrow Composting at Dump	55	

Rajat Oberoi

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BWG	8	Onsite	5	0
		Piggery	2.5	
Cow Dung	12	Compost Pits	5	0
		Windrow Composting	6	
		Making Logs	1	
Horticulture	0.5	Shredding & Windrow Composting	0.5	0
Non BWG	6.5	Piggery	2.5	4
Total Waste	133		121	12

4. That the Municipal Corporation Patiala generates 86 TPD of dry waste out of which 74 TPD of dry waste is being processed by Municipal Corporation Patiala in different manner. The details of processing of dry waste in tabulated formas under:

Category	Generation	Processing Type	Processed	Waste sent to dump
Household	67	Singla Traders /Junk Dealers/ IPCA	60	7
BWG	4	BWG/Junk Dealers	4	0
Non BWG	15	Junk Dealers	10	5
Total Waste	86		74	12

5. That the Municipal Corporation Patiala has executed an agreement dated 16.01.2024 with IPCA (Indian Pollution Control Association) an NGO to setup a processing plant of 5 TPD wet waste processing and 5 TPD for dry waste at Focal Point, MRF Centre. The NGO is processing the wet waste at the Focal Point MRF Centre. The copy of agreement dated 16.01.2024 is attached herewith as **ANNEXURE R-2/1**
6. That the Municipal Corporation Patiala has executed an agreement dated 16.01.2024 with IPCA (Indian Pollution Control Association) an NGO for setting up recycling plant of Multiple Layer of Plastic (MLP) with the capacity of 8 TPD. The plant is operational at Focal Point Patiala and is processing 8 TPD of dry waste every day. **ANNEXURE R-2/1**
7. That the Municipal Corporation Patiala has executed an agreement with IPCA (Indian Pollution Control Association) an NGO to setup 40 Aero bins for processing of wet and dry waste with capacity of 400ltr at 10 gated localities in the Patiala city. The NGO has set up the 40 Aero bins in different colonies of the Patiala City. List of the Colonies is attached herewith as **ANNEXURE R-2/2**

07 JAN 2025

07 JAN 2025



8. That the Municipal Corporation Patiala has executed contract with M/s Hari Bhari Recyclable Pvt. Ltd. for door-to-door collection for a period of 10 years w.e.f from 09.10.2018. The work is being executed by the agency who is collecting segregated wet & dry waste from the households and the agency is charging user charges from the households as fixed by the General House of the Corporation. The copy of work order is being annexed herewith **ANNEXURE. R-2/3**
9. That the Municipal Corporation Patiala has resolved vide resolution bearing No. 494 dated 21.6.2024 to allot at least two acres of land at the existing dump site and electricity connection for the operation of machinery of recycle of the recovery facility for setting up 100 TPD waste processing plant, the same agency responsible for door-to-door collection of Municipal Solid waste. The copy of resolution dated 21.6.2024 is attached herewith as **ANNEXURE. R-2/4**
10. That the Municipal Corporation Patiala had floated tender for the setting up Compressed Bio-gas (CBG) Plant of 100 TPD capacity at Village Dhudhad and the bids for the tender have been received which is further sent to Government for its Technical vetting. The land has already been arranged. However, the Government is also in talks with the 2 Public Sector Undertakings (HPCL & GAIL) for setting up CBG plant and the Municipal Corporation has given the details of infrastructure required of setting up CBG plant. Copy of letter dated 30.10.2024 is attached as **ANNEXURE R-2/5**
11. That the work of bio-remediation in phase-I of 1.76 lakh MT of legacy waste at Sanauri Adda Dump Site was conceived under the SBM in 2020. After completion of all processes, work order was issued to M/s Akanksha Enterprises vide no. 149dt. 28.07.2020 for an amounting of Rs.6.86 Crore. The agency bio-remediated 1.76 lakh MT of legacy waste which is converted into park (Photograph annexed as **Annexure R-2/6**). Now, the work of bio-remediation has been completed by the company at the site.
12. That in phase -II an estimate amounting to Rs. 4.56 Cr. has been prepared by the office of deponent to remediate the quantity of 1.43 lakh MT (till today) of legacy waste. The tenders for the work have been allotted to the successful bidder named M/s Sagar Motors vide work order bearing No. 1176 dated 13.09.2024 and the agency is processing the remaining legacy

2/2/24

07 JAN 2025

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waste at the dump site and the work is likely to be completed before 30.06.2025. Copy of the work order is annexed herewith as

ANNEXURE R-2/7

- 13. That the answering respondent has diligently complied with all the instruction/directions set out by the NGT/Punjab Pollution Control Board Patiala.
- 14. That the answering respondent has diligently complied with all the instruction/directions set out by the NGT/Punjab Pollution Control Board Patiala.
- 15. That it is humbly submitted that Municipal Corporation Patiala is fully committed to comply with the provisions of Solid Waste Management Rules 2016 and NGT guidelines.

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DEPONENT

VERIFICATION

Verified at _____ on _____ that the content of the above compliance report in so far as they relate to factual position are true upon the information derived from the official record and is so far as they relate to the legal submission are true upon the advice received and believed by me to be true. Rest is by way of submission before the Hon'ble Tribunal.

07 JAN 2025

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DEPONENT

*Sh. Sanjeev Kumar Debra to
New Delhi
700733031*

ATTESTED

BAL KRISHAN
Advocate & Oath Commissioner
PATIALA

I certify that the above statement is made on solemn affirmation before me this Wednesday day of January 2025 at Rajkot District of Gujarat State of Gujarat.
 The deponent has been certified by [Signature] personally known to me.
 I am a member of the Bar & year of Register 2019 Oath Commissioner New Delhi.
 My name & date of entry 07 JAN 2025

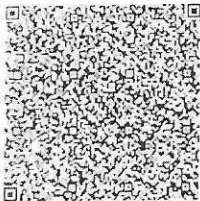
7-1-2025



INDIA NON JUDICIAL
Government of Punjab

e-Stamp

Certificate No. : IN-PB77389740637918W
 Certificate Issued Date : 16-Jan-2024 03:04 PM
 Certificate Issued By : pbshmaru
 Account Reference : NEWIMPACC (SV)/ pb7054304/ PATIALA/ PB-PT
 Unique Doc. Reference : SUBIN-PBPB705430455907786636343W
 Purchased by : GURPAL SINGH
 Description of Document : Article 5 Agreement or Memorandum of an Agreement
 Property Description : Not Applicable
 Area of Property : Not Applicable
 Consideration Price (Rs.) : 0
 (Zero)
 First Party : INDIAN POLLUTION CONTROL ASSOCIATION
 Second Party : MUNICIPAL CORPORATION PATIALA
 Stamp Duty Paid By : INDIAN POLLUTION CONTROL ASSOCIATION
 Stamp Duty Amount(Rs.) : 100
 (One Hundred only)
 Social Infrastructure Cess(Rs.) : 0
 (Zero)
 Total Stamp Duty Amount(Rs.) : 100
 (One Hundred only)



Gurpal Singh



Please write or type below this line

[Signature]
 16-1-24
 Secretary
 Municipal Corporation, Patiala.

IRD 0020172657

MEMORANDUM OF UNDERSTANDING
 Between
Municipal Corporation Patiala
 And
INDIAN POLLUTION CONTROL ASSOCIATION
 On
**PROPOSAL FOR INSTALLATION OF COMPOSTING MACHINE AND OPERATING
 10 TPD WASTE AT MRF
 AND DECENTRALIZED SOLID WASTE MANAGEMENT SYSTEM IN PATIALA**

This Memorandum of Understanding (MOU) establishes a **non-financial partnership** between Municipal Corporation Patiala and IPCA (referred as partners hereon) on.....^{16th}.....day of January 2023, for each partner to share their respective strength in order to achieve the following objectives.

1. Objectives and Roles of both parties

The objective of this partnership will be to:

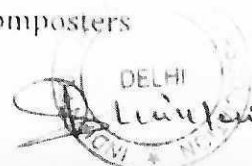
- 2.1 Installation of composting machine and operating 10 TPD waste at Material Recovery Facility in Patiala, Punjab
- 2.2 To set-up a Plastic Recycling Facility in Patiala, Punjab (will be set-up up IPCA using its own resources/land/ expenses etc.
- 2.3 To execute decentralized organic waste management system at 10 gated residential societies in Patiala.
- 2.4 To develop and disseminate knowledge products like SOP Toolkit for MRF development based on the learning's from project
- 2.5 To organize city level panel discussion/conference.
- 2.6 To execute massive IEC and Branding Campaign

A Material Recovery Facility (MRF) is a structure which is developed to receive, sort, process, and store recyclable materials that is transported and marketed for further processing. The key function of the MRF is to recover maximum quantity of recyclable waste. Under this project, IPCA have proposed to install the composting machine and operating MRF with capacity to cater 10 TPD of solid waste. The tentative site of this MRF would be Focal Point, Patiala, where there is already an existing MRF. The existing MRF would be upgraded into a semi-automatic MRF which will be furnished with machineries to process wet waste and prepare dry waste for recycling. The MRF will receive both dry and wet waste which will be unloaded at the tipping floor having hopper with conveyor. This waste will reach to the segregation platform where workers provided by IPCA will sort dry (paper, plastic, cardboard, metal, glass, etc.) and wet waste. The wet waste will be processed into rich compost with the help of a mechanized composter and dry waste like plastic, cardboard, shall be baled and to be handed over to MC Patiala for recycling. Machineries & equipment to be installed at the Material Recovery Facility:

- i. Vertical Hydraulic Baler with 200 kg per hour capacity (2)
- ii. Segregation conveyor with hopper and tipping floor (1)
- iii. Mechanized composter (5 TPD) (1)
- iv. Curing set-up along with conveyor (1)
- v. Weighing scale (1)
- vi. Fire extinguishers (12)

As one of the project's deliverables, IPCA will be implementing decentralised solid waste management at the identified gated residential societies (recommended by Municipal Corporation of Patiala) under which IPCA will install 4 on-site composters (Aerobins) per society.

[Signature]



Machineries and Equipment to be installed in the gated societies

- i. Aerobin (400 L): 40 in nos.
- ii. One time Tools & Equipments for the operators
- iii. Construction of Base for 40 Aerobins
- iv. Cocopeat and bio-culture (per month)

To achieve the above objectives for Waste Management **IPCA** under this MOU with Municipal Corporation Patiala, will ensure key deliverables under the project as following:

1. One Material Recovery Facility (MRF) of capacity 10 TPD catering to 6-7 TPD organic waste (to be processed into compost using Organic Waste Convertors) and 3-4 TPD of dry waste (to be handed over to MC Patiala for recycling)
2. Ten gated residential societies having 40 on-site composters (Aerobins) to cater approximately 18 MT of organic waste per month.
3. A knowledge product, toolkit on SOPs for developing Material Recovery Facilities, to be released with the support of Ministry of Housing and Urban Affairs (MoHUA).
4. A state level conference/Panel discussion with key stakeholders.
5. Establishment of supply chain for different waste commodities.
6. Developing the market of plastic recycled products.
7. IEC material (Documentaries, FM Campaign, awareness videos, social media advocacy, pamphlets etc).
8. Door to door collection will be done by waste collectors of gated societies and segregation of waste will be done by IPCA at MRF Center; they will be provided training and support by IPCA to treat the kitchen/ organic waste in Aerobins. The compost generated from Aerobins will be used for landscaping in their premises.

2. **Monetary Support**

1. IPCA shall not seek any monetary support from Municipal Corporation Patiala in the implementation, and shall arrange its own resources. Municipal Corporation Patiala would however, provide space for Installation of composting machine at Material Recovery Facility (MRF) Centre in their existing Material Recovery Facility (MRF) at Focal Point, Patiala. Further, Municipal Corporation, Patiala may provide guidance for developing Information, Education, and Communication material to IPCA for the dissemination of required knowledge, information, and branding about project in the community.
2. Municipal Corporation, Patiala will not support the project financially, Moreover it shall not have any liability towards Implementation of the project.
3. Municipal Corporation, Patiala shall never be involved in any legal/ or court cases during or after the project.
4. There will no financial burden on Municipal Corporation, Patiala for running this project or any ancillary expenses incurred by IPCA. All the expenses for running this project is to be incurred by IPCA.
5. That Municipal Corporation, Patiala will not be responsible for any vicarious liability of any work done by the any employees engaged by the IPCA for this project. IPCA can be held liable for the unlawful actions of an employee, such as harassment or discrimination in the workplace. IPCA can also be held liable if an employee operates equipment or machinery in a negligent or inappropriate manner, which results in damages to property or personal injury. In case of any damage to MC Property that is to be recovered from IPCA.
6. In case of any dispute the Commissioner, Municipal Corporation, Patiala will be the sole arbitrator and his decision will be final and binding upon the both parties.
7. That if the Municipal Corporation, Patiala intends to use the space given to IPCA for installation of machine for any public purpose or project then IPCA

will have to vacate the place within one month and give the possession to MC Patiala.

8. That in case of violation of any clause of this MOU, Municipal Corporation, Patiala has every right to nullify this MOU and IPCA is bound to shift the machineries and vacate the place.

IPCA's representative would update the officials of the Health Branch of the Municipal Corporation, Patiala from time to time, about the activities undertaken through this MOU and would take their feedback and suggestions to meet the above mentioned objective in more meaningful manner.

3. Roles and Scope of both the parties

Roles and Scope of IPCA :

1. Upgrade the existing Material Recovery Facility (Focal Point, Patiala) by installing new machineries like Conveyor Belt, Baler, and Organic Waste Converter.
2. Depute adequate manpower for the operations of the Material Recovery Facility.
3. Set-up the Plastic Recycling Facility using its own resources (land, machinery, tools, labour and others).
4. Installation and commissioning of the machines.
5. Internal electricity wiring at the project sites
6. Pay all license/compliance fees to get the required permission and licenses.
7. Procure MLP waste and required raw material for its recycling
8. Sale of the end product i.e. board and utilities products like furniture, bench, dustbin etc.
9. Branding of the site
10. Payment of electricity, water bills and any other expenses.
11. Purchase 40 Aerobins along with required tools and install at the recommended gated residential societies.
12. IPCA shall operate and maintain the Aerobin sites with their own resources like manpower & expenses etc.
13. Organize awareness, training, and capacity building program for different stakeholders for effective implementation of the project.
14. Timely execution of the activities on ground .
15. Segregation of waste at MRF with its own manpower.

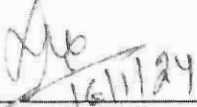
4. **Roles & Scope of Municipal Corporation of Patiala:**

1. Facilitate introductory meetings with the local/ground staff and other stakeholders.
2. Permit the implementing agency to upgrade the existing Material Recovery Facility (MRF) at Focal Point, Patiala, into a 10 TPD MRF with required modifications as per the set objectives of the project proposed
3. Identification of the 10 residential societies for implementing decentralized Solid Waste Management System and facilitating the implementing agency in obtaining requisite NOC's.
4. Assistance in sourcing waste for Material Recovery Facility
5. Support in executing the Information, Education and Communication (IEC) campaign in Patiala
6. Facilitate disposal of inert waste from the Material Recovery Facility.

5. **General Provisions**

1. The participants enter into this MOU while wishing to maintain their own separate and unique missions and mandates, and their own accountabilities. Unless specifically provided otherwise, the cooperation among the Participants as outlined in this MOU shall not be construed as a legal entity or personality. Each Party shall accept full and sole responsibility for any and all expenses incurred by itself relating to this MOU. Nothing in this MOU shall be construed as an exclusive working relationship. The Participants specifically acknowledge that this MOU is not an obligation of funds, nor does it constitute a legally binding commitment by any Parties or create any rights in any third parties.

2. Nothing in this MOU shall be construed as interfering in any way with any separate agreements or contracts entered into by or among the Participants in their individual capacities either prior or subsequent to the signing of this MOU.
3. This project shall be initiated as a pilot project, serving as a preliminary model to assess feasibility, effectiveness and potential scalability before any broader implementation is considered.
4. This pilot project shall be valid for one year, start from its commencing date. However, the Participants may decide in writing prior to its expiry to extend this period. In addition, this MOU may be modified or amended if the Participants agree in writing.
5. Should IPCA's work be deemed unsuitable, Municipal Corporation, Patiala will regard it as a waste of CSR funding and forward the issue to the Government of India and SBI card.
6. Municipal Corporation Patiala is acknowledged as the principal governing authority for this MOU, retaining the explicit right to exercise its revocation right at any time without prior notice to any party.
7. IPCA shall not hold any exclusive rights under this MOU; similar work opportunities outlined herein will remain open and accessible to all qualified entities, ensuring fair and competitive participation.
8. During the tenure of this project, IPCA shall not damage any moveable and immoveable property vesting with the Municipal Corporation, Patiala.




**Municipal Corporation
 Patiala**

Secretary
 Municipal Corporation, Patiala.

Witness

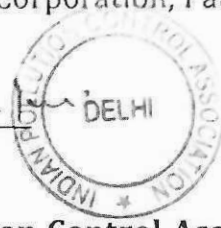
Name:

Department:

Signature: 



**Ashish Jain
 Director
 Indian Pollution Control Association
 (IPCA)**



Witness **DR. REENA CHADHA**

Name: **DR. REENA CHADHA, GENERAL
 MANAGER**

IPCA:

Signature:  (IPCA)

DETAILS OF THE ALLOCATION OF AEROBINS TO EACH GATED SOCIETY IN PATIALA

SR. NO.	NAME OF THE SOCIETY	Total No. of Flats (N)	Total no. Flats Occupied at present/ total no, of families residing (n)	No. of Aerobins provided on the basis of One Aerobin for every 25 families (n/25)
1	Garden Heights, Near Focal Point, Bypass Road	130	106	4
2	Ambey Apartments , Sai Market	150	130	4
3	Phulkian Enclave, Near Tripuri	300houses	280	4
4	Sarup Towers, Sullar Road	68	64	2
5	Gokul Towers , Between Lower Mall and Upper Mall Road	65	60	2
6	City Center, Bhupindera Road	84	73	3
7	Sweet Home Apartments, III Road	25	24	1
8	Sardar Patel Enclave , Khalsa College Road	55	48	4
9	Patiala Heights	150	120	4
10	Government Mohindra College			4


 10/11/25
 Health Officer
 Municipal Corporation, Patiala



ਦਫਤਰ ਨਗਰ ਨਿਗਮ ਪਟਿਆਲਾ
MUNICIPAL CORPORATION PATIALA

No. MCP/CE(HQ)/2018/277-282

Date 09/10/2018

To

Hari-Bhari Recyclables Pvt. Ltd
G-172, Sector - 63
Noida.

Subject:

Work Order for Door-to-door collection of Solid Waste and Transportation of the same by using closed body vehicles with tipping arrangement including labours in accordance with SWM rules 2016 up to established secondary collection points and recycle recovery centers in Municipal Corporation Patiala.

The Finance & Contract Committee vide res. no 169 dt. 03.10.18 and General House vide res. no 54 dt. 04.10.18 of Municipal Corporation Patiala respectively approved the rates / terms & conditions of your agency. You are directed to start the work as per following rates, terms & conditions:-

Financial terms:

Sr. No.	Description	% rate on and above the user charges collected (-)	In words
1	Door to door collection and segregation of Municipal Solid Waste in Municipal Corporation Patiala including setting up and operating Recycle Recovery Centers as per MSW (M&H) Rules 2016, on user charges basis	-25.00	Minus Twenty Five Percent

Handwritten: 25% cap
Note: - 25% level shall be taken as a cap on the amount of support (other than the incentive) to be given to agency. This means that if the agency collects 100% of door-to-door waste and collects 100% of user charges, no support shall be given by MCP to agency. However, in case the agency is unable to collect user charges from the households that it is providing service to and collects only about 90% of the charges then MCP shall give the agency on a monthly basis the difference amount i.e. 10% charges. If the agency is unable to collect charges from 20% of the serviced households then MCP will make up for the balance 20%. However, this balance amount shall be subject to the said cap of 25% of user charges collectable from serviced households. Further MCP shall be at the liberty to collect the said charges from the households who have not paid to the agency thus recovering its payments from the defaulting citizens / households.

The payment to be made to the agency shall be based on the evidence shown by the agency that the property has been serviced for the entire month but has failed to pay the user charges. Proof of both the successful service and the failure to pay shall be mandatory for inclusion in the defaulter list. Besides the agency shall also provide a real-time status of household servicing with the affixation of the RFID tags.

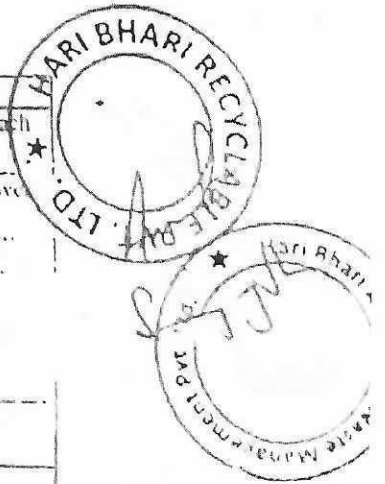
Mannpower and Machinery:

Sr. No.	Items	No. of Vehicles	No. of Workers	Remarks
1.	Tricycles	100	100	One worker for each tricycle
2.	Auto tipper / Hopper	150	450	2 workers and 1 driver for each vehicle.
3.	Supervisory Staff	--	60	--

Time Schedule:

Sr. No.	Activity	Time Schedule
1.	Daily door to door collection of MSW from various households and commercial establishments	7:00 AM to 1:00 PM 11:00 AM to 09:00 PM
2.	Markets	05:30 AM to 11:30 AM 08:00 PM to 11:00 PM

Joint Commissioner
Municipal Corporation
PATIALA



No. of Units (Property) for user charges:-

Sr. No.	Description of property	No.s
1.	Commercial	20,552
2.	Residential	1,11,867
3.	Mix	8,779
	Total	1,41,198

(As per Property Tax Survey Report)

Important Terms & Conditions:-

- The time limit of the project is 10 years from the date of allotment.
- The user charges will increase 5% every year of the base rate / tariff.
- The agency shall be entitled to receive incentive of 20% for the amount collected from targeted household is more than 70%. The incentive shall be available for a period of 3 years only from the date of commencement of contract. The incentive shall be provided that cut off mark of 70% of user charges collection is achieved and more than 70%. The incentive shall be given only on the amount over and above the 70% mark.
- The 2-month mobilization period would be given to the agency and the target of 25% of the user charges should be achieved in the first month and 50% in the second month.
- The agency shall carry out IEC activity to encourage every household to segregate dry and wet waste at their end using 2 separate bins.
- The adequate space for setting up of recovery centers as per requirement preferably near the old secondary points will be provided as per conditions. Also minimum 1-acre land to be provided at suitable place for storage, miscellaneous usage and processing of recyclable waste.
- The agency shall use handheld spot billing machines for generation and receipt of user charges. The data from spot billing machines should be integrated with MCP server. In the interim the bidder should provide all data on a computer and mobile app in real time. The IT collection and monitoring system be put in place by agency within 3 months of award of contract. Full user access be made available to MCP for the application. The IT application should also provide for reconciliation and information to MCP of the receipt against user charges.
- The agency shall not be allowed to take the waste from nearby ULB to the MCP.
- The agency shall be free to use the bio-friendly technology to process recyclables with the prior permission of the MCP.
- Minimum deployment of vehicle and manpower for primary collection shall be as per norms of table 2.3 & 2.5 of CPHEEO manual on Municipal Solid Waste and Management Part - II.
- The contractor is directed to complete the NFC tagging of every household within 3 months. No extra payment should be made by MCP to the agency for RFID tagging or registration.
- The performance bank guarantee for amounting to Rs. 3.00 lac issued by Nationalized bank / Schedule bank located in India in favor of Commissioner, Municipal Corporation Patiala payable at Patiala for a period of 10 years and 3 months should be submitted within 7 days.
- The work shall be executed as per RFP and MSW rules, 2016.

[Signature]
 Corporation Engineer (HQ)
 Municipal Corporation Patiala.

Copy to:-

- P.A. to Mayor for information to the Worthy Mayor.
- P.A. to Commissioner for information to the Worthy Commissioner.
- Joint Commissioner for information.
- Corporation Engineer (In-charge Solid Waste Management) for information and compliance.
- Health Officer, Municipal Corporation Patiala for information and compliance.

Received by
[Signature]



[Signature]
 Corporation Engineer (HQ)
 Municipal Corporation Patiala.

[Signature]
 Joint Commissioner
 Municipal Corporation
 PATIALA



ਦਫਤਰ ਦਫਤਰ ਕਮਿਸ਼ਨਰ ਨਗਰ ਨਿਗਮ ਪਤਿਆਲਾ
 OFFICE OF COMMISSIONER MUNICIPAL CORPORATION PATIALA
 Telephone no. 0175-2311326 E-mail: cmc_patiala@yahoo.com

ਆਈਟਮ ਨੰ: 46

ਮਤਾ ਨੰ: 494

ਵਿਸ਼ਾ:-

Proposal for establishment of centralization recovery facility.

ਰਿਪੋਰਟ ਸਕੱਤਰ ਹੈਲਥ ਸਾਖਾ ਵਿ In reference to the subject cited above a PUC has been received from M/s Hari Bhari Recyclable Pvt. Ltd. regarding proposal for the establishment of centralized recovery facility to address the challenges faced in the solid waste management in Patiala city. The agency has proposed to handle 50 MT of mixed waste daily, funding the initiative entirely with its own financial resources, including the necessary machinery and manpower. The key demand to complete their commitment is 2 acre land for the setting up of recycle recovery facility and additionally they are demanding the monthly electricity expenses necessary for operations.

It is submitted that the work of "Door to door collection of solid waste and transportation of the same by using closed body vehicle with tipping arrangements including labour in accordance with SWM rules 2016 up to established secondary points and recycle recovery centre in Municipal Corporation Patiala." was allotted to M/s Hari Bhari Recyclable Pvt. Ltd., Noida vide office letter no. MCP/CE(HQ)/2018/277 dt. 09.10.2018 for the duration of 10 years from the date of allotment.

The scope of work of this project was as below:

- Door-to-door collection of segregated (wet and dry waste separately) Municipal Solid Waste (MSW) on a daily basis and transportation of Dry waste to the designated Recycle recovery Centres (Designated Recycle recovery Centres will be set up by the successful bidder on the land given by the MCP) and transportation of Wet waste to established secondary location points (secondary points location and type of storage equipments established or to be established under separate project.
- If there is no storage equipment unit established at secondary points, the wet waste shall need to transfer from Auto Tipper/Hooper/ push card/tricycle into refuse Compactors of the MCP or directly to dumping site so that waste can be transported more economical, efficiently over long distance as per place and time fixed by MCP.
- Setting up of One Recycle Recovery Centre's for dry waste on an average every 15 Wards on land given by the Municipal Corporation Patiala.
- Collection of MSW from the bulk generators and its transportation to designated established secondary location points & recycles recovery Centres on a daily basis. Dry waste will be transferred to the designated Recycle recovery Centres to be set up by the successful bidder and wet waste to established secondary location points as per the provisions of Clause 14.1.2 of bid document in the defined area.
- The bidder will be at liberty to sell any dry waste collected; non sellable dry waste should be transported to recycle recovery centre or transfer from Auto Tipper/Hooper/ push card/tricycle into refuse Compactors of the MCP or directly to the dumping site so that waste can be transported more economical, efficiently over long distance as per time and place fixed by MCP.
- All the transportation vehicles/Equipments required from door-to-door collection and onwards transported to established secondary points and Recycle recovery Centres shall be arranged by the bidder.
- The Minimum deployment of Vehicle and Manpower for Primary collection shall be as per norms of Table 2.3 & 2.5 of CPHEEO Manual on Municipal Soils waste and Management part-2, 2016. Vehicles shall comply EURO - IV / latest norms chassis applicable in Punjab.
- Collection of User Charges from the households and other commercial establishments as per the rates notified by MCP from time to time.

In addition the clause 14.1.6 (B) of the RFP states that "Municipal Corporation Patiala will be responsible for providing the land for establishment of recycle recovery centre on average every 15 wards" which may read along with the clause 14.1.6 (C) of RFP "after approval of design of recycle recovery centre submitted by the successful bidder, to carry out all the civil work if any will be the responsibility of Municipal Corporation Patiala." As per above clause the agency was responsible to setup one recycle recovery centre for dry waste on an average every 15 wards on land given by the Municipal Corporation Patiala. But the land was never given to the agency. Now the agency is ready to setup centralized recovery facility and demanding land. The agency agreed to bear all expenses involved in setting up of recycle recovery facility and demanding land. The agency agreed to commissioning and operations except monthly electricity bills.

In this proposal the Municipal Solid waste may be managed centrally with more cost effective and environmentally friendly than the current practices. The allotment of land was the part of existing agreement but there was no provision for the supply of electricity charges. But keeping in view the involvement of high cost charges could be lesser than on the cost involved for the handling of municipal solid waste presently.

Salient Features of the work:

- The agency shall be responsible to setup the centralized recycle recovery facility with the capacity ranging from 50MT to 100 MT per day within four months after the approval of their proposal.
- The agency shall be responsible to complete the civil work, supply, installation, commissioning and operation of whole machinery.
- Municipal Corporation shall be responsible to allot 2 acre of land to the agency for the setting up of centralized recycle recovery facility.
- Municipal Corporation Patiala shall be responsible to supply the raw material (solid waste material) to the centralized recovery facility till the operations of the new CBG plant or till the expiry of the existing contract or whichever is earlier.
- The agency shall be responsible to deposit the additional bank guarantee amounting to Rs. 1 lac.

6. The agency shall be responsible to submit the design of design of centralized recover facility before the installation of machinery.
7. The agency shall be responsible to construct kachha or pakka structure for the establishment of centralized recovery facility with own financial resources with the prior approval of the competent authority.
8. All the clauses/terms and conditions of the existing contract shall be applicable on this work.
9. The agency shall be responsible for the maintenance of machinery during operation at the centralized recovery facility.
10. The agency shall sale the product produced from the centralized recycle recovery facility subject to fulfil the norms fixed by Government.
11. The agency shall be responsible to maintain the record of total production of material and their sale.
12. The agency shall be responsible to obtain the authorization certificate from the PPCB to run the centralized recovery facility.
13. Municipal Corporation Patiala will bear the monthly electricity bills for the operation of centralized recovery facility.
14. Municipal Corporation Patiala shall not be responsible for the loss of raw material (solid waste material) to be supplied to centralized recovery facility in the wake of new CBG plant.
15. Tool, plant, machinery and shed shall be the property of agency till the expiry of existing contract.
16. If the agency deliberately stop the operation of the recyclable recovery facility without assigning any reasons before the expiry of contract period, the whole machinery will be forfeited and the proceeding of black listing will be initiated.
17. As original proposal of the agency was 50MT and MCP proposed 50-100 MT. So, it is advised to execute fresh agreement with the agency after the administrative approval of the proposal.
18. The agency shall be responsible to submit the fresh bank guarantee amounting to Rs. 2.00 lac for the of rest of the period of existing contract.

Recommendation: -

It is recommended to allot at least 2 acre land at the existing dump site and electricity connection for the operation of machinery of recycle recovery facility. The maximum limit of electricity bill will be 2.5 lac per month in case of 50 MT and Rs. 4 lac per month for 100 MT. This work will be considered as part of existing contract of Hari Bhari Recyclable Limited allotted vide letter no. MCP/CH(HQ)/2018/277 dt. 09.10.2018.

ਮਾਨਯੋਗ ਕਮਿਸ਼ਨਰ ਜੀ ਨੇ ਮਿਤੀ 20.06.2024 ਨੂੰ ਕੇਸ ਨੂੰ ਰੈਜ਼ੋਲਿਊਸ਼ਨ ਕਮੇਟੀ ਵਿੱਚ ਭੇਜਣ ਦੀ ਪ੍ਰਵਾਨਗੀ ਦਿੱਤੀ ਹੈ।
ਇਹ ਤਜਵੀਜ਼ ਰੈਜ਼ੋਲਿਊਸ਼ਨ ਕਮੇਟੀ ਦੀ ਮੀਟਿੰਗ ਵਿੱਚ ਵਿਚਾਰੀ ਗਈ।

ਰੈਜ਼ੋਲਿਊਸ਼ਨ ਕਮੇਟੀ ਦੀ ਮੀਟਿੰਗ ਦੌਰਾਨ ਸਕੱਤਰ (ਹੈਲਥ ਸ਼ਾਖਾ) ਵਲੋਂ ਦੱਸਿਆ ਗਿਆ ਕਿ ਪੱਤਰ ਨੰ: MCP/CH(HQ)/2018/277 dt. 09.10.2018 ਰਾਹੀਂ ਦਿੱਤੇ ਗਏ ਠੇਕੇ ਨੂੰ ਸੁਚੱਜੇ ਢੰਗ ਨਾਲ ਚਲਾਉਣ ਲਈ Proposal for establishment of centralization recovery facility ਨੂੰ ਪ੍ਰਵਾਨਗੀ ਦੇਣੀ ਯੋਗ ਹੋਵੇਗੀ।

ਫੈਸਲਾ:-

ਸਾਰੇ ਤੱਥਾਂ ਨੂੰ ਵਿਚਾਰਦੇ ਹੋਏ ਰੈਜ਼ੋਲਿਊਸ਼ਨ ਕਮੇਟੀ ਵਲੋਂ ਇਹ ਫੈਸਲਾ ਲਿਆ ਜਾਂਦਾ ਹੈ ਕਿ ਪੱਤਰ ਨੰ: MCP/CH(HQ)/2018/277 dt. 09.10.2018 ਰਾਹੀਂ ਦਿੱਤੇ ਗਏ ਠੇਕੇ ਲਈ Proposal for establishment of centralization recovery facility ਦੀ ਸਿਫਾਰਿਸ਼ ਕੀਤੀ ਜਾਂਦੀ ਹੈ।

ਕੇਸ ਪ੍ਰਸ਼ਾਸਕ ਦੇ ਵਿਚਾਰ ਹਿੱਤ ਪੇਸ਼ ਹੈ ਜੀ।

ਫੈਸਲਾ

ਰੈਜ਼ੋਲਿਊਸ਼ਨ ਕਮੇਟੀ ਦੀ ਸਿਫਾਰਿਸ਼ ਅਨੁਸਾਰ ਪ੍ਰਵਾਨ ਹੈ।



ਪ੍ਰਸ਼ਾਸਕ

21.06.2024



ਦਫਤਰ ਨਗਰ ਨਿਗਮ ਪਟਿਆਲਾ
MUNICIPAL CORPORATION PATIALA

No...1342/PA/CMC

dated 30/10/24

To

The Chief Executive Officer
 PMIDC, DLG, Chandigarh.

Sub:- **Setting up of proposed Compressed BioGas (CBG) Plants by HPCL and GAIL in Mohali & Patiala Corporation.**


Ref:- Memo no.- PMIDC/SWM/2024/7378-79 dt 16-10-2024.

As information sought regarding subject through letter bearing reference cited above it is stated that the confirmation from municipal corporation Patiala for fulfilling of requirements as per letter is as following:-

1. **Land requirements:-** As demanded 10-acre land parcel is available and as discussed during visit at site the electricity line and electric poles will be get shifted outside the required land parcel by MC Patiala from the Electricity department.
2. **Infrastructure needs:-** It is stated that black top road is available up to site and about 200 m stretch would be needed to be constructed to connect plant to the said road. It will be constructed by MC Patiala.
3. **Utility connections:-** It is informed that electricity connections will be made available to plant as per requirements laid by the company. Any fees or expenditure for the electricity connections will be borne by the company. Regarding water connection it is stated that no other water source except ground water is available at site. The required NOC for use of groundwater will be made available by MC Patiala and company may install tubewell as per their requirement on their own expenditure.
4. **Segregated waste Requirements:-** It is stated that 100 TPD of segregated organic waste will be supplied up to the CBG plant site.

Timeline- at the earliest as possible.

It is also requested to guide that further communication may be proceeded with which particular company.


 Commissioner,
 Municipal Corporation Patiala

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MUNICIPAL CORPORATION PATIALA

DETAILED PROJECT REPORT

for
Bio Remediation of Municipal Solid Waste
at
Dump Site Patiala



**Municipal Corporation Patiala,
Moti Bagh Patiala-147001
(Punjab)**

e-mail:

cmc_patiala@yahoo.com

semcpta@gmail.com

GENERAL INFORMATION

Introduction

Municipal Corporation Patiala is generating approximately 140 MT of municipal solid waste (MSW) per day, of which approx. 90% of waste is collected and is disposed in the open dumpsite, which spreads in an area of about 5.56 Acres. Currently, Municipal Corporation Patiala disposes the waste generated at the said disposal site. This site is operating for the last approximately 20 years. This site is still operating and receiving waste from all over Municipal Corporation Patiala area. The dump site is located at around 10 km from the city and is in operation for more than 20 years.

The remediation of municipal solid waste at dumpsite phase-I est. cost Rs. 6.86 cr was allotted to M/s Akanksha Enterprise in 2020 vide letter no. 149 dt 28.07.2020, the company was given time period of twenty two months to remediate the garbage of quantity 1.76 lac tonne from the dumpsite situated and sanouri adda Patiala. The company has remediated 1.5 lac tonne of garbage and remaining 26000 tonne is currently under process by M/s Akanksha Enterprises. Due to floods in Patiala in year 2023 and closure of MRF centers by public, there were challenges with waste management and processing garbage of the city was directly sent to dumpsite at sanouri adda Patiala for disposal. Due to daily influx of waste is coming for disposal at dumpsite, hence new estimate for Bio-Remediation of municipal solid waste at dumpsite Patiala-Phase 2 has been framed for amount to Rs. 456.24 lacs of quantity of 1.43 lac tonne of waste. The estimate has been prepared on the total station contour survey and calculations are based on mixed type of methods such as CAPEX and OPEX. The machinery will be provided on the CAPEX mode and the Concessionaire will provide the operation services. The new work has been allotted to M/s Sagar Motors vide work order no. 1176 and dt 13.09.2024. Bio-remediation of the legacy waste at dumpsite is currently under process by M/s Sagar Motors.

Need of Dumpsite Remediation Project

The current disposal site at Sanori Adda, Patiala is under environmental threat both physically and socially. It has been necessitated to reclaim the land from the legacy waste and make the land suitable for MCP to initiate any urban infrastructure project. In line of this, Municipal Corporation Patiala may alternatively reclaim maximum land out of this disposal site and then plan to set up an engineered sanitary landfill for the processed inert safe disposal / placement.

Provisions of SWM Rules, 2016:

The Government of India has notified the Solid Waste Management Rules (SWM) Rules, 2016 for proper and effective management of municipal solid waste (MSW). Under the SWM Rules, 2016, following provisions have been made to manage old dumps of MSW.

Rule 15 - Duties and responsibilities of local authorities and village Panchayats of census towns and urban agglomerations. - The local authorities shall,-

- a) investigate and analyze all old open dumpsites and existing operational dumpsites for their potential of bio-mining and bio-remediation and wheresoever feasible, take necessary actions to bio-mine or bio-remediate the sites; 10
- b) In absence of the potential of bio-mining and bio-remediation of dumpsite, it shall be scientifically capped as per landfill capping norms to prevent further damage to the environment.
- c) The by-laws shall apply to every urban local body, outgrowths in urban agglomerations, Cantonment boards, Panchayat, Industrial and Institutional Townships, railways and defense establishments
- d) Further, provisions under Schedule I (j) are given below:-

Schedule-I Closure and Rehabilitation of Old Dumps- Solid waste dumps which have reached their full capacity or those which will not receive additional waste after setting up of new and properly designed landfills should be closed and rehabilitated by examining the following options:

- a) Reduction of waste by bio-mining and waste processing followed by placement of residues in new landfills or capping as in (ii) below.
- b) Capping with solid waste cover or solid waste cover enhanced with geomembrane to enable collection and flaring / utilization of greenhouse gases.
- c) Capping as in (ii) above with additional measures (in alluvial and other coarse grained soils) such as cut-off walls and extraction wells for pumping and treating contaminated ground water.
- d) Any other method suitable for reducing environmental impact to acceptable level.

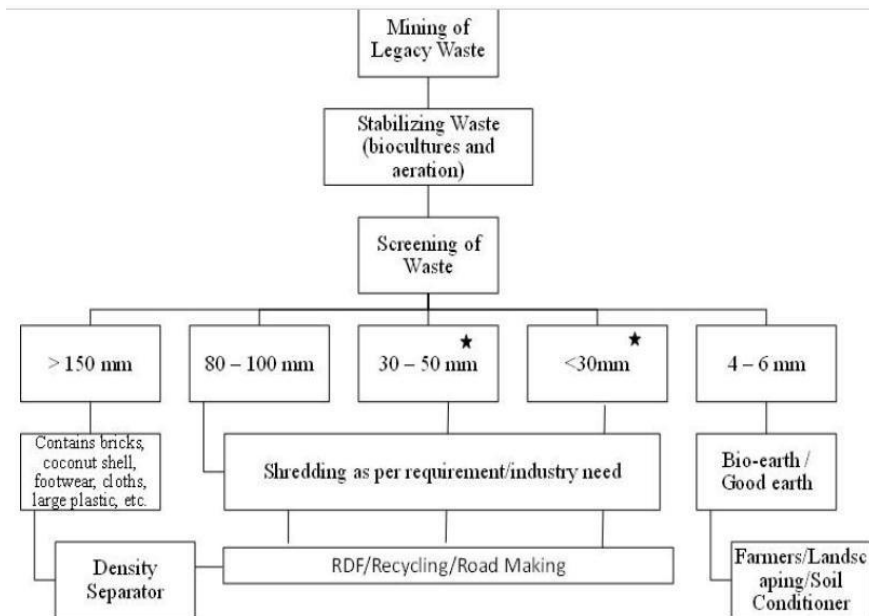
METHODOLOGY:

Patiala dumpsite will be cleared/treated through the treatment & disposal of Legacy MSW by Bio-remediation and Bio-mining. The total station survey of dumping site has been carried out prior to the start of the project.

Bio-remediation & Bio-mining of Old Municipal Dumpsite:

The excavation of old dumped waste and make windrow of legacy waste thereafter stabilization of the waste through bio-remediation i.e. exposure of all the waste to air along with use of composting bio-cultures, i.e. screening of the stabilized waste to recover all valuable resources (like organic fines, bricks, stones, plastics, metals, clothes, rags etc.) followed by its sustainable management through recycling, co-processing, road making etc.

**Overview of Bio-remediation and Bio-mining of Legacy Waste
Tentative Figure (Flow Chart) for Bio-mining**



(The above figure is to understand the procedure of Bio-Remediation. The sives of Trommels may vary as per Tender Document.)

FOLLOWING STEPS ARE ADOPTED FOR BIO-REMEDIATION OF MSW DUMP:

First Step

The first step is to excavate legacy waste, loosen it and make windrows so as the leachate can be dried off through solar exposure and all the entrapped methane is removed from the heap. All biodegradable waste, like discarded food, fruit, flower and garden waste, needs air to decompose it in an odorless way without producing leachate. So the first step in stabilizing and bringing down airless legacy waste is to expose as much of it as possible to air. Addition of composting bio-cultures speeds up decomposition and rapidly creates biological heat within the waste that helps to dry it out and reduce its volume by 35-40%. This happens through loss of moisture and by decomposition of some of the aerated waste to carbon dioxide and water vapor. This is called **bio-remediation** and makes the waste dry enough for screening. Waste is called stabilized when there is no more generation of heat or landfill gas or leachate, and seeds are able to germinate in it.

Screening of such stabilized waste into different size fractions that would be disposed of without affecting the environment. Screen sizes: 75 mm, and 25 mm. The finest fraction is called bio-earth or good earth. The coarsest fraction contains bricks, stones, coconut shells, footwear, cloth and larger plastics. Density separation helps recover combustibles which can be used (usually up to 5-10%) as fuel replacement after supplying it to customer requirements. The lighter mid-fractions are mostly plastics and can be shredded as per industry requirement for use in bitumen hot-mix plants to make so-called Plastic Roads or as refuse derived fuel for co-processing in cement kilns. Fractions up to 50mm do not require shredding for use as RDF. The heavier mid-fractions are mostly stony inert which can be used in the lowest layers of road-making or plinth-filling or in low-lying areas. Less than 10% of the original waste remains as totally unusable residual rejects and may remain onsite, either in a small heap or spread to raise the ground level by a couple of meters.

The land which was hosting waste dump would be fully recovered for alternate uses.

PROCESS OF BIO-REMEDIATION AND BIO-MINING:

Exposing the legacy waste to air to stabilize it has been done. Almost all of them involve forming the waste into long low heaps of about 2-meter height called wind-rows, to get maximum surface area to volume. Repeated turning is necessary to ensure that the innermost waste in wind-rows also gets exposed to air. Usually 3-4 turnings of legacy waste are necessary to stabilize it.

1. Use a Loader/Backhoe to repeatedly loosen the topmost 150 mm layer of legacy waste. Mist-spray the waste lightly with bio-cultures to control odor and get the decomposing microbes dispersed into the waste. Hand-pick out large objects like rocks or coconut-shells or long pieces of cloth. Form the waste into wind-rows using a loader or similar earth-moving equipment. Turn these wind-rows every 5 days. After 2-3 weeks when the heaps are free-flowing enough for screening, move the material to multi-deck vibrating screens or to trommels (rotating cylinders with different size perforations) to get fractions of different size and weight.
2. Use a loader to dig 2-2.5 meter deep trenches downwards from the top of a legacy waste heap at 1.5 to 2 meter intervals. This is a rapid and cost-effective way to slice the uppermost layer into in-situ wind-rows. Mist-spray the sides of the trenches to get microbes to reach exposed waste surfaces. Bring down these slices to form terraces and turn one aerated windrow onto another weekly before repeating the process until almost ground level is reached. Start screening when waste moisture is low enough.
3. Use a loader to lift legacy waste off the top of a heap and drop it from a height to aerate and loosen the waste and form 2-3 meter high cones. Mist-spray bio culture on the cones. Every day or 2-3 days use the loader to lift waste from the cones and drop it back to the same or a nearby location, to aerate the waste. This is rather fuel-intensive.
4. If waste needs to be moved from one location to another part of the same site, usually the perimeter, place it in thin 150 mm layers and mist-spray bio cultures. Allow 5 days to aerate one layer before adding the next one and mist-spraying bio cultures on that also.
5. This is a constantly-evolving field. Hence other cost effective and space effective methods can also be applied.

TIME SCHEDULE

The time schedule set out in the table below or as decided by the MCP for implementation of the SWM.

Sr no	Activity	Time Schedule
1	First shift	8.00 am to 2.00pm
2	Second shift	2.00pm to 8.00pm

TIME FRAME

Milestones/Activities to be performed/completed	Time and Dates
Mobilization of the manpower and machinery, taking over of dumpsite land from MCP, excavation of waste, stabilization of waste, obtaining statutory environmental clearance/permission, erection of facility	One (1) month from the date of agreement
To clear/dispose-off 30% of Waste from the dumpsite	Two (2) months from the Operations Date.
To clear/dispose-off 60% of Waste from the dumpsite	Three (3) months from the Operations Date.
To clear/dispose-off 80% of Waste from the dumpsite	Four and a half (4.5) months from the Operations Date.
To clear/dispose-off 100% of Waste from the dumpsite	Six (6) months from the Operations Date.
Note :- One month period for the mobilization and one month period for the monsoon session is added for the clearance of dumpsite so total period to clear the dumpsite may be calculated as 7 months from the date of LOI.	

ACTION PLAN FOR 100% LEGACY WASTE REMEDIATION

Total Quantity of Legacy Waste to be Remediated		Funds required	Date of Start	100% remediation of legacy waste	Remarks
	(in MT)	(in Lacs)			
Sanori Adda	143135	456.24	05.12.2024	30.06.2025	Work in progress on site. Windrows are being constructed by the agency on site.

BRIEF NOTE

The remediation of municipal solid waste and dumpsite phase-I est. cost Rs. 6.86 cr was allotted to M/s Akanksha Enterprise in 2020 vide letter no. 149 dt 28.07.2020, the company was given time period of twenty two months to remediate the garbage of quantity 1.76 lac tonne from the dumpsite situated and sanouri adda Patiala. The company has remediated 1.5 lac tonne of garbage and remaining 26000 tonne is currently under process by M/s Akanksha Enterprises. Due to floods in Patiala in year 2023 and closure of MRF centers by public, there were challenges with waste management and processing garbage of the city was directly sent to dumpsite at sanouri adda Patiala for disposal. Due to daily influx of waste is coming for disposal at dumpsite, hence new estimate for Bio-Remediation of municipal solid waste at dumpsite Patiala-Phase 2 has been framed for amount to Rs. 456.24 lacs of quantity of 1.43 lac tonne of waste. The estimate has been prepared on the total station contour survey and calculations are based on mixed type of methods such as CAPEX and OPEX. The machinery will be provided on the CAPEX mode and the Concessionaire will provide the operation services. The tenders were called for the new work and in the second time bidding, single bid of agency M/s Sagar Motors was received. After technical evaluation, the financial bid of M/s Sagar Motors was opened and sent to Chief Engineer, Local Govt. Punjab for comparative vetting. After the comparative vetting of financial bid by Chief Engineer, Local. Govt. Punjab vide their letter no C.E.-2024/31136 dt 13.06.2024, the new work has been allotted to M/s Sagar Motors vide work order no. 1176 and dt 13.09.2024. Bio-remediation of the legacy waste at dumpsite is currently under process by M/s Sagar Motors. The quantity of existing waste in this dumpsite has been calculated based on the total station survey undertaken by MCP.