

NO.606/PPCC/NGT/SMR/MS/2022  
GOVERNMENT OF PUDUCHERRY

\*\*\*

Puducherry, dated 18.07.2021,

To

The Hon'ble National Green Tribunal  
Principal Bench,  
New Delhi.

Sir,

Sub: Submission of the third Six Month's Progress Report on Solid and Liquid waste management in the U.T. of Puducherry – Reg.

Ref: Order of Hon'ble NGT dated 24.11.2022 in O.A. No. 606 of 2018.

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In compliance with the Hon'ble National Green Tribunal, Principal Bench, order dated 24.11.2022 in Original Application No. 606/2018, the third Six Month's Progress Report on Solid and Liquid waste management in the U.T. of Puducherry is enclosed for kind perusal.

Yours faithfully,



(Dr. Sharat Chauhan, I.A.S.)  
Chief Secretary



**THIRD SIX MONTHLY PROGRESS REPORT ON COMPLIANCE OF  
HON'BLE DIRECTION DATED 25.01.2024 IN ORIGINAL  
APPLICATION NO. 606 OF 2018**



**Submitted by  
Chief Secretary, Government of Puducherry  
July, 2024**

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**GOVERNMENT OF PUDUCHERRY**  
**DEPARTMENT OF SCIENCE TECHNOLOGY AND ENVIRONMENT**

**Introduction**

The Hon'ble National Green Tribunal (PB) in its order dated 24.11.2022 in OA. No. 606 of 2018, directed the U.T. of Puducherry to submit six month's progress report on solid and liquid waste management.

The first six month's progress report was filed on 08.06.2023 and the second six month's progress report was filed on 23.01.2024.

The Hon'ble NGT reviewed the progress in the solid waste and the sewage management in the U.T. of Puducherry during its last hearing on 25.01.2024. The hearing was attended by the Finance Secretary, the Secretary Environment, the Secretary PWD, the Secretary (LA), the Director (Env't), the Director LAD, the Chief Engineer, PWD and the Member Secretary (PPCC) in virtual mode.

The details of the order of the Hon'ble NGT dt. 25.01.2024 and the updated compliance status as on 30.06.2024 on the legacy waste disposal, solid waste processing, bridging the gap in sewage treatment, utilization of the treated sewage, performance of the existing STPs and details of the ring fenced fund have been presented in this third six monthly progress report.

## Direction of Hon'ble NGT

In the order dated 25.01.2024, the Hon'ble NGT has directed that the next compliance report shall include the following.

| Sl. No | Direction of the Hon'ble NGT in the Order dt. 25.01.2024   | Submission of the Government of Puducherry  |
|--------|--|---|
| 1      | Completion of Gap of 300 TPD of solid waste (for Puducherry) for waste processing and no legacy waste shall be added thereafter in all the four regions of UT. | A processing facility with 400 TPD has commenced the processing with effect from 01.02.2024. As on date, there is no scope for accumulation of legacy waste.  |
| 2      | Completing remediation of 3,45,873 MT legacy waste at Puducherry, Karaikal and Yanam.  | Out of 3,45,873 MT of legacy waste, 3,11,966 MT of legacy has been bio-mined. The remaining 33,907 MT of legacy waste will be bio-mined & remediated by 15 <sup>th</sup> August 2024.   |
| 3      | Operationalisation of new STPs to treat 32 MLD of sewage and providing compliance results of existing STPs of 56 MLD.  | The construction of 15 MLD STP in Puducherry and 11 MLD STP in Karaikal have been commenced and it will be completed by March 2025. The construction of STP in Mahe and Yanam will be commenced after the tendering process gets completed.<br><br>Three STPs of 17 MLD capacity meet the Hon'ble NGT prescribed discharge standards. 2 STP of UASB are not |

| Sl. No | Direction of the Hon'ble NGT in the Order dt. 25.01.2024   | Submission of the Government of Puducherry  |
|--------|--|---|
|        |  | meeting the standards. Online Continuous Monitoring Systems have been installed in all the three STPs.  |
| 4      | Details of Ring-fencing of Rs 178.92 crores in a separate account for utilising solid and liquid waste management. | <p>An amount of Rs. 48.27 Cr was sanctioned by Government of Puducherry for disposal of legacy waste and was utilized completely.</p> <p>An amount of Rs. 50.44 Cr was sanctioned by Government of Puducherry for processing of solid waste and was utilized completely.</p> <p>For construction of four STPs, an amount of Rs. 50.65 Cr was sanctioned under AMRUT 2 and an amount of Rs. 17.22 Cr was sanctioned under SBM2 by Government of India. An amount of Rs. 12.78 Cr was supplemented by Government of Puducherry. (Rs. 50.65 Cr + Rs. 17.22 Cr + Rs. 12.78 Cr = Rs. 80.65).</p> <p>(Total - Rs. 48.27 Cr + Rs. 50.44 Cr + Rs. 80.65 Cr = Rs. 178.92 Cr)</p> |

## Observation of Hon'ble NGT

The observation made by the Hon'ble NGT in the order dated 25.01.2024 and the detailed reply are furnished as below:

| Sl. No              | Observation of the Hon'ble NGT in the Order dt. 25.01.2024  | Submission of the Government of Puducherry   |
|---------------------|---|--|
| <b>Legacy Waste</b> |   |  |
| 1                   | <p>It was mentioned in the order dated 24.11.2022 that three legacy waste sites were in question in Puducherry, whereas now remediation of only one site (Kurumbapet) has been mentioned.</p> | <p>The U.T. of Puducherry consists of the following four regions</p> <ol style="list-style-type: none"> <li>1. Puducherry</li> <li>2. Karaikal</li> <li>3. Mahe and</li> <li>4. Yanam</li> </ol> <p>Each one of the legacy waste sites are present in Puducherry, Karaikal and Yanam regions. i.e 3 legacy waste sites are present in the U.T. of Puducherry. The earlier report was with reference to the bio-mining of the legacy waste site in Puducherry region at Kurumbapet alone. It is submitted that bio-mining of all the three legacy waste dumpsites in the UT of Puducherry i.e. one in Puducherry region, one in Karaikal region and one in Yanam region has already been commenced.</p> |

| Sl. No   | Observation of the Hon'ble NGT in the Order dt. 25.01.2024   | Submission of the Government of Puducherry   |
|----------|--|--|
| 2        | <p>Legacy waste to an extent of 5,53,300 MT has been completely remediated for Puducherry. However, it is not indicated in quantified terms on routing of different components arising out of bioremediation and biomining process like bio-earth, plastics, inert, etc. to the defined destinations in authorized manner.</p> | <p>The details of different components arising out of bio-mining process of the total legacy waste is given in the Annexure I-A. The details of bio-mined organic dry waste sent for co-processing to the various cement plants is given in the Annexure I-B.</p> <p>The earlier legacy waste of 5,33,300 MT was entirely bio-mined in phase-I and was completed on 30.04.2023.</p> <p>The legacy waste disposal through bio-mining process was executed by M/s. Zigma Global Enviro Solution Pvt.Ltd., Erode, authorized by the Puducherry Pollution Control Committee.</p> |
| 3<br>(i) | <p>On account of daily unprocessed waste to an extent of 300 TPD in Puducherry which results to legacy waste has been estimated to 3,48,989 MT and out of this, 70,147 MT has been remediated.</p>   | <p>Out of 3,48,989 MT of subsequently accumulated waste, an amount 3,22,128 MT has been bio-mined. The remaining 26,861 MT waste will be bio-mined by 15<sup>th</sup> August, 2024.</p> <p>The processing of solid waste was commenced from 01.02.2024. Hence there is no further accumulation of legacy waste.</p>  |

| Sl. No       | Observation of the Hon'ble NGT in the Order dt. 25.01.2024  | Submission of the Government of Puducherry  |        |                           |            |       |          |     |       |     |              |              |
|--------------|---|---|--------|---------------------------|------------|-------|----------|-----|-------|-----|--------------|--------------|
| (ii)         | The extent of legacy waste remediation capacity has not been mentioned  | <p>The legacy waste bio-mining capacity in all the 3 regions of the U.T. of Puducherry are given below:</p> <table border="1" data-bbox="790 570 1447 953"> <thead> <tr> <th data-bbox="790 570 1012 681">Region</th> <th data-bbox="1012 570 1447 681">Bio mining Capacity (TPD)</th> </tr> </thead> <tbody> <tr> <td data-bbox="790 681 1012 747">Puducherry</td> <td data-bbox="1012 681 1447 747">1,600</td> </tr> <tr> <td data-bbox="790 747 1012 814">Karaikal</td> <td data-bbox="1012 747 1447 814">550</td> </tr> <tr> <td data-bbox="790 814 1012 880">Yanam</td> <td data-bbox="1012 814 1447 880">280</td> </tr> <tr> <td data-bbox="790 880 1012 953"><b>Total</b></td> <td data-bbox="1012 880 1447 953"><b>2,430</b></td> </tr> </tbody> </table> | Region | Bio mining Capacity (TPD) | Puducherry | 1,600 | Karaikal | 550 | Yanam | 280 | <b>Total</b> | <b>2,430</b> |
| Region       | Bio mining Capacity (TPD)   |   |        |                           |            |       |          |     |       |     |              |              |
| Puducherry   | 1,600   |   |        |                           |            |       |          |     |       |     |              |              |
| Karaikal     | 550   |   |        |                           |            |       |          |     |       |     |              |              |
| Yanam        | 280   |   |        |                           |            |       |          |     |       |     |              |              |
| <b>Total</b> | <b>2,430</b>  |   |        |                           |            |       |          |     |       |     |              |              |
| 4            | In case of Karaikal and Yanam regions, still there is legacy waste to the extent of 45,430 MT and 21,600 MT respectively which is yet to be remediated. | <p>In the Karaikal Region, all the accumulated legacy waste of 45, 430 was bio-mined.</p> <p>In the Yanam Region, due to the unprecedented rain, the bio-mining activity got affected. Out of 21,600 MT of the legacy waste, 14,554 MT has been bio-mined. The remaining legacy waste of 7,046 MT will be bio-mined by July, 2024.</p>  |        |                           |            |       |          |     |       |     |              |              |

| Sl. No                        | Observation of the Hon'ble NGT in the Order dt. 25.01.2024   | Submission of the Government of Puducherry  |         |           |     |           |             |         |       |                |  |                |
|-------------------------------|--|---|---------|-----------|-----|-----------|-------------|---------|-------|----------------|--|----------------|
| <b>Solid Waste Processing</b> |  |   |         |           |     |           |             |         |       |                |  |                |
| 5                             | <p>There has been a continuing gap of 300 TPD of waste processing in Puducherry which has resulted in legacy waste. Existing waste processing is only 10 TPD and there is no mention about the nature/type of plant which is going to commence from February, 2024. On commencement of Processing plant, no legacy waste should be added thereafter. Compost/ Refuse Derived Fuel (RDF) / or Biogas based plant of 300 TPD should have defined authorized users and in no case any component be stocked or piled up.</p> | <p>The processing of solid waste generated from the urban areas has been assigned to M/s. Green Warrior, Chennai. The firm has established a facility with processing capacity of 370 TPD and commenced processing with effect from 01.02.2024. The processing plant consists of the following units.</p> <table data-bbox="784 906 1207 1205"> <tr> <td>Compost</td> <td>- 240 TPD</td> </tr> <tr> <td>RDF</td> <td>- 120 TPD</td> </tr> <tr> <td>Recoverable</td> <td>- 2 TPD</td> </tr> <tr> <td>Inert</td> <td>- <u>8 TPD</u></td> </tr> <tr> <td></td> <td><u>370 TPD</u></td> </tr> </table> <p>The composts are taken by the farmers in Puducherry and Tamilnadu areas. RDF is sent to Dalmia Cement, Ariyalur and Bharathi Cement, Guntur through M/s. Paperman Eco Solutions LLP, Bangalore. In this regard, an agreement was entered on 12<sup>th</sup> February, 2024. Recyclable wastes are sent to the local vendors.</p> <p>Currently there is no scope for accumulation of the legacy waste.</p> | Compost | - 240 TPD | RDF | - 120 TPD | Recoverable | - 2 TPD | Inert | - <u>8 TPD</u> |  | <u>370 TPD</u> |
| Compost                       | - 240 TPD  |   |         |           |     |           |             |         |       |                |  |                |
| RDF                           | - 120 TPD  |   |         |           |     |           |             |         |       |                |  |                |
| Recoverable                   | - 2 TPD  |   |         |           |     |           |             |         |       |                |  |                |
| Inert                         | - <u>8 TPD</u>   |   |         |           |     |           |             |         |       |                |  |                |
|                               | <u>370 TPD</u>   |   |         |           |     |           |             |         |       |                |  |                |



| Sl. No                   | Observation of the Hon'ble NGT in the Order dt. 25.01.2024         | Submission of the Government of Puducherry   |
|--------------------------|--|--|
| <b>Sewage Management</b> |  |  |
| 8 (i)                    | There is no significant progress in the treatment of sewage        | <p>The construction of 15 MLD STP in Puducherry was commenced on 27.07.2023 and reached 40% physical progress and 10% financial progress. The construction will be completed by March, 2025.</p> <p>The construction of 11 MLD STP in Karaikal was commenced on 01.12.2023 and reached 30% physical progress and 10% financial progress. The construction will be completed by March, 2025.</p> <p>The construction of 0.5 MLD STP in Mahe, tender is under finalization. The construction will be completed by 30.06.2025.</p> <p>The construction of 6 MLD STP in Yanam, tender is floated 5 times. But no response had been received since the site for construction of STP is in low-lying area. The estimate has been revised and Retender will be floated at the earliest. The construction will be completed by 30.06.2025.</p> |
| ii)                      | Performance of existing STPs treating 56 MLD has not been provided | Three STPs of 17 MLD capacity meets the NGT prescribed standards of p <sup>H</sup> , total suspended solids, BOD, COD and fecal coliform. Two STP of UASB are not meeting the standards. The Online Continuous Monitoring Systems have been installed in all the three 17 MLD STP.   |

| Sl. No            | Observation of the Hon'ble NGT in the Order dt. 25.01.2024  | Submission of the Government of Puducherry   |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
|-------------------|---|--|---------|---------|----------------|-------------|------------------|-----|--|----------------------|-----|--|--------------------|--|-------------------|--|---|-----|-------------------|-----------------------|-----|--------------|--|-------------|
| iii)              | In Puducherry, 17 MLD Sewage Treatment Plant (STP) is expected to be commissioned by July 2024 for bridging the gap of 15 MLD. However, no mention is made on connectivity of household with sewer network and this is essential that STP coming up be operationalized utilizing fully designed capacity. | Out of 75, 934 Households in Puducherry Urban area, 65, 502 HHS have been provided Under Ground Drainage (UGD) connectivity. A Joint Task Force was constituted on 31.01.2024 under the Chairmanship of the Superintending Engineer-II to bring the remaining 10,432 HHS under the UGD connectivity.   |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
| iv)               | Simultaneously, treated sewage should be utilized.  | <p>Government of Puducherry has formulated an Action Plan and constituted a committee for the effective the utilization of the treated sewage. The details of current utilization of treated sewage is given below:</p> <table border="1" data-bbox="832 1234 1467 1853"> <thead> <tr> <th>Station</th> <th>Purpose</th> <th>Quantity (MLD)</th> </tr> </thead> <tbody> <tr> <td>Lawspet STP</td> <td>Industrial usage</td> <td>0.8</td> </tr> <tr> <td></td> <td>Fodder Grass raising</td> <td rowspan="3">6.0</td> </tr> <tr> <td></td> <td>Coconut Plantation</td> </tr> <tr> <td></td> <td>Silk cotton trees</td> </tr> <tr> <td></td> <td>Natural recharging through Impound in reservoir</td> <td>9.0</td> </tr> <tr> <td>Dubrayera pet STP</td> <td>To Pandy Marina Hotel</td> <td>0.3</td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>Total</b></td> <td><b>16.1</b></td> </tr> </tbody> </table> <p>It is envisaged to utilize additional 5 MLD of the treated sewage before December, 2024.</p> | Station | Purpose | Quantity (MLD) | Lawspet STP | Industrial usage | 0.8 |  | Fodder Grass raising | 6.0 |  | Coconut Plantation |  | Silk cotton trees |  | Natural recharging through Impound in reservoir | 9.0 | Dubrayera pet STP | To Pandy Marina Hotel | 0.3 | <b>Total</b> |  | <b>16.1</b> |
| Station           | Purpose   | Quantity (MLD)   |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
| Lawspet STP       | Industrial usage  | 0.8  |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
|                   | Fodder Grass raising  | 6.0  |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
|                   | Coconut Plantation  |  |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
|                   | Silk cotton trees   |  |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
|                   | Natural recharging through Impound in reservoir   | 9.0  |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
| Dubrayera pet STP | To Pandy Marina Hotel   | 0.3  |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |
| <b>Total</b>      |   | <b>16.1</b>  |         |         |                |             |                  |     |  |                      |     |  |                    |  |                   |  |   |     |                   |                       |     |              |  |             |

| Sl. No | Observation of the Hon'ble NGT in the Order dt. 25.01.2024   | Submission of the Government of Puducherry   |
|--------|--|--|
| v)     | Similarly, for Karaikal, 11 MLD STP should be fully utilised ensuring full connectivity of household connections   | 20 drains carrying sewage have been identified. These drains will be intercepted and taken to the 11 MLD STP.  |
| 9      | <p>We find that uncertainty still existing for setting up of Sewage treatment facilities at Yanam territory and 6 MLD sewage remains untreated.</p> <p>In case of Mahe region, system of Septic tank and Soak pit has been predominantly adopted and to treat waste water from commercial centres (0.5 MLD) is yet to be established.</p>                                | <p>The construction of 6 MLD STP in Yanam, tender was floated 5 times. But no response was received since the site for construction of the STP is in low-lying area. The estimate has been revised and the tender will be floated at the earliest and the construction of STP will be completed by 30.06.2025.</p> <p>The construction of 0.5 MLD STP in Mahe, tender is under finalization. The construction of STP will be completed by 30.06.2025.</p>      |
| 10     | It is inferred from the data that about 32 MLD of untreated sewage (15 MLD in Puducherry, 10.6 MLD in Karaikal, 6 MLD in Yanam and 0.5 MLD in Mahe) is either seeping in to ground or getting into coastal waters or other water bodies through drains. These drains should be maintained for storm water drainages rather than using for sewage conveyance and disposal | Households are not connected to the Under Ground Drainage System are having in-situ treatment system of soak pit and septic tank arrangement. Hence it can not be construed as 32 MLD of untreated sewage is reaching the water bodies. The construction of four STPs to treat 32 MLD is in progress. Regular reviews on the progress of the construction of STP work is being conducted by the Chief Secretary, Finance Secretary and the Secretary, PWD. The |

| Sl. No | Observation of the Hon'ble NGT in the Order dt. 25.01.2024                               | Submission of the Government of Puducherry   |
|--------|--|--|
|        |  | construction of all the four STPs will be completed as committed in this report.   |
| ii)    | Further, at Commune / village level, proper sewage-septage management should be ensured. | Installation of 3 MLD STP along with FSTP in Villianur is under tender process. The construction will be completed by 30.06.2025 |

Hon'ble NGT in the order dt. 08.04.2024 in the O.A. No 606 of 2018 directed all the States to provide the progress Report in the specific format. Accordingly the duly filled format for legacy waste disposal and solid waste processing and sewage management is given in the Annexure – II-A, II-B & II-C respectively.

## ANNEXURE – I A

**Details of different components arising out of bio-mining**

| Sl. No     | Classification of Processed products  | Pondicherry Phase I (MT) | Pondicherry Phase II (MT) | Karaikal (MT)    | Yanam (MT)     | Total (MT)         |
|------------|---------------------------------------|--------------------------|---------------------------|------------------|----------------|--------------------|
| 1.         | Legacy waste                          | 5,53,300                 | 3,48,989                  | 85,350           | 21,600         | 10,09,239          |
| 2.         | Co-processing (RDF)                   | 84,453.70                | 30,392.12                 | 8,393.95         | 448.24         | <b>1,23,688.01</b> |
| 3.         | Coarse sand                           | 2,81,710.155             | 1,55,961.86               | 59,776           | 5,951          | <b>5,03,399.02</b> |
| 4.         | Footwear Aggregate                    | 160.17                   | 18.53                     | 20.23            | 1,399          | <b>1,597.93</b>    |
| 5.         | Glass Aggregate from MSW              | 272.37                   | -                         | -                | 29.32          | <b>301.69</b>      |
| 6.         | Ore Based Metallic Aggregate from MSW | 38.71                    | 19.49                     | -                | -              | <b>58.20</b>       |
| 7.         | Stainless Steel Aggregate from MSW    | 55.7                     | 30.76                     | 4,651.3          | -              | <b>4,737.76</b>    |
| 8.         | Stones                                | 69,125.26                | 21,473.28                 | -                | 561.5          | <b>91,160.04</b>   |
| 9.         | Tyre Aggregate from MSW               | 320.8                    | 81.66                     | -                | -              | <b>402.46</b>      |
| 10.        | Wires and Cables Aggregate from MSW   | 85.185                   | 5.68                      | -                | -              | <b>90.87</b>       |
| 11.        | Wood Aggregate from MSW               | 547.9                    | 277.49                    | -                | -              | <b>825.39</b>      |
| 12.        | Silt                                  | 10,803                   | -                         | -                | -              | <b>10,803</b>      |
| 13.        | RDF Stocked                           | 600                      | -                         | -                | -              | <b>600</b>         |
| <b>14.</b> | <b>Total</b>                          | <b>4,47,869.95</b>       | <b>2,08,260.87</b>        | <b>72,841.48</b> | <b>8389.06</b> | <b>7,37,664.4</b>  |
| 15.        | Moisture Content 19 %                 | 1,05,127                 | 66,307.9                  | 16,216.5         | 4104           | <b>1,91,755.4</b>  |
| 16.        | Bio-mined products to be disposed     | -                        | 47,559.23                 | -                | 2060           | <b>49,619</b>      |
| 17.        | Grand Total                           | <b>5,53,300</b>          | <b>3,22,128</b>           | <b>89,057.98</b> | <b>14,559</b>  | <b>9,79,039</b>    |
| 18.        | To be bio-mined                       | -                        | <b>26,861</b>             | -                | <b>7046</b>    | <b>33,907</b>      |

## ANNEXURE – I B

**Bio-mined Organic dry waste sent for Co-processing to various  
Cement Plants**

| <b>Puducherry – Phase I– RDF</b> |   |                |                  |
|----------------------------------|---|----------------|------------------|
| <b>Sl.No</b>                     | <b>Cement Plant</b>                               | <b>State</b>   | <b>Qty. (MT)</b> |
| 1                                | M/s. ACC Limited                                  | Karnataka      | 1,188.99         |
| 2                                | M/s. Chettinad Cement Corporation Private Limited | Tamilnadu      | 1,618.58         |
| 3                                | M/s. Chettinad Cement Corporation Private Limited | Andhra Pradesh | 1,173.86         |
| 4                                | M/s. Dalmia Cement (B) Ltd                        | Tamilnadu      | 1,570.97         |
| 5                                | M/s. JSW Cement Limited                           | Andhra Pradesh | 11,425.32        |
| 6                                | M/s. Jindal Urban Waste Management Limited        | Andhra Pradesh | 44,564.68        |
| 7                                | M/s. Sree Jayajothi Cements Private Limited       | Andhra Pradesh | 13,637.19        |
| 8                                | M/s. The Ramco Cements Limited                    | Tamilnadu      | 1217.95          |
| 9                                | M/s. Ultratech Cement Limited                     | Andhra Pradesh | 1,217.95         |
| 10                               | M/s. UltraTech Cement Ltd                         | Andhra Pradesh | 402.40           |
| <b>Total</b>                     |   |                | <b>84453.7</b>   |

| <b>Puducherry – Phase II – RDF</b> |   |                |                  |
|------------------------------------|---|----------------|------------------|
| <b>Sl. No</b>                      | <b>Cement Plant</b>                               | <b>State</b>   | <b>Qty (MT)</b>  |
| 1                                  | M/s. Chettinad Cement Corporation Private Limited | Tamilnadu      | 2,274.75         |
| 2                                  | M/s. Dalmia Cement (B) Ltd                        | Tamilnadu      | 1,997.25         |
| 3                                  | M/s. JSW Cement Limited                           | Andhra Pradesh | 15,650.39        |
| 4                                  | M/s. Jindal Urban Waste Management Limited        | Andhra Pradesh | 290.73           |
| 5                                  | M/s. Sree Jayajothi Cements Private Limited       | Andhra Pradesh | 10,179.00        |
| <b>Total</b>                       |   |                | <b>30,392.12</b> |

| <b>Karaikal – RDF</b> |                            |              |                 |
|-----------------------|----------------------------|--------------|-----------------|
| <b>Sl. No</b>         | <b>Cement Plant</b>        | <b>State</b> | <b>Qty (MT)</b> |
| 1                     | M/s. Dalmia Cement (B) Ltd | Tamilnadu    | 8393.95         |

| <b>Yanam – RDF</b> |  |                |                 |
|--------------------|--|----------------|-----------------|
| <b>Sl. No</b>      | <b>Cement Plant</b>                        | <b>State</b>   | <b>Qty (MT)</b> |
| 1                  | M/s. Jindal Urban Waste Management Limited | Andhra Pradesh | 448.24          |

| LEGACY WASTE           |  |  |   |  |                                    |                      |                     |  |   |  |  |
|------------------------|--|--|---|--|------------------------------------|----------------------|---------------------|--|---|--|--|
| (i) Names of Districts | (ii) Legacy waste site (District wise) | (iii) Area covered by the legacy waste (District wise) | (iv) Quantity of the waste (in MT) in each site | (v) Composition of the Waste in MT                   |                                    |                      |                     | (vi) Process adopted to remediate at each site | (vii) Timeline to process at each site) | (viii) Final destination of the component at (v)   | (ix) Action plan to remediate and recover the sites at (iii) (in sq.km.) with earmarked Budget (District Wise) |
|                        |  |  |   | a) Inerts (%) (Construction Waste, Wood, Glass, etc) | b) Compost (%) organic (Fine Sand) | c) RDF (%) Plastic   | d) Other scraps (%) |  |   |  |  |
| Puducherry             | Kurumbapet (Phase – I)                 | 12.96 Acres  | 5,53,300MT                                      | 12 to 13% (69,125MT)                                 | 50 to 51% (2,81,666MT)             | 16 to 18% (90,800MT) | 1 to 2% (7,200MT)   | Biomining & Bioremediation                     | Completed on 30.04.2023                 | 1. RDF to Cement factory. Fine coarse soil used for filling up of low lying areas.<br>2. Stones used for road Formation. | 12.61 acres of land has been reclaimed.<br>Agreement cost is Rs.42.60 Crs.                                     |

| (i) Names of Districts     | (ii) Legacy waste site (District wise) | (iii) Area covered by the legacy waste (District wise) | (iv) Quantity of the waste (in MT) in each site | (v) Composition of the Waste in MT                   |                                    |                      |                       | (vi) Process adopted to remediate at each site | (vii) Timelin e to process at each site) | (viii) Final destination of the component at (v)   | (ix) Action plan to remediate and recover the sites at (iii) (in sq.km.) with earmarked Budget (District Wise)                               |
|----------------------------|--|--|---|--|------------------------------------|----------------------|-----------------------|--|--|--|--|
|                            |  |  |   | a) Inerts (%) (Construction Waste, Wood, Glass, etc) | b) Compost (%) organic (Fine Sand) | c) RDF (%) Plastic   | d) Other scraps (%)   |  |  |  |  |
| Puducherryas on 02.07.2024 | Kurumbapet (Phase – II)                | 3.50 Acres   | 3,48,989MT                                      | 7 to 8% (25,200MT)                                   | 55 to 60% (1,91,000MT)             | 19 to 20% (65,950MT) | 0.20 to 0.50% (550MT) | Biomining & Bioremediation                     | Will be completed on 15.08.2024          | <ol style="list-style-type: none"> <li>1. RDF to Cement factory.</li> <li>2. Fine coarse soil used for filling up of low lying areas.</li> <li>3. Stones used for road Formation.</li> </ol> | 2.70 acres of land has been reclaimed, remaining 0.80 acre to be reclaimed within 15 <sup>th</sup> August 2024. Agreement cost Rs.34.09 Crs. |

| (i) Names of Districts | (ii) Legacy waste site (District wise) | (iii) Area covered by the legacy waste (District wise) | (iv) Quantity of the waste (in MT) in each site | (v) Composition of the Waste in MT                   |                                   |                    |                     | (vi) Process adopted to remediate at each site | (vii) Timelin e to process at each site) | (viii) Final destination of the componentat (v)  | (ix) Action plan to remediate and recover thesites at (iii)(in sq.km.) with earmarked Budget (District Wise)   |
|------------------------|--|--|---|--|-----------------------------------|--------------------|---------------------|--|--|--|--|
|                        |  |  |   | a) Inerts (%) (Construction Waste, Wood, Glass, etc) | b) Compost (%)organic (Fine Sand) | c) RDF (%) Plastic | d) Other scraps (%) |  |  |  |  |
| Yanam                  | UKV Nagar                              |  | 21,600MT  | 6 to 8% (1100 MT)                                    | 56 to 60% (9950 MT)               | 6 to 8% (980MT)    | 12 to 15% (1500MT)  | Biomining & Bioremediation                     | 6 Months                                 | <ol style="list-style-type: none"> <li>1. RDF to Cement factory.</li> <li>2. Fine coarse soil used for filling up of low lying areas.</li> <li>3. Stones used for road Formation.</li> </ol> | 14,554 MT of legacy waste upto Road level was processed and disposed. Legacy Waste below ground level is under processing and propoed to complete on or before 15 <sup>th</sup> August 2024. Agreement cost Rs.2.30 Crs. |

## DAILY SOLID WASTE GENERATION

## ANNEXURE IIB

| (i) Names of Districts | (ii) Waste generation (in TPD) District wise) | (iii) Break up of Waste Generated District wise (in TPD) |    | (iv) Method of Treatment in the District (in TPD) |                                      |                                    |                      | (v) Final Destination of Each of components of (iv) | (vi) Break up details of waste processing District Wise |                   |                      |                 |  | (vii) Action Plan to Process 100% Waste |   |          |
|------------------------|---|--|----|---|--------------------------------------|------------------------------------|----------------------|---|---|-------------------|----------------------|-----------------|--|---|---|----------|
|                        |   |  |    | a)  | b)                                   | c)                                 | d)                   |   | Energy Plants (Waste to Energy Plants)                  | Bio Compost Units | Used in Cement Units | Land Fill Sites | Other uses of inerts                             | Time lines                              | Budget outlay   | Proposal |
|                        |   |  |    |   |                                      |                                    |                      |   |   |                   |                      |                 |  |   |   |          |
| Puducherry Region      | Puducherry                                    | 370  |    | Compost for agriculture purpose (240 TPD).        | Filling urban low lying areas (8TPD) | RDF for cement industries(120 TPD) | Recoverable 2.00 TPD | 1   | 240 TPD   | 120 TPD           | Nil                  | 8 TPD           | Phase I on going                                 | 58 Cr.                                  | Proposal in II Phase<br>1. Bio CBG.<br>2. Pyrolysis<br>3. Pellets<br>4. Carbon block.<br>5. Paver block |          |
| Puducherry Region      | Puducherry                                    |  | 70 | Compost 55 TPD                                    | Filling low lying areas (3 TPD)      | RDF – 15TPD                        | Recoverable 8 TPD    | Nil   | 55 TPD  | 15 TPD            | Nil                  | 13 TPD          | On going, 100% achieved prior before August 2024 | 18 Cr.                                  | Proposed for 50 TPD Bio CBG & CNG in the year 2025  |          |

|                 |            |              |             |  |   |             |                  |  |                                     |        |        |   |   |                     |           |                     |
|-----------------|------------|--------------|-------------|--|---|-------------|------------------|--|-------------------------------------|--------|--------|---|---|---------------------|-----------|---------------------|
| Karaikal Region | Puducherry | 65           | 25          | Rapid compost (70 TPD) & vermi compost for farming purpose (4 TPD)<br>Bio gas (1TPD) | Filling low lying areas (3 TPD), after screening the material | RDF -15 TPD | Recyclable 4 TPD | 1. Supply to farmers (Com post)<br>2. Supply to Cement Factories (RDF)<br>3. For RRP Unit. | 1<br>Tone for Electricity Generator | 70 TPD | 15 TPD | - | - |                     | 10.20 Cr. | Proposed for 50 TPD |
| Yanam Region    | 22         | Wet waste 15 | Dry waste 7 |  | Filling low lying areas (1TPD)                                |             | Recyclable 3 TPD |  | -                                   | 1      | 1      | 1 | 1 | Proposed for Aug'24 |           |                     |
| Mahe Region     | 12         | Wet waste 8  | Dry waste 4 | Pipe composting 8 TPD  | Material Recovery facility 4 TPD                              |             |                  | Compost Horticulture   |                                     |        |        |   |   |                     |           |                     |

## DETAILS OF SEWAGE TREATMENT

| (i)<br>Name<br>of<br>Distri<br>cts | (ii)<br>Sewage<br>generati<br>on<br>District<br>wise<br>populati<br>on | (iii) Sewage<br>generation<br>Quality |                | Details of Treatment of Sewage (District wise) |   |   |   |           |   | (v) Details of disposal of untreated sewage<br>(MLD) (District wise)              |   |       |           |  | (vi) Action plan to treat<br>untreated sewage (District<br>wise)   |  |             |
|------------------------------------|--|---------------------------------------|----------------|--|---|---|---|-----------|---|---|---|-------|-----------|--|--|--|-------------|
|                                    |  |                                       |                |  |   |   |   |           |   | (a)<br>Final<br>destina<br>tion of<br>Discha<br>rge of<br>untreat<br>ed<br>sewage | (b) If (a) above is let out in its<br>quality |       |           |  |  |  |             |
|                                    |  |                                       |                |  |   |   |   |           |   |   |   |       |           |  |  |  | Wet<br>land |
| Urban<br>areas                     | Rural<br>Areas   | By STP<br>(MLD)                       | Type of<br>STP | Disinfec<br>tion<br>method<br>in STP           | Discharge water<br>quality from STP<br>including Faecal &<br>E-coli   | Final<br>disch<br>arge<br>of<br>Treate<br>d STP<br>water<br>(MLD) | Other<br>mode<br>of<br>treat<br>ment<br>(MLD)   |           |   |   |   |       |           |  |  |  |             |
| Puduc<br>herry                     | 71 MLD<br>Urban  | 71 MLD                                | -              | 56<br>MLD<br>(Urban)                           | 3nos of<br>SBR<br>each<br>17MLD<br>& 2nos<br>of UASB<br>each 5<br>MLD | Chlorina<br>tion<br>(Post)  | For the Month May<br>2024<br><br>STP at Lawspet<br><br>pH – 7.54, TSS -<br><10, COD – 14.4,<br>BOD – 3.8, Faecal<br>Coliforms – 50 MPN<br>/ 100 ml<br><br>STP at Dubrayapet<br><br>pH – 7.66, TSS - | 56<br>MLD | - |   |   | 3 MLD | 15<br>MLD |  | STP 15 MLD<br>capacity is under<br>construction. Will<br>be completed by<br>31.03.2025.<br><br>STP of 3MLD<br>capacity is under<br>tender process.<br>Will be completed<br>by 30.06.2025 | Rs. 33.02<br>Cr. is<br>allotted<br>under<br>AMRUT. |             |

| (i)<br>Name of Districts | (ii)<br>Sewage generation District wise population | (iii) Sewage generation Quality |             | Details of Treatment of Sewage (District wise) |             |                            |   |  |                               | (v) Details of disposal of untreated sewage (MLD) (District wise) |  |  |  |  | (vi) Action plan to treat untreated sewage (District wise) |      |
|--------------------------|--|---------------------------------|-------------|--|-------------|----------------------------|---|--|-------------------------------|---|--|--|--|--|--|------|
|                          |  |                                 |             |  |             |                            |   |  |                               | (a)<br>Final destination of Discharge of untreated sewage         | (b) If (a) above is let out in its quality |  |  |  |  |      |
|                          |  | Urban areas                     | Rural Areas | By STP (MLD)                                   | Type of STP | Disinfection method in STP | Discharge water quality from STP including Faecal & E-coli  | Final discharge of Treated STP water (MLD) | Other mode of treatment (MLD) |   |  |  |  |  | Wet land   | Pond |
|                          |  |                                 |             |  |             |                            | <10, COD – 13.4, BOD – 3, Faecal Coliforms – 40 MPN / 100 ml<br><br>STP at Kanagneri<br>pH – 7.26, TSS - <10, COD – 18.1, BOD – 9.5, Faecal Coliforms – 90 MPN / 100 ml |  |                               |   |  |  |  |  |  |      |

| (i)<br>Name of Districts | (ii)<br>Sewage generation District wise population | (iii) Sewage generation Quality |   | Details of Treatment of Sewage (District wise) |   |   |   |   |                      | (v) Details of disposal of untreated sewage (MLD) (District wise) |  |                                      |             |                            | (vi) Action plan to treat untreated sewage (District wise)                     |  |   |
|--------------------------|--|---------------------------------|---|--|---|---|---|---|----------------------|---|--|--------------------------------------|-------------|----------------------------|--|--|---|
|                          |  |                                 |   |  |   |   |   |   |                      | (a)<br>Final destination of Discharge of untreated sewage         | (b) If (a) above is let out in its quality |                                      |             |                            |  |  |   |
|                          |  |                                 |   |  |   |   |   |   |                      | Urban areas   | Rural Areas                                | By STP (MLD)                         | Type of STP | Disinfection method in STP |  |  | Discharge water quality from STP including Fecal & E-coli |
| Karaikal                 | 11 MLD Urban                                       | 11 MLD                          | - | -  | - | - | - | - | Septic tank Soak pit | -   | -  | 11 MLD Back water of Arasallar river | -           | -                          | 11 MLD capacity STP is under construction and will be completed by 31.03.2025. | Rs. 33.31 Cr is allotted under AMRUT and State fund. |   |
| Puducherry, Yanam        | 6 MLD ,  | 6 MLD                           | - | -  | - | - | - | - | Septic tank Soak pit | -   | -  | 6 MLD (Coring a river which          | -           | -                          | Tender was floated 5 times. But no response since the site for construction of | Rs. 17.73 is allotted under AMRUT (SBM).             |   |

| (i)<br>Name of Districts | (ii)<br>Sewage generation District wise population | (iii) Sewage generation Quality |             | Details of Treatment of Sewage (District wise) |             |                            |   |  |                               | (v) Details of disposal of untreated sewage (MLD) (District wise) |  |       |                              |                  | (vi) Action plan to treat untreated sewage (District wise)  |                    |
|--------------------------|--|---------------------------------|-------------|--|-------------|----------------------------|---|--|-------------------------------|---|--|-------|------------------------------|------------------|---|--------------------|
|                          |  |                                 |             |  |             |                            |   |  |                               | (a)<br>Final destination of Discharge of untreated sewage         | (b) If (a) above is let out in its quality |       |                              |                  |   |                    |
|                          |  | Urban areas                     | Rural Areas | By STP (MLD)                                   | Type of STP | Disinfection method in STP | Discharge water quality from STP including Fecal & E-coli | Final discharge of Treated STP water (MLD) | Other mode of treatment (MLD) | Wet land  | Pond                                       | River | Sea                          | Other Water Body | Time lines  | Budget Outlay (Cr) |
|                          |  |                                 |             |  |             |                            |   |  |                               |   |  |       | has back water all the time) |                  | STP is in lowlying area. Estimate modified and the tender will be floated at the earliest and will be completed by 30.06.2025 |                    |

| (i)<br>Name of Districts | (ii)<br>Sewage generation District wise population | (iii) Sewage generation Quality |             | Details of Treatment of Sewage (District wise) |             |                            |   |  |                               | (v) Details of disposal of untreated sewage (MLD) (District wise) |      |  |     |  | (vi) Action plan to treat untreated sewage (District wise) |                    |
|--------------------------|--|---------------------------------|-------------|--|-------------|----------------------------|---|--|-------------------------------|---|------|--|-----|--|--|--------------------|
|                          |  |                                 |             |  |             |                            |   |  |                               | (a) Final destination of Discharge of untreated sewage            |      | (b) If (a) above is let out in its quality |     |  |  |                    |
|                          |  | Urban areas                     | Rural Areas | By STP (MLD)                                   | Type of STP | Disinfection method in STP | Discharge water quality from STP including Fecal & E-coli | Final discharge of Treated STP water (MLD) | Other mode of treatment (MLD) | Wet land  | Pond | River                                      | Sea | Other Water Body   | Time lines   | Budget Outlay (Cr) |
| Puducherry, Mahe         | 0.5 MLD  | 0.5 MLD                         | -           | -  | -           | -                          | -   | Septic tank Soak pit                       | -                             | -   | -    | 0.5 MLD                                    | -   | Tender under finalization. Will be completed by 30.06.2025 | Rs. 4.1 Cr is allotted under AMRUT (SBM).                  |                    |