

**Before the National Green Tribunal  
Eastern Zone Bench, Kolkata**

OA No. 97/2022/EZ

MA-18/2025/EZ

In the matter of:

Subrata Debnath

...Petitioner

Versus

State of Tripura & Ors.

...Respondents

Status Report – cum - Affidavit of compliance of the respondent No.  
5 in terms of the orders dated 09/02/2023 passed by this Hon'ble  
Tribunal

**INDEX**

Sl No.	Description of papers	Annexure	Page(s)
1.	The Status Report – cum - Compliance Affidavit.		1 – 10
2.	Copies of GPS photographs of the functional compost plant at Devendra Chandra Nagar waste management facility.	R – 1	11-12
3.	Copy of the test report regarding compost manure issued by Qualissure Laboratory Services.	R – 2	13
4.	Copies of letter dated 06/02/2022, 23/03/2022 issued by AMC; electronic mail dated 11/05/2022 along with the project proposal issued by NEERI, Nagpur.	R – 3	14-20
5.	Communication of the study report by NEERI, Nagpur through electronic	R – 4	21-48

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	mail dated 03/12/2022, along with the study report of NEERI, Nagpur.		
6.	Copy of work order dated 11/01/2023 issued by AMC.	R - 5	49
7.	Copy of work order dated 17/02/2023 issued by AMC.	R - 6	50
8.	Copies of GPS photographs of the three functional processing screens at Devendra Chandra Nagar waste management facility.	R - 7	51-58
9.	Copies of the test reports relating to Bio Earth, Refuse Derived Fuel (RDF), Ambient Air Quality, Ground Water Quality issued Qualissure Laboratory Services.	R - 8	59-71
10.	Copy of the memo issued by the Relief Rehabilitation and Disaster Management Department, Government of Tripura, on 27/08/2024.	R - 9	72
11.	Copies of bills submitted by Mandy Enterprises and documents indicating release of such payments.	R - 10	73-90



**Before the National Green Tribunal  
Eastern Zone Bench, Kolkata**

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Status Report – cum - Affidavit of compliance of the respondent No.  
5 in terms of the orders dated 09/02/23 passed by this  
Hon'ble Tribunal

I, Dr. Sailesh Yadav, son of Sri Kashi Nath Yadav, aged about 40 years, by occupation – service, by religion – Hindu, working as the Municipal Commissioner, Agartala Municipal Corporation, having office at “City Centre Complex”, Post office – Agartala, Police Station – West Agartala, District – West Tripura, Pin Code – 799 001, do hereby solemnly affirm and say as follows: -

1. I am the Municipal Commissioner, Agartala Municipal Corporation (hereafter referred to as “AMC”). I am affirming this status report – cum - affidavit of compliance in OA No. 97/2022/EZ [hereafter the “said application”] where I was impleaded as the respondent No. 5.

2. The “said application” pertains to environmental impact of solid waste management facility of AMC at Devendra Chandra



Nagar, Agartala. This Hon'ble Tribunal was pleased to dispose of the "said application" by its order dated 09/02/2023.

3. The aforesaid order dated 09/02/2023, passed by this Hon'ble Tribunal, in the 'said application', inter alia reads thus:

"22. However, in case the work of Bio-mining/Bio – remediation has not yet started, we direct the Agartala Municipal Corporation to ensure that the same commences within next fifteen days.

23. We find that in these Reports no timelines have been given for completion of Bio – mining/Bio – remediation of the legacy waste at Debendra Chandra Nagar Dumpsite. We, therefore, direct the Agartala Municipal Corporation to file Status Report/ affidavit of compliance in this regard by 31.12.2024."

In compliance with the above direction passed by this Hon'ble Tribunal the answering respondent is filing this affidavit.

4. At the outset, I consider it necessary to plead as follows:

A] The "AMC" has taken up the task of processing both fresh waste as well as legacy waste by way of two different projects which are functioning separately at the Devendra Chandra Nagar waste processing site. The procedure of fresh waste processing is being conducted through a 250 TPD Windrow Compost Plant. It is also stated that the procedure of legacy waste processing is being conducted by way of bio-remediation/bio-mining.

B] For the purpose of processing fresh waste, a contractual agreement was signed between "AMC" and Mandy



Enterprises [a lead firm of the consortium comprising of M/s Mandy Enterprises, Earth Recyclers Pvt. Ltd. and URBO Waste Management Pvt. Ltd.] on 30/03/2022. Subsequently, a direction was issued by the “AMC” vide work order no. F.601/Mech. Div./AMC/2022/11-17 dated 01/04/2022. I state that the project has been running successfully and an average waste of around 136 tonnes are being transported daily to the site. Such waste is further being processed to generate compost manure through windrow compost plant. Copies of GPS photographs of the functional compost plant are annexed hereto and collectively marked with the letter “R – 1”. Additionally, a copy of the test report regarding such compost manure issued by an independent laboratory, namely Qualissure Laboratory Services is annexed hereto and marked with the letter “R – 2”.

5. I state that for the purpose of processing legacy waste by way of Bio – remediation/Bio – mining, the following steps have been taken: -

A] The “AMC” had issued a letter to the National Environmental Engineering Research Institute (hereafter NEERI), Nagpur on 06/02/2022 for receiving technical guidance and supervision in treating legacy waste. Subsequently, the “AMC” on 23/03/2022 issued a letter to NEERI for preparation of Study Report and Quantification of Legacy Waste at Devendra Chandra Nagar. This was followed by communication by NEERI on 11/05/2022 through electronic mail a project proposal entitled “Studies on Quantification of Legacy Waste at DC Nagar Waste Processing Site, Agartala”. Copies of such letter dated 06/02/2022, 23/03/2022, electronic mail sent by NEERI dated 11/05/2022 along with the project proposal are annexed hereto and collectively marked with the letter ‘R – 3’.

~~X~~

B] The letter of “AMC” was accepted by NEERI, Nagpur and a study report was sent through electronic mail to “AMC” on 03/12/2022. A copy of such electronic mail dated 03/12/2022 along with the study report are annexed hereto and collectively marked with the letter ‘R – 4’. The study report quantified the legacy waste at around 3, 32, 249.5 tonnes. I say that based on such quantification, the work for processing such legacy waste was awarded.

C] I state that by work order contained in work order no. F.458/ Mech. Div./AMC/2019/Part – 1/8057(A) – 8057(E), dated 11/ 01/2023, the work of processing the legacy waste at Devendra Chandra Nagar was awarded to an agency namely, Mandy Enterprises. A copy of such work order dated 11/01/2023 is annexed hereto and marked with the letter ‘R – 5’. In furtherance to issuance of such work order, one processing screen at Devendra Chandra Nagar was set up on 01/02/2023.

D] I further state that Mandy Enterprises had commenced with processing the legacy waste by 15/02/2023 in terms of the work order dated 11/01/2023. An interregnum period of around thirty-four days, were required by Mandy Enterprises for commissioning the machineries, followed by installation and engaging skilled manpower to operate and maintain such machineries.

E] I submit that higher moisture level in the atmosphere disrupted the processing of legacy waste. Such disruption was detected by “AMC”, resulting in directing Mandy Enterprises to improve the pace of processing the legacy waste by means



of installing two more processing screens. Such direction was issued by work order no. F.458/Mech. Div/AMC/2019/Part-I/8926(A)-8926(E), dated 17/02/2023. A copy of such work order dated 17/02/2023 is annexed hereto and marked with the letter 'R – 6'.

F] A total of three processing units were treating the legacy waste from 19/03/2023, with the use of three sets of processing screens in the following manner: -

- i. Heap Cutting and making Windrow to reduce the moisture level by the use of earth movers
- ii. Weighing in weigh bridge
- iii. Waste segregation by the use of three processing screens.
- iv. Separation of Bio Earth, Refuse Derived Fuel (RDF) and Inerts/Rejects.

Copies of GPS photographs of the three functional processing screens are annexed hereto and collectively marked with the letter "R – 7".

G] I further state that after separation of Bio Earth and Inerts/Rejects are used in land filing of the ditches in the site, Additionally, Refuse Derived Fuel (RDF) which gets separated in the bio-remediation process is being transported to the Dalmia Cement Factory at Meghalaya. Copies of Test reports relating to Bio Earth, Refuse Derived Fuel (RDF), Ambient Air Quality, Ground Water Quality issued by an independent laboratory, i.e., Qualissure Laboratory Services are annexed hereto and collectively marked with the letter "R – 8".

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H] I state that the State of Tripura, particularly Agartala experiences heavy rainfall in the months ranging from April to September. Such heavy rainfall hinders the expeditious processing of the legacy waste. The Government of Tripura through its Relief Rehabilitation and Disaster Management Department had issued a memo on 27/08/2024, thereby declaring the whole State of Tripura as a “Natural Calamity Affected Area” due to unprecedented floods. A copy of such memo is annexed hereto and marked with the letter “R – 9”.

I] I submit that even in such adversarial times, the “AMC” has continued the work of processing the legacy waste. I, state that as in December, 2024 around 2, 13, 428. 49 tonnes of legacy waste have been remediated and around 10.68 acres of land have been reclaimed so far. I also state that the “AMC” has already spent Rs. 17, 88, 70, 149/- for processing the legacy waste by way of bio-remediation at the Devendra Chandra Nagar Waste processing site. Copies of bills submitted by Mandy Enterprises and documents indicating release of payments in furtherance thereto are annexed hereto and collectively marked with the letter “R – 10”.

J] I state that around 64% of legacy waste has already been remediated and the rest of the 36% is in the process of being remediated prior to 30/06/2025, provided that the rainfall and moisture content are within workable limits.

6. The deponent humbly craves leave of the Hon’ble Tribunal to submit any other document(s) by way of supplementary affidavit (s) for clarifying any matter which may require further elucidation.

X

7. This affidavit is made bona fide and for ends of justice.



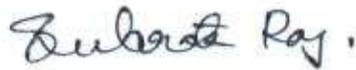
8. The averments made in the paragraphs 1 to 3 hereinabove are true to my knowledge, those made in paragraphs 4, 5 [A] to [I] hereinabove are obtained from records kept and maintained in the office of the Agartala Municipal Corporation which I verily believe to be true, and the rests are my humble submissions before the Hon'ble Tribunal.

Prepared in my Office and I certify that the annexures are legible

  
(Dr. Shailesh K. Yadav, IAS)  
Municipal Commissioner  
Agartala Municipal Corporation

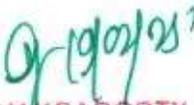
The Deponent is known to me

19 FEB 2025



Advocate Advocate

dt.: 19-02-2025

  
Notary  
SANANDA CHAKRABORTY  
NOTARY, Govt. of Tripura  
Agartala, West Tripura  
Regd. No. - 47 of 2021

Sl. No. *19/02/25* Date *19 FEB 2025*  
~~IX~~

VERIFICATION



I, Dr. Sailesh Yadav, son of Sri Kashi Nath Yadav, aged about 40 years, by occupation – service, do hereby solemnly declare and verify that I am holding the post of Municipal Commissioner, Agartala Municipal Corporation, having office at “City Centre Complex”, Post office – Agartala, Police Station – West Agartala, District – West Tripura, Pin Code – 799 001, and in my official capacity I say that the averments made in the paragraphs 1 to 3 hereinabove are true to my knowledge, those made in paragraphs 4, 5 [A] to [I] hereinabove are obtained from records kept and maintained in the office of the Agartala Municipal Corporation which I verily believe to be true, and the rests are my humble submissions before the Hon’ble Tribunal. I have not suppressed any material facts. I am competent to sign this Verification.

I signed this verification on this the *19<sup>th</sup>* day of February, 2025 at the office of the Agartala Municipal Corporation at Agartala.

*19 FEB 2025*

Prepared in my office and I certify that the annexures are legible

(Dr. Sailesh K. Yadav, IAS)  
Signature of the Commissioner  
Agartala Municipal Corporation

*Subrata Ray*  
Advocate

Identified by me.

*dt.: 19-02-2025*

Advocate

The Contents of the Affidavit are read over and Explained to the Deponent/Deponents. The Deponent / Deponents has / have Acknowledged the contents and has/Have Signed/put the thumb impression in this Affidavit and he/She/They are identified by me

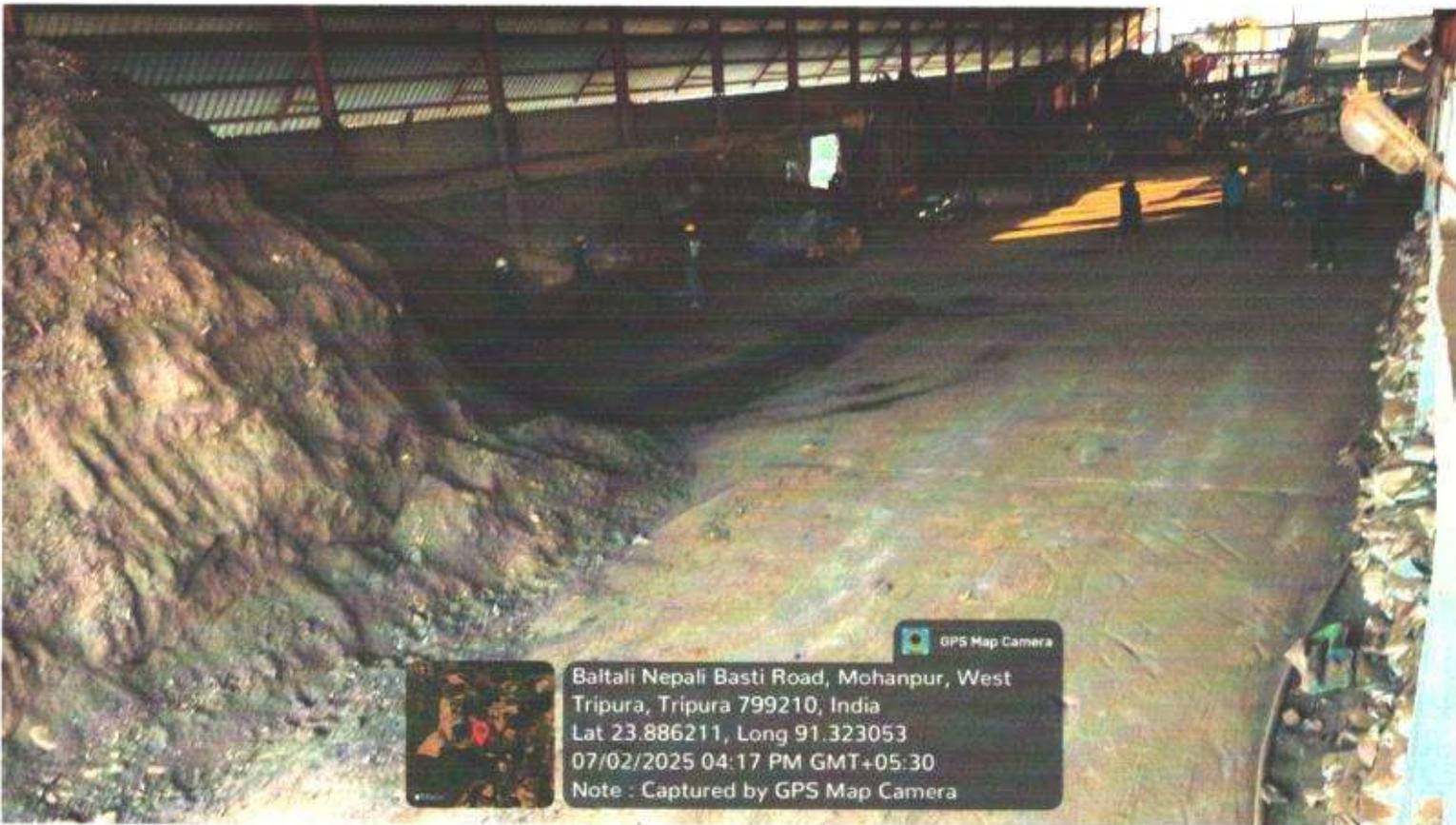


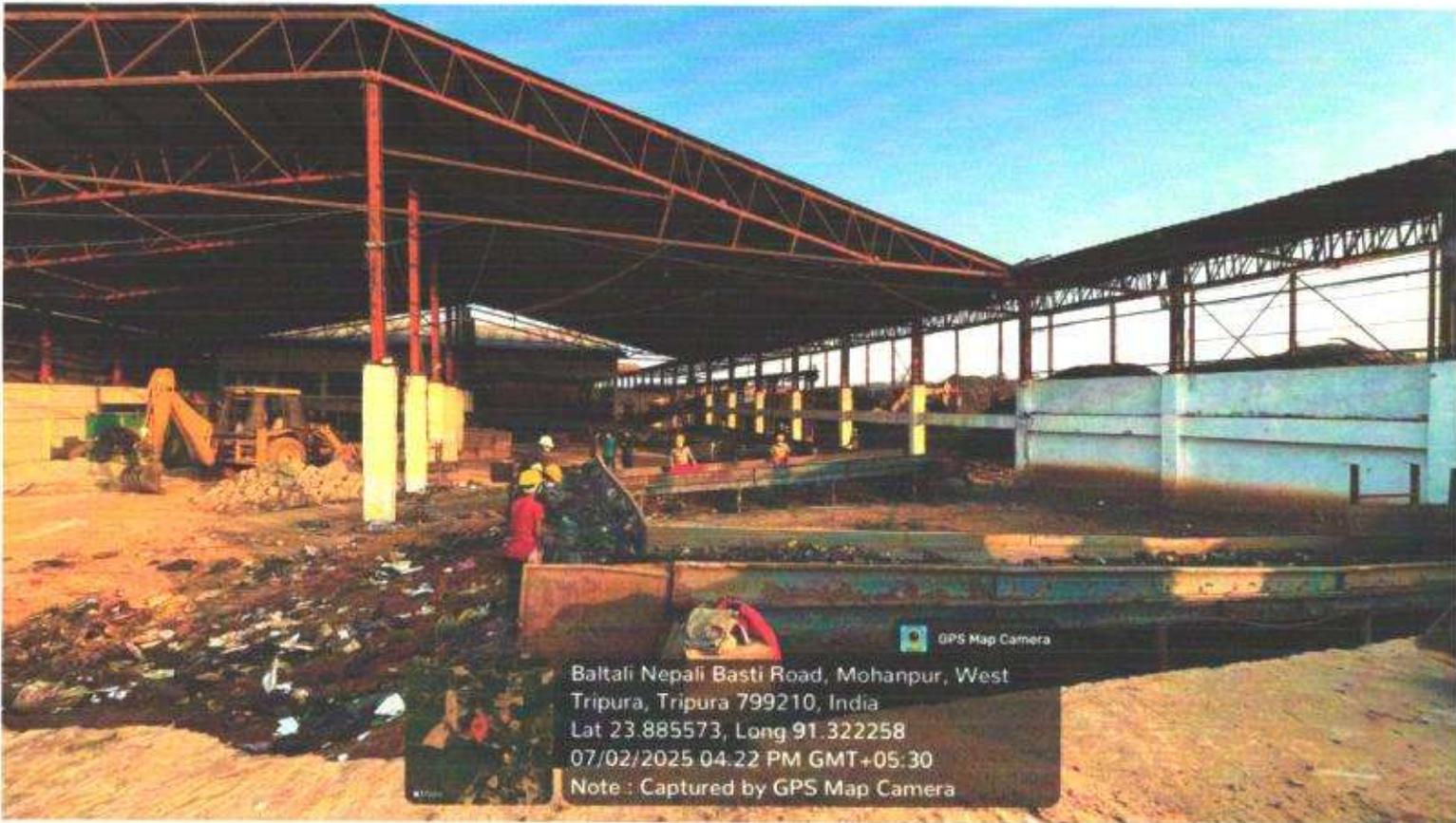
*Subrata Ray*  
Advocate

*19/02/25*  
SANANDA CHAKRABORTY  
NOTARY, Govt. of Tripura  
Agartala, West Tripura  
Regd No. - 47 of 2021

X

R-1







# Qualissure Laboratory Services

R-2

361, Prantick Palli  
45/361, Bose Pukur Road  
Kolkata - 70010  
Email : qualissure@gmail.com  
Mob. No. : 983128708  
983009397

DOC NO : QLS/SAMP/08-E/00

## TEST REPORT

<b>Name &amp; Address Of the Customer :</b>  <b>M/S Agartala Waste Management</b> AMC Dumping Yard, DC Nagar, Near BSF Camp, Dumdomia, Agartala, West Tripura PIN - 799002	Report No.	: QLS/P-32/24-25/C/08
	Date	: 28.09.2024
	Sample No.	: QLS/P-32/24-25/08
	Sample Description	: Compost
	Period Of Analysis	: 15.09.2024-27.09.2024
	Sample Drawn On	: 12.09.2024
	Ref No. Date	: Verbal Confirmation

## Analysis Result

Sl.No.	Test Parameter	Test Method	Specification of City Compost as per FCO	Result
1.	Colour	As Per FCO norms (1985)	Dark Brown to Black	Black
2.	Odour	As Per FCO norms (1985)	Absence of Odour	Absent
3.	Particle Size (pass through 4.0mm IS Sieve) in % by mass	As Per FCO norms (1985)	90% Pass through 4.0mm IS Sieve	93
4.	pH (1:5) at 25°C	As Per FCO norms (1985)	6.5-7.5	7.37
5.	Electrical Conductivity (1:5) at 25°C in mS/cm	As Per FCO norms (1985)	4.0(Max)	2.12
6.	Bulk density in g/cc	As Per FCO norms (1985)	<1	0.92
7.	Moisture Content at 105°C in %	As Per FCO norms (1985)	15-25	15.9
8.	Total Phosphorus (as P <sub>2</sub> O <sub>5</sub> , % by weight)	As Per FCO norms (1985)	0.4(Min)	0.43
9.	Total Potassium (as K <sub>2</sub> O, % by weight)	As Per FCO norms (1985)	0.4(Min)	0.42
10.	TOC (% by weight)	As Per FCO norms (1985)	12.0(Min)	12.8
11.	Total Nitrogen (as N) % by weight	As Per FCO norms (1985)	0.8(Min)	0.82
12.	C:N Ratio	As Per FCO norms (1985)	<20.0	15.6
13.	Copper (as Cu), mg/kg	As Per FCO norms (1985)	300.0(Max)	57.6
14.	Zinc (as Zn), mg/kg	As Per FCO norms (1985)	1000.0(Max)	216.4
15.	Mercury (as Hg), mg/kg	As Per FCO norms (1985)	0.15(Max)	<0.01
16.	Cadmium (as Cd), mg/kg	As Per FCO norms (1985)	5.0(Max)	0.29
17.	Nickel (as Ni), mg/kg	As Per FCO norms (1985)	50.0(Max)	11.8
18.	Chromium (as Cr), mg/kg	As Per FCO norms (1985)	50.0(Max)	38.3
19.	Lead (as Pb), mg/kg	As Per FCO norms (1985)	100.0(Max)	10.7
20.	Arsenic (as As <sub>2</sub> O <sub>3</sub> ), mg/kg	As Per FCO norms (1985)	10.0(Max)	<0.25

Report Prepared By: *Ch*



for Qualissure Laboratory Services  
Reviewed & Authorized By

*Bishnupriya Banerjee*  
Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

-----End of Report-----

1\*

R-3

222



## AGARTALA MUNICIPAL CORPORATION

Mechanical Division

Ramanagar Rd. No-9, Agartala, Tripura West, 799001, Phone -0381-2383646

E-mail: mechdivision.amc@gmail.com, amc.tripura@gmail.com

F. No.-601/Mech. Div/AMC/2022/8570-73

Dt. 23/03/2022

To,

The Director  
National Environmental Engineering Research Institute  
Nagpur, Maharashtra  
Pin-440020

Sub: Preparation of study report on legacy waste at DC Nagar waste processing site and quantification of legacy waste.

Our earlier communication Ref.: 458/Mech. Div/AMC/2021/7506-09, Dt. 16th Feb, 2022

Sir,

With reference to the subject cited above I would like to inform you that we have received project proposal along with budgetary provision from you end. The authority of Agartala Municipal Corporation has suggested undersigned to place a request to you to bring down the budget estimate considering Tripura a special category state in NE region. It is requested to you to reconsider your budget as we have a long term relationship with your organisation. It may be mentioned that one such study report was prepared by you at the cost Rs. 25.00 lakhs for our Hapania site. Our requirement is only quantification and site study report which are to be done on fast track so that we may finalise the tendering process for bio remediation and work may be completed by 2023.

Yours faithfully

(Er. C. Chakraborty)

Executive Engineer (Mech)  
Agartala Municipal Corporation

1. P.S to Hon'ble Mayor, AMC for kind information.
2. The Municipal Commissioner, AMC for kind information.
3. Dr. Sunil Kumar, SR, Principal Scientist & Head, Waste Processing Division, NEERI, Nagpur for kind information.

Executive Engineer (Mech)  
Agartala Municipal Corporation

✕

AGARTALA MUNICIPAL CORPORATION  
OFFICE OF THE MUNICIPAL COMMISSIONER  
CITY CENTRE, 2<sup>nd</sup> FLOOR

Phone/Fax- 0381-2383646 E-MAIL-amc.tripura@gmail.com

Dated . . . . Feb, 2022

F. 458/Mech. Div/AMC/2021/ 7516 23

To,  
The Director  
National Environmental Engineering Research Institute  
Nagpur, Maharashtra  
Pin- 440020

**Subject: Preparation of Study Report on Legacy waste at DC Nagar waste processing site and quantification.**

Kind attention: Dr. Sunil Kumar, Senior Principal Scientist, NEERI.

Sir,

I would like to inform you that we have taken initiative for proper disposal of the legacy waste by bio mining/ bio remediation method at our sole live waste processing site located at Devendra Chandra Nagar which is around 15 KM away from Agartala City Centre. In this regard an experienced agency has already been selected to execute the project. It is felt necessary to go ahead with the project under your technical guidance and supervision so that all aspects of SBM 2.0 guidelines may be met for the said component. It may be mentioned that one such project of bio remediation for reclamation of land at our old abandoned dumping site located at Hapania is in progress under your technical guidance and supervision.

You are requested to accept our proposal for preparation of study report with quantification of the legacy waste. You are also requested to extend your technical guidance and supervision so that legacy waste at the site may be successfully treated by bio mining or bio remediation.

Look forward for your confirmation to undertake the envisaged activity.

Yours faithfully

  
(Dr. Shailesh Kr. Yadav, IAS)  
Municipal Commissioner  
Agartala Municipal Corporation

Copy to –

1. Hon'ble Mayor, AMC for kind information.
2. Executive Engineer, Mech. Div., AMC for information and n/a.
3. Mandy Enterprises, New Delhi for information and n/a.

  
Municipal Commissioner  
Agartala Municipal Corporation



Mechanical Division Agartala Municipal Corporation &lt;mechdivision.amc@gmail.com&gt;

**Letter from AMC**

2 messages

Mechanical Division Agartala Municipal Corporation <mechdivision.amc@gmail.com> Wed, Mar 23, 2022 at 5:00 PM  
To: "Dr. Sunil Kumar" <s\_kumar@neeri.res.in>

Sir,

Kindly find the attachment.

Y/f

Dealing Assistant  
Agartala Municipal Corporation letter to neeri.pdf  
97K

Dr. Sunil Kumar <s\_kumar@neeri.res.in>  
To: mechdivision amc <mechdivision.amc@gmail.com>

Wed, May 11, 2022 at 11:11 AM

Dear Sir,

With reference to your letter dated 23.3.22, a revised project proposal entitled "**Studies on Quantification of Legacy Waste at DC Nagar Waste Processing Site, Agartala**" duly approved by Director, NEERI is attached for issuing the award letter.

Regards.

Dr. Sunil Kumar, Humboldt Senior Fellow

Senior Principal Scientist and Head

Waste Re-processing Division

(Professor, Academy of Scientific and Innovative Research)

CSIR-National Environmental Engineering Research Institute (CSIR-NEERI)

Nehru Marg, Nagpur – 440 020, Maharashtra, India

Telephone (office): +91 712 2249748 (Direct)

+91 712 2249885 Ext. 696

Mobile No.: +91 8806029925

Fax: +91 712 2249900

Skype Id: sunilkumarskp

Alternate Email: sunil\_neeri@yahoo.co.in

Web: www.neeri.res.in

**From:** "mechdivision amc" <mechdivision.amc@gmail.com>  
**To:** "Dr. Sunil Kumar" <s\_kumar@neeri.res.in>  
**Sent:** Wednesday, March 23, 2022 5:00:40 PM  
**Subject:** Letter from AMC  
[Quoted text hidden]

19/02/2025, 11:53

Gmail - Letter from AMC

~~12/1~~

 Proposal\_Agartala Municipal Corporation\_Biomining (1).docx  
47K



**PROJECT PROPOSAL**

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**Studies on Quantification of Legacy Waste at DC Nagar Waste  
Processing Site, Agartala**

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**Submitted to**

**Agartala Municipal Corporation,  
Agartala**



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**CSIR-National Environmental Engineering Research Institute  
(CSIR-NEERI)  
Nagpur**



**March 2022**



## **Studies on Quantification of Legacy Waste at DC Nagar Waste Processing Site, Agartala**

### **1. Preamble:**

Government of India issued notification for appropriate management of municipal solid waste (MSW) being dumped into the landfill sites. As per solid waste management (SWM) Rules 2016 adhering to clause 'J' of Schedule-I, Hon'ble NGT directed CPCB for Bio-mining and Bio-remediation of legacy waste. In view of the guidelines suggested in the rules, Agartala Municipal Corporation (AMC) intends to undertake the activity of legacy waste quantification and processing by bio-mining at DC Nagar dumpsite in Agartala. Accordingly, AMC, requested CSIR-National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur to quantify the waste at the DC Nagar dumpsite along with its status.

### **2. About CSIR-NEERI**

CSIR-NEERI is the premier research institute dealing with environmental science and engineering in India. The institute comprises research departments dealing with various components of environment. The role of the institute is to provide scientific and technical information and services to the various authorities and industries and promote planning, policy and management strategy for the regional environmental efforts in India as well as overseas. More than 500 scientific and technical staff members make CSIR-NEERI a highly qualified partner contributing analytical facilities and extensive knowledge on various aspects of environment.

Among the various environmental domains, the institute is dealing with MSW management for the last five decades. The institute has assisted various regulatory agencies *viz.*, Ministry of Environment, Forests & Climate Change (MoEFCC), Central and State Pollution Control Boards, Urban Local Bodies, State Industrial Development Corporations and the numerous industries on various issues of MSW management *viz.*, legislations, inventorization, characterization, waste minimization, treatment and disposal. The institute has developed comprehensive process packages on management of solid/hazardous wastes for a variety of industrial sectors. The institute is equipped with highly skilled manpower and the latest analytical facilities which makes it highly competent in undertaking this type of study.

### **3. Need of the Study**

There are two major challenges of solid waste management in cities/towns:

- Managing the continuous flow of solid waste on a daily basis, and
- Dealing with the legacy waste resulting into garbage heaps at dumpsites

The landfill sites were originally located outside of the cities, but as the cities have expanded the dumpsites are now in the closed proximities of the cities. In the absence of exposure to air, the



high-rises of rotting mixed waste on these sites generate methane (a greenhouse gas) and other landfill gases, which contribute to global warming. They also produce leachate (liquid generated by airless waste) which pollutes groundwater. Frequent outbreaks of fire at the dumpsites lead to air pollution. Many municipal authorities across the country have to prioritize environment-friendly legacy waste management as per Clause 'J' of Schedule-I of the SWM Rules, 2016.

Local Bodies also need to ensure that the upcoming infrastructure is designed to handle and store unmixed wastes separately. Government bodies should also create infrastructure for collection, handling, sorting, processing and sustainable end disposal infrastructure for all types of waste.

Keeping an eye on the severity of the problem of legacy waste CSIR-NEERI has been approached by AMC to conduct a scientific study for quantification of waste at DC Nagar dumpsite and its status.

#### 4. Objectives and Scope of the Work:

The major objective of the proposed study is to quantify legacy waste. The study is expected to lay emphasis on:

- Quantification of waste at the dumpsite
- Existing status of the dumpsite

#### 5. Timeline

Quantification and Processing of Legacy waste at DC Nagar Waste Processing Site, Agartala	Months		
	2	4	6
Task 1: Quantification of waste at the dumpsite			
Task 2: Existing status of the dumpsite			



#### **6. Budget and Payment Terms:**

The total estimated budget is Rs. 25 lakhs plus GST which include the expenditure on visit of study team for data collection, surveying, measurement of quantity. This also covers the expenditure on manpower requirements, use of equipment, and instruments for the project work as well as institutional overheads. The proposed payment terms are as follows.

- Rs. 18lakhs + GST along with the workorder
- Rs. 7lakhs + GST after the submission of the finalreport

*(All the payments are to be made in favour of Director, NEERI, Nagpur)*

#### **7. Duration:** 6months

#### **8. Deliverables:**

- Inspection report after 6 months from the start of the work
- Final report after the discussions and acceptance by Agartala Municipal Corporation

#### **9. Inputs from Sponsor**

- One liaison Officer has to be identified for giving relevant information, organizing field visits.
- Guest-house facilities to the visitingteam.
- Localtransport
- Any other need-based input, if any, required during the project activities on mutually agreeableterms.



Mechanical Division Agartala Municipal Corporation <mechdivision.amc@gmail.com>

~~X1~~

R-4

## Quantification Report

2 messages

Sunil Kumar <sunil\_neeri@yahoo.co.in>

To: "Mechdivision amc" <mechdivision.amc@gmail.com>

Sat, Dec 3, 2022 at 6:22 PM

Dear Sir,

PFA the draft report for further action.

Regards.

Dr. Sunil Kumar, Humboldt Senior Fellow  
 Sr. Principal Scientist and Head, Waste Re-processing Division  
 Professor, Academy of Scientific and Innovative Research  
 CSIR-National Environmental Engineering Research Institute (CSIR-NEERI)  
 Nehru Marg, Nagpur – 440 020, Maharashtra, India  
 Telephone (office): +91 712 2249885 Ext. 696, Mobile No.: +91 8806029925  
 Fax: +91 712 2249900  
 Skype Id: sunilkumarskp  
 Alternate Email: sunil\_neeri@yahoo.co.in  
 Web: www.neeri.res.in

Legacy Waste Quantification AMC.pdf  
11054K

Mechanical Division Agartala Municipal Corporation <mechdivision.amc@gmail.com>  
 To: Shailesh Yadav <drshaileshkyadav@gmail.com>

Sat, Dec 3, 2022 at 6:55 PM

[Quoted text hidden]

Legacy Waste Quantification AMC.pdf  
11054K



Report on

**Quantification of Legacy Waste at DC Nagar Waste  
Processing Site, Agartala**

For

**Agartala Municipal Corporation,**

Agartala, Tripura – 799001,

INDIA

December, 2022



## Table of Contents

1.	Background of the Project .....	3
2.	Agartala City and Solid Waste Management .....	3
3.	DC Nagar Solid Waste Dumpsite .....	4
3.1	About the Dumpsite .....	5
3.2	Existing Status.....	6
4.	Objectives and Scope of the Work .....	10
5.	Methodology for Landfill Bioremediation .....	10
5.1	Approaches to Dumpsite Remediation.....	11
5.2	Survey and Steps to Quantify Legacy Waste .....	11
6.	Results and Discussion .....	14
6.1	Baseline Information .....	14
6.2	Climate Information .....	15
6.3	Environmental Monitoring.....	17
6.4	Legacy Waste Quantification .....	18
7.	Limitations of the Study .....	18
8.	Conclusion and Recommendations .....	19
	References.....	19



## **1. Background of the Project**

The Government of India launched the Swachha Bharat Mission (SBM) to implement Sanitation goals and objectives all over India. The Govt. of Tripura has taken initiatives to achieve sanitation and waste management amenities for all and provide cleanliness in the state. This mission had two components, SBM – Urban for urban areas and SBM – Rural for rural areas. SBM – Urban aims to make urban India clean and Open Defecation (ODF) free and achieve 100% garbage-free municipalities, to construct Individual Household Latrines and Community and Public Toilets. Under SBM – Urban, Agartala Municipal Corporation (AMC) has participated in the cleanliness initiative.

The majority of Indian urban areas did begin disposing of all this undesirable waste outside of municipal borders, along unattended roadside dumps that were located in no-man's-land. The uncontrolled and ongoing dumping of municipal solid waste (MSW) created mountains of legacy waste. Like other municipalities, AMC has also started practicing disposal of the MSW at DC Nagar Dumpsite. Due to a lack of waste handling and processing facilities, all the collected waste remained dumped in the dumpsite. As the DC Nagar dumpsite was started in 2012, now it has become like the mountain of MSW with four big heaps of waste. As the dumpsite gets old, it poses a threat to public health and damages the environment due to leachate formation, GHG emission, and landfill fires.

As there is need of remediation of the DC Nagar dumpsite, AMC is planning to do biomining/bioremediation as per directed by NGT Order in OA 519/2019 dated 17/7/2019. AMC decided to do quantification of legacy waste at DC Nagar dumpsite to take necessary action for the landfill remediation. Against this backdrop, AMC approached CSIR – NEERI to perform quantification study of legacy waste at DC Nagar dumpsite and assist in bioremediation of existing dumpsite. NEERI performed the necessary activities and collected primary and secondary data for exact quantification of legacy waste. This report presents the quantification of the legacy waste at DC Nagar dumpsite.

## **2. Agartala City and Solid Waste Management**

The Municipal Administration in Agartala was established in 1874 AD and the city became a planned city by Maharaja Bir Bikra Manikya Bahadur in 1940s. This erstwhile Princely State

Capital of Tripura merged with India on 15th October 1949. Agartala, the capital of the state of Tripura is located at the western portion of the West Tripura District touching international border with Bangladesh. The city extends between 23° 45' - 23° 55' N latitude and 91°15' - 91°20' E longitude, covering an area of 62 km<sup>2</sup> in the flood plains of the Haora River. The climate of the city is tropical monsoon type. The average annual rainfall is around 220 centimetres (cm). The average no of rainy days is 100 days. The temperature varies from 4.2°C to 37.6° on average. Administratively, Agartala Municipal Corporation (AMC) comprises 35 wards. The AMC is broadly classified into four planning zones: North, East, Central, and South Zones (JNNURM, 2006).

Agartala, a rapidly growing city, generates large quantities of MSW and other waste such as BMW, IHW, etc. As such, no systematic study has been conducted regarding the amount of MSW generated in AMC. Agartala is a tier 2 (class 1) city in India, with a population of 4-5 lakh and a middle level of economic activity. The city generates MSW at the rate of 0.5 to 0.6 kg per capita per day. On an average, the city generates 225-250 Metric Tonnes (MT) of MSW per day, which increases during festivals such as Durga Puja.

As per the Tripura State Pollution Control Board (TSPCB), the state generated 332.90 MT per day of MSW in the year 2021-22. However, 222 MT per day MSW was generated by AMC. For the same year collection efficiency of AMC was 96.80% where city collected 214.9 MT. As per the compliance to Schedule I of MSW Rules 2016, Agartala city believed for a good practice. Door to door collection practice is going one in 51 wards of AMC.

### **3. DC Nagar Solid Waste Dumpsite**

With rapid urbanization and development of Agartala city, waste generation increased due to the growing population, cultural activities, and modernization. Earlier, there was an old dumpsite where all the MSW was intensely dumped since the year 1997. The site's name was Hapania Dumping ground and located southwest border area of the city. With increasing heaps of legacy waste due to unscientific dumping and the absence of a waste treatment plant in the Hapania dumping ground had caused a serious threat to the local environment (Purkayastha and Chakrabarti, 2014). As a result, three new waste dumping sites were proposed at Debendra Chandra Nagar, Nagichara, and Paschim Noabadi.



### 3.1 About the Dumpsite

The dumping management practice at Debendra Chandra Nagar (DC Nagar) (**Fig. 1**) was started successfully in 2012. Located in close proximity to one another, five ULBs—Agartala, Mohanpur, Bishalgarh, Ranirbazar, and Jirania—use the DC Nagar Processing site for the treatment and disposal of solid waste.



**Fig. 1:** Legacy waste at D. C. Nagar Dumpsite

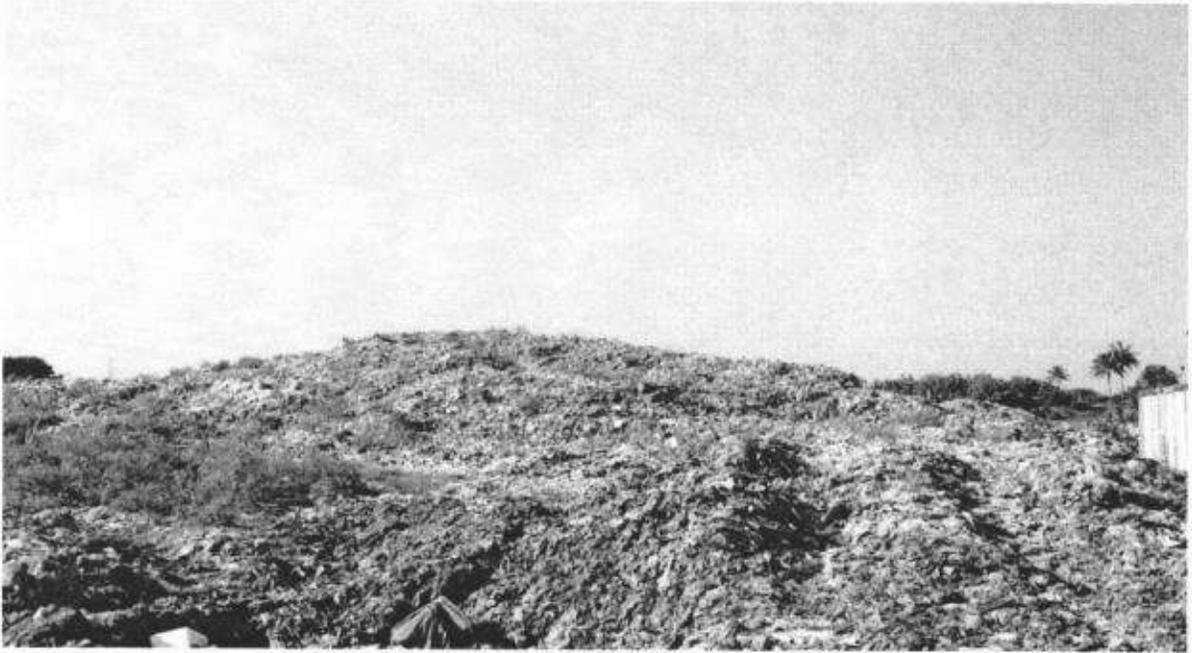
Presently the total waste material of these five cities is dumped on this site, where a sanitary landfill site has been developed (not in operation) approximately 12 km away from Agartala city (**Fig. 2**). The dumpsite is surrounded by hilly region. Small grasses, bushes, rubber, and wind break tree plantation have surrounded to the dumping ground. The height of tilla top is about 39 m from the mean sea level (MSL). The average soil permeability is about 5cm-10m/s which is higher than the required by the MSW 2016 rules for the baseline.



Fig. 2: Distance of the DC Nagar Dumpsite from Agartala

### 3.2 Existing Status

During the visit, it was observed that there is no such operation going on at DC Nagar dumping site in terms of MSW handling and processing. There is the infrastructure available for the Material Recovery Facility (MRF) but not in operation. Site also has the weighbridge facility for the estimation of incoming quantity of MSW but it is also not in working stage. However, all the collected waste uses to dump openly on the land; this resulted in the formation of four heaps. There are some gaps between the heaps so that the rainwater can pass easily. And leachate is also passes through the same gaps, highlighted in the **Fig. 3**.



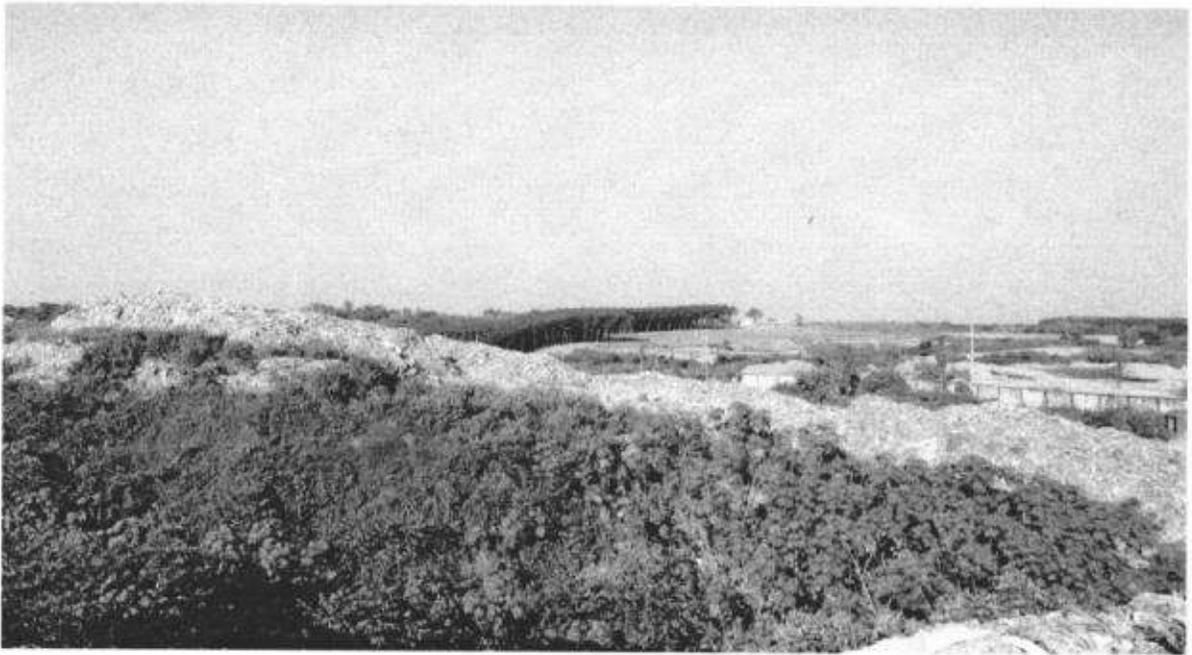




Fig. 3: Glimpse of the DC Nagar Dumpsites



#### **4. Objectives and Scope of the Work**

The major objective of the proposed study is to quantify the legacy waste and its characterization for appropriate processing. The study is expected to lay emphasis on:

- Mining of legacy waste
- Characterization of legacy waste
- Screening of appropriate process for bio-mining or bioremediation
- Identification of utility of the mined fractions with emphasis on the environmental impacts
- Management strategy for the legacy waste, leachate and fire control and safety

#### **5. Methodology for Landfill Bioremediation**

Bio-remediation is considered to be a suitable option for treatment and disposal of legacy MSW. There are three different types and methods are available for the remediation of dumpsite, based on the applicability any one method can be used.

- a. Capping without land recovery
- b. Bioremediation and reclamation of part of land by utilizing part of retrieved fractions and the leftovers heaped in suitable profile and capped appropriately
- c. Reclamation with complete land recovery

For choosing any of the above method, a total station survey or drone mapping of dumpsite must be done to quantify exact quantity of legacy waste. Therefore, the 'Advisory on Landfill Reclamation' suggested ensuring a precursor study with history of the site, compositional analysis of the waste. However, before starting the project, AMC with NEERI planned to study the site environment parameters such as baseline study of heavy metals in surface and subsurface soils and water, rainfall, soil type, surface hydrology, topography, wind direction, etc. Periodic study should also to be carried out during and after completion of the bioremediation to check for any adverse effects on nearby surrounding.



## 5.1 Approaches to Dumpsite Remediation

To undertake all the Dumpsite Remediation-related operations, the project will take an integrated approach. It may be detailed as follows:

- The amount of waste that has to be bio-remediated will be assessed using geotechnical surveys and area contouring
- Ensure to reach Lowest Ground Level
- To remove items like rags, plastic, rubber, and textiles, the garbage layer was often raked with a long spike harrow that operated in opposite directions.
- Rotating and horizontal screens are used to screen trash and coarse material. In the designated region, the recovered earth is dispersed. Load or lifting of the material are not subject to an additional fee for the contractor.
- The recyclables such plastic, glass, metal, carpets, and cloth recovered from the rubbish were packed and sold, while the stone, bricks, and ceramics removed during screening and raking to be sent for land filling or to fill up of low-lying area.
- The soil recovered to be used for refilling the ground on the same site for greenery
- The recovered construction and demolition waste to be recovered and sent to C&D processing facility for producing building materials and the left-over of the waste to be sent to a secured landfill
- Valuable land to be recovered by bio-remediation process of legacy waste
- The project machines to be deployed: Trommels, Horizontal Screens, excavators, backhoe loaders, workers
- Daily monitoring of the progress of work to be done by a team headed by an expert

## 5.2 Survey and Steps to Quantify Legacy Waste

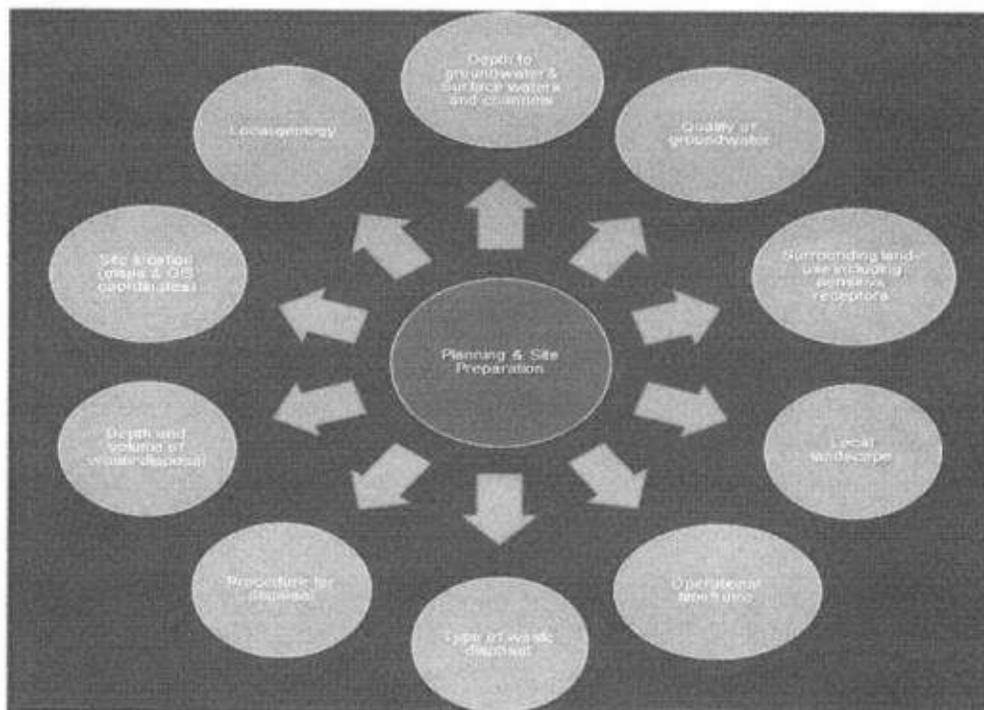
The steps for dumpsite remediation are (a) planning and site preparation, (b) excavation, (c) bio stabilization of waste and (d) screening and recovery of recyclables. The planning and site preparation are detailed in the following section whereas excavation, bio stabilization of



waste and screening and recovery of recyclables are detailed in the subsequent sections of this advisory.

**Planning & Site Preparation:** The first step in a dumpsite remediation project is planning & site preparation. This will start with a detailed site assessment of dumpsite and estimate the material processing method and rate. This site assessment involves different parameters such as geological features, stability of the surrounding area, and proximity of ground water, and determines the fractions of usable soil, recyclable material, combustible waste, and hazardous waste at the site etc. Future land use will be a key factor in determining the extent of remediation to occur. The various components to be considered in planning and site preparation are shown in **Fig. 4**.

The methodology for the execution and implementation of bioremediation of legacy waste is presented in the **Fig. 5**. The general workflow for Reclamation with complete Land Recovery is furnished herewith.



**Fig. 4:** Components to be considered in planning and site preparation



### Flow Chart for the Bioremediation

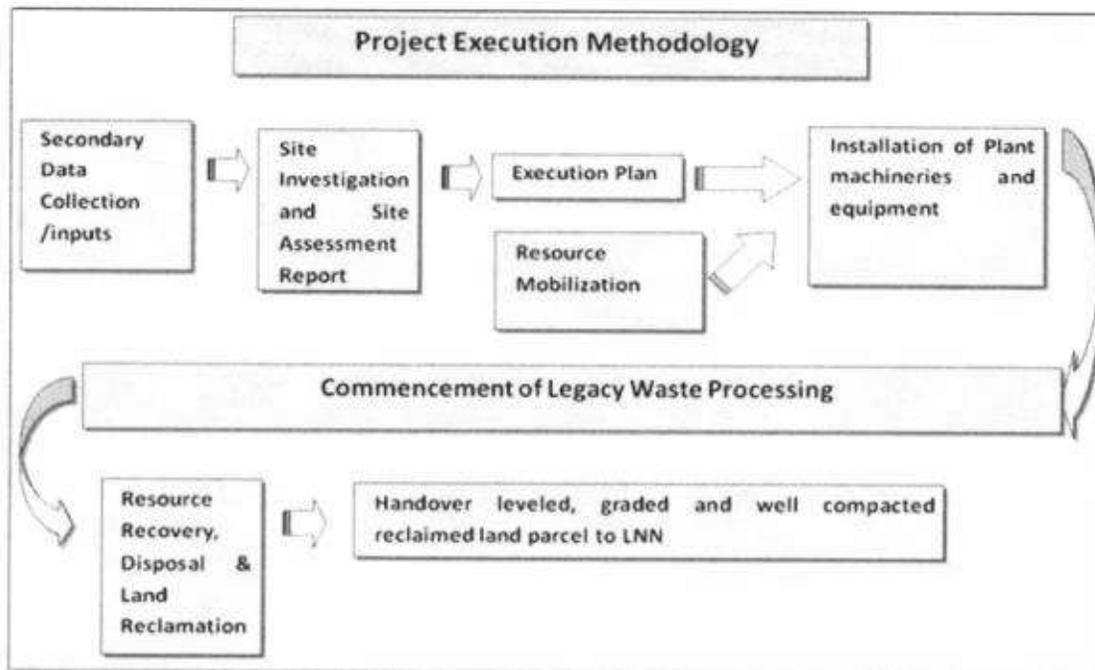


Fig. 5: Project Execution methodology for bioremediation

- Geo-technical investigations (Contour Survey, Geotechnical Investigation, Physio-chemical analysis and baseline environmental monitoring)
- Estimation of Legacy Waste Quantity
- Execution plan, drawings of Scientific Reclamation Layout and required infrastructure
- Site Assessment Report (SAR) including Environment Management Plan (EMP), Environment Monitoring Plan and its implementation Mechanism
- Resource mobilization
- Construction of processing facility and installation of weighbridge
- Excavation, resource recovery, sale and disposal of the recovered material
- Scientific disposal of the process rejects
- Reclamation of land, levelling, grading and compaction
- Storm water management system/ infrastructure
- Leachate management system/ infrastructure

## 6. Results and Discussion

As per the methodology, the primary and secondary data have been collected to get an idea about the existing situation of DC Nagar Dumpsite. Also, the officials from NEERI visited the site for survey and data collection. As per the discussion with the AMC officials, it is clear that MRF facility for fresh waste is going to start from 1<sup>st</sup> December, 2022 and hence, the estimation or quantification of legacy waste is presented till the 25<sup>th</sup> November, 2022. The total station survey is conducted after the visit during 22<sup>nd</sup> – 25<sup>th</sup> November, 2022.

Secondary data, such as past waste collection record, rainfall data, baseline information, environmental monitoring report, etc were collected from AMC. Tripura State Pollution Control Board (TSPCB) also helped to get additional information about MSW, PW, and other categories of waste. Apart from this, data related top climate, rainfall were collected from TSPCB. The details about all the parameters related to bioremediation are presented in this section.

### 6.1 Baseline Information

During the survey, it was observed that the dumpsite is surrounded by hilly region. Small grasses, bushes, rubber, and wind break tree plantation have surrounded to the dumping ground. The height of tilla top is about 39 m from the mean sea level (MSL). However, open dumping is in practice was the plain surface. As per Google earth data, the approximate total area of dumping ground is 8.43 hectare. However, 4.43 hectare of land is occupied by the MSW waste. On the north-west side of the dumping site, there is a small bank for surface water where rainwater is passes during rainy season. **Fig. 6** represents the area of the DC Nagar dumping site with the highlighted.



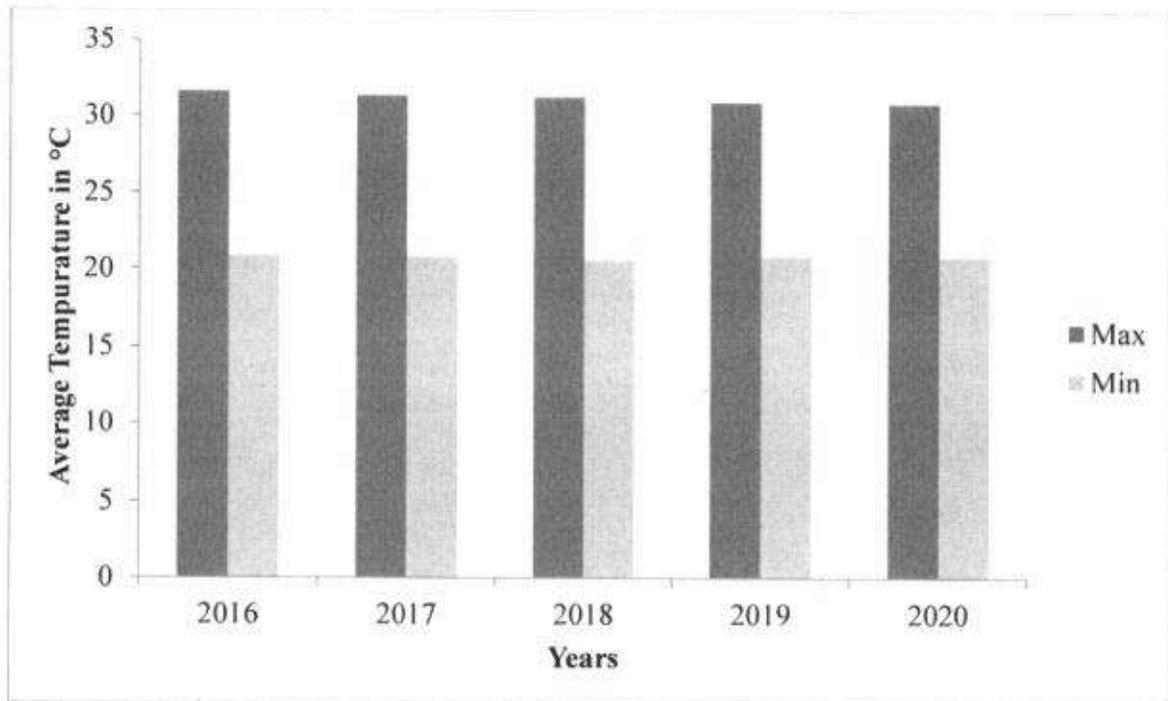
**Fig. 6:** Location of DC Nagar Dumping Site

## 6.2 Climate Information

The climate condition in the state of Tripura is Humid Sub-tropical type. However, different parts of state experience variation in the features of climate. Only two meteorological observatories, located in Tripura at Agartala and Kailasahar, have the capability to record temperature and certain other meteorological conditions. The following is a description of some of the key aspects of regional climate variance with relation to temperature, rainfall, humidity, and wind speed.

- Temperature

Agartala and Kilasahar typically experience temperatures of 25.2°C and 25.0°C, respectively. A decreasing trend in the temperature is visible from west to east. During the summer, the daily mean maximum and lowest temperatures are 30, 70 and 19, 50 degrees Celsius, respectively. The onset of the cold begins towards the end of November when both daytime and nighttimes temperatures gradually drop. The mean daily low temperature is just 8.9°C in January, while the mean daily maximum is 25.2°C (Fig. 7).

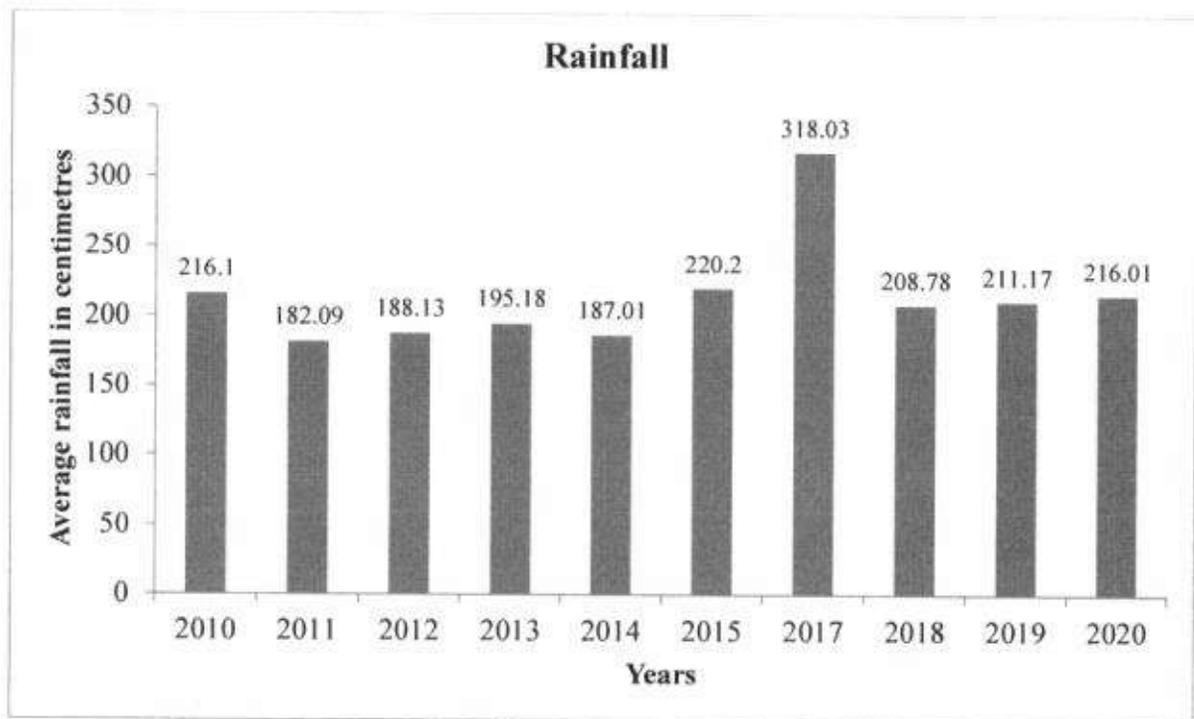


**Fig. 7:** Average temperature in different years (in °C)

- Rainfall

The variance in rainfall is one of the most delicate aspects of climate. It fluctuates according to the seasons as well as from one location to another and from one year to another. **Fig. 8** displays the variation in rainfall throughout the districts during a few years. Rainfall varies from 1922 mm to 2855 mm every year. In general, the amount of rain rises from the south-west to the north-east. The southern central region, which is bordered by 1500 mm isohyets, has a significant rainfall gap. The state's north-eastern region, near Dharamnagar, experiences the most rainfall. However, Agartala city experience moderate rainfall as it is located in the north-western part of the state.

The months of April-June and July-September receive the most rainfall. The main agricultural season for the whole state falls around this time, which is often referred to as the "Kharif season." The seasonal variations in wind direction and the existence of a cold upper air current over the designated regions of the state are the factors that influence rainfall. Large depressions form across one or more areas of the state during the Kharif season.



**Fig. 8:** Average rainfall in different years (in centimetre)

[Source: Directorate of Economics & Statistics, Govt. of Tripura]

- Humidity

Humidity is generally high throughout the year. In the summer season, the relative humidity is between 50 to 74% whereas in the rainy season, it is over 85%. The mean wind speed is 7.1 km per hour with maximum of 13.1 km per hour in May and minimum of 3 km per hour in December. The relationship between rainfall, temperature and farming is suitable to grow paddy crops in the plains, and bamboo trees and jhum cultivation on hills along with the scope for plantation of rubber, coffee, cashewnut, coconut and other evergreen and deciduous plants on the hilly and tilla land. The state represents hypothermic soil temperature regime.

### 6.3 Environmental Monitoring

Tripura State Pollution Control Board (TSPCB) conducted the study on the environmental monitoring parameters, such as groundwater, air, and noise in an around the DC Nagar dumping site, Agartala. The detailed information provided by TSPCB is enclosed with this report (**Annexure 1**). However, environmental monitoring parameters related to leachate,



surface water, and the other parameters will be studied throughout the bioremediation process.

#### 6.4 Legacy Waste Quantification

A total station survey was conducted for the entire site to assess existing situation and quantify legacy waste on site from 21<sup>st</sup> to 25<sup>th</sup> November 2022. Details of the total station survey report, along with drawings, have been enclosed in **Annexure 2**. Following is the summary of the quantification of legacy waste with respect to the survey conducted on 25<sup>th</sup> November 2022.

- 1) The total area under legacy waste is 4.21 hectares with the existing total quantity of legacy waste on site being **302045 cu.m.**
- 2) The quantity of legacy waste on the First Heap is 2235 cu.m. under an area of 0.0935 ha.
- 3) The quantity of legacy waste on the Second Heap is 3030 cu.m. under an area of 0.2244 ha.
- 4) The quantity of legacy waste on the Second Heap is 119975 cu.m. under an area of 1.9136 ha.
- 5) The quantity of legacy waste on the Second Heap is 176805 cu.m. under an area of 1.9786 ha.

Whereas the average bulk density of legacy waste at DC Nagar dumpsite is 1.1 tonne/Cum. Therefore, the quantity of legacy waste is around **3, 32, 249.5 tonnes** as on 25<sup>th</sup> November 2022.

#### 7. Limitations of the Study

AMC in collaboration with CSIR – NEERI quantified the quantity of legacy waste. Also, NEERI officials visited for 4 days and surveyed the dumping site and collected the necessary data for proper planning to implement the bioremediation. Hence, based on the collected information and the quantification, proper planning and implementation of the bioremediation approach is needed. This need to be strengthened for carrying out the detailed activity. Detailed report will be submitted after detailed investigation and monitoring.



## 8. Conclusion and Recommendations

Based on the site investigation and survey conducted for the quantification of the legacy waste, it can be concluded that bioremediation is needed. The estimated legacy waste in DC Nagar dumpsite is 3, 32,249.5 tonnes (302045 cu. m). Based on the estimated quantity, proper contract should be made with contractual clarity for seamless operations. Preparing and getting all stakeholders' acceptance from a thorough operational plan that includes the work process flow and schedules as per planned DPR is necessary. Dumping fresh waste must be separated from biomining and should not mix with legacy waste. Leachate drips out due to the opening up of legacy trash, and it must be appropriately collected and handled. The aeration process of legacy waste helps to reduce the leachate. Stakeholders must work on Fire Control, Safety, and environmental compliance throughout the biomining process. Stakeholders must manage issues related to odor and dust since they are hazardous to employees and adjacent residents. This is done by stabilizing the garbage and often sprinkling the waste heaps with bio-culture solutions. Recovered material must be put to use to make bioremediation economically viable. Recovered materials, such as plastic, textile, and metals can be sold. However, C&D waste can be used as filler in construction activity. Recovered bio-earth can be used to enhance land fertility or given to the farmers after proper treatment, including improving quality as per FCO standards and removing microplastics.

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Environmental Monitoring in respect of air, water, leachate and  
noise in an around the Debendrachandranagar dumping site,  
Agartala, Tripura West



ANALYTICAL RESULTS OF GROUNDWATER SAMPLES COLLECTED IN AND  
AROUND THE DEBENDRACHANDRANAGAR DUMPING SITE AGARTALA, TRIPURA  
WEST

Sl. No	Parameters	S-1	S-2	S-3	S-4	Standards (BIS, 2012)
1.	pH	6.52	6.69	6.51	6.56	6.5-8.5
2.	Conductivity ( $\mu\text{S}/\text{cm}$ )	43.9	124.8	69	39.3	
3.	TDS (mg/l)	21.9	62.4	34.5	19.6	500
4.	Turbidity (NTU)	4.68	4.27	2.47	2.63	5
5.	Chlorides (mg/l)	23.1	23.1	25.3	28.8	250
6.	Total Hardness (mg/l)	90.2	70.2	50.5	20.3	200
7.	Sulphate (mg/l)	6.52	5.86	7.08	6.24	200
8.	Chromium (as $\text{Cr}^{+6}$ )	BDL	BDL	BDL	BDL	0.05
9.	Cadmium (mg/l)	BDL	BDL	BDL	BDL	0.01
10.	Lead (mg/l)	BDL	BDL	BDL	BDL	0.05
11.	Iron (mg/l)	0.07	0.07	0.05	0.06	0.3
12.	Arsenic (mg/l)	BDL	BDL	BDL	BDL	0.01

\*BDL (Below Detectable Limit)

**Site of collection:**

S-1: North side of Debendrachandranagar dumping site, Agartala (Residence of Sri Jagadish Debbarma)

S-2: North side of Debendrachandranagar dumping site, Agartala (Residence of Sri Ranjit Kal)

S-3: North East side of Debendrachandranagar dumping site, Agartala (Residence of Sri Sarabjit Thapa)

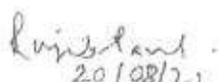
S-4: North East side of Debendrachandranagar dumping site, Agartala (Residence of Sri Karna Bahadur Singh)

**MATERIALS AND METHODOLOGY:**

Four groundwater samples were collected in and around the Debendrachandranagar dumping site, Agartala on 06.08.2022 for the analysis of different physical & chemical parameters. Samples were analyzed in the laboratory of TSPCB using the standard methods given in **APHA, 2012 (American Public Health Association, 2012)**.

**OBSERVATIONS:**

From the result table, it has been observed that, all the analytical parameters of collected ground water samples were within the prescribed standard of BIS (Bureau of Indian Standard, 2012).

  
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**: AMBIENT AIR QUALITY DATA AT DEBENDRACHANDRANAGAR DUMPING  
SITE AGARTALA, TRIPURA WEST:**

**Date of Monitoring: 08.08.2022**

Pollutants	Time weighted Average	S-1	Standards (CPCB, 2009)	Methods of Measurement
Particulate matter (PM <sub>10</sub> ), µg/m <sup>3</sup>	24 Hours	21.5	100	Gravimetric
Particulate matter (PM <sub>2.5</sub> ), µg/m <sup>3</sup>	24 Hours	14.9	60	Gravimetric
Sulphur Dioxide (SO <sub>2</sub> ), µg/m <sup>3</sup>	24 Hours	2.15	80	Improved West and Geake
Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	24 Hours	5.62	80	Jacob & Hochheiser

**Materials and Methodology:**

The air quality monitoring was conducted on **08.08.2022** for 24 hours inside the **Debendrachandranagar dumping site, Agartala, Tripura West**. The sampling procedures for measurement of PM-2.5, PM-10, NO<sub>2</sub> and SO<sub>2</sub> were made according to the internationally accepted standard technique through use of Respirable Dust Sampler (RDS) with gaseous sampling attachments and PM-2.5 Sampler manufactured by M/s Envirometech Instruments PVT. LTD., New Delhi.

**Observations:**

From the result table it has been observed that the measured concentration of Respirable Particulate Matter (PM-10), Fine Particulate Matter (PM-2.5), SO<sub>2</sub> and NO<sub>2</sub> is well within the prescribed standard limit of CPCB (Central Pollution Control Board, 2009).

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### NOISE LEVEL MONITORING REPORT

**Monitoring Location** : Debendrachandra Nagar dumping site, Agartala, Tripura (W)  
**Date of Monitoring** : 06/08/2022  
**Time of Monitoring** : 12.00 PM to 2.00 PM  
**Type of sample** : Ambient Noise  
**Noise Meter Model No** : Lutron SL-4001, Class-2  
**Major Construction Noise**  
**Source(s) during monitoring** : Vehicular movement inside the dumping site and Household activities.  
**Other Noise Sources(s) during monitoring** : NA

#### Monitoring Results

Sl. No	Sampling location	Distance from the dumping site	Leq dB(A)	Standards dB(A) Leq (Day time)
1.	Inside the Debendrachandranagar dumping site	NA	43.7	55
2.	In front of the house of Sri. Balai Munda (North West side of dumping station)	150 meter (approx)	41.8	55
3.	In front of the house of Sri. Jagadish Debbama (North side of dumping station)	800 meter (approx)	42.5	55
4.	In front of the Malabati Para high School	600 meter (approx)	38.4	55

#### **Observations:**

From the monitoring results it has been observed that, the noise level in and around the **Debendrachandra Nagar dumping site, Agartala, Tripura (W)** is within the prescribed standard limit of Ambient Air Quality standard in respect of noise (55dB) of CPCB (Rule 3(1) & 4(1)) at day time in respect of residential area.

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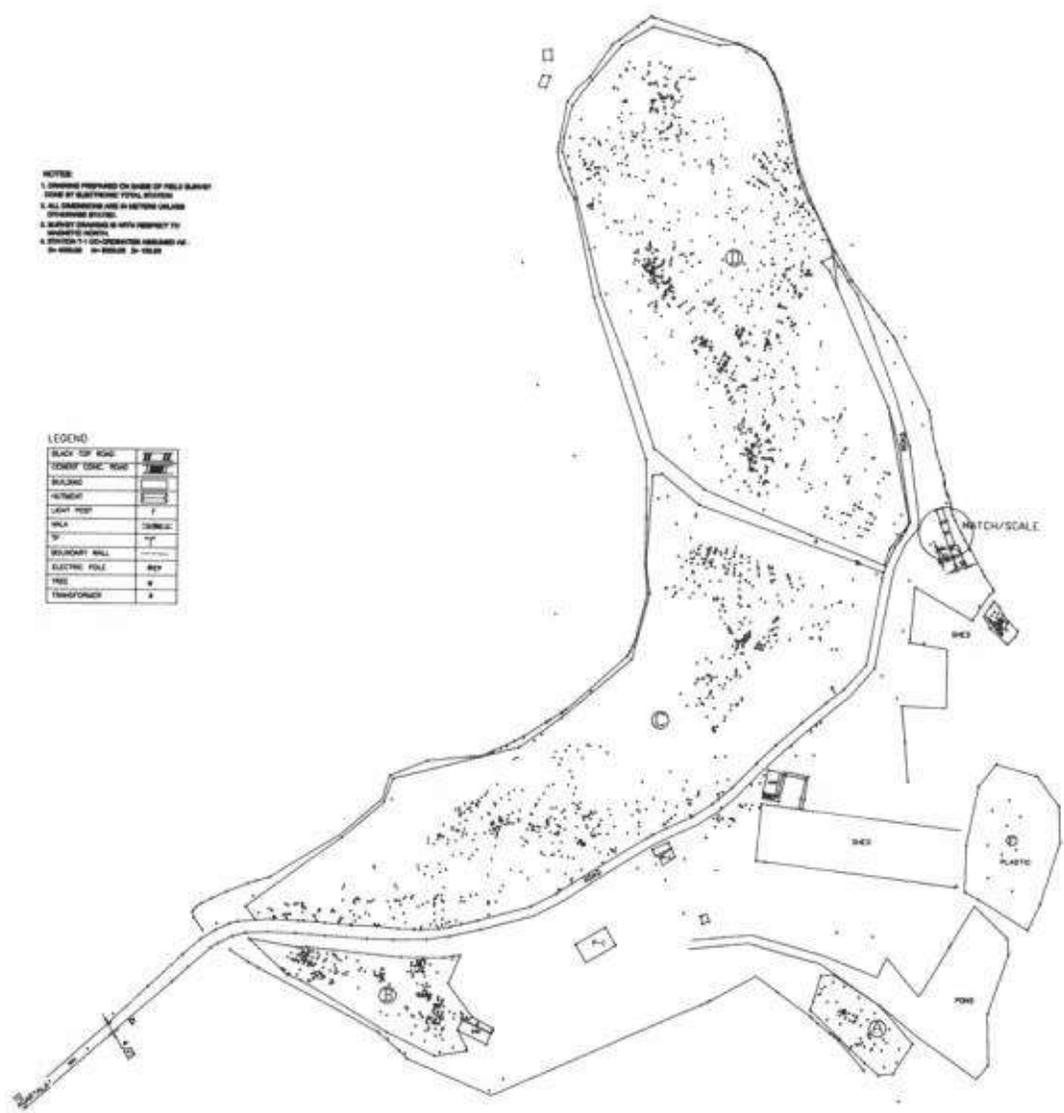


**NOTES**

1. DRAWING PREPARED ON BASIS OF FIELD SKETCHES
2. DATE OF SURVEYING: 1970
3. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED
4. SURVEY CONDUCTED IN ACCORDANCE WITH THE SURVEY ACT, 1907
5. SURVEY TO THE SATISFACTION OF THE SURVEYOR

**LEGEND**

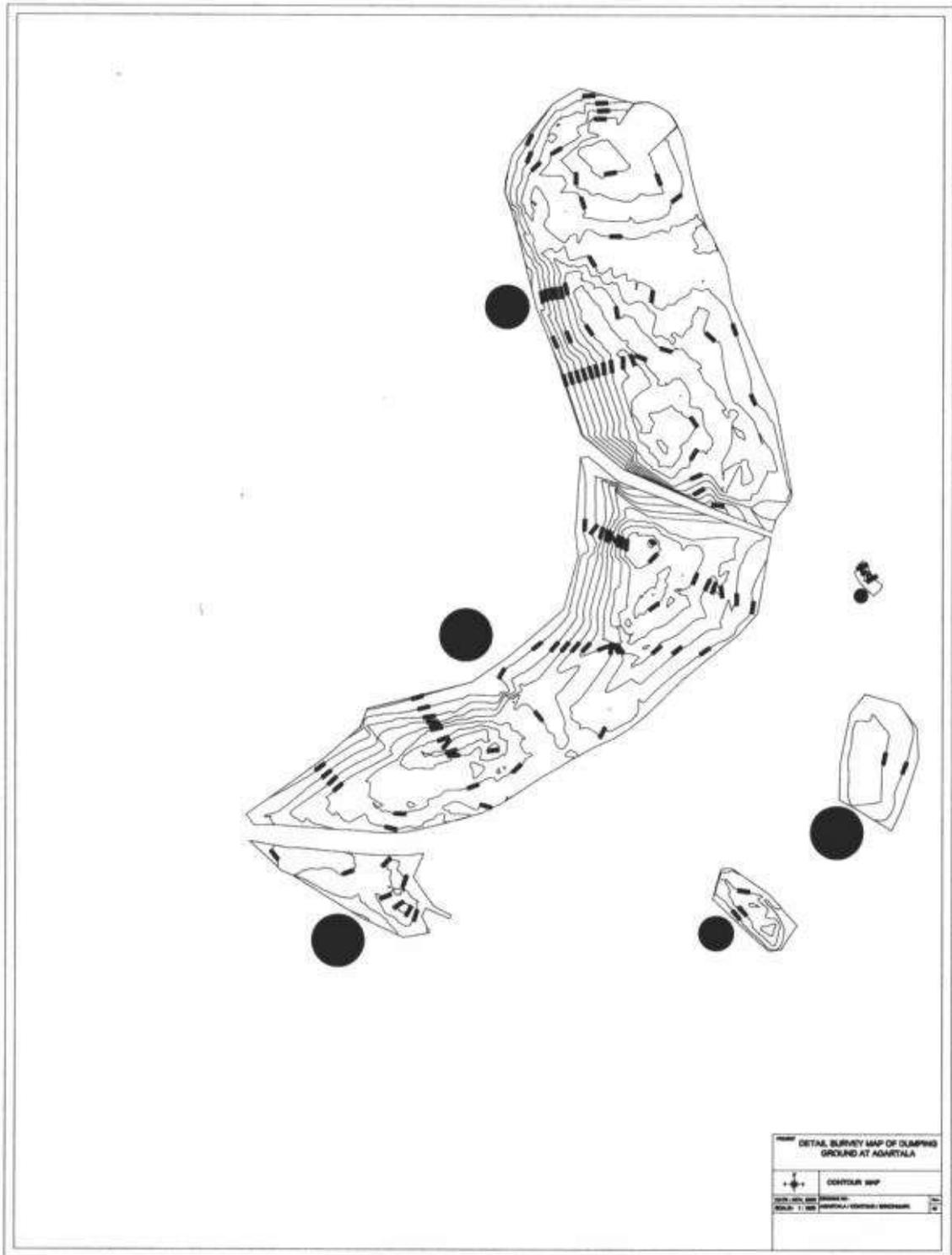
BLACK TOP ROAD	BT
"GRAVEL" ROAD	GR
BUILDING	BLDG
WATER	WTR
WELL	WELL
WINDMILL	WINDMILL
ELECTRIC POLE	EP
POLE	P
TRANSFORMER	T



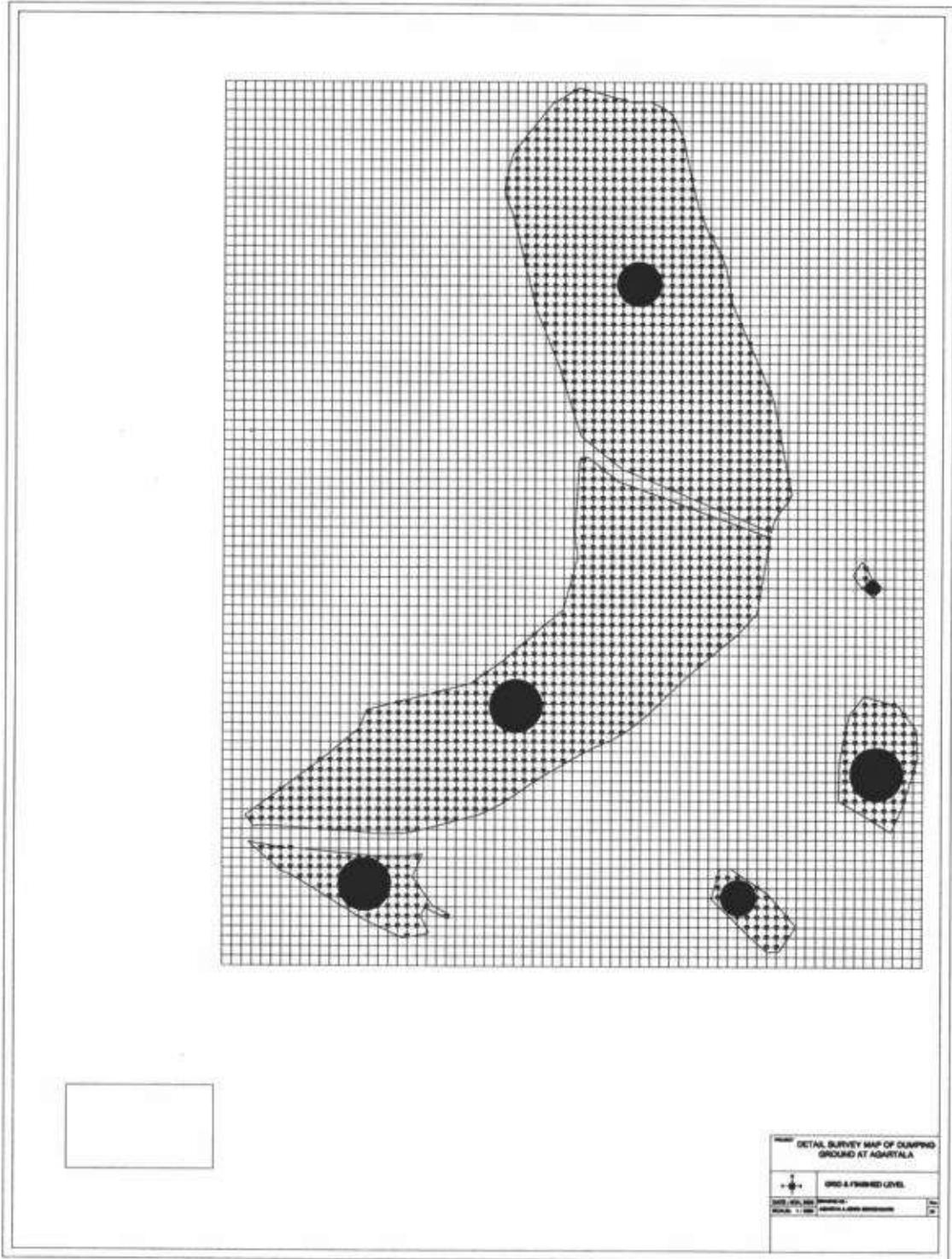
**DETAIL SURVEY MAP OF CLEARING GROUND AT AGARTALA**

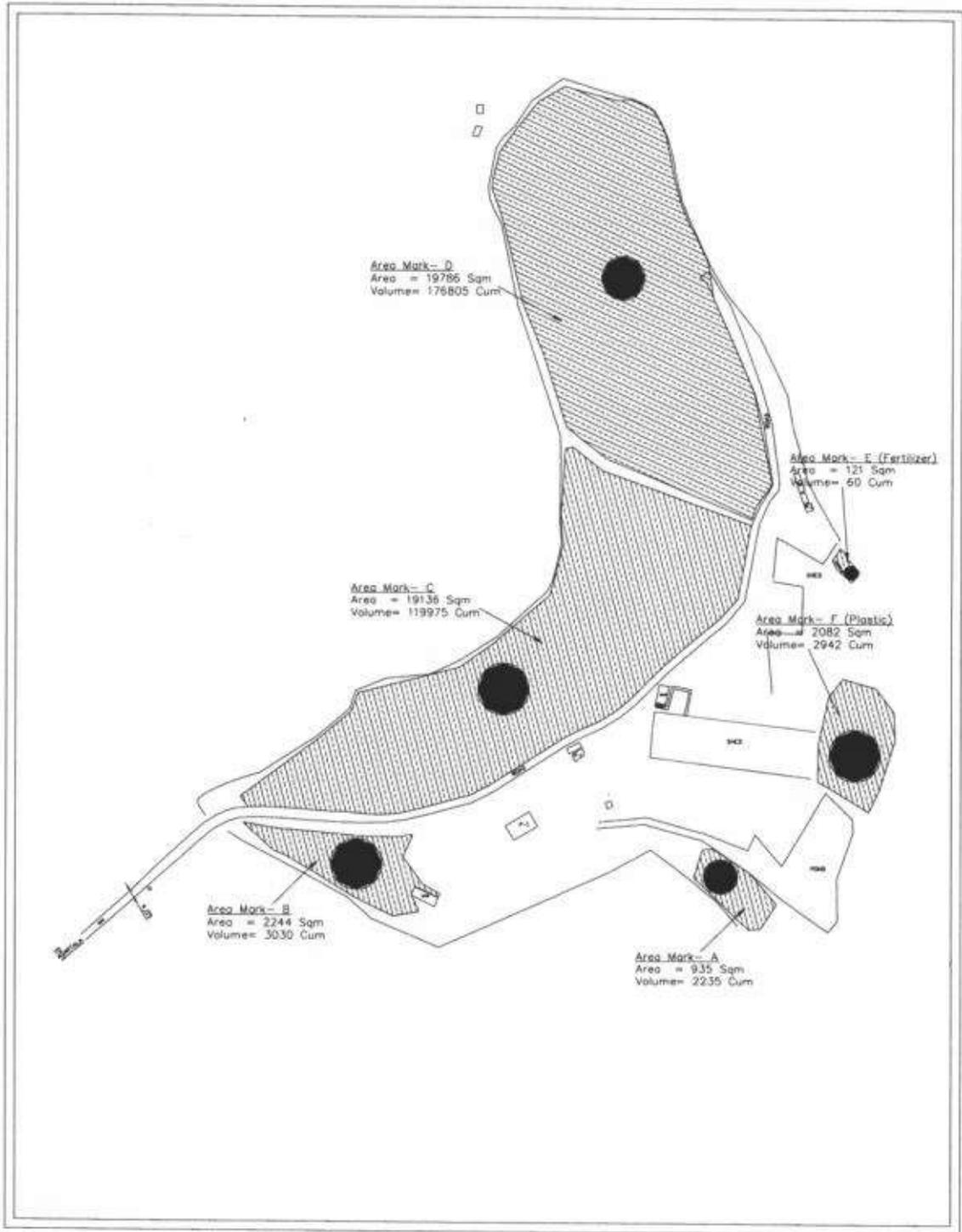
**TOPOGRAPHICAL SURVEY MAP**

DATE: 1970  
 SCALE: 1:500  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]



47







R-5

AGARTALA MUNICIPAL CORPORATION

Office of the Municipal Commissioner

City Centre, Agartala, Phone/Fax -03812385646, email- amc.tripura@gmail.com

F.458/Mech. Div./AMC/2019/Part-1 / 8057(A)-8057(E)

Dt. 11/01/2023

To,

Mandy Enterprise

(Lead Firm of the Consortium comprising of MS Mandy Enterprises,  
Earth Recyclers Pvt. Ltd. and URBO Waste Management Pvt. Ltd.)

W-8, 1st Floor, West Patel Nagar

New Delhi-110008

Sub: Processing (bio mining/bio remediation) of the legacy waste at Devendra Chandra Nagar

Ref.e-tenderID&amp;PNIT: 2021\_SAMC\_17513\_1, 06/04/2021 and 69/RFP/Mech.Div/AMC/2021

Dated 06.04.2021 (BOQ item 2)

Ref: Note No 45 of AMC file No. F.458/Mech. Div./AMC/2019/Part-1

Sir,

Pursuant to proposal and rate offer for Processing (bio mining/bio remediation) of the Legacy Waste at Devendra Chandra Nagar in respect with aforesaid PNIT and e-tender Id, it has been decided to award you the work at the price **Rs. 873/- (Eight Hundred Seventy Three) only per Metric Tonne (Inclusive of GST, Processing, Transportation of aggregates and disposal as per CPCB rules and Hon'ble NGT guidelines)** instead of lump sum amount based on accumulated quantity. You are instructed to proceed with the execution in accordance to the RFP documents. You are also requested to initiate your activities once written intimation is given by the Mechanical Division of Agartala Municipal Corporation.

You are hereby directed to sign the contract agreement within 07 (seven) days from the date of the issue of this letter. The whole work will be governed under the contract agreement to be executed.

(Dr. Shailesh Kr. Yadav, IAS)  
Municipal Commissioner  
Agartala Municipal Corporation

Copy to:-

1. P.S to Hon'ble Mayor, AMC for kind information.
2. Director, UDD for information please.
3. DDO, AMC for information and n/a.
4. Executive Engineer (Mech), AMC for information and n/a.

Municipal Commissioner  
Agartala Municipal Corporation



~~XO~~

R-6

AGARTALA MUNICIPAL CORPORATION  
MECHANICAL DIVISION

Ramnagar Road No.9, Agartala, Tripura West, Phone -0381-2330010

F.458/Mech. Div./AMC/2019/Part-1/8926(A)-8926(E)

Dt. 17/02/2023

To,

Mandy Enterprises

(Lead Firm of the Consortium comprising of MS Mandy Enterprises,  
Earth Recyclers Pvt. Ltd. and URBO Waste Management Pvt. Ltd.)

W-8,1st Floor, West Patel Nagar

New Delhi-110008

Sub: Processing (bio mining/bio remediation) of the legacy waste at Devendra Chandra Nagar  
Ref. Work Order No - F.458/Mech. Div/AMC/2019/Part-1/8057(A)-8057(E), 11<sup>th</sup> January,  
2023.

Sir,

With reference to above you are requested to expedite the work by installing 02 more units of processing scanners so that bio-remediation/bio-mining gets completed within 2024. You are also instructed to carry out the job in 02 shift on daily basis.

**The matter is most urgent.**

(Chinmoy Chakraborty)  
Executive Engineer, Mech. Div  
Agartala Municipal Corporation

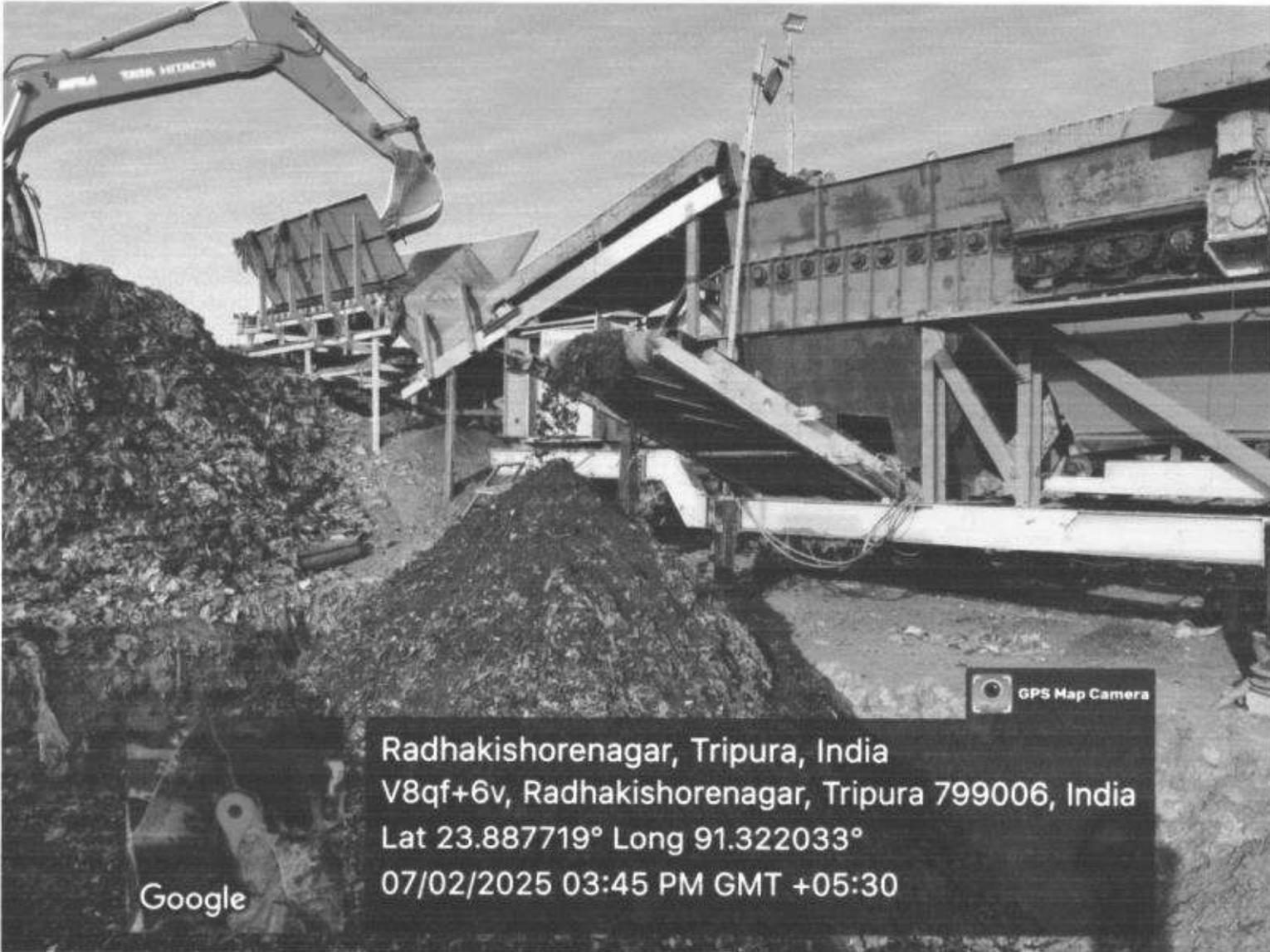
Copy to:-

1. P.S to Hon'ble Mayor, AMC for kind information.
2. The Municipal Commissioner, AMC for information and n/a.
3. Assistant Engineer (Mech), for information and n/a.
4. J.E - Sri Dinesh Debbarna for information and n/a. He is instructed to closely monitor daily's activities at the site and weigh bridge operation.

(Chinmoy Chakraborty)  
Executive Engineer, Mech. Div  
Agartala Municipal Corporation



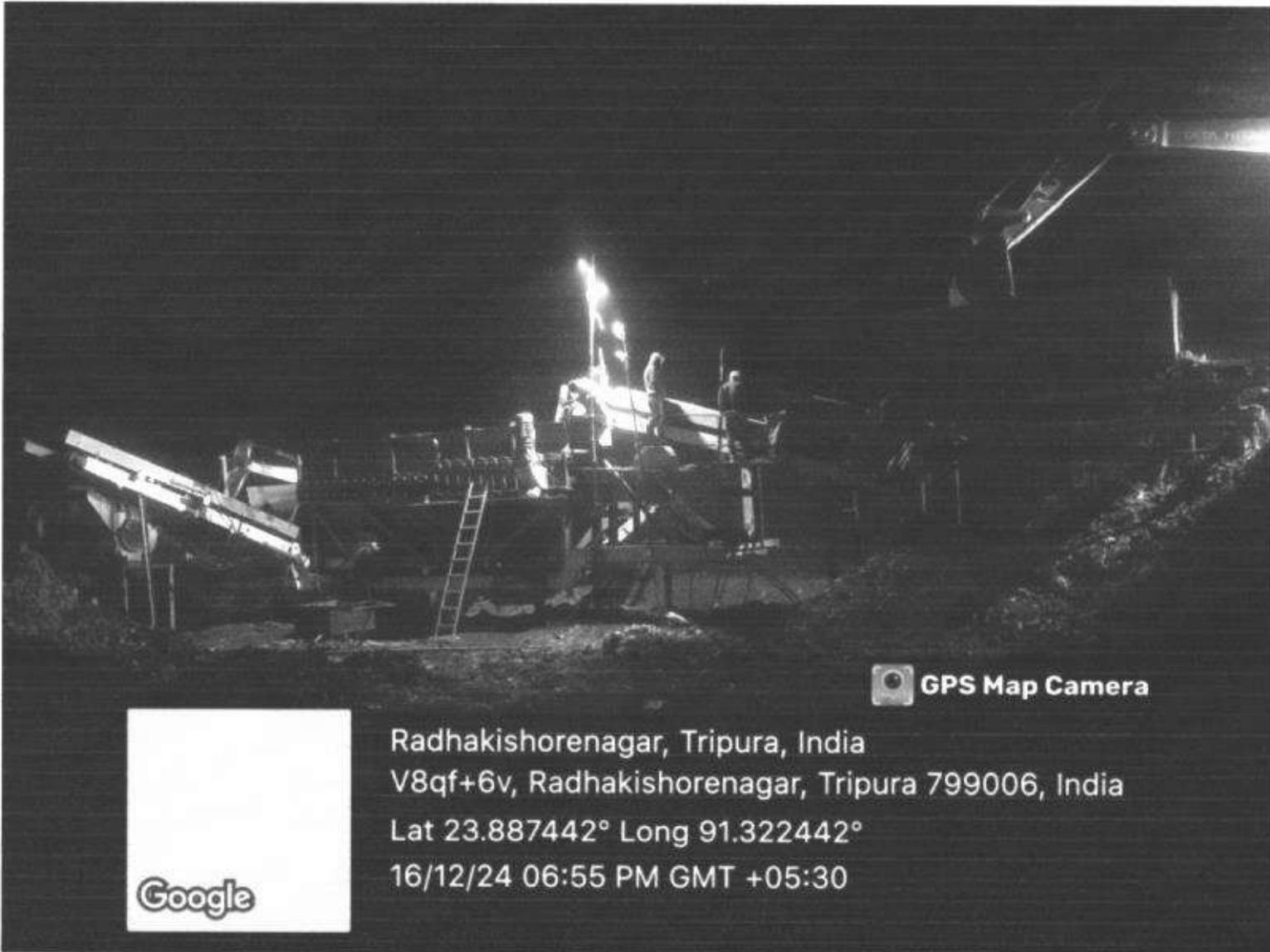
R-7



GPS Map Camera

Radhakishorenagar, Tripura, India  
V8qf+6v, Radhakishorenagar, Tripura 799006, India  
Lat 23.887719° Long 91.322033°  
07/02/2025 03:45 PM GMT +05:30

Google



 **GPS Map Camera**



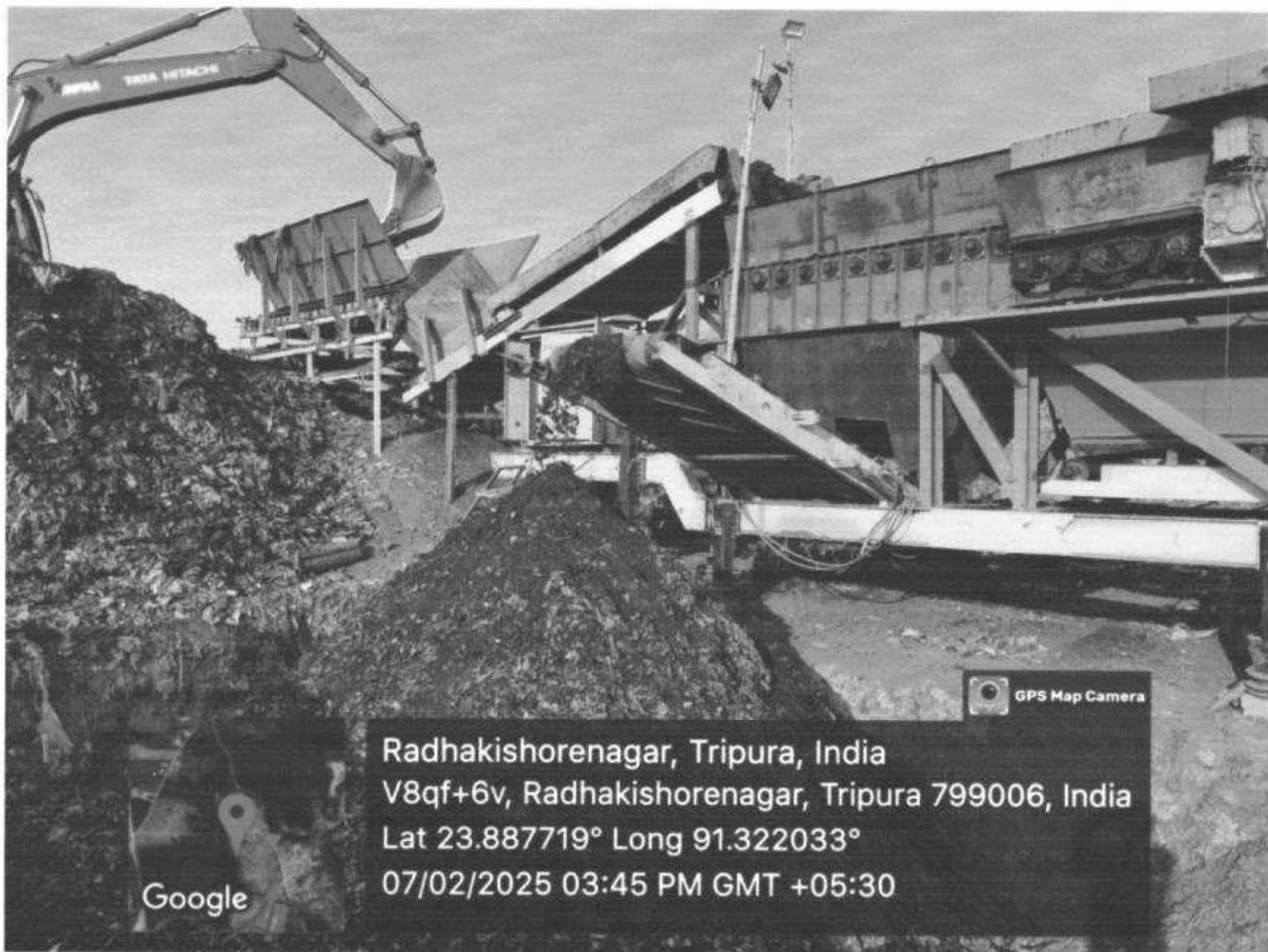
Radhakishorenagar, Tripura, India  
V8qf+6v, Radhakishorenagar, Tripura 799006, India  
Lat 23.887442° Long 91.322442°  
16/12/24 06:55 PM GMT +05:30



GPS Map Camera

Radhakishorenagar, Tripura, India  
V8qf+6v, Radhakishorenagar, Tripura 799006, India  
Lat 23.887881° Long 91.322295°  
07/02/25 03:53 PM GMT +05:30

Google



Radhakishorenagar, Tripura, India  
V8qf+6v, Radhakishorenagar, Tripura 799006, India  
Lat 23.887719° Long 91.322033°  
07/02/2025 03:45 PM GMT +05:30



 GPS Map Camera

Radhakishorenagar, Tripura, India  
V8qf+6v, Radhakishorenagar, Tripura 799006, India  
Lat 23.886802° Long 91.323927°  
07/02/25 03:37 PM GMT +05:30

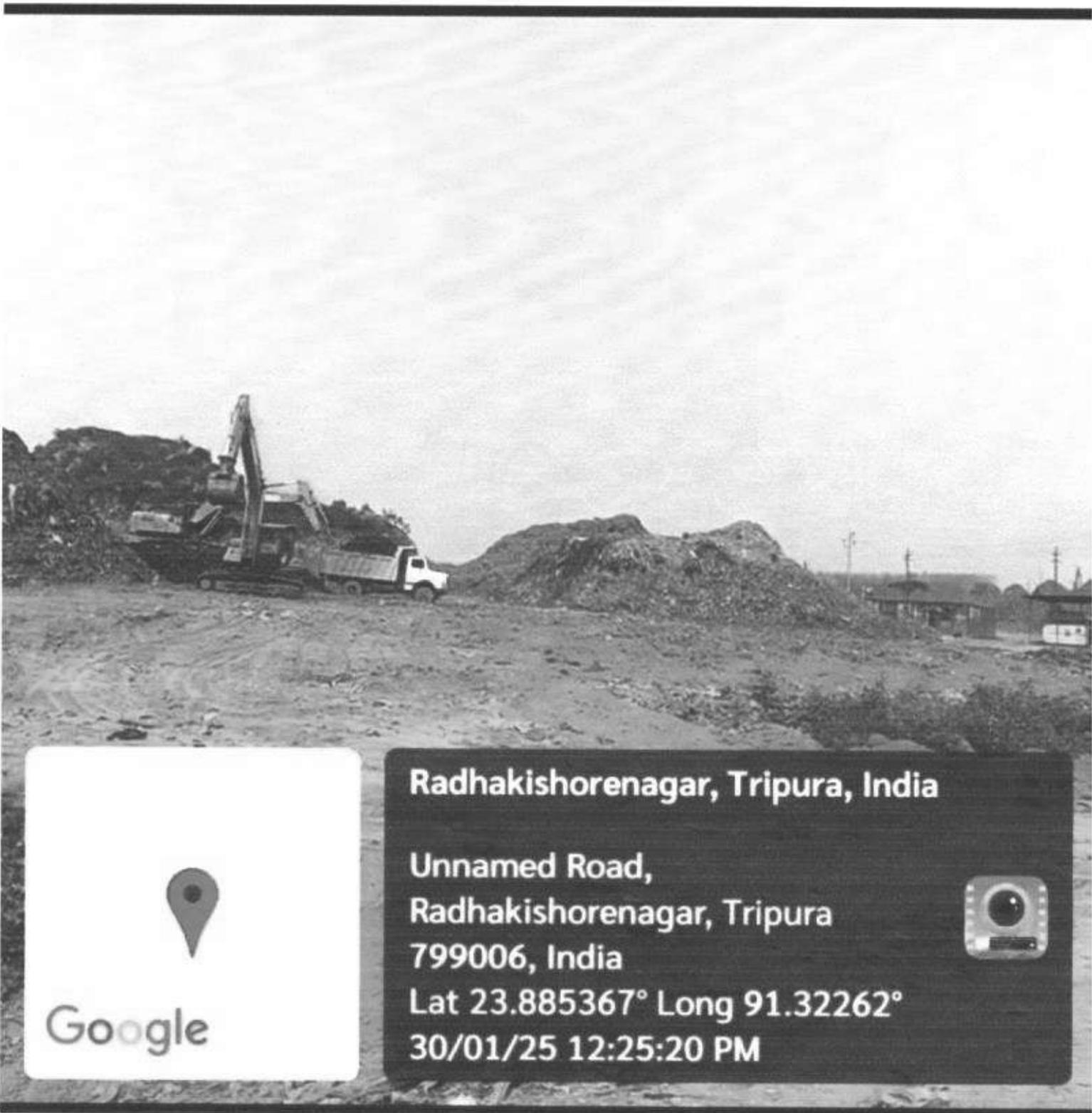




 GPS Map Camera

Radhakishorenagar, Tripura, India  
V8qf+6v, Radhakishorenagar, Tripura 799006, India  
Lat 23.888228° Long 91.322424°  
07/02/25 04:11 PM GMT +05:30

 Google



Google

**Radhakishorenagar, Tripura, India**  
Unnamed Road,  
Radhakishorenagar, Tripura  
799006, India   
Lat 23.885367° Long 91.32262°  
30/01/25 12:25:20 PM



**Radhakishorenagar, Tripura, India**

VBQF+6V, Radhakishorenagar, Tripura 799006, India

Lat 23.887601° Long 91.322238°

28/01/25 02:22:07 PM





# Qualissure Laboratory Services

R-8  
361, Prantick Pally,  
45/361, Bose Pukur Road,  
Kolkata - 700107  
Email : qualissure@gmail.com  
Mob. No. : 9831287086  
9830093976

DOC NO : QLS/SAMP/08-E/00

## TEST REPORT

<b>Name &amp; Address Of the Customer :</b>	<b>Report No.</b> : QLS/P-32/24-25/C/07
<b>M/s. Mandy Enterprises</b>	<b>Date</b> : 28.09.2024
<b>Site And Study Area:</b>	<b>Sample No.</b> : QLS/P-32/24-25/07
Tripura, Agartala	<b>Sample Description</b> : Bio Earth
	<b>Period Of Analysis</b> : 15.09.2024-27.09.2024
	<b>Sample Drawn On</b> : 13.09.2024
	<b>Ref No. Date</b> : Verbal Confirmation

## Analysis Result

Sl.No.	Test Parameter	Test Method	Specification of City Compost as per FCO	Result
1.	Colour	As Per FCO norms (1985)	Dark Brown to Black	Black
2.	Odour	As Per FCO norms (1985)	Absence of Odour	Absent
3.	Particle Size(pass through 4.0mm IS Sieve) in % by mass	As Per FCO norms (1985)	90% Pass through 4.0mm IS Sieve	86
4.	pH(1:5) at 25°C	As Per FCO norms (1985)	6.5-7.5	7.73
5.	Electrical Conductivity(1:5) at 25°C in mS/cm	As Per FCO norms (1985)	4.0(Max)	1.89
6.	Bulk density in g/cc	As Per FCO norms (1985)	<1	0.97
7.	Moisture Content at 105°C in %	As Per FCO norms (1985)	15-25	16.6
8.	Total Phosphorus (as P <sub>2</sub> O <sub>5</sub> ,% by weight)	As Per FCO norms (1985)	0.4(Min)	0.21
9.	Total Potassium (as K <sub>2</sub> O,% by weight)	As Per FCO norms (1985)	0.4(Min)	0.27
10.	TOC (% by weight)	As Per FCO norms (1985)	12.0(Min)	10.6
11.	Total Nitrogen (as N)% by weight	As Per FCO norms (1985)	0.8(Min)	0.58
12.	C:N Ratio	As Per FCO norms (1985)	<20.0	18.3
13.	Copper (as Cu), mg/kg	As Per FCO norms (1985)	300.0(Max)	41.7
14.	Zinc (as Zn), mg/kg	As Per FCO norms (1985)	1000.0(Max)	182.4
15.	Mercury (as Hg), mg/kg	As Per FCO norms (1985)	0.15(Max)	<0.01
16.	Cadmium (as Cd), mg/kg	As Per FCO norms (1985)	5.0(Max)	0.23
17.	Nickel (as Ni), mg/kg	As Per FCO norms (1985)	50.0(Max)	14.3
18.	Chromium (as Cr), mg/kg	As Per FCO norms (1985)	50.0(Max)	37.1
19.	Lead (as Pb), mg/kg	As Per FCO norms (1985)	100.0(Max)	12.5
20.	Arsenic (as As <sub>2</sub> O <sub>3</sub> ), mg/kg	As Per FCO norms (1985)	10.0(Max)	<0.25

Report Prepared By: *[Signature]*



for Qualissure Laboratory Services  
Reviewed & Authorized By

*[Signature]*  
Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

-----End of Report-----

**Dalmia**  
**cement**  
*FUTURE TODAY*

*cement silos refractories power*

**Certificate of Co-Processing**  
Issued To: M/s Mandy Enterprise  
Certificate No: DCBL/MANDY/012  
Date: 28-11-2024

This is to certify that we have successfully co-processed the following quantities of **6512.27 MT** of Refuse Derived Fuel (RDF) sent by M/s Mandy Enterprise for Co-processing in our Cement Kiln during the period of 23<sup>rd</sup> February 2024 to 30<sup>th</sup> June 2024.

Waste Name: Refuse Derived Fuel (RDF)  
Quantity (MT): 6512.27



Authorized Signatory  
Date: 28.11.2024

# Dalmia cement

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Receipt details for the period of 23-02-2024 to 30-06-2024:

Collection City	Vehicle Detail	Date of Receipt	Quantity Received (MT)	Type of Waste	Co-processor Name and Location
Agartala	WB23C8715	23-Feb-24	22.29	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS27C7522	23-Feb-24	22.14	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01LC8124	23-Feb-24	20.20	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01LC7498	24-Feb-24	21.81	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01LC9875	24-Feb-24	20.47	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01LC8122	24-Feb-24	34.03	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AF4642	24-Feb-24	29.06	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AF7264	25-Feb-24	25.07	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	HP648850	25-Feb-24	24.73	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	PB65AN1277	25-Feb-24	23.26	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB11E5655	25-Feb-24	26.32	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB59B8386	25-Feb-24	26.76	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	GJ12BW5231	25-Feb-24	30.21	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01A84751	26-Feb-24	28.97	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AD7107	26-Feb-24	33.14	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07AA2440	26-Feb-24	37.53	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07AA2444	26-Feb-24	35.21	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07AA2439	26-Feb-24	36.05	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07AA2443	26-Feb-24	25.08	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS09AC6646	26-Feb-24	29.68	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01GC1964	26-Feb-24	32.89	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AD4677	27-Feb-24	26.60	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS11CC0863	28-Feb-24	27.60	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MLO5T6884	28-Feb-24	26.34	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AB0821	28-Feb-24	26.21	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01QC1436	28-Feb-24	24.11	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS27C7522	28-Feb-24	37.62	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AF4281	28-Feb-24	37.01	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS11EC2144	29-Feb-24	32.93	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AF4300	29-Feb-24	26.91	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya

Dalmia cement (Bharat) Ltd.

**Dalmia Cement (Bharat) Limited**

Umso Mootang, Village - Thangskai, PO Lumshnong, District - East Jaintia Hills, 793210 (Meghalaya) India  
T 91 9612901824/9612895625 Toll Free 1800 2020 W www.dalmiacement.com CIN:U65191TN1996PLC035963

# Dalmia cement

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cement | sugar | refractories | power

Agartala	AS01LC5420	29-Feb-24	29.98	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01L6769	29-Feb-24	36.78	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AG4055	01-Mar-24	37.46	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AG7386	01-Mar-24	34.39	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC7554	01-Mar-24	34.31	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01NC9371	02-Mar-24	38.35	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07AA2946	03-Mar-24	31.65	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC9318	03-Mar-24	34.22	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC2044	05-Mar-24	32.34	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC6389	05-Mar-24	29.75	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01GC2816	05-Mar-24	27.53	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS09BC0918	06-Mar-24	28.50	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC8838	07-Mar-24	28.23	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AA9477	07-Mar-24	25.94	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	HP17C8555	07-Mar-24	27.49	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	ML05T6884	08-Mar-24	25.86	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL02L6700	08-Mar-24	23.84	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01G7081	10-Mar-24	27.51	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	HP17G1251	10-Mar-24	29.16	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AR12A2479	10-Mar-24	36.78	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC5163	11-Mar-24	34.68	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC9863	11-Mar-24	33.27	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07A9400	13-Mar-24	37.32	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC9862	13-Mar-24	28.67	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN01AA0163	13-Mar-24	26.71	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC6389	13-Mar-24	28.55	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01GC2816	15-Mar-24	36.04	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01QC6251	15-Mar-24	39.35	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01QC6241	15-Mar-24	29.57	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AE3855	15-Mar-24	37.99	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC9081	15-Mar-24	32.27	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC5163	15-Mar-24	22.38	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	ML05T6884	15-Mar-24	19.98	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB57C4668	15-Mar-24	23.21	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya

*[Handwritten signature]*

**Dalmia Cement (Bharat) Limited**

Umsa Mootang, Village - Thangskal, PO Lumshnong, District - East Jaintia Hills, 793210 (Meghalaya) India

# Dalmia cement

**FUTURE TODAY**

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Agartala	NL01N2275	16-Mar-24	24.18	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AP39UL8199	19-Mar-24	30.66	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01JC9633	19-Mar-24	27.10	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01DD4146	19-Mar-24	31.16	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL02L1837	19-Mar-24	29.28	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL02N0195	20-Mar-24	29.93	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL02K7195	20-Mar-24	24.62	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB61A6987	21-Mar-24	25.71	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01G7611	21-Mar-24	30.40	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB59D0198	22-Mar-24	27.81	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB61A6609	22-Mar-24	29.11	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB61A7198	23-Mar-24	33.69	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS02CC9952	23-Mar-24	36.33	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS31C0675	23-Mar-24	27.72	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01FC9575	24-Mar-24	23.46	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB65C1987	24-Mar-24	21.30	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB59B3353	25-Mar-24	26.54	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB61B6321	25-Mar-24	23.92	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB271597	25-Mar-24	24.44	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23C4033	25-Mar-24	22.08	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB57C3091	26-Mar-24	33.94	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07A9400	26-Mar-24	37.97	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07AA3033	26-Mar-24	27.47	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN01AA1798	27-Mar-24	26.39	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN019033	27-Mar-24	29.80	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN019570	28-Mar-24	30.63	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN01AA0081	28-Mar-24	32.12	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	UP79T6575	29-Mar-24	37.23	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AF4281	29-Mar-24	29.55	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN03T3049	29-Mar-24	27.78	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN045240	31-Mar-24	26.73	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN01AA0164	31-Mar-24	26.42	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN03T3161	01-Apr-24	24.47	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	JK02AU5477	01-Apr-24	22.01	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya

**Dalmia Cement (Bharat) Limited**

Umso Mootang, Village - Thangskoi, PO Lumshnong, District - East Jaintia Hills, 793210 (Meghalaya) India  
T 91 9612901824/9612895625 Toll Free 1800 2020 W www.dalmiacement.com CIN:U165101TN1996PL0025062

# Dalmia cement

## FUTURE TODAY

Agartala	JK206511	01-Apr-24	22.09	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	PB12Y2210	02-Apr-24	34.55	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS25FC2075	03-Apr-24	34.43	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC7554	03-Apr-24	27.00	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AC1673	03-Apr-24	28.51	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC6389	03-Apr-24	31.33	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AG1481	04-Apr-24	27.24	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01KC0229	05-Apr-24	24.94	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB51B8420	06-Apr-24	24.83	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB51C1238	06-Apr-24	32.01	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL02Q8264	06-Apr-24	27.11	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	BR01GG7908	06-Apr-24	31.43	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	BR25GA2367	06-Apr-24	25.63	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01L0227	06-Apr-24	25.37	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB25G8777	07-Apr-24	23.08	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB61B7515	07-Apr-24	25.29	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	ML04C5649	07-Apr-24	27.14	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	BR01GG4033	07-Apr-24	33.77	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	BR06GD6795	08-Apr-24	36.39	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07AA2899	08-Apr-24	34.34	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC4967	08-Apr-24	28.49	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL02Q9700	09-Apr-24	32.09	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AG7786	11-Apr-24	27.15	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS25AC1269	11-Apr-24	30.10	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07A8810	11-Apr-24	30.48	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN01AA6440	11-Apr-24	23.30	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS25AC1261	11-Apr-24	30.23	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN01AA0163	12-Apr-24	32.07	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN04C0685	13-Apr-24	27.19	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN09B0034	13-Apr-24	25.22	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01DC3499	14-Apr-24	33.38	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AE1083	14-Apr-24	21.07	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB41F3849	14-Apr-24	26.99	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB39B7868	14-Apr-24	24.00	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya

**Dalmia Cement (Bharat) Limited**

Umso Mootang, Village - Thangskai, PO Lumshnong, District - East Jaintia Hills, 792210 (Meghalaya)

# Dalmia cement

**FUTURE TODAY**

cement/ sugar/ refractories/ power

Agartala	WB23E4805	17-Apr-24	28.55	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB916935	17-Apr-24	32.25	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB59C1566	17-Apr-24	27.46	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB916021	17-Apr-24	27.62	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB25F1100	18-Apr-24	26.72	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB25E1413	19-Apr-24	29.56	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB25G2382	19-Apr-24	23.05	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB11C1811	20-Apr-24	23.69	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB11D8351	20-Apr-24	23.12	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB65D7362	20-Apr-24	33.55	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC7554	21-Apr-24	28.89	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB65C3202	21-Apr-24	26.29	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB57C1268	23-Apr-24	23.40	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB57B2725	23-Apr-24	26.01	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB59B3376	24-Apr-24	30.14	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB51C1238	24-Apr-24	36.11	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01NC3457	24-Apr-24	34.22	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC6389	25-Apr-24	35.36	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AG1481	25-Apr-24	25.03	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN019547	27-Apr-24	31.62	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01KC0229	27-Apr-24	36.11	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC9863	28-Apr-24	39.71	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL07AA3033	29-Apr-24	25.77	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01DD2007	29-Apr-24	37.43	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AF4281	29-Apr-24	28.28	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB51A8097	29-Apr-24	25.05	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB51B8420	30-Apr-24	22.97	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB11C6447	30-Apr-24	33.53	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC7368	04-May-24	25.95	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01G7081	04-May-24	26.41	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL02L6700	06-May-24	34.37	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN01AA6440	06-May-24	30.28	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB25J3521	06-May-24	28.98	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	ML04C5649	06-May-24	35.72	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya

Dalmia cement (Bihar)

Authorized Signatory

**Dalmia Cement (Bharat) Limited**

Umso Mootang, Village - Thangskai, PO Lumshnong, District - East Jaintia Hills, 793210 (Meghalaya) India  
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# Dalmia cement

## FUTURE TODAY

cement! sugar! refractories! power!

Agartala	NL07A9400	06-May-24	26.11	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB59B5037	09-May-24	25.90	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB57C1722	09-May-24	24.34	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB65C3075	09-May-24	34.29	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	BR06GD9891	13-May-24	24.26	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB15C3781	13-May-24	28.84	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23E4226	13-May-24	35.62	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB57D3987	18-May-24	26.33	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB271597	19-May-24	27.97	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB59B2580	19-May-24	27.80	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB49N0500	19-May-24	26.14	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01EC7413	20-May-24	37.96	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC9862	21-May-24	34.63	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01PC5163	22-May-24	29.36	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23D6713	23-May-24	31.00	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB931710	23-May-24	26.86	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	PB04AA0867	23-May-24	23.10	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	RJ08GA4926	25-May-24	27.43	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	PB29N9535	25-May-24	24.63	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	PBB04Z0091	27-May-24	22.03	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB29A6276	27-May-24	23.84	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB19G1552	27-May-24	38.66	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	PB04AA8891	27-May-24	27.21	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AD4677	31-May-24	33.89	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AE2877	31-May-24	22.57	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	PB05AP7426	01-Jun-24	21.10	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NL01AE3277	01-Jun-24	29.90	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS26C9977	01-Jun-24	29.52	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23C3164	01-Jun-24	34.30	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23E3823	01-Jun-24	26.86	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB57B5321	01-Jun-24	23.35	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23D7539	04-Jun-24	29.10	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23F6375	04-Jun-24	27.58	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	JK13G9342	05-Jun-24	34.46	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya

Dalmia Cement (Bharat) Limited

Umso Mootang, Village - Thanaskai, PO Lumshnong, District - East Jaintia, Meghalaya

# Dalmia cement

**FUTURE TODAY**

*cement! sugar! refractories! power!*

Agartala	JK05H7360	07-Jun-24	27.23	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	JK13E8777	07-Jun-24	34.10	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NLD1AE2714	10-Jun-24	28.68	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	JK11L8885	10-Jun-24	21.11	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB11C9663	10-Jun-24	30.14	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB65D6810	13-Jun-24	24.10	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23D4895	14-Jun-24	32.65	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	NLD1AD3651	14-Jun-24	31.46	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB57C2525	15-Jun-24	22.87	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB65E0715	15-Jun-24	36.27	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23F6105	15-Jun-24	18.60	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB11C6447	16-Jun-24	39.15	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB53B5973	17-Jun-24	24.97	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23D0261	17-Jun-24	24.90	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB41F4333	19-Jun-24	25.63	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	PBD6V7677	20-Jun-24	29.87	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB49N0500	21-Jun-24	33.13	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB65E0595	21-Jun-24	33.12	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB41G0B27	23-Jun-24	25.17	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23C1395	25-Jun-24	29.17	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB23B9705	25-Jun-24	26.42	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB15C5689	25-Jun-24	21.81	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	WB15C2404	27-Jun-24	33.07	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	AS01MC6389	27-Jun-24	26.66	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
Agartala	MN019457	30-Jun-24	31.37	Refuse Derived Fuel	Dalmia Cement Bharat Limited, Meghalaya
			6512.27		

Dalmia cement (Bharat)

Authorized Signatory

**Dalmia Cement (Bharat) Limited**

Umso Mootang, Village - Thangskoi, PO Lumshnong, District - East Jaintia Hills, 793210 (Meghalaya) India  
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# Qualissure Laboratory Services

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9830093976

DOC NO: QLS/SAMP/08-A/00

## TEST REPORT

<b>Name &amp; Address Of the Customer :</b>	Report No.	: QLS/P-32/24-25/C/03
<b>M/s. Mandy Enterprises</b>	Date	: 28.09.2023
<b>Site And Study Area:</b>	Sample No.	: QLS/P-32/24-25/03
Agartala, Tripura	Sample Description	: Ambient Air
	Date of Performance	: 15.09.2024-27.09.2024
	Ref No. Date	: Verbal Confirmation

## Analysis Result

Location: Near Dumping Yard		Date of sampling: 12.09.2024-13.09.2024		
Sampling Done by: S.Ghosh		Sampling done as per : CPCB Guidelines (Volume-1)		
Environmental Condition : Clear				
Sl. No.	Pollutants	Result	Limit as per-CPCB	Method of Test Reference
1	Particulate matter (PM <sub>10</sub> ) in $\mu\text{g}/\text{m}^3$	134	100	IS: 5182 (Part-23) - (RA-2022)
2	Particulate matter (PM <sub>2.5</sub> ) in $\mu\text{g}/\text{m}^3$	68	60	IS: 5182 (Part-24) - (RA-2024)
3	Sulphur dioxide (SO <sub>2</sub> ) in $\mu\text{g}/\text{m}^3$	7.1	80	IS: 5182 (Part-2)-2001(RA-2023)
4	Nitrogen dioxide (NO <sub>2</sub> ) in $\mu\text{g}/\text{m}^3$	27.3	80	IS: 5182 (Part- 6)-2001 (RA-2017)
5	Carbon Monoxide (CO) in $\mu\text{g}/\text{m}^3$	673	2000	IS: 5182 (Part- 10):RA-2019
6	Ammonia (NH <sub>3</sub> ) in $\mu\text{g}/\text{m}^3$	27.4	400	IS: 5182 (Part- 10):RA-2018
<b>NOTE:</b> Limit as per CPCB notification, New Delhi, 18 <sup>th</sup> November 2009, for Ambient air quality.				

Report Prepared By: *Ch*



for Qualissure Laboratory Services  
Reviewed & Authorized By

*Bishnupriya Banerjee*  
Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

-----End of Report-----



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DOC NO: QLS/SAMP/08-D/00

## TEST REPORT

<b>Name &amp; Address Of the Customer :</b>	Report No.	: QLS/P-32/24-25/C/05
	Date	: 28.09.2024
<b>M/s. Mandy Enterprises</b>	Sample No.	: QLS/P-32/24-25/05
	Sample Description	: Ground Water
<b>Site And Study Area:</b> Agartala, Tripura	Sample Location	: Bore Well-Water
	Sample Drawn On	: 13.09.2024
	Date of Performance(s)	: 15.09.2024-24.09.2024
	Ref No. Date	: Verbal Confirmation

## Analysis Result

### (A) Microbiological Analysis

Sl. No.	Test Parameter	Test Method	Norms as per IS 10500 : 2012(RA 2018) Amd. 2	Result
1.	E.Coli/100ml	IS:15185-2016 (RA 2021)	Not Detectable	Not Detected
2.	Total Coliform Bacteria/100ml	IS:15185-2016 (RA 2021)	Not Detectable	Not Detected

### (B) Chemical Analysis

Sl. No.	Test Parameter	Test Method	IS 10500:2012 (RA 2018) Amd. 1 & 2		Result
			Acceptable Limit	Permissible Limit	
1.	Colour in Hazen Unit	IS 3025 (Part 4): RA 2021	5	15	<5
2.	Temperature in °C	IS 3025 (Part 9)- 1984 RA: 2006	---	---	29.2
3.	pH Value at 25°C	IS 3025 (Part 11): 2022	6.5-8.5	No Relaxation	7.18
4.	Total Suspended Solids (TSS) in mg/l	APHA 24 <sup>th</sup> Edition-2023, 2540D	---	---	4
5.	Total Dissolved Solids (as TDS) in mg/l	IS 3025 (Part 16):	500	2000	412
6.	Bio Chemical Oxygen Demand (BOD) in mg/l	IS 3025 (Part 44)- 1993, RA: 2019	---	---	<2
7.	Conductivity in µS/cm at 25°C	IS 3025 (Part 14)- 1984 RA: 2013	---	---	724
8.	Calcium(as Ca) in mg/l	IS 3025 (Part 40): 1991(RA 2019)	75	200	68.1
9.	Chloride(as Cl) in mg/l	IS 3025 (Part 32): 1988 (RA 2019)	250	1000	80.2
10.	Copper(as Cu) in mg/l	IS 3025 (Part 42): 1992(RA 2019)	0.05	1.5	<0.02
11.	Chemical Oxygen Demand (COD) in mg/l	APHA 24 <sup>th</sup> Edition-2023, 5220B	---	---	<4
12.	Dissolved Oxygen (DO) in mg/l	APHA 24 <sup>th</sup> Edition-2023, 4500-O-C	---	---	3.3
13.	Hexavalent Chromium (as Cr <sup>6+</sup> ) in mg/l	IS 3025 (Part 52): 2014( RA 2019)	---	---	<0.05
14.	Iron (as Fe) in mg/l	IS 3025 (Part 53): 2003(RA 2019)	1.0	No Relaxation	0.24
15.	Magnesium(as Mg) in mg/l	APHA 24 <sup>th</sup> Edition- 2023, 3500 Mg B	30	100	28.5
16.	Nitrate (as NO <sub>3</sub> ) in mg/l	IS 3025 (Part 34): 1988(RA 2019)	45	No Relaxation	0.57
17.	Oil & Grease in mg/l	APHA 24 <sup>th</sup> Edition-2023, 5520B	---	---	<1.4
18.	Phosphate (as PO <sub>4</sub> ) in mg/l	APHA 24 <sup>th</sup> Edition-2023,4500-P-D	---	---	<0.15
19.	Phenolic Compounds(as C <sub>6</sub> H <sub>5</sub> OH) in mg/l	IS 3025 (Part 43): Sec 1, 2022	0.001	0.002	<0.001
20.	Potassium (as K) in mg/l	IS 3025 (Part 45)-1986 (RA: 2019)	---	---	7.8
21.	Selenium(as Se) in mg/l	IS 15303-2003; RA: 2018	0.01	No Relaxation	<0.01
22.	Sodium (as Na) in mg/l	IS 3025 (Part 45)-1986 (RA: 2019)	---	---	48.3
23.	Sulphate (as SO <sub>4</sub> ) in mg/l	IS 3025 (Part 24): Sec 1, 2022	200	400	23.9
24.	Total Alkalinity(as CaCO <sub>3</sub> ) in mg/l	IS 3025 (Part 23): 2023	200	600	248.5
25.	Total Hardness (as CaCO <sub>3</sub> ) in mg/l	IS 3025 (Part 21): 2009(RA 2019)	200	600	289.1
26.	Cadmium(as Cd) in mg/l	IS 3025 (Part 41): 2023	0.003	No Relaxation	<0.002
27.	Lead(as Pb) in mg/l	IS 3025 (Part 47): 1994 (RA 2019)	0.01	No Relaxation	<0.01
28.	Mercury(as Hg) in mg/l	IS 3025 (Part 48): 1994(RA 2019)	0.001	No Relaxation	<0.001
29.	Arsenic(as As) in mg/l	IS 3025 (Part 37): 2022	0.01	0.05	<0.01

Report Prepared By:

*S. Chakraborty*

for Qualissure Laboratory Services  
Reviewed & Authorized By

*S. Chakraborty*  
Soumy Chakraborty, Microbiologist  
(Authorized Signatory)

for Qualissure Laboratory Services  
Reviewed & Authorized By

*Bishnu Priya Banerjee*  
Bishnu Priya Banerjee, Chemist  
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-----End of the Report-----



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DOC NO: QLS/SAMP/08-C/00

## TEST REPORT

<b>Name &amp; Address Of the Customer :</b>	Report No.	: QLS/P-32/24-25/C/06
<b>M/s. Mandy Enterprises</b>	Date	: 28.09.2024
<b>Site And Study Area:</b>	Sample No.	: QLS/P-32/24-25/06
<b>Agartala, Tripura</b>	Sample Description	: Legacy Waste
	Date of Sample Collection	: 13.09.2024
	Date of Performance	: 15.09.2024-27.09.2024
	Ref No. Date	: Verbal Confirmation

## Analysis Result

### (A) Chemical Analysis

Sl. No.	Test Parameter	Result	Test Method
1	Moisture at 105°C in %	17.2	IS 1350 (P-1) : 1984
2	Gross Calorific Value (GCV) in Kcal/kg	1031	IS 1350 (P-2) : 1975
3	Ash Content at 805°C in %	28.9	IS 1350 (P-1) 1984
4	Volatile Matter in %	26.3	IS 1350 (P-1) 1984
5	Inorganic Carbon at 550°C in %	14.8	APHA 24 <sup>th</sup> Edition, 2023, Sec:2540 G
6	Carbon in %	27.6	IS 1350 (P-4) 1975
7	Organic Carbon in %	12.8	APHA 24 <sup>th</sup> Edition, 2023, 2540 G
8	Bulk Density (Kg/ m <sup>3</sup> )	792	IS 2386 (Part 2)-1963

Report Prepared By: *Ch*



for Qualissure Laboratory Services  
Reviewed & Authorized By

*Bishnupriya Banerjee*  
Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

-----End of Report-----



# Qualissure Laboratory Services

361, Prantick Pally,  
45/361, Bose Pukur Road,  
Kolkata - 700107  
Email : qualissure@gmail.com  
Mob. No. : 9831287086  
9830093976

DOC NO: QLS/SAMP/08-C/00

## TEST REPORT

<b>Name &amp; Address Of the Customer :</b> M/s. Mandy Enterprises	Report No. : QLS/P-32/24-25/C/04
<b>Site And Study Area:</b> Agartala, Tripura	Date : 28.09.2023
	Sample No. : QLS/P-32/24-25/04
	Sample Description : Noise Monitoring
	Date of Performance : 15.09.2024-18.09.2024
	Ref No. Date : Verbal Confirmation

## Monitoring Result of Noise

Sampling Done By: S. Ghosh				
Sampling Guideline : As per IS: 9989: 1981 (RA-2020)				
Sample No.	Date of Monitoring	Location	Leg dB (A) Day Time	Leq dB (A) Night Time
04	12.09.2024	Near Dumping Yard	63.8	48.1
Code/ Category	Leq dB Day Time(A)	Leq dB Night Time(A)	<b>NOTE:</b> Day Time : 06.00 Hr. – 22.00 Hr. Night Time : 22.00 Hr. – 06.00 Hr.	
A/Industrial	75	70		
B/Commercial	65	55		
C/Residential	55	45		
D/Ecological Sensitive	50	40		

Report Prepared By: *Ch*



for Qualissure Laboratory Services  
Reviewed & Authorized By

*Bishnupriya*  
Bishnupriya Banerjee, Chemist  
(Authorized Signatory)

-----End of Report-----

F.NO. 12(16)-REV/FLOOD/2024 ~~X2~~

R-9

GOVERNMENT OF TRIPURA

(RELIEF REHABILITATION AND DISASTER MANAGEMENT DEPARTMENT)

Dated, Agartala, the 27<sup>th</sup> August, 2024MEMORANDUM

The State of Tripura has witnessed unprecedented floods, causing loss of human lives and extensive damage, destruction and loss of both public and public infrastructures & properties. As on date, as much as 31 persons have died, 2 are injured and 1 is reportedly missing. The preliminary estimates suggest a loss to the tune of Rs. 15,000 crores due to damages on account of recent floods.

2. Considering the gravity of the situation, leading to loss of human lives and damage to public and private properties, the State Executive Committee (SEC) of Tripura Disaster Management Authority (TDMA) under the chairmanship of the Chief Secretary in its meeting held on 24<sup>th</sup> August, 2024, has decided to declare the entire state as "**Natural Calamity Affected Area**".

3. Accordingly, whole State of Tripura is notified as "**Natural Calamity Affected Area**" due to recent unprecedented floods.



(Brijesh Pandey)

Secretary

Relief, Rehabilitation and Disaster  
Management  
Government of Tripura

Copy to:

1. The Secretary to His Excellency the Governor of Tripura for kind information of the Hon'ble Governor.
2. The Secretary to Hon'ble Chief Minister for kind information of the Hon'ble Chief Minister.
3. All Ministers, Government of Tripura for kind information
4. The AG, Tripura for kind information
5. All Secretaries/Special Secretaries for information
6. All DM & Collectors for information

## TAX INVOICE

~~X3~~

R-10

<b>Mandy Enterprises</b> F/F,W-8,Block-42,Right Side ,Main Patel Nagar West Patel Nagar, West Delhi GSTIN/UIN: 07AZUPB4139J1Z2 State Name : Delhi, Code : 07	Invoice No. <b>MD/24-25/EXMP/27</b>	Dated <b>1-Feb-25</b>
Consignee (Ship to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16	Delivery Note	Mode/Terms of Payment
Buyer (Bill to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16	Buyer's Order No.	Dated
	Dispatch Doc No.	Delivery Note Date
	Dispatched through	Destination
	Terms of Delivery	

Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE -EXEMPTED</b> 01.01.2025 TO 31.01.2025	999433	15,382.010 MT	873.00	MT	1,34,28,494.73
	<b>ROUND OFF</b>					0.27
Total			15,382.010 MT			₹ 1,34,28,495.00

Amount Chargeable (in words) **INR One Crore Thirty Four Lakh Twenty Eight Thousand Four Hundred Ninety Five Only**  
E. & O.E

HSN/SAC	Taxable Value
999433	1,34,28,494.73
Total	1,34,28,494.73

Tax Amount (in words) : **NIL**

## Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Mandy Enterprises  
**For MANDY ENTERPRISES**

Authorised Signatory

This is a Computer Generated Invoice

Authorised Signatory

## TAX INVOICE

<b>Mandy Enterprises</b> F/F,W-8,Block-42,Right Side ,Main Patel Nagar West Patel Nagar,West Delhi GSTIN/UIN: 07AZUPB4139J1Z2 State Name : Delhi, Code : 07		Invoice No. <b>MD/24-25/EXMP/23</b>	Dated <b>2-Jan-25</b>
Consignee (Ship to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16		Delivery Note	Mode/Terms of Payment
Buyer (Bill to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16		Buyer's Order No.	Dated
		Dispatch Doc No.	Delivery Note Date
		Dispatched through	Destination
		Terms of Delivery	

Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE-EXEMPTED</b> 16.12.2024 TO 31.12.2024  <p style="text-align: center;"><b>ROUND OFF</b></p>	999433	17,400.561 MT	873.00	MT	1,51,90,689.75
						<b>0.25</b>
Total			17,400.561 MT			₹ 1,51,90,690.00

Amount Chargeable (in words) **INR One Crore Fifty One Lakh Ninety Thousand Six Hundred Ninety Only** E. & O.E

HSN/SAC	Taxable Value
999433	1,51,90,689.75
Total	1,51,90,689.75

Tax Amount (in words) : **NIL**

Declaration  
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

**For MANDY ENTERPRISES**

Authorised Signatory

This is a Computer Generated Invoice

Authorised Signatory

**TAX INVOICE**

<b>Mandy Enterprises</b> F/F,W-8,Block-42,Right Side ,Main Patel Nagar West Patel Nagar,West Delhi GSTIN/UIN: 07AZUPB4139J1Z2 State Name : Delhi, Code : 07	Invoice No. <b>MD/24-25/EXMP/22</b>	Dated <b>19-Dec-24</b>
	Delivery Note	Mode/Terms of Payment
Consignee (Ship to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16	Buyer's Order No.	Dated
	Dispatch Doc No.	Delivery Note Date
Buyer (Bill to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16	Dispatched through	Destination
	Terms of Delivery	

Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE -EXEMPTED</b> 18.11.24 TO 15.12.24- 18465.160 MT's  <p style="text-align: center;"><i>ROUND OFF</i></p>	999433	18,465.160 MT	873.00	MT	1,61,20,084.68
						0.32
Total			18,465.160 MT			₹ 1,61,20,085.00

Amount Chargeable (in words) **INR One Crore Sixty One Lakh Twenty Thousand Eighty Five Only** E. & O.E

HSN/SAC	Taxable Value
999433	1,61,20,084.68
<b>Total</b>	<b>1,61,20,084.68</b>

Tax Amount (in words) : **NIL**

Declaration  
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

**For MANDY ENTERPRISES**  
  
 Authorised Signatory

This is a Computer Generated Invoice

Authorised Signatory



## TAX INVOICE

<b>Mandy Enterprises</b> F/F,W-8,Block-42,Right Side ,Main Patel Nagar West Patel Nagar,West Delhi GSTIN/UIN: 07AZUPB4139J1Z2 State Name : Delhi, Code : 07		Invoice No. <b>MD/24-25/EXMP/11</b>	Dated <b>19-Nov-24</b>			
		Delivery Note	Mode/Terms of Payment			
		Buyer's Order No.	Dated			
Consignee (Ship to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16		Dispatch Doc No.	Delivery Note Date			
		Dispatched through	Destination			
		Terms of Delivery				
Buyer (Bill to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16						
Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE-EXEMPTED</b> 24.10.24 TO 31.10.24- 1878.470 01.11.24 TO 17.11.24-12188.700  Less: <b>ROUND OFF</b>	999433	14,067.170 MT	873.00	MT	1,22,80,639.41
Total			14,067.170 MT			₹ 1,22,80,639.00
Amount Chargeable (in words) <b>INR One Crore Twenty Two Lakh Eighty Thousand Six Hundred Thirty Nine Only</b>						E. & O.E
HSN/SAC						
999433						Taxable Value
						1,22,80,639.41
Tax Amount (in words) : <b>NIL</b>						Total 1,22,80,639.41
Declaration We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.		<b>For MANDY ENTERPRISES</b> For Mandy Enterprises  Authorised Signatory				

This is a Computer Generated Invoice

~~XX~~  
**TAX INVOICE**

**Mandy Enterprises**  
F/F, W-8, Block-42, Right Side, Main Patel Nagar  
West Patel Nagar, West Delhi  
GSTIN/UIN: 07AZUPB4139J1Z2  
State Name : Delhi, Code : 07

Invoice No.  
**MD/24-25/EXMP/03**  
Delivery Note

Dated  
**11-Jun-24**  
Mode/Terms of Payment

Consignee (Ship to)

Reference No. & Date.

Other References

**AGARTALA MUNICIPAL CORPORATION**

Buyer's Order No.

Dated

AGARTALA TRIPURA

Dispatch Doc No.

Delivery Note Date

GSTIN/UIN : 16AAALA1311N1ZJ

State Name : Tripura, Code : 16

Dispatched through

Destination

Buyer (Bill to)

**AGARTALA MUNICIPAL CORPORATION**

Terms of Delivery

AGARTALA TRIPURA

GSTIN/UIN : 16AAALA1311N1ZJ

State Name : Tripura, Code : 16

Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	PROCESSING OF LEGACY WASTE- EXEMPTED 01.05.2024 TO 31.05.2024	999433	15,168.000 MT	873.00	MT	1,32,41,664.00
Total			15,168.000 MT			₹ 1,32,41,664.00

Amount Chargeable (in words)

**INR One Crore Thirty Two Lakh Forty One Thousand Six Hundred Sixty Four Only**

E. & O.E

HSN/SAC	Taxable Value
999433	1,32,41,664.00
<b>Total</b>	<b>1,32,41,664.00</b>

Tax Amount (in words) : **NIL**

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Mandy Enterprises  
**For MANDY ENTERPRISES**

Authorised Signatory

Authorised Signatory

This is a Computer Generated Invoice



**TAX INVOICE**

**Mandy Enterprises**  
 F/F, W-8, Block-42, Right Side, Main Patel Nagar  
 West Patel Nagar, West Delhi  
 GSTIN/UIN: 07AZUPB4139J1Z2  
 State Name : Delhi, Code : 07  
 Consignee (Ship to)

Invoice No. **MD/24-25/EXMP/02**  
 Delivery Note  
 Dated **3-May-24**  
 Mode/Terms of Payment

**AGARTALA MUNICIPAL CORPORATION**  
 AGARTALA TRIPURA  
 GSTIN/UIN : 16AAALA1311N1ZJ  
 State Name : Tripura, Code : 16

Reference No. & Date. Other References

Buyer (Bill to)  
**AGARTALA MUNICIPAL CORPORATION**  
 AGARTALA TRIPURA  
 GSTIN/UIN : 16AAALA1311N1ZJ  
 State Name : Tripura, Code : 16

Buyer's Order No. Dated

Dispatch Doc No. Delivery Note Date

Dispatched through Destination

Terms of Delivery

Sl No	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE- EXEMPTED</b> 01.04.2024 TO 30.04.2024	999433	40,307.817 MT	873.00	MT	3,51,88,724.24
	Less: <b>ROUND OFF</b>					(-)0.24

Amount Chargeable (in words) Total **40,307.817 MT** ₹ **3,51,88,724.00**

**INR Three Crore Fifty One Lakh Eighty Eight Thousand Seven Hundred Twenty Four Only**  
 HSN/SAC

999433	Taxable Value	3,51,88,724.24
	Total	3,51,88,724.24

Tax Amount (in words) : **NIL**

Declaration  
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Mandy Enterprises  
**For MANDY ENTERPRISES**  
 Authorised Signatory  
 Authorised Signatory

This is a Computer Generated Invoice

## TAX INVOICE

<b>Mandy Enterprises</b> F/F, W-8, Block-42, Right Side, Main Patel Nagar West Patel Nagar, West Delhi GSTIN/UIN: 07AZUPB4139J1Z2 State Name : Delhi, Code : 07 Consignee (Ship to)		Invoice No. <b>MD/24-25/EXMP/01</b> Delivery Note	Dated <b>1-Apr-24</b> Mode/Terms of Payment			
<b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16 Buyer (Bill to)		Reference No. & Date. Buyer's Order No.	Other References Dated			
<b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16		Dispatch Doc No. Dispatched through	Delivery Note Date Destination			
		Terms of Delivery				
SI No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE-EXEMPTED</b> 21.03.2024 TO 31.03.2024- 13207.135 MT	999433	13,207.135 MT	873.00	MT	1,15,29,828.86
	Less :					ROUND OFF (-)0.86
Total			13,207.135 MT			₹ 1,15,29,828.00
Amount Chargeable (in words) <b>INR One Crore Fifteen Lakh Twenty Nine Thousand Eight Hundred Twenty Eight Only</b> E. & O.E						
HSN/SAC						Taxable Value
999433						1,15,29,828.86
Total						1,15,29,828.86
Tax Amount (in words) : <b>NIL</b> Declaration. We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.						
For Mandy Enterprises <b>FOR MANDY ENTERPRISES</b> Authorised Signatory Authorised Signatory						

This is a Computer Generated Invoice

Authorised Signatory

## TAX INVOICE

<b>Mandy Enterprises</b> F/F,W-8,Block-42,Right Side ,Main Patel Nagar West Patel Nagar,West Delhi GSTIN/UIN: 07AZUPB4139J1Z2 State Name : Delhi, Code : 07		Invoice No. <b>MD/23-24/EXMP/15</b>	Dated <b>22-Mar-24</b>
Consignee (Ship to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16		Delivery Note	Mode/Terms of Payment
Buyer (Bill to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16		Reference No. & Date.	Other References
		Buyer's Order No.	Dated
		Dispatch Doc No.	Delivery Note Date
		Dispatched through	Destination
		Terms of Delivery	

Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE- EXEMPTED</b> 01.03.2024 TO 20.03.2024- 30976.980 MT	999433	30,976.980 MT	873.00	MT	2,70,42,903.54
	Less: <b>ROUND OFF</b>					(-)0.54
Total			30,976.980 MT			₹ 2,70,42,903.00

Amount Chargeable (in words) **INR Two Crore Seventy Lakh Forty Two Thousand Nine Hundred Three Only.** E. & O.E

HSN/SAC	Taxable Value
999433	2,70,42,903.54
Total	2,70,42,903.54

Tax Amount (in words) : **NIL**

Remarks:  
 PROCESSING OF LEGACY WASTE FOR THE PERIOD OF 01.03.2024 TO 20.03.2024 AT D.C NAGAR

Declaration  
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Mandy Enterprises  
**For MANDY ENTERPRISES**  
 Authorised Signatory

This is a Computer Generated Invoice

Authorised Signatory

## TAX INVOICE

**Mandy Enterprises**  
 F/F,W-8,Block-42,Right Side ,Main Patel Nagar  
 West Patel Nagar,West Delhi  
 GSTIN/UIN: 07AZUPB4139J1Z2  
 State Name : Delhi, Code : 07

Invoice No.  
**MD/23-24/EXMP/14**

Dated  
**14-Mar-24**

Delivery Note

Mode/Terms of Payment

Reference No. & Date.

Other References

Buyer's Order No.

Dated

Dispatch Doc No.

Delivery Note Date

Dispatched through

Destination

Terms of Delivery

Consignee (Ship to)

**AGARTALA MUNICIPAL CORPORATION**  
**AGARTALA TRIPURA**

GSTIN/UIN : 16AAALA1311N1ZJ

State Name : Tripura, Code : 16

Buyer (Bill to)

**AGARTALA MUNICIPAL CORPORATION**  
**AGARTALA TRIPURA**

GSTIN/UIN : 16AAALA1311N1ZJ

State Name : Tripura, Code : 16

Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE-EXEMPTED</b> FEB-36568.216 MT	999433	36,568.216 MT	873.00	MT	3,19,24,052.57
	Less: <b>ROUND OFF</b>					(-).057
	<b>Total</b>		36,568.216 MT			₹ 3,19,24,052.00

Amount Chargeable (in words)

**INR Three Crore Nineteen Lakh Twenty Four Thousand Fifty Two Only**

E. & O.E

HSN/SAC	Taxable Value
999433	3,19,24,052.57
<b>Total</b>	<b>3,19,24,052.57</b>

Tax Amount (in words) : **NIL**

Remarks:

**PROCESSING OF LEGACY WASTE FOR THE PERIOD OF FEBRUARY 2024 AT D.C NAGAR**

Declaration

We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

**For MANDY ENTERPRISES**

Authorised Signatory

This is a Computer Generated Invoice

Authorised Signatory

## TAX INVOICE



<b>Mandy Enterprises</b> F/F, W-8, Block-42, Right Side, Main Patel Nagar West Patel Nagar, West Delhi GSTIN/UID: 07AZUPB4139J1Z2 State Name : Delhi, Code : 07	Invoice No.	Dated
	MD/23-24/EXMP/13	12-Feb-24
Consignee (Ship to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UID : 16AAALA1311N1ZJ State Name : Tripura, Code : 16	Delivery Note	Mode/Terms of Payment
	Reference No. & Date.	Other References
Buyer (Bill to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UID : 16AAALA1311N1ZJ State Name : Tripura, Code : 16	Buyer's Order No.	Dated
	Dispatch Doc No.	Delivery Note Date
	Dispatched through	Destination
	Terms of Delivery	

Sl No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	PROCESSING OF LEGACY WASTE- EXEMPTED JAN- 27267.453 MT	999433	27,267.453 MT	873.00	MT	2,38,04,486.47
	Less :  <b>ROUND OFF</b>					<b>(-)0.47</b>
	Total		27,267.453 MT			₹ 2,38,04,486.00

Amount Chargeable (in words) **INR Two Crore Thirty Eight Lakh Four Thousand Four Hundred Eighty Six Only** E. & O.E

HSN/SAC	Taxable Value
999433	2,38,04,486.47
Total	2,38,04,486.47

Tax Amount (in words) : **NIL**  
 Remarks:  
 PROCESSING OF LEGACY WASTE FOR THE PERIOD  
 OF JANUARY 2024 AT D.C NAGAR

Declaration  
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Mandy Enterprises  
**For MANDY ENTERPRISES**  
 Authorised Signatory

This is a Computer Generated Invoice

Authorised Signatory

## TAX INVOICE

<b>Mandy Enterprises</b> F/F,W-8,Block-42,Right Side ,Main Patel Nagar West Patel Nagar,West Delhi GSTIN/UIN: 07AZUPB4139J1Z2 State Name : Delhi, Code : 07		Invoice No. <b>MD/23-24/EXMP/11</b>	Dated <b>6-Jan-24</b>
Consignee (Ship to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16		Delivery Note	Mode/Terms of Payment
Buyer (Bill to) <b>AGARTALA MUNICIPAL CORPORATION</b> AGARTALA TRIPURA GSTIN/UIN : 16AAALA1311N1ZJ State Name : Tripura, Code : 16		Reference No. & Date.	Other References
		Buyer's Order No.	Dated
		Dispatch Doc No.	Delivery Note Date
		Dispatched through	Destination
		Terms of Delivery	

SI No.	Description of Services	HSN/SAC	Quantity	Rate	per	Amount
1	<b>PROCESSING OF LEGACY WASTE-EXEMPTED</b> NOV- 8195.073 MT DEC- 11892.961 MT	999433	20,088.034 MT	873.00	MT	1,75,36,853.68
	<b>Round Off</b>					0.32
<b>Total</b>			20,088.034 MT			<b>₹ 1,75,36,854.00</b>

Amount Chargeable (in words) E. & O.E  
**INR One Crore Seventy Five Lakh Thirty Six Thousand Eight Hundred Fifty Four Only**

HSN/SAC	Taxable Value
999433	1,75,36,853.68
<b>Total</b>	<b>1,75,36,853.68</b>

Tax Amount (in words) : **NIL**

Remarks:  
 PROCESSING OF LEGACY WASTE FOR THE PERIOD OF NOVEMBER 2023 AND DECEMBER 2023 AT D.C NAGAR

Declaration  
 We declare that this invoice shows the actual price of the goods described and that all particulars are true and correct.

for Mandy Enterprises  
**For MANDY ENTERPRISES**  
 Authorised Signatory 

This is a Computer Generated Invoice

Authorised Signatory



Bank of Baroda

जेल अश्रम शाखा, अगरतला - 791001  
JAIL ASHRAM BRANCH, AGARTALA - 791001  
RTGS / NEFT IFSC CODE : BARB0DALTR

जारी की गई तिथि से तीन माह के लिए ही / Valid only for three months from the date of issue

CBS 18012025

बचत खाता SAVINGS ACCOUNT

Pay Mandy Enterprises  
Rupees रुपये Three/crore/fifty/eight/thousand/three/hundred/forty/one/only -  
अंश करें ₹ 3,00,58,344/-

24340100004951

15940000104342

Under Rupees 30058345/-

Municipal Commissioner (E. C. Chakraborty)  
Agartala Municipal Corporation  
AGARTALA  
Agartala Municipal Corporation

\*009512\* 2990120031 004951\* 31





**Bank of Baroda** जैल अश्रम शाखा, अगर्ताला - 799001  
 JAIL ASHRAM BRANCH, AGARTALA - 799001  
 RTGS / NEFT IFSC CODE : BARB00DALTRI

करी की गई तारीख से तीन माह के लिए वैध / VALID FOR THREE MONTHS FROM THE DATE OF ISSUE

CBS 06 07 20 24  
 D D M M Y Y Y Y

बचत खाता SAVINGS ACCOUNT

Pay **Mrs. Mandy Enterprises** or Bearer

Rupees रुपये One thousand seven hundred and ninety eight only - अदा करें ₹ 1,27,11,999/-

AN No. 24340100004951 15940000104342

SB/2024/UF

भारत की सभी शाखाओं पर समतुल्य पर देय  
 Payable at par at all branches in India

Under Rupees 1,27,11,999/-

Municipal Commissioner (E. C. Chakraborty)  
 Agartala Municipal Corporation  
 AGARTALA

⑈008939⑈ 799012003⑈ 004951⑈ 31

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जेल आश्रम शाखा - अगरतला - 799001  
JAIL ASHRAM BRANCH, AGARTALA - 799001  
RTGS / NEFT IFSC CODE - BARBODALTRI

जारी की गई तारीख से तीन महीने के लिए वैध / VALID FOR THREE MONTHS FROM THE DATE OF ISSUE

CBS 29/05/2024

बचत खाता SAVINGS ACCOUNT

Pay Mandy Enterprises, or Bearer

Rupees रुपये Three crore thirty seven lakh eighty one thousand या धारक को

one hundred seventy six only - अदा करें ₹ 337,81,76/-

UNIVERSAL BANKING CORPORATION

EP No. 24340100004951

15940000104342

Und. Rupees 337,81,76/-

*(Signature)*  
Municipal Commissioner (Er. C. Chakraborty)  
Agartala Municipal Corporation  
AGARTALA

*(Signature)*  
AGARTALA MUNICIPAL CORPORATION  
E.E. (MIS) B.O.  
Agartala Municipal Corporation

68/2024/JF  
भारत की सभी शाखाओं पर समान्य पर देय  
Payable at par at all branches in India DALTRI

⑈008824⑈ 799012003⑈ 004951⑈ 3⑈

8X

Bank of Baroda  
श्री ॐ वड़ोदा

जेल अश्रम शाखा, अगरतला - 791001  
JAIL ASHRAM BRANCH, AGARTALA - 791001  
RTGS / NEFT IFSC CODE : BARB0DALTRI

वारी ती महें तारीख वी अंतत मज्जे कें दिने दिव / VALID FOR THREE MONTHS FROM THE DATE OF ISSUE  
CBS 22042024  
बचत खाता SAVINGS ACCOUNT

Pay **Mandy Enterprises,** or Be.

Rupees रुपये	Three crore Seventy lakh Twenty nine thousand	या धारक
	Eight hundred Twenty two only	अदा करे
	₹	37,029,822

15940000104342

24340100004951

Under Rupees 37,029,822/-

Municipal Commissioner (Er. C. Chakrabarti)  
Agartala Municipal Corporation  
AGARTALA  
AGARTALA MUNICIPAL CORPORATION  
E.E. (Tech) E.O.C.  
Agartala Municipal Corporation

SB/2024/JF

भारत की सभी शाखाओं पर समान रूप पर देना  
Payable at par at all branches in India | DALTRI

⑈008745⑈ 7990120031 004951⑈ 31



जेल अश्रम रास्ता, अगर्ता - 792001  
JAIL, ASHRAM (BRANCH) AGARTALA - 792001  
RTGS / NEFT IFSC CODE : BARB0DALTR

वारी की गई तारीख से तीन माह की लिए 30% / VALID FOR THREE MONTHS FROM THE DATE OF ISSUE

CBS 16/03/2024  
D O M M Y Y Y Y

बचत खाता SAVINGS ACCOUNT

Pay **Mrs. Mandy Enterprises** or Bearer  
Rupees रुपये **Three crore Six lakh forty Seven thousand ninety**  
अदा करें ₹ **30,647,090/-**

24340100004951

15940000104342

SB/2024/JP

Under Rupees **30647091/-**  
Payable at par at all branches in India | DALTRI

*(Signature)*  
Municipal Commissioner AGARTALA  
Agartala Municipal Corporation AGARTALA  
E.E. (Mech) & D.D.O.  
Agartala Municipal Corporation

⑈008668⑈ ⑈999012003⑈ 004951⑈ 3⑈



**Bank of Baroda**  
 Pay to the order of **Mandy - Annaprasanna**  
 Rupees **Two crore Twenty eight lakh Fifty Two thousand** only  
 Three hundred Six only -  
 24340100004951      15940000104342      ₹ 22,85,23,07/-  
 Date: 21/02/2024

Under Rupee **22852307/-**  
 Payable at any of our branches in India

*(Signature)*  
 Municipal Commissioner  
 Agartala Municipal Corporation  
 AGARTALA  
*(Signature)*  
 (Er. C. Chakraborty)  
 E.E. (Mech) & D.D.O.  
 Agartala Municipal Corporation

⑈008590⑈ 799012003⑈ 004951⑈ 3⑈

BANK :- HDFC Bank  
 BRANCH :- West Patel nagara, Delhi  
 A/C NO :- 50200070800474  
 IFSE-CODE :- HDFC0004400

*(Signature)*  
 (Er. C. Chakraborty)  
 E.E. (Mech) & D.D.O.  
 Agartala Municipal Corporation

(*Signature*)  
 (Dr. Sharesh K. Yadav, IAS)  
 Municipal Commissioner  
 Agartala Municipal Corporation

**VAKALATNAMA**  
 National Green Tribunal  
 Eastern Zone Bench, Kolkata

O.A.No. 97 /2022 /EZ

Subrata Debnath

Applicant  
 Appellant/Petitioner

-Versus-

The State of Tripura & Ors

Respondents

Vakalatnama on behalf of the Respondent No.5

Known all men by these presents that by this Vakalatnama, I/We appoint the Advocate noted below as my/our lawful Advocate for filling the memorandum of appeal or petition or entering appearance in my/our behalf in the above matter for appearing conducting and arguing the same for depositing or withdrawing any money in connection therewith for moving the Court in any matter connected therewith, for preparing the paper book in the case and for putting in papers, petitions, etc. On my/our behalf for filing, taking back any documents for withdrawing suits or appeals or petitions with permission to institute fresh suit etc. For signing and filing petitions of compromise in connections with the said matter and for taking copies of paper from the record and I/We further say that any act done by my/our said Advocate after accepting this Vakalatnama, shall be considered as my/our own true and lawful act.

And I/We further hereby agree and undertake to pay the said Advocate his fees as settled and all others sums that may be necessary to carry out the requisitions of the Court and otherwise to enable the said Advocate to conduct the case properly, failing which the said Advocate after notice to me/us will be at liberty to withdraw from further conducting the case.

IN WITNESS WHEREOF I/We sign and execute this Vakalatnama on this the 5<sup>th</sup> day of February, 2025

Name of Advocate

**Shirsho Banerjee**

Advocate, High Court at Calcutta

5, Shyamananda Road, Kolkata: 700 025

9836231551; [shirshobanerjeeatwork@gmail.com](mailto:shirshobanerjeeatwork@gmail.com)

Enrolment No: F/2746/1517/2024

Received the Vakalatnama from the executant,  
 satisfied and accepted.

(*Signature*)  
 Advocate



Shirsho Banerjee &lt;shirshobanerjeeatwork@gmail.com&gt;

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**SERVICE OF STATUS REPORT IN OA 97/2022/EZ [Subrata Debnath Vs. The State of Tripura & Ors.]**

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Shirsho Banerjee &lt;shirshobanerjeeatwork@gmail.com&gt;

Wed, Mar 5, 2025 at 10:09 AM

To: Dipankar Saha &lt;dipankarsaha.advocate@gmail.com&gt;

To,  
Mr. Dipankar Saha  
Advocate for the Petitioner  
10, Old Post Office Street,  
Fourth Floor, Room No. 105  
Kolkata – 700 001.  
Mobile No: 98310-50830  
Email: [dipankarsaha.advocate@gmail.com](mailto:dipankarsaha.advocate@gmail.com)

**Re: OA 97/2022/EZ  
Subrata Debnath  
Vs.  
The State of Tripura & Ors.**

\*\*\*\*\*

My client: The Municipal Commissioner, Agartala Municipal Corporation  
[Respondent No. 5]

Your client: Subrata Debnath

Sir,

- 1]** I represent the above named respondent no. 5, in the above disposed of original application before the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata.
- 2]** A copy of the Status Report - cum - Affidavit of compliance, with its annexures is attached with this mail in conformance to the order dated 09/02/2023 of the Hon'ble National Green Tribunal, Eastern Zone Bench, Kolkata.
- 3]** The status report is self-explanatory. Kindly acknowledge receipt.

Encl: As stated

Regards,  
Shirsho Banerjee  
Advocate for the Respondent no. 5

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 **AMC COMPLIANCE AFFIDAVIT.pdf**  
8558K