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GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE,
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MOST URGENT / COURT MATTER / BY E-MAIL

F.No.CC-47/IRO/RPR/2024/130 Dated 28th August, 2024.

To

The Registrar,
Hon'ble National Green Tribunal,
Principal Bench,
New Delhi-110001.
(E-mail: judicial-ngt@gov.in).

Subject: **O.A. No. 606 of 2018 (I.A. No.163/2021) before Hon'ble NGT, (Principal Bench), New Delhi regarding compliance of Municipal Solid Waste Management Rules, 2016 and other environmental issues in respect of Chhattisgarh State – submission of the Joint Committee report regarding.**

Reference: (i). Order dated 04/4/2024 of Hon'ble NGT, Principal Bench, New Delhi in the O.A. No. 606 of 2018.

(ii). Letter No.CC-47/IRO/RPR/2024/ 83 dated 03/7/2024 of MoEF&CC, Sub-Office, Raipur.

Sir/Madam,

In compliance with the Order dated 04/4/2024 of Hon'ble NGT, Principal Bench, New Delhi in the above matter, as a nodal agency Sub-Office of MoEF&CC at Raipur vide O.M. No.CC-47/IRO/RPR/2024/43 dated 03/5/2024 constituted a Joint Committee comprising of the members referred therein. In this regard, as directed by the Hon'ble NGT duly signed Report of the Joint Committee with relevant Annexures are enclosed herewith as an attachment for kind perusal please. Further, it is requested that the Report of the Joint Committee may kindly be placed on record for perusal of the Hon'ble Tribunal. The above matter is listed on 28/8/2024.

Yours faithfully,

Encls: As above

(Dr. M. Thalamadai Karuppiah)
Scientist - E
Member & Nodal Officer to the Joint Committee,

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

Original Application No.606 of 2018
(I.A. No.163 of 2021)

(In respect of State of Chhattisgarh)

(w.r.t. Compliance of Municipal Solid Waste Management Rules, 2016 and other Environmental issues in respect of State of Chhattisgarh)

REPORT OF THE JOINT COMMITTEE

INDEX

Report of the Joint Committee constituted in the O.A. No. 606 of 2018 (I.A. No. 163 of 2021) w.r.t. Compliance of Municipal Solid Waste Management Rules, 2016 and other Environmental issues in respect of State of Chhattisgarh before the Hon'ble National Green Tribunal, Principal Bench, New Delhi.

1. Introduction

In pursuance to the order of the Hon'ble Supreme Court dated 02.09.2014 in Writ Petition No. 888/1996, in the matter of Almitra H. Patel vs. Union of India & Ors., and the order dated 22.02.2017 in W.P. No. 375/2012, reported in (2017) 5 SCC 326 in the matter of Paryavaran Suraksha vs. Union of India, the issue of solid as well as liquid waste management at the State level is being examined by the Hon'ble National Green Tribunal, Principal Bench, New Delhi in the O.A. No.606 of 2018. In order to ascertain the correctness of the disclosures made in the second six monthly progress report dated 01/4/2024 and the presentation of the Chief Secretary, Govt. of Chhattisgarh filed before the Hon'ble Tribunal a Joint Committee has been constituted. Accordingly, Hon'ble National Green Tribunal, Principal Bench, New Delhi vide Order dated 04/4/2024 appointed a Joint Committee comprising the members of (1). Regional Officer, Ministry of Environment, Forest and Climate Change (MoEF&CC), Raipur, (2). Senior representative from Central Public Health Environmental Engineering Organization (Ministry of Housing and Urban Affairs, GoI) and (3). Representative of the Member Secretary of Central Pollution Control Board (CPCB) with the direction to thoroughly examine the second six monthly report dated 01.4.2024 and the presentation submitted by the Chief Secretary, State of Chhattisgarh and ascertain the correctness of the disclosures made therein after collecting the information from ground level and submit its report within a period of four weeks. In the above said Order, Hon'ble NGT appointed Regional Office, Ministry of Environment, Forest and Climate Change, as nodal agency for this purpose.

2. Constitution of the Joint Committee

It is submitted that consequent upon the Gazette notification S.O. 4410(E) dated 20.09.2022 of MoEF&CC, the then Integrated Regional Office of MoEF&CC at Raipur become a Sub-Office under the Regional Office of MoEF&CC at Nagpur and thus presently no Regional Officer is available at Raipur. In compliance with the directions of the Hon'ble NGT, as a nodal agency, Sub-Office of MoEF&CC at Raipur vide O.M. No.CC-47/IRO/RPR/2024/43 dated 03/5/2024 constituted a Joint Committee. However, Central Public Health Environmental Engineering Organization, Ministry of Housing and Urban Affairs vide e-mail communication dated 07/6/2024 nominated Shri. Sathishkumar S, Asst. Adviser (PHE) as a member to the Joint Committee in place of Shri. Rohit Kakkar, Deputy Adviser, due to unavoidable circumstances. Accordingly, the Joint Committee has been constituted comprising the following members based on the Officers deputed / nominated from the Authorities concerned:

(i). Dr. M. Thalamadai Karuppiah, Scientist 'E', MoEF&CC, Sub-Office, Raipur – (Nodal Officer for the Joint Committee).

(ii). Shri. Sathish Kumar S, Asst. Adviser (PHE), Central Public Health & Environmental Engineering Organization, MoHUA, Delhi.

(iii). Dr. Yogendra Kumar Saxena, Scientist-C, Central Pollution Control Board, Regional Directorate, Bhopal.

3. Terms of reference (ToR) to the Joint Committee

Hon'ble NGT in its Order dated 04/4/2024 recorded the following observations based on the information disclosed in the said report / presentation submitted by the Chief Secretary, State of Chhattisgarh:

(i). In respect of solid waste management in the urban area, it is stated that 100% source segregation is done at the urban area and nearly 100% (2048 TPD out of 2051 TPD) is done at the rural area which is difficult to believe.

(ii). No clarification on operation of SLRM with reference to waste processing, utilization of products and management of residues/rejects.

(iii). On waste generation, quantities reported in the year 2023 and now, are same and without any variation.

(iv). In case of legacy waste, out of 10,17,440 MT legacy waste, 6,56,900 MT has been remediated except at Raipur and Rajnand Gaon. No details of legacy waste in quantitative terms are given in the Annexure-C.

(v). In case of sewage management, still there is a gap of 373.3 MLD in sewage treatment and in respect of 8 STPs, capacity of utilization is below the designed capacity. Further, no timeline has been given for completion of STPs for 423.7 MLD.

Considering the above observations, Hon'ble Tribunal issued Terms of the Reference (ToR) to the Joint Committee with the mandate to thoroughly examining the second six monthly report dated 01.04.2024 and the presentation submitted by the Chief Secretary, State of Chhattisgarh and ascertain the correctness of the disclosures made therein after collecting the information from ground level.

4. Meeting of the Joint Committee and site inspection

(i). Nodal agency vide their Office O.M. No.CC-47/IRO/RPR/2024/58 dated 03/5/2024 requested the Chief Secretary, Govt. of Chhattisgarh to depute an Officer conversant with the subject matter for rendering necessary co-ordination to the Committee during the meetings / inspections. Further, Nodal agency vide letter No.CC-47/IRO/RPR/2024/58 dated 27/5/2024 requested the Chhattisgarh Environment Conservation Board to depute an Officer conversant with the subject matter to render necessary co-ordination to the Joint Committee during the meetings / inspections by providing requisite input/documents. Accordingly, Govt. of Chhattisgarh nominated Chief Executive Officer (CEO) of the Chhattisgarh State Urban

Development Authority (SUDA) for extending co-ordination to the Committee & providing requisite inputs. Similarly, Chhattisgarh Environment Conservation Board deputed Regional Officer of CECB at Raipur for extending co-ordination during the field visit of the Committee. Nodal agency vide e-mail communication dated 03/5/2024 circulated a copy Committee constitution letter along with a copy of the Order dated 04/4/2024 of Hon'ble NGT, copy of second six monthly progress report dated 01/4/2024 and presentation of the Chief Secretary, Govt. of Chhattisgarh filed before the Hon'ble Tribunal for kind perusal of the members.

(ii). In consultation with the members of the Joint Committee and Officers concerned from the Department of Urban Administration & Development, Govt. of Chhattisgarh and CECB, a preliminary meeting of the Committee was convened on 31/5/2024 at 11.30 A.M. through video conferencing. In the said meeting all the members of the Joint Committee and concerned State authorities were present and discussed the facts and issues involved in the matter, TOR to the Committee and further course of action proposed in this regard. In the said preliminary meeting Committee has requested the State Authorities to comment their views on the observation of Hon'ble Tribunal especially the statements made in their second six monthly progress report dated 01.04.2024 and the presentation submitted by the Chief Secretary, State of Chhattisgarh. In this regard, Chhattisgarh State Urban Development Authority (SUDA) informed that they relied upon the data submitted before the Hon'ble Tribunal and further stated that there is no any error or omission in the said report. Further, it was discussed regarding the field inspection of the Committee. In continuation to the preliminary meeting, subsequent site inspection of the Joint Committee was held in two phases (11/6/2024 to 14/6/2024 and 25/6/2024 to 28/6/2024) to verify the factual status and collect the information in respect of various facilities available in the Urban and Rural areas of Chhattisgarh. Hon'ble NGT in its Order dated 04/4/2024, directed the Committee to submit the report within a period of four weeks by e-mail. However, due to the involvement of the Officers of the State and Central Authorities in the Assembly and General Election 2024, the Committee could not submit the report within the stipulated time. In view of the above, on behalf of the Joint Committee, Nodal agency vide letter No.CC-47/IRO/RPR/2024/83 dated 03/7/2024 sought additional time of six weeks from the Hon'ble Tribunal to enable as to prepare & finalize the report and submit the same before the Hon'ble Tribunal.

(iii). Though the second six monthly report dated 01.04.2024 and the presentation submitted by the Chief Secretary, State of Chhattisgarh referred in the above O.A. covers the entire State, the Joint Committee in consensus with all the members decided to carryout site inspections in two phases in selected major cities and its adjoining rural areas of the Chhattisgarh State, considering the practical difficulties involved in collection of information throughout the State by the Committee within the limited time fame. Accordingly, first phase of the site inspection of the Committee was held from 11/6/2024 to 14/6/2024 to visit various facilities viz. Solid and Liquid Resource Management (SLRM) Centers, Sanitary/Scientific landfill site, Bio-mining & Bio-remediation of legacy waste, C&D waste processing plant, Material Recovery Facility (MRF) center, Refused Derived Fuel (RDF) plant, Composing / Vermicomposting plant, Sewage

Treatment Plants STPs, etc., located in the Urban and adjoining Rural areas of Raipur, Durg, Bhilai and Rajnandgaon of Chhattisgarh. Second phase of inspection was held from 25/6/2024 to 28/6/2024 in the Urban and adjoining Rural areas of Bilaspur, Raigarh, Korba, and Ambikapur of Chhattisgarh. The CECB made all the logistic arrangements to the Joint Committee during the visit. The Officers of the State Authority extended full cooperation during the visit of the Committee by coordinating with respective Municipal authorities / implementing agencies and also furnishing the inputs.

5. Submissions of the Chhattisgarh State Authority on the observations of the Hon'ble NGT and comments of the Committee

Durning the meeting held with Chhattisgarh State Authority on 31/5/2024 and 11/6/2024, the Joint Committee deliberated the observations of the Hon'ble NGT referred therein the Order dated 04/4/2024. The observations of the Hon'ble NGT, submissions of the State Authority and comments/views of the Committee in this regard is furnished below in the **Table 1**:

Table: 1

Sl. No.	Observations of the Hon'ble NGT in the Order dated 04/4/2024	Submissions of the Chhattisgarh State Authority on the observations of Hon'ble NGT	Comments/ Views of the Committee
(i)	In respect of solid waste management in the urban area, it is stated that 100% source segregation is done at the urban area and nearly 100% (2048 TPD out of 2051 TPD) is done at the rural area which is difficult to believe.	Chhattisgarh State Authority informed that there is no error or omission in the data furnished in their second six monthly report dated 01.4.2024 and the presentation submitted by the Chief Secretary, State of Chhattisgarh.	Based on the random site inspections undertaken, the Joint Committee is not in agreement with the claim of the State Authority that 100% source segregation of solid waste and its management in the urban and rural areas have been achieved.
(ii)	No clarification on operation of SLRM with reference to waste processing, utilization of products and management of residues/rejects.	State Authority informed that there are 3255 wards across 169 ULBs with 377 SLRM centers, 185 Compost sheds and 2 Integrated Solid Waste Management (ISWM) facilities at Raipur and Bilaspur for municipal solid waste management. More than 9000	The Committee is in agreement with the submissions of the State Authority, in respect of the capacity created, since the said system is already in place. Details regarding functionality of

		SHG women with approx. 5721 covered collection vehicles (tricycles, E-rickshaws, and mini-tippers) are deployed by the ULBs for collection of source segregated waste from households and transfer to the collection vehicle / SLRM Centres. At the SLRM centres secondary segregation of the Dry waste takes place and the recyclables are sold to authorized recyclers, while the non-recyclable and non-saleable Segregated Combustible Fraction (SCF) are cleaned & compressed using bailing machines and then sent to cement plants for co-processing. At Compost Sheds the organic/wet waste is converted into compost which is being sold to local farmers/citizens. In addition to the above, Raipur Municipal Corporation has established a plastic granulation plant with 15 TPD capacity and C&D waste plant with 65 TPD capacity.	respective SLRMs visited is furnished below in the report.
(iii)	On waste generation, quantities reported in the year 2023 and now, are same and without any variation.	In compliance with the Order dated 31/8/2018 of the Hon'ble NGT, State Level Committee has been constituted to oversee the steps taken for implementation of the Solid Waste Management Rules, 2016. In compliance with the directions of the State Level Committee, estimated the	The Joint Committee agree with the submissions of the State Authority.

		average solid waste generation as 1650 TPD, based on the data collected during February, 2019 and the same was reported in the final report of SLC. Later in April, 2022 an inter-ULB assessment of all the ULBs was done and as per the assessment, the waste quantification was found to be approximately 1820 TPD. Since then, no new assessment has been done, so this verified data was submitted for the hearings on 31.03.2023 and 04.04.2023. For the year 2024-25, Inter ULB quantitative & performance assessment has been completed in July 2024 and the updated quantification details will be submitted in the next six-monthly report.	
(iv)	In case of legacy waste, out of 10,17,440 MT legacy waste, 6,56,900 MT has been remediated except at Raipur and Rajnandgaon. No details of legacy waste in quantitative terms are given in the Annexure-C.	The detailed information of the existing legacy waste dumpsites in quantitative terms has been provided in the Annexure-E of the report not in the Annexure-C. As of now, 05 legacy waste dumpsites have been successfully remediated. (7,41,812 MT). Approx. 1,90,000 MT out of 4,50,000 MT of Legacy waste at Raipur has been remediated and the rest will be remediated by December, 2024. Approx 12,000 MT out of 51,640 MT of Legacy waste at Rajnandgaon has been remediated and the	State Authority clarified the status of quantitative submission in the Annexure-E. Further, committed to remediate the remaining Legacy waste by December, 2024. However, it appears that with the present phase of progression, complete remediation of the Legacy waste especially in Rajnandgaon dumpsite may not be achieved within the committed timeline of

		rest will be remediated by December, 2024.	December, 2024. The views and suggestions of the Committee is furnished in the conclusion part of this report.
(v)	In case of sewage management, still there is a gap of 373.3 MLD in sewage treatment and in respect of 8 STPs, capacity of utilization is below the designed capacity. Further, no timeline has been given for completion of STPs for 423.7 MLD.	At present around 269.3 MLD of sewage is treated in 14 STPs (360 MLD). 9 out 14 operational STPs are currently operating at 80-90% of designed plant capacity and these STPs are newly constructed STPs which are designed for 25-30 years therefore it is not possible to run them at designed capacity (100%). 2 STPs at Nava Raipur are underutilized due to less habitation. Work of 3 Under construction STPs with total capacity of 37.4 MLD is completed. The proposed timeline for completion of STPs under planning stage with total capacity of 423.7 MLD is March 2027. Moreover, Under SBM-U 2.0, Low-Cost stabilization pond with cumulative capacity as 248 MLD will be constructed in 155 ULBs.	View of the Committee on the sewage treatments facilities installed and its factual status has been furnished below.

6. Site inspections undertaken and observations of the Joint Committee

In continuation to the preliminary meeting held, to assess the factual status on the implementation of solid and liquid waste management in the State of Chhattisgarh, site inspection was carriedout by the Committee in two phases (11/6/2024 to 14/6/2024 and 25/6/2024 to 28/6/2024) in presence of the State Authorities concerned in the urban / rural area of Raipur, Durg, Bhilai, Rajnandgaon, Bilaspur, Korba, Raigarh & Ambikapur of Chhattisgarh State. During the site inspection an introductory meeting was held with the respective municipal

authorities of the area concerned. During the visit of the Joint Committee, to assess the pollution load, treatment efficiency and compliance of the discharge standards samples of raw sewage before treatment and treated water discharged from the STP has been collected in each operational STPs visited and the samples were analyzed in the laboratory of Central Pollution Control Board, Bhopal. Based on the information made available by the Authorities concerned and site inspection of the Joint Committee, the factual status of implementation on the solid and liquid waste management in the area visited and observations of the Committee is furnished below.

7. Urban and Rural area of Raipur

The Joint Committee along with the Officers of Municipal Authorities and CECB visited the Integrated Municipal Solid Waste Management plant, Construction & Demolition plant, legacy waste remediation dumpsite, Sewage Treatment Plants and SLRM Centers located in the Urban and Sub-urban area of Raipur.

7(a). Solid Waste Generation, Collection, Treatment and Disposal

Raipur is a capital city of Chhattisgarh spread in 178 Sq. km of area having current population of approx. 14.67 Lakh. Raipur is divided in to 70 wards within10 Zones with approx. 3.23 Lakh households and 13900 non-residential establishments. Approximately 686.71 TPD (D2D collection 524 TPD, and city sanitation 162.71 TPD) municipal solid waste is generated having 446.36 TPD of organic / wet waste and 240.35 TPD of dry waste. Integrated Municipal Solid Waste Management plant is being operated by the M/s Delhi MSW Solutions Limited based on PPP mode in accordance with the contract between Raipur Municipal Corporation for the implementation of Integrated Solid Waste Management Scheme for 15 years from 22/02/2018. Door to Door solid waste collection is being carried out by M/s Delhi MSW Solutions Limited in all 70 wards deploying more than 242 mini tippers and compactors which are enabled with GPS online tracking system. There are 9 transfer stations located at different location of city, MSW collected with the help of Refuse Compactors for processing in covered vehicles and ultimately transported to ISWMP. Reportedly, 70-75% source segregation is being practiced at household level and 15% are done at transfer stations of the D2D Collected waste.

The municipal solid waste collected from the Raipur municipal area is being processed at the Integrated Solid Waste Management plant located at Village Sakri near Raipur. The plant is having MRF 15 TPD, RDF facility 300 TPD, Compost facility 50 TPD, Plastic waste granulating unit 15 TPD, MEE plant 40 KLD, RO plant 75 KLD and sanitary landfill site 551160 MT (06 cells) capacity. As per the information made available by Municipal Authority of Raipur, 686.71 of waste is being collected and transported from the city to Integrated solid waste management plant, wherein segregated and processed 240.35 TPD dry waste and 446.36 MT of wet-waste. Reportedly monthly average solid waste processed for the month of May 2024 is 676.12 TPD out of which 439.48 TPD wet waste and 236.64 TPD dry waste. There is gap of 10.59 TPD with respect to collection and treatment of solid waste. Solid waste from Naya Raipur is also received

at ISWM plant, Raipur. Copy of the waste processed at ISWM plant, Raipur is enclosed as **Annexure-9.**

- **Dry Waste Processing**: Out of 236.64 TPD dry waste, 190.76 TPD of non-recyclable waste (Refused Derived Fuel) are sent to the cement plants by third party and 3-4 TPD quantity of plastic waste is being processed at the plastic granulation unit.41.88 TPD inerts generated are disposed at sanitary landfill site.
- **Wet waste processing**: Wet waste are converted to compost with aerobic composting method by formation of windrows & culturing and revenue generated from selling of compost, left over balance material called inert is being sent to the sanitary landfill for disposal. Wet waste around 439.48 TPD is being processed in which rejects approx. 104.84 TPD are sent to sanitary landfill site and rest of the wet waste is being processed through windrow composting method and generated around 35.16 TPD compost, which is being sold to fertilizer companies viz. RCF, Coromandal, Paradeep Phosphates Ltd., National fertilizers Ltd. etc.
- Storage area for plastic waste was insufficient as plastic waste was stored in open space. Wet waste was also being processed in open area by forming windrows and culturing. During the visit it was observed that leachate was accumulated nearby wet waste processing area as no proper leachate collection system was provided along the compost heaps.

- Also, mixed waste was observed lying in heaps in compositing yard and the size/no. of yard and windrows provided appears to be inadequate for treating the daily wet waste received by the plant as per the records.
- **Leachate treatment:** Leachate generated in this process is treated through leachate treatment plant. For the collection and treatment of leachate, 2 HDPE lined solar evaporation ponds 8000 KL, MEE plant 40 KLD and RO plant 75 KLD is provided. During the visit Committee has also collected sample from RO permeate tank after treatment of leachate and the same was analyzed by the CPCB. The analytical results show that the pH: 8.94, TSS: 7.0 mg/L, COD: 17mg/L, BOD: 3 mg/L, PO_4: 0.005 mg/Land FC: <=1.8/100 ml. All the monitored values are within the norms prescribed in the consent issued by CECB. Analysis results are enclosed as **Annexure-10**
- **C&D Waste:** The Committee visited C&D waste processing plant located at Atari. The plant was originally designed for 65 TPD capacity and the current operational capacity is only 10 TPD.
- **Sanitary Landfill:** For disposing of the inert materials, sanitary landfill site has been provided within the Integrated Solid Waste Management plant at Village Sakri near Raipur having 06 cells with the capacity of 551160 MT. During the visit of the Joint Committee, it has been observed that 01 cell is being currently used for disposal of inert material, construction of 01 cell has already completed and 04 cells are under

construction. Total quantity of inert disposed at SLF for last one year from May 2023 to May 2024 is 53898 MT.

7(b). Remediation of Legacy waste through Bio-mining

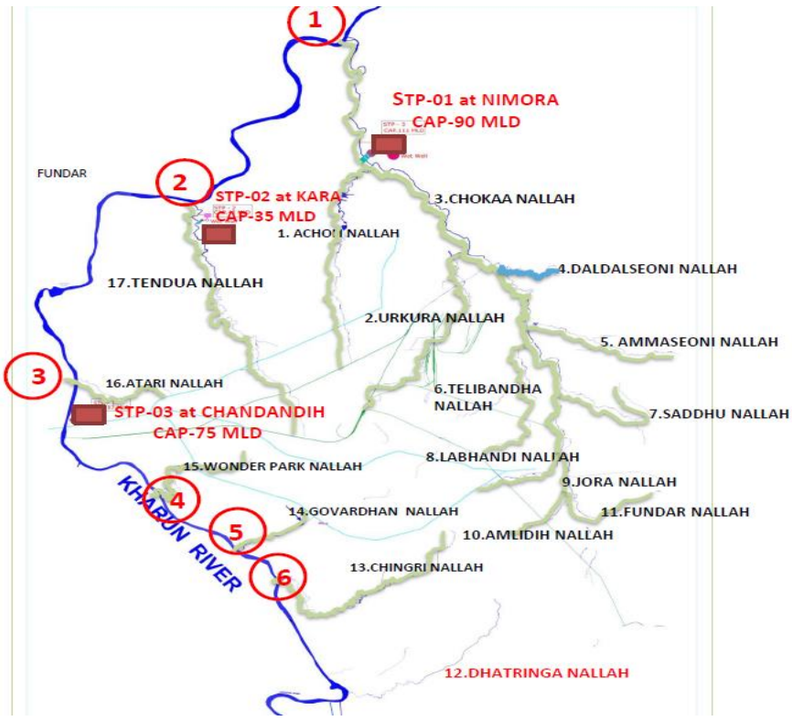
Legacy waste dumpsite is located at Sarona, Raipur with estimated quantity of 4.50 lakh MT legacy waste spread over an area of 28.20 acres. Chhattisgarh State Authority has issued work order to M/s Hill Bro Metallic and Construction Pvt. Ltd. and Environ Organic Works on 22.06.2023 with the project cost of Rs.1264.50 lakh with the timeline for complete remediation of legacy waste is 18 months i.e. 22/12/2024. The remediation work has been reportedly commenced in the month of July, 2023. During the visit of the Joint Committee, remediation work was under progress. As informed by the Authority of Nagar Nigam as on 10.06.2024 around 175000 MT (approx. 39%) of legacy waste has been processed out of which, 28000 MT RDF and 35000 MT inert, 87500 MT soil and 10500 MT C&D waste has been generated and as per the operator about 14000 MT is considered as moisture loss. After processing of legacy waste, bio-earth is used for levelling, RDF generated is supplied to the cement plants, inert and C&D waste generated is being disposed in low lying area for landfill. The Committee observed that the process of implementation appears to be in very slow phase and non-scientific as still a huge fraction of waste lying untreated in the dumpsite indicating the project may not be completed within the scheduled completion time line. Neither recovered RDF portion nor the bailing machine was found in/near the site during the visit. Indiscriminate dumping of the recovered inert portion in the high raised land near to the dumpsite where already legacy waste is existing has been observed during the visit. State Authority concerned has not obtained necessary Consent & Authorization from the CECB. There is no facility for collection and treatment of leachate. After complete reclamation of land, State Authority has proposed to install solar power and development of greenbelt. No proper safety measures are being adhered during the processing of legacy waste. The details of waste treated and disposed is enclosed as **Annexure-11.**

- There are 9 transfer stations located in the Raipur city, Joint Committee visited Narayana transfer station, where trammel is installed for the segregation of waste and for further transportation to ISWM plant.
- Sanitary waste is being collected through third party M/s SMS Water grace Enviroprotect Pvt. Ltd. Raipur Municipal Corporation has accorded NOC to M/s Star E-Waste processor for collection/buying E- waste directly from the residents /shopkeepers and for transportation of collected E-waste for further processing.

7(c). Sewage generation, treatment and disposal in Raipur

Raipur city is having approx. population of 14.67 Lakhs. Average sewage generation is estimated as 160 MLD. River Kharun is outlining Raipur City, flowing south to north for the length of 42 Kms. The city with more than one million urban populations must have a systematically planned sewerage network but this will lead huge capital expenditure as well as O & M liabilities on the municipal corporation. Being a capital of newly formed State, the quantum of sewage generation is very huge and there is inadequate conveyance system of sewage to the STPs and also there

is intrusion of waste water from other sources. There are 17 Nallas originating from inside of Raipur city and meets Kharun River at 6 locations. These Nallas are unlined & conveying domestic as well as industrial waste. The sewage generated from the Raipur city is being treated through 4 STPs installed having the total operational capacity of 206 MLD. However, present utilized capacity of all four STPs is 170 MLD. The utilized capacity is more than the sewage generated this might be due intrusion of storm water. The inlet BOD at STPs substantiates this as it is in the range of 50-60 mg/L, this indicates there is high level of dilution of sewage by other sources viz. storm water. Therefore, though the STP treats more than the sewage generated but the actual treatment of sewage is fall lesser as the BOD of the sewage will be around 150 mg/L (as per literatures it's 250 mg/L which makes more than four times dilution). Two additional STPs are proposed at Nimora (60 MLD) and Kara (20 MLD). Nallahs in the south west side of Raipur town, namely Chingri, Goverdhan, Wonderpark & Atari nalla are clubbed together to contribute waste water to STP No.1 of capacity 75 MLD situated at Chandandih. The Tendua Nalla, having its own catchment, couldn't be clubbed with above nallahs, contributes waste water to STP No.2 of capacity 35 MLD, situated near Kara village. The Chhokra nalla (contributing the flow from catchment of 11 other Nallas) which conveys about 45% waste water from Raipur city contributes waste water in the STP No.3 having the capacity 90 MLD, situated near Nimora Village. The strategic locations of the STPs located clubbing discharge of various nallas are shown below.



Presently treated water from the STPs is discharged in to the same Nalla from where the sewage drawn for treatment and no dedicated sewer network laid for discharging the treated water. Also, the treated wastewater from Batagaon STP is treated twice as the STPs treated wastewater alongside of the excess sewage flowing in the Nala is once again treated in Chandandi Tatibandh STP. Raipur Municipal Corporation is in the process of finding out possible buyers for reuse of treated water for recovering the O&M cost. The Joint Committee visited all the operational STPs located at Raipur city and the factual details are furnished below.

Table 2: Details of operational STPs at Raipur

S. No.	Location	Technology	Year of commissioning	Operational status	Installed Capacity (MLD)	Approximate Capacity utilized (MLD)	Gap in treatment (MLD)	Compliance status as per CTO
1.	90 MLD STP at Nimora	SBR	June 2022	Operational	90	90	Inadequacy of conveyance system & intrusion of storm water.	Complied
2.	75 MLD STP at Chandandih	SBR	June 2023	Operational	75	40		Complied
3.	35 MLD STP at Kara	SBR	June 2022	Operational	35	35		Complied
4.	6 MLD STP at Bhatagaon	Biotower (Trickling Filter)	June 2020	Operational	6.0	5.0		Complied

Analytical reports are enclosed as **Annexure-10.**

7(d). SLRM (Solid Liquid Resource Management) centers

In the State of Chhattisgarh for processing of Municipal solid waste, SLRM (Solid Liquid Resource Management) centers have been established in all Urban Local Bodies (ULBs). The Joint Committee visited randomly few of the SLRM centers in each city to verify the solid waste processing status at SLRM centers. At SLRM centers, door to door collection of dry and wet waste is being done by Self Help Group (SHG) women using manual rickshaw, E-rickshaw and mini tippers in segregated manner in their wards. For processing of plastic waste bailer and fatka machines and for wet waste processing compost pits and compost digester machine are provided. Dry waste is further segregated and sold to kabadiwals and wet waste is processed in compost pits. SHG women are paid Rs.7200 per month under Mission clean city and money received from selling of plastic/recyclable segregated waste is also equally distributed among them. The Joint Committee visited Derapara, Birgaon SLRM center (Manikanchan Kendra), where approx. 9.0 TPD of solid waste has been collected by 44 SHG women on regular basis with help of 13 tricycle, 7 E-rickshaw. Out of 9.0 TPD solid waste 1.5 TPD wet waste and 7.5 TPD dry waste is collected from 11 wards. Composting capacity of 3 TPD (compost pit of 1 TPD capacity and compost digester machine of 2 TPD) installed for composting was operational during the visit. Dry waste is further segregated and sold to kabadiwalas.

7(e). Sewage generation, treatment and disposal in Nava-Raipur

Nava Raipur, officially known as Atal Nagar-Nava Raipur, is the country's first Greenfield smart city. The estimated sewage generation of the Nava-Raipur area is 39.42 MLD (population 3.65 lacs as per 2021). For the sewage treatment of the Nava Raipur area 3 STPs are already installed and are operational with total capacity of 18.2 MLD. Present utilized capacity by all three STP is 4.2 MLD. Two STPs are under construction at Nawa-Raipur Zone-1 with the capacity of 10 MLD and Nawa-Raipur Zone-4 with the capacity of 10 MLD, timeline for completion the work is December, 2024. NRDA is the nodal agency undertaking comprehensive development of the 'greenfield' city. The details of the STPs visited by the Committee and its present capacity utilization is furnished below.

Table 3: Details of operational STPs at Nava-Raipur.

Location	Technology	Year of commissioning	Present Status	Installed Capacity (MLD)	Approximate Capacity utilized (MLD)	Gap in treatment (MLD)	Status of compliance
10 MLD STP at Nava Raipur – Zone 2	SBR	2019	Operational	10	2.0	Approx. 35.22 MLD	Complied
7.0 MLD STP at Nava Raipur – Zone 3	SBR	2019	Operational	7.0	1.0		Complied
1.2 MLD STP at Nava Raipur – Sector 19	MBR	2019	Operational	1.2	1.2		Complied

Analytical reports are enclosed as **Annexure-10.**

During the visit of the Committee, it has been observed that STP at Nawa Raipur – Zone 2 having the capacity of 10 MLD based on SBR technology with 4 basins have already installed and one basin was not in operation. Plant is currently operational with the capacity of 2.0 MLD for treatment of sewage.

STP at Nawa Raipur – Zone 3 (7.0 MLD based on SBR technology) with 2 basins, only one basin was operational. During the visit it was observed that second basin was not operational and there was algal bloom in the SBR basin and chlorination tank, which is not in supportive of continuous operation of the STP with efficacy. STP is currently operational with the capacity of 1.0 MLD.

STP at Nawa Raipur – Sector 19 having the capacity of 1.2 MLD based on MBR technology. Among the 2 basins, only one basin was operational during the visit. Photographs of the solid and liquid waste management facilities available at Raipur and Naya Raipur area is enclosed as **Annexure-1**.

7(f). Observations:

(i). State Authority shall explore sustainable buyers for reuse of treated water.

(ii). As per the report submitted to Hon'ble NGT dated 01.04.2024, the total Municipal Solid Waste generation in Raipur ULB was reported as 575 TPD with 319 TPD wet and 230 TPD dry waste and 26 TPD inerts, but as per the commissioner Nagar Nigam during the visit of joint committee present waste generation is reported as 686.71 TPD from households and commercial place. For the processing of solid waste an Integrated Solid waste management plant is installed. As per the records provided by the operator of the ISWM plant the monthly average solid waste processed for the month of May 2024 is 676.12 TPD out of which 439.48 TPD wet waste and 236.64 TPD dry waste. There is gap of 10.59 TPD with respect to collection and treatment of solid waste. Gap was observed in the processing of wet waste as the size composting yard is not adequate. Further, incoming waste in mixed form also noticed.

(iii). The work of bio-mining and bioremediation of legacy waste dumpsite started in July, 2023 for an estimated quantity of 4.50 lakh MT, during the visit of joint committee it was

found that the remediation work was under progress. As information provided by Nagar Nigam till 10.06.2024, 175000 MT (approx. 39%) of legacy waste has been remediated out of which 28000 MT RDF and 35000 MT inert, 87500 MT good soil and 10500 MT C&D waste generated and as per the operator about 14000 MT is considered as moisture loss. The timeline for completion of the work is December, 2024. However, it is observed still a huge fraction of waste lying untreated in the dumpsite and neither recovered RDF portion nor the bailing machine was found in/near the site. Also, indiscriminate dumping of the recovered inert portion is observed in the high raised land near to the dumpsite where already legacy waste is existing.

(iv). As per the population of Raipur city, the estimated sewage generation is 160 MLD. For the treatment of sewage, there are 04 operational STPs in Raipur Nagar Nigam with installed capacity of 206 MLD and the present utilization is 170 MLD. The utilized capacity is more than the sewage generated this might be due intrusion of storm water. The inlet BOD at STPs substantiates this as it is in the range of 50-60 mg/L, this indicates there is high level of dilution of sewage by other sources vis storm water. Therefore, though the STP treats more than the sewage generated but the actual treatment of sewage is fall lesser as the BOD of the sewage will be around 150 mg/L (as per literatures it's 250 mg/L which makes more than four times dilution). Though adequate capacity of STP is existing, only a portion of the sewage generated is being currently treated and the rest is being let out into the environment without proper treatment. Two additional STPs are proposed at Nimora and Kara with capacity of 60 MLD and 20 MLD respectively. Also, there is no sewerage network in the city for the collection and conveyance of the sewage.

(v). The estimated sewage generation of the Nava-Raipur area is 39.42 MLD (population 3.65 lakhs as per 2021). For the treatment of sewage, there are 3 operational STPs under NRDA with installed capacity of 18.2 MLD, due to poor sewerage network / household service, present utilization is only 4.2 MLD. Two STPs are under construction at Nava-Raipur. The efficacy of these plants are also not satisfactory. There is gap of 35.22 MLD with respect to treatment of sewage generated in the city.

(vi). It appears that sewage generated from the part of the residential area of Nava Raipur is discharged in the nala and yet to be connected to the treatment facility installed.

8. Urban and Rural area of Bhilai

The Joint Committee along with the Officers of Municipal Authorities and CECB visited various solid and liquid treatment facilities available at Urban and Rural area of Bhilai.

8(a). Municipal Solid Waste generation and its Collection, Treatment and Disposal

As per information provided by the Municipal Authorities, Bhilai Municipal Corporation is divided into 52 wards with a population of about 4.96 lakh having average solid waste generation of 152 TPD, out of which 86 TPD is wet waste & 58 TPD is dry waste. Reportedly about 104850 households and 14141 shops are covered from 52 wards under Municipal area. Bhilai Steel Plant

township area having approx. population of 1.48 lakh generates 32 TPD solid waste. As informed by the Municipal Authority 90-95% source segregation and 100% door to door waste collection is being practiced on daily basis.

8(b). SLRM centers

Bhilai municipal area is having 9 SLRM centers equipped with 159 tricycles and 106 E-rickshaws and 62 Tata Ace for the processing of solid waste. 342 SHG women across 9 SLRM centers are involved in the collection and processing of municipal solid waste. Capacity of MRFs at SLRM center is 5 TPD-15 TPD depending on the size, area and number of wards covered. For processing the wet waste there are 440 compost pits having average capacity of 3.0 - 3.5 tons per compost pit. Bhilai Steel Plant Township area is having one SLRM center. The Joint Committee randomly selected and visited the following SLRM Centers during the visit.

SLRM center located at Gautam Nagar, Ward No.42: Gautam Nagar Ward No.42, SLRM center (Manikanchan Kendra) wherein approx. 32.2 TPD of solid waste is being collected by 35 SHG women on regular basis with help of 30 tricycle, 24 E-rickshaw and 17Appe. Out of 32.2 TPD solid waste 19 TPD wet waste and 13.2 TPD dry waste is collected from 14 wards and 23817 households & shops. For processing of wet waste 85 compost pits are provided with total capacity of 189.5 MT. Daily collection, treatment and disposal details is enclosed as **Annexure-12.**

SLRM center located at Battalion, Ward-6: Battalion Ward 6, SLRM center (Manikanchan Kendra) wherein approx. 8.5 TPD of solid waste is being collected by 35 SHG women is on regular basis with help of 12 manual rickshaw, 4 E-rickshaw and 1 Appe. Out of 8.5 TPD solid waste 5.0 TPD wet waste and 3.5 TPD dry waste is collected from 5 wards comprising of 5270 households and shops. For processing of wet waste 11 compost pits are provided with total capacity of 27.5 MT. Daily collection, treatment and disposal details is enclosed as **Annexure-12.**

SLRM center located at BSP township area: SLRM Center located at Bhilai Steel Plant township area comprising of 23 wards with a population of 1.49 lakhs generating 32 TPD solid waste, out of which 20 TPD is wet waste and 12 TPD is dry waste. There is one SLRM center equipped with 60 tricycles, 42 E-rickshaws and 12 Tata Ace for collection of solid waste from BSP township area. During the visit, it was found that huge quantity of solid waste was dumped in open area. SLRM center was also not in operational. For processing of wet waste compost shed was provided with 44 Nos. of pits but most of the pits were empty. Daily collection, treatment and disposal details is enclosed as **Annexure-12.**

8(c). Bio-mining & remediation of Legacy waste

The Bhilai Municipal Corporation has remediated the legacy waste located at Jamul by bio-mining. The bio-mining project reportedly commenced in the month of October, 2018 and ended in March, 2022. The total estimated quantity of waste deposited was approximately 1.65 lakhs Cum (Approx. 1.5 lakh MT) at an area of 12 acres. 100 % remediation has been done and 12 acre of land has been reclaimed. The total quantity of RDF (1-2%) which was sent to the cement

plants (M/s ACC and JK Lakshmi cement), 127500 MT 80-85% is soil which was used in the construction of National Highway NH 53 and remaining waste was C&D waste which was utilized in road construction and filling of low-lying area. On the reclaimed land, 1 SLRM center and 6 compost sheds have been provided for processing of solid waste. Installation of Bio-CNG plant under SATAT scheme is planned at reclaimed site and MoU with BPCL has been made.

8(d). Sewage generation, treatment and disposal

In the Bhilai Municipal area, average sewage generation from households is 53.56 MLD. Presently, there is no any operational STPs in the Municipal area. Sewage of the city is being disposed into the drains. There is 100% gap with respect to collection and treatment of sewage. As informed 2 STPs with capacity of 150 MLD and 8 MLD are under planning stage under the AMRUT 2.0 scheme. For 150 MLD STP DPR has been prepared and for 08 MLD STP proposal has been submitted for funding from Urban Infrastructure Development Fund (UIDF).

BSP township area is having ASP technology based one STP having the capacity of 30 MLD and it was operational with inlet flow of 25-26 MLD. Sewage generated from 23 wards of the BSP township area having the population of 1.49 lakh is being treated and discharged into Nallah. However, continuous operation of the STP and its efficacy of treatment needs to be verified periodically as the inlet wastewater is highly diluted (as the BOD range is only 20-35 mg/l) and it was observed that the sludge drying bed of the plant was not in use for long time.

Table 4: Details of operational STP located within BSP Township area

Sl. No.	Location	Technology	Year of commissioning	Operational status	Capacity (MLD)	Approximate Capacity utilized (MLD)	Gap in treatment (MLD)	Compliance status as per CTO
1.	30 MLD STP at BSP township	ASP	2012	Operational	30	25	Nil	Complied

Analytical reports are enclosed as Annexure-10.

8(e). Observations:

(i). In the second six monthly report dated 01.04.2024 submitted to the Hon'ble NGT, it has been reported that total Municipal Solid Waste generation in Bhilai ULB is 180.8 TPD with 108.1 TPD wet and 72.7 TPD dry waste. As informed by the Municipal Authority during the visit, present waste generation in the ULB and BSP township area is 152 TPD and 32 TPD respectively. Whereas as per population of Municipal area, total waste generation should be 188.48 TPD hence there is gap of 36.48 TPD. As per population of BSP township, total waste generation should be 56.24 TPD hence there is gap of 24.24 TPD. During the visit, it was found that the SLRM center located in BSP township area was not operational and huge quantity of solid waste was dumped in open area.

(ii). The work of bio-mining and bioremediation of legacy waste dumpsite has already been completed and completely remediated 12 acres of the land. Reclaimed land dedicated for establishment of waste management infrastructure such as construction of MRF,

composting shed, Bio-CNG plant and C&D waste processing plant. Installation of Bio-CNG plant under SATAT scheme is planned at reclaimed site.

(iii). As per the population of Bhilai Nagar Nigam and BSP township area, the estimated sewage generation is 69.55 MLD. Presently no STPs are available in the Municipal area. However, one STP in BSP township area with capacity of 30 MLD is operational with utilized capacity of 25 MLD sewage generated within the township. However, continuous operation of the STP and its efficiency of the treatment shall be ensured by periodical monitoring of the authorities concerned.

(iv). There is gap of 100 % with respect to sewage generation and treatment in municipal area.

(v). Two STPs with capacity of 150 MLD and 8 MLD are reportedly under planning stage in the Municipal area.

Photographs showing the solid and liquid waste management facilities available at Bhilai Municipal area including BSP township area is enclosed as **Annexure-2(a)** and rural area is enclosed as **Annexure-2(b).**

9. Status of Solid waste and Sewage Management in Rural area of Bhilai

The Joint Committee visited rural areas of the Bhilai to verify the status of collection, transportation and treatment of solid and liquid waste generated. During the visit, it has been observed that at village level, in each house wet and dry waste is being segregated. Segregated dry solid waste is collected by the SHG women for further processing at SLRM centers. Wet waste generation is comparatively less and is being processed at each house by their own Ghurva arrangement. The Committee visited three villages namely Patora, Dhaurbhatha and Gadadih in Durg district. During the visit Committee interacted with the local residents to know the factual status of solid and liquid waste management practices adopted.

At Patora, there are 3 vehicles and 10 SHG women for collection and segregation of waste. Approx 25-30 Kg dry solid waste is collected on weekly basis from 910 households. For processing of the waste shredder, bailer, fatka machine and compost pits are provided. For processing of sanitary waste incinerator is installed, deep burial is also being practiced. Fecal sludge treatment plant is provided for collection of fecal sludge from 20-25 nearby villages.

At Dhaurbhatha village, as informed by the villagers, most of wet waste is being processed by households at home itself by making Ghurwa and dry waste is collected by SHG women which is further segregated at SLRM Center. Segregated waste is being sold to kabadiwalas. Compost/vermi-compost pits are also provided at the SLRM Center.

At Gadadih, there is 1 vehicle and 12 SHG women engaged for collection and segregation of wet and dry waste. Approx 14-20 Kg solid waste is being collected on weekly basis from 360 households. Segregated dry waste is sold to kabadiwalas. Most of wet waste is being processed by households at home itself by making Ghurwa.

9(a). Observations:

(i). At village level, best practices are being adopted for the collection, treatment and disposal of solid waste. Dry waste is collected by SHG women and further segregated at waste segregation unit and sold to local kabadiwalas. Wet waste is being processed at households by making Ghurwa and compost generated is used in farming.

(ii). Sewage of the households is being handled in septic tanks/double pit latrines and sludge is supplied to the fecal sludge treatment plants as and when required.

(iii). It has been observed maintenance of proper sanitation and cleanliness in rural area / villages.

10. Solid waste and Sewage Management in the Urban and Rural area of Durg

The Joint Committee along with the Officers of Municipal Authorities and CECB visited various solid and liquid waste treatment facilities available at Urban and Rural area of Durg.

10(a). Generation, Collection, Treatment and Disposal of Municipal Solid Waste

Durg Municipal Corporation is divided into 60 wards with a population of 3.49 lakhs having average solid waste generation of 101 TPD comprising of 56.6 TPD wet waste and 44.40 TPD dry waste. As informed 72766 households and 7014 shops are being covered from 60 wards under Municipal area. During the visit, Durg Municipal Authority informed around 85% source segregation is being practiced at household level and 5% by SHG women at door step and 95-97% door to door waste collection is being done on daily basis.

- **SLRM centers:** Reportedly 10 numbers of SLRM centers located in the different parts of Durg city for the processing of solid waste equipped with 225 tricycles and 57 E-rickshaws and 48 mini tippers. As informed 582 SHG women across 10 SLRM centres are involved in the collection and processing of municipal solid waste. Capacity of MRFs at SLRM center is 4.5 TPD depending on size, area and wards covered. Wet waste of 907.5 Tones is being processed through 363 compost pits. The Joint Committee randomly visited the following SLRM centers and the details are furnished below:

- **SLRM Center located at Borsi Haat Bazaar**: Joint committee visited SLRM center at Borsihaat bazar of (Durg). It has been observed that solid waste generated from 6907 households is being collected by deploying 26 Manual rickshaws and 6 E-rickshaws. Average solid waste collection is 8.85 TPD, comprising of 5.15 MT wet waste and 3.35 MT dry waste. After further processing at SLRM Center, recyclable material is being sold to kabadiwalas. Wet waste is being processed through 21 compost pits having the capacity of 63 MT. Daily waste collection, treatment and disposal details are enclosed at **Annexure -12.**

10(b). Bio-mining & remediation of Legacy waste

It has been observed that during initial survey, it was identified 144000 MT legacy waste in the area of around 10.38 acre. However, due to delay in the tender process, excess quantity of waste of about 40587 MT has been dumped at legacy waste dumpsite located at Potiyakala

(Durg). Meanwhile tender was finalized for the quantity of 144000 MT of legacy waste spread over an area of about 10.38 acre. As informed by the Municipal Authority, 144000 MT of legacy waste has been already remediated, in which 11520 MT RDF, 21600 MT inert, 87840 MT Soil, 18720 MT C&D waste and 4320 miscellaneous wastes are generated. Accordingly, 10.38 acre of land has been reclaimed. However, the remediation work of excess quantity of solid waste (40587 MT) disposed during the tender process was under progress. As per the Municipal authority the excess quantity of waste remediation will be completed by the end of August, 2024. The details of waste treated and disposed is enclosed as **Annexure-13.**

10(c). Sewage Generation, Treatment and Disposal

Reportedly 37.69 MLD of sewage is being generated from households of the Durg Municipal area. Presently, there is no any operational STPs or sewer networks under the Municipal area of Durg and thus sewage generated is being discharged into the drains without any treatment. It has been observed that there is 100% gap in respect of the networking and sewage treatment. Two STPs having the capacity of 30 MLD at ward No. 55 of Pulgaon and 47 MLD at ward No.58 of Urla are under planning stage under the AMRUT 2.0 scheme. In this regard DPR has been prepared and land survey is under process.

10(d). Observations:

(i). According to the second six monthly report dated 01.04.2024 of Chhattisgarh State Authority, the total Municipal Solid Waste generation in Durg ULB was reported as 81 TPD comprising of 49.5 TPD wet and 31.5 TPD dry waste. However, present waste generation is reportedly 101 TPD. Whereas as per population, total waste generation should be 132.62 TPD, hence there is gap of 31.62 TPD.

(ii). The work of bio-mining and bioremediation of legacy waste dumpsite remediation for 144000 MT of legacy waste spread over an area of 10.38 acre has been completed. However, remediation work for excess 40587 MT legacy waste is under progress with the completion timeline by August, 2024.

(iii). As per the population of Durg Nagar Nigam, the estimated sewage generation is 37.69 MLD, presently there is no STP for treatment of sewage and thus there is 100% gap with respect to the treatment of sewage.

Photographs showing the Solid management facilities available at Durg is enclosed as **Annexure-3.**

11. Solid waste and Sewage Management in the Urban and Rural area of Rajnandgaon

The Joint Committee along with the Officers of Municipal Authorities and CECB visited various solid and liquid waste treatment facilities available at Rajnandgaon area.

11(a). Generation, Collection, Treatment and Disposal of Municipal Solid Waste

Rajnandgaon Municipal Corporation is comprising of 51 wards having total population of around 2.11 lakhs. The average solid waste generation is 82.78 TPD, which comprises 46.645 TPD wet waste and 34.944 TPD dry waste. As informed by the Municipal Authority of Rajnandgaon, about 95% of source segregation and 100% door to door collection is achieved.

- **SLRM centers:** There are 20 SLRM centers equipped with 163 tricycles and 35 E-rickshaws and 12 Tata Ace for collection, transportation of solid waste. 442 SHG women across 20 SLRM centers are involved in the collection and processing of municipal solid waste. The Joint Committee randomly visited SLRM center located at Navagaon, Rajnandgaon located near legacy waste dumpsite, wherein collected approx. 8.853 TPD solid waste by 67 SHG women on regular basis by deploying 06 E-rickshaw and 26 manual rickshaw. Out of 8.853 TPD solid waste, 3.347 TPD dry waste and 5.150 TPD wet waste is collected from 05 wards having 6907 households. Dry waste is further segregated and sold to kabadiwalas. For processing of wet waste 21 compost pits are provided with total capacity of 63 MT. Organic composting machine for processing the wet waste has been reportedly installed in April 2024. But the same is not operational during the visit. Mixed waste was seen in the tricycles meant for door-to-door collection. Therefore, source segregation needs to be improved. Further, the functionality of the SLRM center needs to be improved as dumping of fresh unsegregated waste was observed in the dumpsite area. Daily waste collection, treatment and disposal details are enclosed at **Annexure -12.**

11(b). Bio-mining & remediation of Legacy waste

In 2022 survey, Nagar Nigam identified 26506 MT of solid waste, but as per agency engaged in the remediation work 51640 MT of solid waste was present in this year. Work order was issued for 26506 MT to M/s Wastetech Pvt. Ltd. Based on the documents made available, it has been observed that Bioremediation of legacy waste has been commenced in September, 2023 with completion time of July, 2024. So far remediated 12000 MT of legacy waste and remaining work was in progress. From the processed waste 650 MT of RDF has been sent to the cement plants. 3120 MT of inert generated disposed at low lying areas. Sanitary landfill site has not been provided. Huge quantity of legacy waste was dumped at site, only less than 25% of the land has been reclaimed through remediation. Dumping of fresh waste also observed in the dumpsite. There is no provision for collection and treatment of leachate. Also, waste was lying indiscriminately outside the dumpsite and evidences of burning the waste inside and outside the dump was also observed. During the visit, for processing of waste deployed 2 poclain and 1 power screener. Details of waste treatment and disposal of residue etc. are not made available by the implementing agency.

11(c). Sewage generation, treatment and disposal

It has been observed that 22.78 MLD sewage is being generated from households of the Municipal area of Rajnandgaon. To cater the treatment of sewage generated one STP having the capacity of 6.2 MLD has been installed at Mohadh, Rajnandgaon. The STP is currently

operational with utilized capacity of 3 MLD. Remaining sewage is being discharged into the drains which leads to the river. It has been observed that there is a gap of 19.58 MLD in respect of sewage treatment. It has been observed that one STP having the capacity of 41 MLD is proposed under the AMRUT 2.0 scheme and DPR is under preparation. The Joint committee visited operational STP located at Mohadh and observed 2 SBR basins of 3.1 MLD capacities each has been provided. Approx. 3.0 MLD of sewage flow is received and treated. No sewerage network is provided in the city. Inlet sewage to the STP is being received from the nallah.

Table 5: Details of operational STP located at Mohadh, Rajnandgaon

Location	Technology	Year of commissioning	Operational status	Installed Capacity (MLD)	Approximate Capacity utilized (MLD)	Gap in treatment (MLD)	Status of Compliance
6.2 MLD STP at Mohadh, Rajnandgaon	SBR	August, 2021	Operational	6.2	3	19.58 (w.r.t. population)	Complied

Analytical reports are enclosed as Annexure-10.

11(d). Observations:

(i). State Authority in their second six monthly report dated 01.04.2024, it has been reported that the total Municipal Solid Waste generation in the Rajnandgaon ULB was 47 TPD (27 TPD wet and 20 TPD dry waste). However, during the visit as informed by the Municipal Corporation, the present waste generation is reportedly 82.78 TPD. Whereas existing treatment capacity is 76 TPD, hence there is gap of 6.78 TPD with treatment of solid waste.

(ii). It has been observed that the remediation work was under progress and so far only 25% of remediation work of legacy waste dumpsite is completed. The timeline for completion is July,2024, but huge quantity of legacy waste is available at dumped site, which requires special attention of the Authorities concerned to expeditiously complete the remediation. The Committee has noticed the occurrence of fire on the waste dump and the Committee has advised to adhere with adequate safety measures including on-site emergency plan to prevent any fire hazards at legacy waste dumpsite. Dumping of fresh waste has also been observed and thus stringent monitoring mechanism has to be put in place.

(iii). The estimated average sewage generation is 22.78 MLD. The installed capacity of STP is 6.2 MLD and the utilized capacity of STP is 3.0 MLD. There is gap of 19.58 MLD with respect to the sewage treatment capacity. In order to meet this requirement one STP having the capacity of 41 MLD is proposed under the AMRUT 2.0 scheme and DPR is under preparation

Photographs showing the Solid and liquid waste management facilities available at Rajnandgaon area is enclosed as **Annexure-4.**

12. Generation, Collection, Treatment and Disposal of Solid Waste and Sewage in the Urban and Rural area of Bilaspur

Bilaspur is the 2nd largest city in the State of Chhattisgarh spread over an area of 145.26 Sq. km of area having 8 zones comprising of 70 wards with current population of approx. 6.49 Lakh.

Average solid waste generation is 250 TPD. The Bilaspur Municipal Corporation under PPP mode has an agreement with M/s Delhi MSW Solutions Limited for the implementation of the Integrated Solid Waste Management Schemes for a period of 15 years with effect from 22/8/2018. As informed by Municipal corporation, 200 TPD of solid waste is being processed in ISWM as per the agreement in year 2019. Subsequently added nearby villages in the Municipal area thereby increased 50 TPD of solid waste from the newly added villages, which is being processed at 17 SLRM centers. M/s Delhi MSW Solutions Limited covers 72742 households for Door-to-Door collection of solid waste with the help of more than 63 modified collection vehicles with separate compartments for dry & wet waste and 12 compactors which are enabled with GPS online tracking system. As informed by the Municipal Authority, 95% source segregation is being practiced at household level and 100% at Door-to-Door waste collection is being done daily basis.

The Chhattisgarh State Authority has established an Integrated Solid Waste Management (ISWM) plant at village Kachhar near Bilaspur for processing and disposal of the collected municipal solid waste. The ISWM plant is having the capacity of processing 250 TPD with RDF plant capacity 100 TPD, Compost plant capacity 150 TPD, MEE plant 15 KLD, Solar evaporation pond capacity 6300 KL and sanitary landfill site 300000 MT (04 cells) capacity. Based on the documents made available, it has been observed that 200 TPD of waste is being collected and transported from the city to Integrated Solid Waste Management plant, wherein 130 MT of wet waste and 70 MT of dry waste is being processed. Further, 50 TPD of solid Waste of newly added villages are being processed at 17 SLRM centers.

- **Dry Waste Processing**: Further segregated recyclable dry waste is being sent to authorized recyclers, non-recyclable waste (Refused Derived Fuel) is sent to the cement plants by third party. However, no bailing or compaction of the RDF portion is observed. Perusal of the CTO accorded by the CECB, show that the storage, transport, separation, treatment & disposal arrangements and RDF capacity is 100 TPD. Dry waste of 70 TPD is processed at ISWM plant. Bailing machine have not been provided for compaction of RDF.

- **Wet waste processing:** Wet waste collected are being converted as compost with aerobic composting method by formation of windrows & culturing and revenue is being generated by selling the compost generated. The left over balance material called inert is being sent to the sanitary landfill for disposal. 130 TPD of wet waste is being processed in 24 windrows with 250 MT capacity of each which takes 2.5 – 3 days for filling of each windrow. However, dates on windrow were discontinuous and does not match with the claims of the operator of the plant. Also, mixed waste was deposited at the site for further processing by a refuse compactor vehicle. As per the CTO issued by CECB, the composting plant capacity is 150 TPD. Approx. 7-10 TPD of compost is generated from the wet waste which is further sold to fertilizer companies. For the collection of leachate small drain is provided beneath the windrow.

- **Leachate treatment**: The leachate generated in this process is being treated through leachate treatment plant. For the collection and treatment of leachate, one HDPE lined solar evaporation pond with capacity of 6300 KL with retention period 20-25 days, MEE plant 15KLD, RO plant and ATFD is provided.

- **Sanitary landfill:** One sanitary landfill site existing with 4 numbers of cells at Integrated Solid Waste Management plant located at Village Kachhar near Bilaspur with total capacity 300000 MT are provided for dumping of inert material. During the visit of the Joint Committee, it has been observed that one sanitary landfill cell completely filled and covered with tarpaulin another one cell is being currently used for disposal of inert material and construction of 2 sanitary landfill cells were completed.

- **SLRM Centers:** The solid waste generated from the newly added villages area is being processed in the 17 numbers of SLRM centers equipped with 18 tricycles, 20 E-rickshaws and 78 mini tippers. In the 17 SLRM centers around 449 SHG women are involved in the collection and processing of municipal solid waste from the 55480 households and commercial centers of the area. Approx 45-50 TPD solid waste is being collected and processed at 17 SLRM centers. Total capacity of MRFs at SLRM centers is 59.5TPD. Wet waste is being processed through 10 composting plants with a total capacity of 1028 MT and 09 Compost sheds having 324 pits with the capacity of 648 MT.

  SLRM Center at Mopka, Ward 47: The Joint Committee visited Mopka SLRM center, wherein approx. 4.1 TPD of solid waste is collected by 30 SHG women using 2 tricycle and 1 E-rickshaw and 6 mini tippers. Out of 4.1 TPD solid waste 2.4 TPD wet waste and 1.6 TPD dry waste is being collected from 2 wards having 6712 households on daily basis. Dry waste is further segregated at SLRM center and sold to kabadiwalas and for processing the wet waste 63 compost pits having the total capacity of 126 MT are provided at the SLRM center. Currently approx. 0.35 TPD of compost is generated, which is sold to the end users and also used for gardening in the locality. Daily waste collection, treatment and disposal details are enclosed at **Annexure -12.**

  SLRM center at Chatghat, Ward 51: The Joint Committee visited Chatghat SLRM center, wherein approx. 3.3 TPD of solid waste is collected by 25 SHG women using 2 tricycle and 3 E-rickshaw and 5 mini tippers. Out of 3.3 TPD solid waste 1.9 TPD wet waste and 1.3 TPD dry waste collected from 2 wards having 5600 households on daily basis. For processing of wet waste 34 compost pits having the total capacity of 68 MT are provided at the SLRM center. During the visit, it was found that huge quantity of mixed solid waste and C & D waste was dumped around the SLRM center without any fencing. Daily waste collection, treatment and disposal details are enclosed at **Annexure – 12.**

12(a). Bio-mining & remediation of Legacy waste

The Bilaspur Municipal Corporation has remediated the legacy waste located at Kachhar, Sendri Bypass road of Bilaspur by Bio-mining. Work order has been issued to M/s Delhi MSW solutions

Ltd. for estimated quantity of legacy waste 108003.92 MT spread over an area of approx. 2.2 acres. The bio-mining project commenced from March, 2019 and ended in May, 2020. According to the details made available by the Municipal Authorities 108003.92 MT of legacy waste was remediated, out of which 45465 MT RDF, 32601.96 MT inert and 7040 MT compost, 12863 MT good soil and 10033.04 MT C&D waste was generated. After processing of legacy waste, RDF generated have been sent to cement plants, C&D waste, inerts are disposed at sanitary landfill site and compost was utilized in gardening. On reclaimed land, Integrated Solid Waste Management plant has been established.

12(b). Sewage treatment and its disposal

The Bilaspur Municipal Corporation is having approx. population of 6.49 Lakhs having average generation of 70 MLD sewage from households of the city. Sewage generated from the city is being treated through 2 STPs installed at different locations with total capacity of 71 MLD. Present utilized capacity of the STPs are 36 MLD. There is gap of 34 MLD with respect to treatment of sewage. There are 3 under construction STPs at Koni C (6.0 MLD), Mangla B (10 MLD) & Mangla D (6.0 MLD) under the Smart city scheme and timeline for completion was June, 2024. The Joint Committee visited both the operational STPs located in the Bilaspur city and the details are furnished below:

Table 6: Details of operational STPs located at Bilaspur

Sl. No.	Location	Technology	Year of commissioning	Operational status	Installed Capacity (MLD)	Approximate Capacity utilized (MLD)	Gap in treatment (MLD)	Compliance status
1.	54 MLD STP at Domuhani	ASP	March 2018	Operational	54	19	34 MLD (w.r.t. population)	Complied
2.	17 MLD STP at Chilhati	ASP	October2013	Operational	17	17		Complied

Analytical reports are enclosed as Annexure-10.

During the visit of the Committee, it was found that the STP having the capacity of 54 MLD located at Domuhani is based on ASP technology with 16 aerators in the aeration tank. The STP is operational with average flow of 19 MLD for treatment of sewage. Treated waste water is being discharged into the River Arpa. Neither recirculation of sludge nor MLSS as required in ASP is being maintained. Also, no significant settleable solids observed in the aeration tanks. OCEMS is not installed for online monitoring of discharged water. SCADA was not properly functioning and the analyzers have not been linked with SCADA. Sewerage network has been laid and connected with 2056 households, for rest of the households inter connection between junctions is required.

The STP (17 MLD based on ASP technology) located at Chilhati is operational with 6 aerators having the average flow of 16-17 MLD sewage. Treated waste water is being discharged into the River Arpa. Neither recirculation of sludge nor MLSS as required in ASP is being maintained. OCEMS is not installed for online monitoring of discharged water. SCADA was not properly functioning, analyzer was not linked with SCADA. Sewerage network has been laid and connected with 5870 households.

12(c). Observations

(i). As per the second six monthly report dated 01.04.2024, the total Municipal Solid Waste generation in the Bilaspur ULB was reported as 173.2 TPD with 99.1 TPD wet and 69.2 TPD dry waste and 5 TPD inert. Whereas, as per the population average waste generation should be 259.6 TPD. One Integrated Solid Waste Management Plant with installed capacity of 250 TPD is operational for processing of 200 TPD solid waste generated. Further, 50 TPD solid waste generated from the newly added villages are further processed at 17 SLRM centers. However, collected mixed waste has been observed. There is approximate gap of 9.6 TPD with respect to collection of solid waste.

(ii). The work of bio-mining and bioremediation of legacy waste dumpsite reportedly commenced in March, 2019 and completed in May, 2020 by remediating the estimated quantity of 108003.92 MT in an area of 2.2 acres. An integrated solid waste management plant has been established in the reclaimed land.

(iii). As per the population of Bilaspur Municipal Corporation, the estimated sewage generation is 70 MLD, there are 2 operational STPs with combined capacity of 71 MLD. The existing capacity of STPs is sufficient for treatment of sewage generated. However, due to lack of sewer network and household connection, only 36 MLD sewage is being treated. The ULB/State Government may take necessary steps to improve the performance and continuous operation of the these STPs. There is gap of 34 MLD with respect to the treatment of sewage. Three STPs at Koni C (6.0 MLD), Mangla B (10 MLD) & Mangla D (6.0 MLD) are under construction under the Smart city scheme and timeline for completion was June, 2024.

Photographs showing the Solid and liquid waste management facilities available at Bilaspur area is enclosed as **Annexure-5.**

13. Generation, Collection, Treatment and Disposal of Solid Waste and Sewage in the Urban and Rural area of Raigarh

Raigarh is an industrial city located in the State of Chhattisgarh. The Raigarh Municipal Corporation is consisting of 48 wards with a population of 1.66 lakhs having average solid waste generation of 33.56 TPD. Among this generated waste, 19.94 TPD is wet waste and 13.62 TPD is dry waste. As informed by the Municipal Authority approx. 95% of source segregation and 100% door to door waste collection is being done daily. Construction and demolition waste generated in the city is being dumped into low lying areas and no C&D waste processing plant exists.

SLRM centers: There are 12 SLRM centers equipped with 133 tricycles and 8 mini tippers used for the collection, transportation and processing of solid waste generated. Reportedly 266 SHG women are involved in the 12 SLRM centers for the collection and further processing of municipal solid waste. For processing the wet waste 224 compost pits with total capacity of 560 MT is provided and for processing the dry waste MRFs having total capacity of is 60 TPD is provided at SLRM centers.

SLRM Center at Ward 32, Banjipali Fathamuda, Raigarh: The Joint Committee visited the SLRM center located at Ward 32, Banjipali Fathamuda of Raigarh, wherein approx. 0.73 TPD of solid waste is collected from 1371 households and 192 shops covering 03 wards using 6 manual rickshaws (one rickshaw is provided as standby). The door-to-door waste collection from the households is achieved by 13 SHG women. Source segregation is being adopted at households itself. For processing of wet waste 24 compost pits are provided with total capacity of 52 MT. Approx 30 garbage vulnerable points in the city has been identified, Safaidaroga are deployed for creating awareness and imposing penalty against the littering of solid waste. Daily waste collection, treatment and disposal details are enclosed at **Annexure -12.**

13(a). Bio-mining & remediation of Legacy waste

The Raigarh Municipal Corporation has remediated the legacy waste dumped at Bade Rampur, Raigarh by bio-mining. The bio-mining project commenced in the month of November, 2022 and completed in March, 2023. The remediation work was implemented through M/s Ecostan infra Pvt. Ltd, Noida. The total estimated quantity of waste remediated was approximately 53934 MT over an area of 6.6 acres. During the process of Bioremediation of 53934 MT legacy waste, 8090 MT inert, 4315 MT RDF, 7011 MT C&D waste and 34518 MT good earth has been generated. RDF was sold to the cement manufacturing units. Inert and C&D waste was disposed at low lying areas. The total area of land reclaimed is 6.6 acres. During the visit of the Joint Committee, it was found that on reclaimed land capping work & plantation was under progress. In the reclaimed area it is proposed to develop oxyzone park in collaboration with forest department & Rotary club of Raigarh and a MRF Center. The details of waste treated and disposed is enclosed as **Annexure-14.**

13(b). Sewage generation, treatment and disposal

The average sewage generation from the households of Municipal area of Raigarh is 17.93 MLD, which is being treated through 2 STPs installed at different locations with total capacity of 32 MLD. However, present utilized capacity is 16 MLD of sewage and observed a gap of 1.93 MLD with respect to sewage collection and treatment. The Committee has visited both the operational STPs of Raigarh city and the details are furnished below.

Table 7: Details of operational STPs located at Raigarh

Sl. No	Location	Technology	Year of commissioning	Status	Installed Capacity (MLD)	Approximate Capacity utilized (MLD)	Gap in treatment (MLD)	Status of compliance
1.	25 MLD STP at Banjipali	SBR	July 2022	Operational	25	18	1.93 MLD	Complied
2.	7 MLD STP at Bade Atarmuda	SBR	July 2022	Operational	7	4		Complied

Analytical reports are enclosed as Annexure-10.

During the visit, it has been observed that the STP (25 MLD - SBR technology) located at Banjipali of Raigarh is operational with 04 number of SBR basins. During the visit of the Committee, it

was found that the flow meter and SCADA were not functioning properly. Also, OCEMS has not been installed. Also, no significant settleable solids observed in the aeration tanks. Fecal sludge also being treated as a co-treatment. Total sludge generated in the process is approximately 30 to 40 kg per week. Treated waste water of the STP is being discharged into the Kelo river. Also, no significant settleable solids observed in the aeration tanks From the log book, it has been observed that the various parameters of the raw sewage and treated water remains more or less same during the entire month.

The STP (7 MLD based on SBR technology) located at Bade Atarmuda of Raigarh is operational with 2 number of SBR basins having average sewage flow 3-4 MLD. During the visit of the Joint Committee, it was found that the flow meter and SCADA were not functioning properly. Also, no significant settlable solids observed in the aeration tanks. Treated waste water of the STP is being discharged into the Kelo river. From the log book, it has been observed that the various parameters of the raw sewage and treated water remains more or less same during the entire month.

13(c). Observations:

(i). As per the second six monthly progress report dated 01.04.2024, the total Municipal Solid Waste generation in Raigarh ULB was reported as 58 TPD comprising of 34.8 TPD wet waste and 23.2 TPD dry waste. However, based on the input made available by the Municipal Authorities present solid waste generation in ULB is 33.56 TPD. Whereas as per population the solid waste generation should be 63.08 TPD, hence there is approximate gap of 29.52 TPD with respect to the handling and processing of solid waste. There are 12 SLRM centers for handling and processing of Municipal solid waste.

(ii). The work of Bio-mining / bioremediation of legacy waste has been reportedly commenced in November, 2022 and completed in March, 2023 for an estimated quantity of 53934 MT. All the waste has been treated and on reclaimed land plantation is under progress. it is also proposed to develop oxyzone park in collaboration with forest department & Rotary club of Raigarh and a MRF Center.

(iii). The estimated sewage generation is 17.93 MLD, installed capacity for the treatment is 32 MLD and the utilised capacity is 16 MLD and thus there is gap of 1.93 MLD with respect to sewage generation and treatment. Further, functioning of the existing STP needs to be improved.

Photographs showing the Solid and liquid waste management facilities available at Raigarh area is enclosed as **Annexure-6.**

14. Generation, Collection, Treatment and Disposal of Solid Waste and Sewage in the Urban and Rural area of Korba

The Korba Municipal Corporation is comprising of 67 wards with estimate population of 4.05 lakhs, generating 115 TPD of average solid waste, which inter-alia include 68.30 TPD wet waste and 46.70 TPD dry waste. As informed by the Municipal Authorities of Korba, approx. 92% source segregation and 100% door to door waste collection is being done on

daily basis. During the interaction with the Municipal Authority, it was stated that the ULB caters for the SWM needs of only around 1.7 lakh(approx.) population in 42558 HHs out of city's population of ~4.05 Lakh and the rest is being taken care by industries as these are coming within the township areas. However, during the interaction with the officials of two major townships in the city (i.e., M/s Balco and NTPC), the total population of these two townships combined are not more than 17,000-18,000, means more than 2 lakh population is unaccounted for. This needs to be looked into by the State Authorities.

SLRM centers: There are 19 numbers of SLRM centers equipped with 215 tricycles, 80 E-rickshaw and 15 Tata Ace located in different parts of the city for collection, transportation and processing of solid waste. There are 715 SHG women are involved in 19 SLRM centers in the collection and further processing of municipal solid waste. Total capacity of MRFs at SLRM center is 60 MT. Wet waste is being processed at 7 compost plants with each having the capacity 10 MT and 218 compost pits.

The Joint committee visited the SLRM center located at Podibahar, Korba, wherein 4.3 TPD of solid waste is collected from 3 wards consisting of 3535 households, out of which 2.5 TPD is wet waste and 1.8 TPD is dry waste. There are 5 E-rickshaw, 6 manual rickshaws & 2 mini tippers and 26 numbers of employees are working at the SLRM center. Source segregation is being done either by households or by SHG women at door step itself. For processing of wet waste 24 compost pits are provided with total capacity of 72 MT and dry waste is further segregated and sold to local kabadiwalas. For processing of sanitary waste incinerator has been installed. Facility for health checkup has also been provided to the SHG women through a mobile medical unit. Details of the waste collection, treatment and disposal is enclosed at **Annexure-12.**

- The Joint committee also visited SLRM center located at Vaishali Ngar, Korba, wherein 4.2 TPD of solid waste is collected from 3 wards consisting of 3345 households, out of which 2.43 TPD is wet waste and 1.63 TPD is dry waste. There are 6 E-rickshaw, 5 manual rickshaws & 1 mini tipper and 35 nos. of employees are involving at the SLRM center. Source segregation is being done either by households or by SHG women at door step itself. Wet waste is being processed in 24 compost pits with total capacity of 72 MT provided at the SLRM center and dry waste is further segregated and sold to local kabadiwalas. Facility for health checkup has also been provided to the SHG women through a mobile medical unit. Daily waste collection, treatment and disposal details are enclosed at **Annexure-12.**

- The Joint committee visited a waste management unit located within the NTPC Korba township, wherein total 0.2 TPD of solid waste is collected from NTPC Township consisting of approx 1293 households. There are 6 E-rickshaw and 17 number of employees are working at the unit. Source segregation is not being done and the total waste is collected and segregated at SLRM center. Approx 0.02 TPD dry waste and 0.180 TPD wet waste is collected. Wet waste is processed in 16 windrows provided for

composting at the SLRM center and dry waste is segregated and sold to local kabadiwalas. There is no proper leachate collection or treatment system and the composting is being carried out in open area. Observed inadequate maintenance of reports. Daily waste collection, treatment and disposal details are enclosed at **Annexure-12.**

- The Joint committee visited SLRM center located at BALCO Korba Township, wherein total 4.9 TPD of solid waste is collected from BALCO township (2 wards) consisting of approx 2855 households. Source segregation is not done and the total waste is collected and segregated at SLRM center. Approximately 3.68 TPD dry waste and 1.10 TPD wet waste is collected. Dry waste is segregated and sold to local kabadiwalas. There are 8 Tata Ace & 1 tractor and 28 SHG women employed at the SLRM center. Proper Waste segregation is not being done. 10 Vermi composting pits have been provided for processing of wet waste. However, no worms were identified during the visit of the Joint Committee. Organic waste processor and plastic waste shredder machines are also installed at the SLRM center but both were not in operation. Weighing machine has not provided at the SLRM center. Daily waste collection, treatment and disposal details are enclosed at **Annexure -12.**

14(a). Bio-mining & remediation of Legacy waste

The Korba Municipal Corporation has remediated the legacy waste located at Barbaspur by bio-mining. Reportedly the work order for the remediation of legacy waste dump site was awarded to M/s R L services, Durg. The bio-mining of the project commenced in January, 2022 and completed in June, 2023. The total estimated quantity of waste deposited was 2.64 lakhs MT at an area of 10.20 acres. Bioremediation work of 2.64 lakh MT legacy waste has been completed. During the remediation process, 90738 MT inert, 21140 MT C&D waste, 24223 MT RDF and 127899 MT compost was generated. 100 % remediation has been done and 10.20 acre of land has been reclaimed. On the reclaimed land, establishment of SWM Facility and Development of OXY Zone has been proposed.

14(c). Sewage generation, treatment and its disposal

The average sewage generation of Korba city is 44 MLD from the approx. population of 4.05 Lakhs. Presently, there is no any operational STPs under Korba Municipal Corporation area. Sewage of the city is being disposed into the drains which ultimately meets the River Hasdeo. There is 100% gap with respect to treatment of sewage for which 33 MLD STP has been proposed under the AMRUT 2.0 scheme and DPR is under the preparation.

14(d). Observations:

(i). As per the second six monthly progress report dated 01.04.2024, the total Municipal Solid Waste generation in Korba ULB was reported as 100 TPD with 58.7 TPD wet and 41.3 TPD dry waste. However, as informed by the Municipal Authority of Korba present solid waste generation is 115 TPD. Whereas as per population, the solid waste generation should be 153.90 TPD, approximate utilization capacity of treatment facilities

is 130 TPD, hence there is approximate gap of 23.90 TPD with respect to the handling and processing of solid waste.

(ii). The issue of more than 2 lakh unaccounted population is an important issue, which needs to be looked into by the State Authority.

(iii). The waste management practices adopted in the townships shall be monitored and superior waste management methods shall be implemented.

(iv). The work of bio-mining and bioremediation of legacy waste for an estimated quantity of 2.64 lakh MT in an area of 10.20 acres has already been completed. On the reclaimed land, it is proposed to establish SWM Facility and development of OXY Zone.

(v). The estimated sewage generation is 43.74 MLD. Presently, no STPs are available and thus 100% gap is observed with respect to treatment of sewage. Sewage of the city is being disposed into the drains. STP with the capacity of 33 MLD has been proposed under the AMRUT 2.0 scheme and DPR is under the preparation.

Photographs showing the Solid and liquid waste management facilities available at Korba area is enclosed as **Annexure-7.**

15. Generation, Collection, Treatment and Disposal of Solid Waste and Sewage in the Urban and Rural area of Ambikapur

The Ambikapur Municipal corporation is located in the Sarguja District of Chhattisgarh State, which is regarded as a model City for the solid waste management. The concept of SLRM center was evolved from this city. Ambikapur Municipal corporation is having 20 zones with 48 wards comprising of approx population of 145200, which generates approx. 51 TPD of solid waste. Among the solid waste generated, 18 TPD dry waste and 33 TPD wet waste. As per the Municipal Authority, approx. 90-95% source segregation and 100% door to door waste collection is being done daily.

SLRM centers: There are 20 numbers of SLRM centers equipped with 150 tricycles, 20 E-rickshaw and 12 Auto tippers located in the different parts of the city for the processing of solid waste. There are 456 SHG women involved in 20 SLRM centers in the collection and processing of municipal solid waste. The details of SLRM centers, waste treatment and disposal details are enclosed at **Annexure-12.**

- SLRM center at DC Road: The Joint committee visited SLRM center located at DC Road (Ambikapur) wherein 2.75 TPD of solid waste is collected from 3 wards consisting of 1817 households and 155 shops, out of which 2.2 TPD is wet waste and 0.55 TPD is dry waste. There are 1 E-rickshaw, 8 manual rickshaws, 1 mini tipper and 27 SHG women are involved in the collection and processing of solid waste. Source segregation is being done either by households or by SHG women at door step itself. Wet waste is being processed in 25 compost pits with total capacity of 62.5 MT provided at the SLRM center and dry waste is further segregated and sold to local Kabadiwalas. Facility for health checkup has also been provided for SHG women through a mobile medical unit. Agreement has been

executed with M/s Mishra traders, Satna (M.P.) for processing and handling of E-waste, plastic waste and RDF. Daily waste collection, treatment and disposal details are enclosed at **Annexure -12.**

15(b). Bio-mining & remediation of Legacy waste

Remediation work for Legacy waste dumpsite reportedly commenced in the year 2015 for the estimated quantity of 24500 MT legacy waste dumped in the area of 16 acre land. Bioremediation work of 24500 MT legacy waste has already been completed in year 2016. During the remediation process reportedly generated 1500 MT inert, 1400 MT RDF and 21600 MT bio-earth. Recyclables waste sold to recyclers, RDF sent to Cement plant, Bio Earth – A heap of bio earth was made on which lawn/garden developed. Now lemon grass has been planted in it. Inerts disposed at low laying area. On the reclaimed land the Swachhata Chetna complex has been developed. SLRM center for tertiary segregation of dry waste has been installed, however during the visit it was found not in operation due to fire accident occurred during previous Diwali day.

15(c). Sewage generation, treatment and disposal

Ambikapur is having population of around 1.45 Lakhs, which generating 15.68 MLD sewage. Presently, there is no STPs under the Ambikapur Municipal area. The Sewage of the city is being disposed into the drains which ultimately meets into the river. There is 100% gap with respect to treatment of sewage. As informed to cater the need of sewage treatment of the city, 46 MLD STP has been proposed under the AMRUT 2.0 scheme and DPR is under the preparation stage. The Joint Committee also visited one of the fecal sludge treatment plants with capacity 20 KLD. On a regular basis 6 fecal sludge vehicles with 3 KL capacity are received at the plant.

15(d). Observations:

(i). As per the second six monthly progress report dated 01.04.2024, the total Municipal Solid Waste generation in Ambikapur ULB was reported as 51 TPD with 33 TPD wet and 18 TPD dry waste. Whereas as per population, total solid waste generated should be 50.82 TPD and thus there is no gap. There are 20 SLRM centers which are sufficient for handling and processing of Municipal solid waste.

(ii). The work of bio-mining and bioremediation of legacy waste dumpsite remediation has already completed in year 2016 for an estimated quantity of 24500 MT over an area of 16 acres. On the reclaimed land the Swachhata Chetna complex (garden) has been developed. SLRM center for tertiary segregation of dry waste has been installed, however presently it is not operational condition due to the fire accident occurred.

(iii). The estimated sewage generation is 15.68 MLD. Presently, there is no operational STP under the Municipal area of Ambikapur and thus there is 100% gap with respect to treatment of sewage. For sewage treatment of the city 46 MLD STP has been proposed under the AMRUT 2.0 scheme and DPR is under the preparation. Fecal sludge treatment plant for treatment of fecal sludge has been provided**.**

Photographs showing the Solid and liquid waste management facilities available at Ambikapur area is enclosed as **Annexure-8.**

16. Conclusions:

(i). Based on the inputs made available to the Committee and random site inspections undertaken in the Urban and Rural areas of various existing treatment facilities, it has been observed that undisputedly Chhattisgarh State Authority is effectively implementing the source segregation, door to door collection and management of solid waste treatment facilities both in urban and rural areas of the places visited by the Committee. However, the Joint Committee is not in agreement with the claim of the State Authority that 100% source segregation of solid waste and its management in the urban and rural areas have been achieved as reported in the second six monthly report submitted to the Hon'ble NGT. Despite the efforts are being made by the implementing agency even imposing penalty provisions for the defaulting residents, who are not complying with propre source segregation of dry and wet waste at the residence, mixed waste has been noticed in few SLRM centers / landfill sites during the visit, which emphasis that 100% source segregation can be achieved only by awareness and voluntary responsible participation of all the residents of the area concerned. The issue of more than 2 lakh unaccounted population in the Korba municipal area is an important issue, which needs to be looked into immediately by the State Authority. Further, in few places viz. residential townships of SAIL at Bhilai and NTPC & BALCO at Korba observed an ambiguity in effective implementation of solid and liquid waste management, which is not presently under the active supervision of Municipal Authorities. Further, it appears that based on the practical difficulties involved in the data acquisition / quantification of waste, Chhattisgarh State Authority is in the process of reviewing the practice adopted for quantification of waste and its disposal. Based on the appropriate quantification methodology, State Authority may revisit and submit updated status report for the entire State of Chhattisgarh.

(ii). State Authority shall expedite the ongoing remediation work of remaining Legacy Dumpsites with scientific manner ensuring all precautionary and safety measures to protect the environment. Proper provision should be made for the collection and treatment of leachate generated during the bio-remediation process. The Committee has observed existence of few C&D waste management plants. However, State Authority shall ensure its sustainability by adopting suitable policy by promoting mandatory procurement of manufactured products from the C&D plants in certain percentage at fixed cost for fixed years by the ULBs for using in its constructions activities.

(iii). Presently majority area of Chhattisgarh State is not having sewer network and even the area like Naya Raipur where sewer network has been completed but yet to be connected to the households. Undisputedly there is a gap in the treatment of domestic sewage. Collection and conveyance of sewage is being regulated through Nala/rivers, which leads to the dilution of sewage and also possible mixing of industrial discharges and storm water, which may lead ineffective / uneconomical treatment process at any point of time. In certain areas like Naya Raipur STPs are operating undercapacity and some of the STPs are yet to be operational. Treated

water shall be effectively re-used. In certain STPs it has been observed that treated water is being discharged in to the downstream of the same nala, wherein again mixed with the untreated sewage. State Authority shall explore sustainable buyers for reuse of treated water.

17. Other suggestions of the Joint Committee:

(i). Chhattisgarh State Urban Development Authority (SUDA) shall obtain all mandatory statutory Consent and Authorizations from the Chhattisgarh Environment Conservation Board as applicable to various treatment facilities before and after installation. Chhattisgarh Environment Conservation Board shall ensure effective compliance of various regulatory measures inter-alia including the conditions of the Consent and Authorizations accorded.

(ii). Chhattisgarh State Authority may consider for laying of sewer network for collection of sewage and the same shall be directly linked to the STPs and shall ensure that the treated water is being discharged without mixing with untreated sewage.

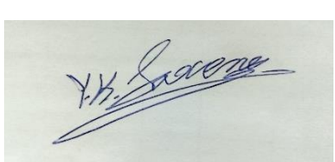
(iii). Stringent measures to be taken up by the CECB and CPCB for ensuring installation and proper functioning of online continuous effluent monitoring systems (OCEMS) at STPs and the real-time monitored data same shall be linked with the servers of CPCB and CECB.

(iv). Chhattisgarh State Urban Development Authority (SUDA) and CECB shall ensure that there is no mixing of any industrial discharges / effluents in the sewage.

(v). Treated effluents shall be utilized to the extent possible and shall be avoided discharging treated water in to the downstream of the same nala where the sewage is being drawn.

(vi). Various treatment facilities executed through third party shall be periodically monitored by the regulatory authorities concerned in order to ensure proper functioning of various utilities installed and compliance of various statutory requirements.

(vii). SLRM located at Bhilai Steel Plant township area operated by BSP should take immediate action to treat the solid waste dumped in huge quantity in the nearby area, also it is required to make SLRM operational by adopting proper waste management practices.



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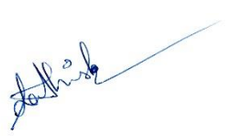

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Annexure-1

Photographs showing the Solid and liquid waste management facilities available at Raipur area.

Flow chart for processing of plastic waste at Integrated Solid Waste Management

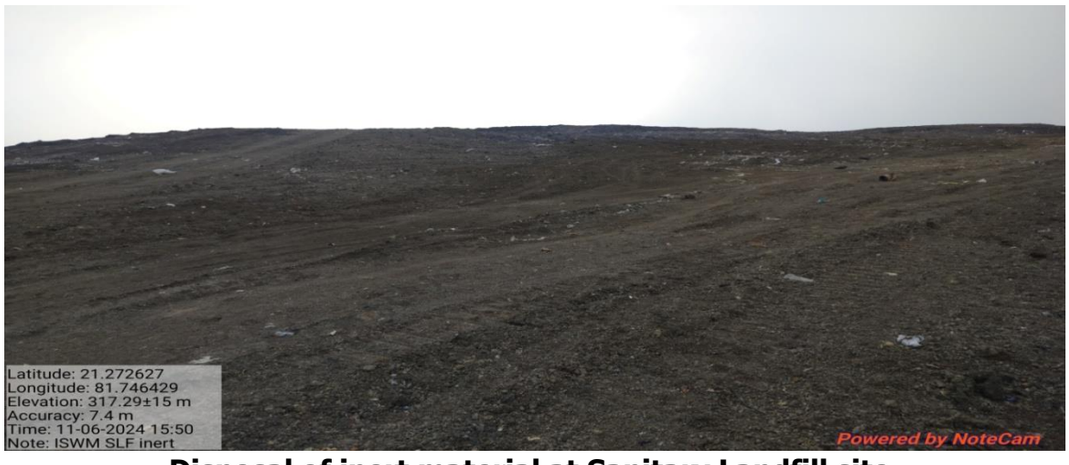
Dry waste segregation

Waste Segregation at RDF Section

View of plastic granulation unit

View of Wet waste processing by forming windrows

View of Compost Formation



Disposal of inert material at Sanitary Landfill site

View of Sanitary Landfill site under construction

View of Leachate tank near Sanitary landfill site

Leachate treatment plant MEE

Legacy Waste Dumpsite visit by the Joint Committee

view of Legacy waste Dumpsite

View of ongoing processing of legacy waste under progress

SLRM center Birgaon

Segregated dry waste at SLRM center

Usage of Compost Digestor

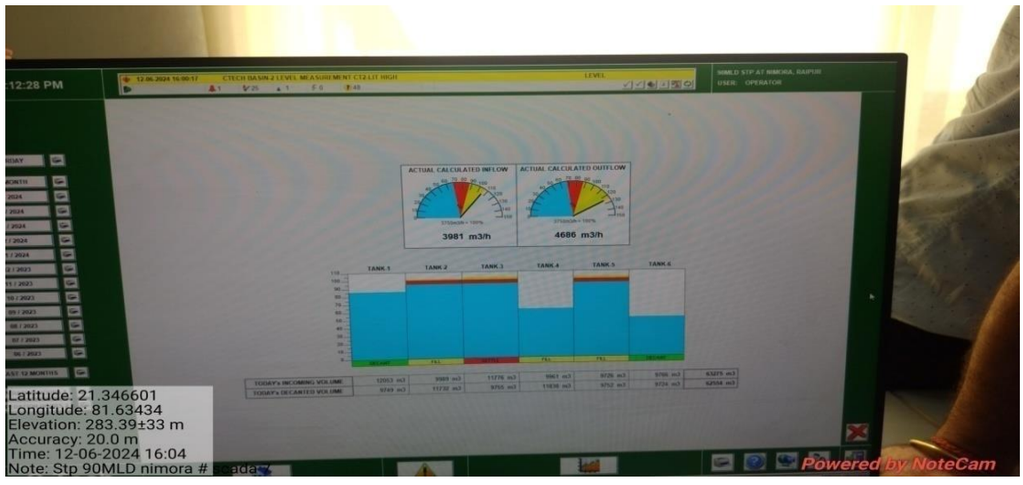
View of Narayana Transfer Station

Model display of STP 90 MLD, Nimora

STP 90 MLD inlent Tank

Grit Chamber

SBR Basin



SCADA, online monitoring of STP

Joint committee inspection at STP 35 MLD Kara

Aeration process in SBR Basin

STP 75 MLD, Chandandih, Raipur

STP 75 MLD SBR basin, Chandandih, Raipur

STP 6 MLD, Bhatagaon, Raipur

STP 6 MLD Biotowers, Bhatagaon, Raipur

STP 7 MLD, Nava Raipur

STP 7 MLD, Nava Raipur

STP 10 MLD Nava-Raipur

STP 10 MLD Nava-Raipur

STP 1.2 MLD Nava-Raipur

STP 1.2 MLD Nava-Raipur, Sample collection

Annexure-2(a)

Photographs showing the Solid and liquid waste management facilities available in the area of Bhilai

Joint committee visit at SLRM Center, Ward No. 42, Bhilai

Waste segregation at SLRM center

Wet waste processing in compost pits

SLRM center, Ward-6, Battalion, Bhilai

Segregated Dry waste at SLRM center, Battalion

SLRM center, BSP township area, Bhilai

Solid waste dumped outside SLRM center at BSP township area

Wet waste processing in compost pits

STP 30 MLD, BSP township area

STP 30 MLD, BSP township area

Annexure-2(b)

Photographs showing the waste management practices of the Rural area of Bhilai.

Joint committee visit at Dhaurbhatha village

Ghurwa nearby houses in rural area

Waste segregation unit, Village Patora

Fecal sludge treatment plant, Patora

Waste segregation unit, Village Gadadih

Annexure-3

Photographs showing the waste management practices adopted in the Urban and Rural area of Durg.

Joint committee visit at SLRM Borsi haat bazar, Durg

Segregated Waste at SLRM center

Compost formation

Plastic waste as RDF after bailing

Legacy waste dumpsite, reclaimed land, Durg

Work under progress for excess legacy waste

Annexure-4

Photographs showing the waste management practices adopted in the Urban and Rural area of Rajnandgaon.

SLRM Center Navagaon, Rajnandgaon

Segregated Dry waste at SLRM center

Solid waste dumped Outside SLRM center

Instances of fire of dumped waste outside SLRM center

Legacy waste dumpsite

Power screener at legacy waste site

Instances of fire at legacy waste dumpsite

STP 6.2 MLD, Mohadh, Rajnandgaon

STP 6.2 MLD, Mohadh, Rajnandgaon

STP 6.2 MLD, Mohadh, sample collection

Annexure-5

Photographs showing the Solid and liquid waste management facilities available at Bilaspur area.

Joint committee at Integrated solid waste management plant

Solid Waste at ISWMP

Trommel for segregation of solid waste

Windrow formation for processing of wet waste

Compost generation

Exhausted Scientific landfill site

Under construction Scientific landfill site

Interaction of the Joint Committee at the Scientific landfill site

Leachate Tank at MEE, ISWM plant

Multi Effective Evaporater Plant

Solar Evaporation Pond at ISWM plant

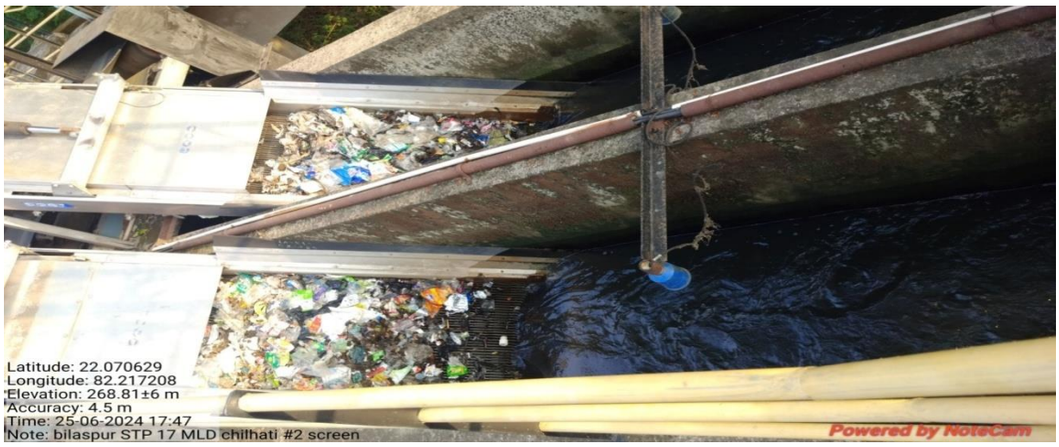
SLRM center Mopka, Bilaspur

Wet waste processing in compost pits

STP 54 MLD, Domuhani

Sample collection during inspection of STP

Aeration tank of STP 54 MLD, Domuhani



STP 17 MLD, Chilhati

Aeration tank STP 17 MLD, Chilhati

Annexure-6

Photographs showing the Solid and liquid waste management facilities available at Raigarh area.

SLRM Center Ward No. 32, Bajhinpalli, Raigarh

Wet Waste processing in compost pits

Compost Formation

Reclaimed Legacy waste dumpsite

Capping work under progress at legacy waste site

STP 25 MLD, Banjipali

STP 25 MLD, SBR basin

MLSS determination by Joint Committee at STP 25 MLD, Raigarh

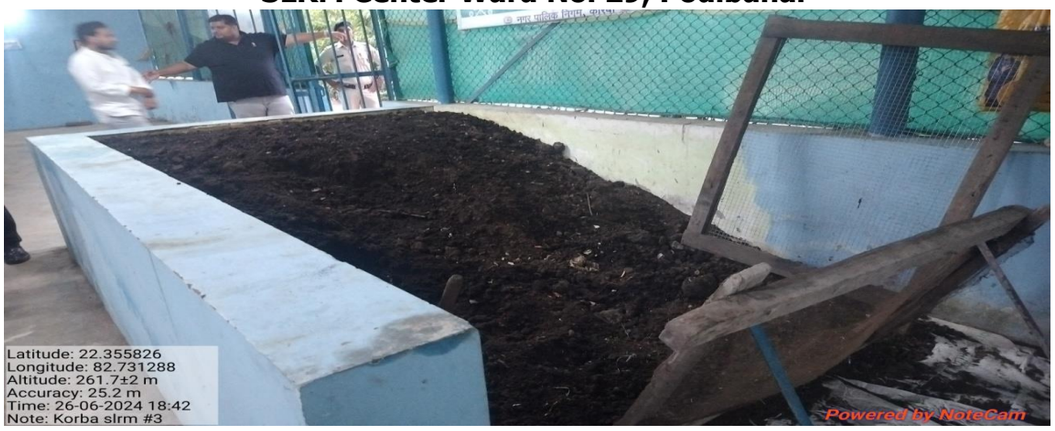
STP 7 MLD, Bade Atarmuda

STP 7 MLD, Bade Atarmuda

Annexure-7

Photographs showing the Solid and liquid waste management facilities available at Korba area.

SLRM Center Ward No. 29, Podibahar



Compost formation at SLRM center

Wet waste processing in compost pits

SLRM center, Ward-59, Vaishalinagar

Vehicles for collection of solid waste

Joint committee at Township Waste management Unit, NTPC, Korba

Compost pits for processing of Wet waste

Segregated waste at Waste management Unit

SLRM center Balco Township area

Vermicomposting Pits at SLRM center

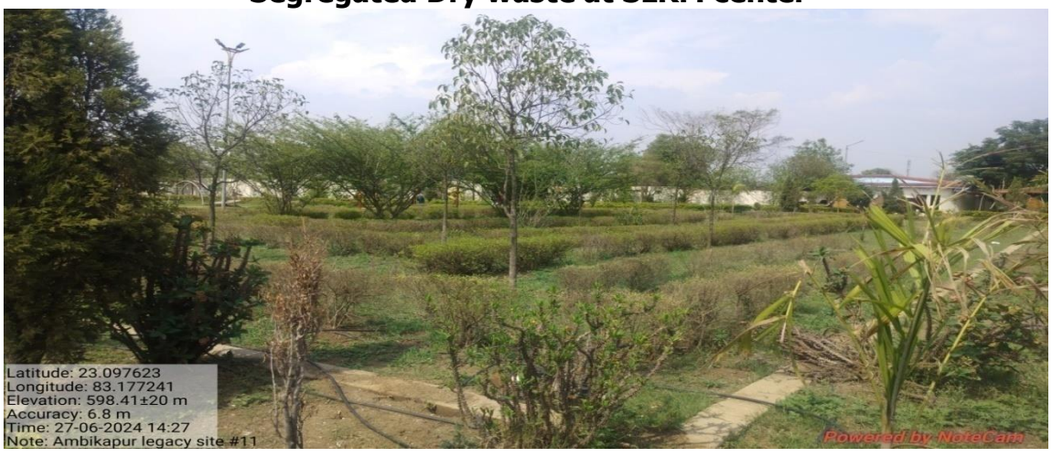
Compost generated

Annexure-8

Photographs showing the Solid and liquid waste management facilities available at Ambikapur area.

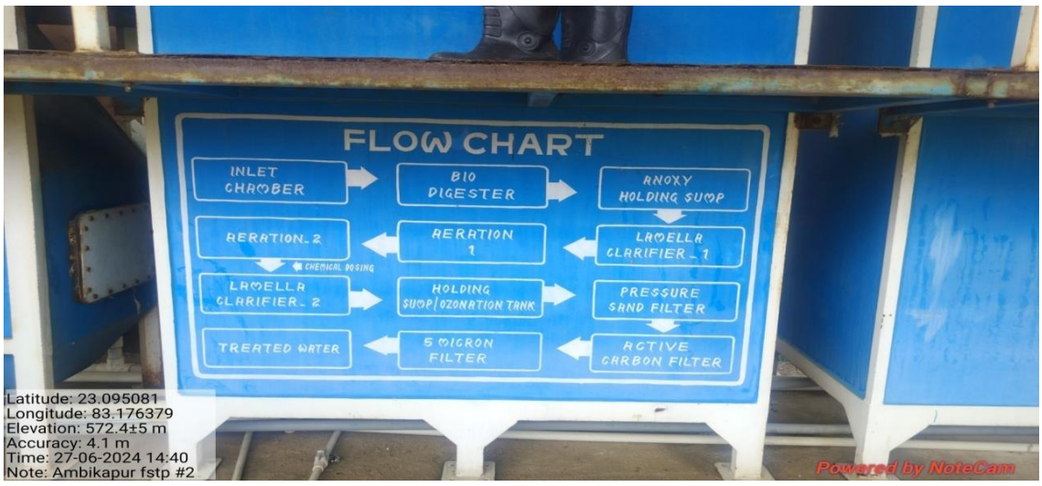
Joint committee visit at SLRM Center, DC Road

Segregated Dry waste at SLRM center



Swachhata Chetna complex on reclaimed legacy waste dumpsite

Swachhata Chetna complex on reclaimed legacy waste dumpsite



Fecal sludge treatment plant, Ambikapur

Fecal sludge treatment plant, Ambikapur

Waste management training center, Ambikapur

Waste management training center, Ambikapur

RAIPUR PROCESSING DATA JAN'23 TO MAY'24

Month	Dmswsl Receipt (Tons)	Nigam Receipt (Tons)	New Raipur (Tons)	Zonta Receipt (Tons)	IGKY	Total Receipt in plant (Tons)	Wet waste processed Approx	Dry waste processed Approx	RDF Disposed (Tons)	RDF Closing Stock	Inert Disposed (Tons)	Compost Production (Tons)	Compost Sale (Tons)	Compost Closing Stock	Plastic Inward	Plastic Outward	Plastic Closing Stock
May-23	15983.00	4766.00	293.00	6.98	0.00	21048.98	13681.84	7367.14	5436.00	1931.14	4871.00	1094.55	334.00	760.55	0.00	0.00	0.00
Jun-23	15503.00	4415.00	326.00	7.00	0.00	20251.00	13163.15	7087.85	5552.00	1535.85	4881.00	1053.05	631.00	422.05	31070	19710	11360
Jul-23	16036.00	5836.00	363.00	15.00	0.00	22250.00	14462.50	7787.50	5851.00	1936.50	4442.00	1157.00	446.00	711.00	43890	27310	16580
Aug-23	15858.00	5240.00	347.32	8.00	0.00	21453.32	13944.66	7508.66	5017.00	2491.66	2803.00	1115.57	185.00	930.57	47880	29820	18060
Sep-23	15463.92	4875.00	453.35	3.95	0.00	20796.22	13517.54	7278.68	5504.00	1774.68	2507.00	1081.40	784.00	297.40	66650	37980	28670
Oct-23	16358.00	4676.00	465.18	0.00	0.00	21499.18	13974.47	7524.71	5092.00	2432.71	3917.00	1117.96	526.00	591.96	136204	58435	77769
Nov-23	16245.00	4536.00	444.54	0.00	112.00	21337.54	13869.40	7468.14	5650.00	1818.14	3335.00	1109.55	456.00	653.55	129425	71005	58420
Dec-23	16179.00	4764.00	452.00	0.00	12.00	21407.00	13914.55	7492.45	5597.00	1895.45	4105.00	1113.16	367.00	746.16	20639	20140	499
Jan-24	16169.00	4844.00	434.00	0.00	12.00	21459.00	13948.35	7510.65	5598.00	1912.65	4773.00	1115.87	263.00	852.87	39750	39611	139
Feb-24	15181.58	5513.64	384.18	0.00	11.15	21090.55	13708.86	7381.69	5507.33	1874.36	4523.24	1096.71	243.63	853.08	48125	36235	11890
Mar-24	15804.55	5323.93	454.85	0.00	9.08	21592.41	14035.07	7557.34	5704.95	1852.39	4488.95	1122.81	96.00	1026.81	56495	47415	9080
Apr-24	15718.39	5398.15	431.70	0.00	9.86	21558.10	14012.77	7545.34	5450.59	2094.75	4703.49	1121.02	205.00	916.02	46444	30689.00	15755
May-24	15806.68	4691.56	449.76	0.00	11.66	20959.66	13623.78	7335.88	5913.81	1422.07	4548.45	1089.90	605.00	484.90	32050	22044.00	10006
Total	**206306**	**64879**	**5299**	**41**	**178**	**276703**	**179857**	**96846**	**71874**	**24972**	**53898**	**14389**	**5142**	**9247**	**698622**	**440394**	**258228**

CPCB

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
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Annexure-10

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Test Report : Waste Water (Physico Chemical Parameter)

Project Name		**NGT Case No. 606/2018**		**Test Report No.**	**WW/24-25/45**
Sample Description		**ISWM, MEE Plant RO Permeate, Raipur - Outlet**		**Requisition No.**	131
Date of sample collection		11.06.2024		**Date**	20.06.2024
Date of sample receipt		13.06.2024		**Type of sample**	Grab
Date of analysis		13.06.2024 to 20.06.2024		**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah
S.No.	**Parameters**	**Unit**	**Result**	**Method**	
1	Temperature	°C	-	-	
2	Odour	-	-	-	
3	Appearance	-	-	-	
4	Colour	Pt-Co Scale	-	APHA, 2120-B	
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B	
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C	
7	**pH**	**pH unit**	**8.94**	**APHA, 4500H+B**	
8	Specific Conductivity	µmho/cm	-	APHA 2510 B	
9	**Suspended Solids**	**mg/L**	**7**	**APHA 2540 D**	
10	Total Dissolved Solids	mg/L	-	APHA 2540 C	
11	Total Solids	mg/L	-	APHA 2540 B	
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E	
13	**COD**	**mg/L**	**17**	**APHA, 5220 B**	
14	**BOD (3 days, 27°C)**	**mg/L**	**3**	**IS 3025, 1993**	
15	Chloride	mg/L	-	APHA, 4500-CL-B	
16	Total Alkalinity	mg/L	-	APHA 2320-B	
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C	
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B	
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B	
20	**Oil & Grease**	**mg/L**	**BDL**	**APHA 5520-D**	
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C	
22	Turbidity	N.T.U.	-	APHA, 2130-B	
23	**Phosphate (as P)**	**mg/L**	**0.005**	**APHA 4500-P-D**	
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E	
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F	
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B	
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B	
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D	
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B	
30	Potassium (as K)	mg/L	-	APHA 3500-K-B	
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B	
32	Boron (as B)	mg/L	-	APHA 4500-B-C	
33	**Faecal Coliform**	**MPN/100ml**	**1.8**	**APHA 9221-E**	
34	Total Coliform	MPN/100ml	-	APHA 9221-B	
35	Bioassay Test	% Survival	-	APHA 8910 A-C	
36					
37					
38					

Prepared by:

Milind Kumar Nimje
Scientist 'B' & Government Analyst
Laboratory Head
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Central Pollution Control Board, Bhopal (M.P.)

CPCB

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab

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Test Report : Waste Water (Physico Chemical Parameter)

Project Name	**NGT Case No. 606/2018**	**Test Report No.**	**WW/24-25/57**
Sample Description	**90 MLD STP-3, Nimora, Raipur- Outlet**	**Requisition No.**	132
Date of sample collection	12.06.2024	**Date**	20.06.2024
Date of sample receipt	13.06.2024	**Type of sample**	Grab
Date of analysis	13.06.2024 to 20.06.2024	**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.61**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**8**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**27**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**8**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**2**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.748**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**3.33**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**6.8**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

मिलिन्द कुमार निमजे/Milind Kumar Nimje
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Central Pollution Control Board,Bhopal (M.P.)
Laboratory Head

CPCB

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Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/56
Sample Description	90 MLD STP-3, Nimora, Raipur- Inlet	Requisition No.	132
Date of sample collection	12.06.2024	Date	20.06.2024
Date of sample receipt	13.06.2024	Type of sample	Grab
Date of analysis	13.06.2024 to 20.06.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.4**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**66**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**61**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**17**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

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Central Pollution Control Board,Bhopal (M.P.)
Laboratory Head

CPCB

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Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/53
Sample Description	75 MLD STP-1, Chandandeah, Raipur-Outlet	Requisition No.	131
Date of sample collection	12.06.2024	Date	20.06.2024
Date of sample receipt	13.06.2024	Type of sample	Grab
Date of analysis	13.06.2024 to 20.06.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.92**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**8**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**26**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**7**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**2.5**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.55**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.6704**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**170**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

Milind Kumar Nimje
Scientist / Regional Laboratory
Central Pollution Control Board, Bhopal (M.P.)

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Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	**NGT Case No. 606/2018**	**Test Report No.**	**WW/24-25/52**
Sample Description	**75 MLD STP-1, Chandandeah, Raipur-Intlet**	**Requisition No.**	131
Date of sample collection	12.06.2024	**Date**	20.06.2024
Date of sample receipt	13.06.2024	**Type of sample**	Grab
Date of analysis	13.06.2024 to 20.06.2024	**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.59**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**184**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**94**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**29**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

मिलिन्द कुमार निमजे / Milind Kumar Nimje
वैज्ञानिक 'ग' एवं प्रयोगशाला प्रमुख / Scientist 'C' & Lab Head & Government Analyst
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Central Pollution Control Board
Regional Directorate (Central)
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Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/55
Sample Description	35 MLD STP-2, Kara, Raipur- Outlet	Requisition No.	132
Date of sample collection	12.06.2024	Date	20.06.2024
Date of sample receipt	13.06.2024	Type of sample	Grab
Date of analysis	13.06.2024 to 20.06.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.97**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**11**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**20**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**6**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**1.6 ≃ 2.00**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.055**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.754**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**9.2**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

Laboratory Head
Central Pollution Control Board, Bhopal (M.P.)

CPCB

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
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Test Report : Waste Water (Physico Chemical Parameter)

Project Name	**NGT Case No. 606/2018**	**Test Report No.**	**WW/24-25/54**
Sample Description	**35 MLD STP-2, Kara, Raipur- Inlet**	**Requisition No.**	132
Date of sample collection	12.06.2024	**Date**	20.06.2024
Date of sample receipt	13.06.2024	**Type of sample**	Grab
Date of analysis	13.06.2024 to 20.06.2024	**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.62**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**116**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**114**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**36**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
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Prepared by:

Laboratory Head / Regional Directorate

CPCB

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/59
Sample Description	06 MLD STP, Bhatgaon, Raipur- Final Outlet	Requisition No.	133
Date of sample collection	12.06.2024	Date	25.06.2024
Date of sample receipt	16.06.2024	Type of sample	Grab
Date of analysis	16.06.2024 to 25.06.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.22**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**18**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**34**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**7**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**3.9**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.822**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**2.72**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**120**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
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Prepared by:

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Central Pollution Control Board
Regional Directorate (Central)
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EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/58
Sample Description	06 MLD STP, Bhatgaon, Raipur- Inlet	Requisition No.	133
Date of sample collection	12.06.2024	Date	25.06.2024
Date of sample receipt	16.06.2024	Type of sample	Grab
Date of analysis	16.06.2024 to 25.06.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**6.93**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**43**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**73**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**16**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

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Central Pollution Control Board
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Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/49
Sample Description	10 MLD STP-2, Nava Raipur - Outlet	Requisition No.	131
Date of sample collection	12.06.2024	Date	20.06.2024
Date of sample receipt	13.06.2024	Type of sample	Grab
Date of analysis	13.06.2024 to 20.06.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.82**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**9**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**20**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**6**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**2.6**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.17**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.475**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**24**	**APHA 9221-E**
34	Bioassay Test	% Survival	-	APHA 8910 A-C
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

Laboratory Head
Regional Directorate
केन्द्रीय प्रदूषण नियंत्रण बोर्ड,भोपाल (म.प्र.)
Central Pollution Control Board,Bhopal (M.P.)

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Regional Directorate (Central)
"Parivesh Bhawan"
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EPA Recognised Lab

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Test Report : Waste Water (Physico Chemical Parameter)

Project Name		**NGT Case No. 606/2018**		**Test Report No.**	**WW/24-25/48**
Sample Description		**10 MLD STP-2, Nava Raipur - Intlet**		**Requisition No.**	131
Date of sample collection		12.06.2024		**Date**	20.06.2024
Date of sample receipt		13.06.2024		**Type of sample**	Grab
Date of analysis		13.06.2024 to 20.06.2024		**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah
S.No.	**Parameters**	**Unit**	**Result**	**Method**	
1	Temperature	°C	-	-	
2	Odour	-	-	-	
3	Appearance	-	-	-	
4	Colour	Pt-Co Scale	-	APHA, 2120-B	
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B	
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C	
7	**pH**	**pH unit**	**7.5**	**APHA, 4500H+B**	
8	Specific Conductivity	µmho/cm	-	APHA 2510 B	
9	Suspended Solids	mg/L	17	APHA 2540 D	
10	Total Dissolved Solids	mg/L	-	APHA 2540 C	
11	Total Solids	mg/L	-	APHA 2540 B	
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E	
13	**COD**	**mg/L**	**61**	**APHA, 5220 B**	
14	**BOD (3 days, 27°C)**	**mg/L**	**17**	**IS 3025, 1993**	
15	Chloride	mg/L	-	APHA, 4500-CL-B	
16	Total Alkalinity	mg/L	-	APHA 2320-B	
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C	
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B	
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B	
20	Oil & Grease	mg/L	-	APHA 5520-D	
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C	
22	Turbidity	N.T.U.	-	APHA, 2130-B	
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D	
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E	
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F	
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B	
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B	
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D	
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B	
30	Potassium (as K)	mg/L	-	APHA 3500-K-B	
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B	
32	Boron (as B)	mg/L	-	APHA 4500-B-C	
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E	
34	Bioassay Test	% Survival	-	APHA 8910 A-C	
35	Bioassay Test	% Survival	-	APHA 8910 A-C	
36					
37					
38					

Prepared by:

Laboratory Head
Regional Directorate / Central Pollution Control Board, Bhopal (M.P.)

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Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
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Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/51
Sample Description	7 MLD STP-3, Nava Raipur- Outlet	Requisition No.	131
Date of sample collection	12.06.2024	Date	20.06.2024
Date of sample receipt	13.06.2024	Type of sample	Grab
Date of analysis	13.06.2024 to 20.06.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.94**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**15**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**24**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**8**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**3.3**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.323**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.494**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**140**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
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Prepared by:

मिलिन्द कुमार निमजे/Milind Kumar Nimje
वैज्ञानिक-'ग', क्षेत्रीय प्रयोगशाला एवं सरकारी विश्लेषक
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Central Pollution Control Board,Bhopal (M.P.)

Laboratory Head:

CPCB

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018			Test Report No.	WW/24-25/50
Sample Description	7 MLD STP-3, Nava Raipur- Intlet			Requisition No.	131
Date of sample collection	12.06.2024			Date	20.06.2024
Date of sample receipt	13.06.2024			Type of sample	Grab
Date of analysis	13.06.2024 to 20.06.2024			Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**6.95**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**57**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**128**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**33**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

Milind Kumar Nimje
Government Analyst
Laboratory Head
Regional Directorate
केन्द्रीय प्रदूषण नियंत्रण बोर्ड,भोपाल (म.प्र.)
Central Pollution Control Board, Bhopal (M.P.)

CPCB

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Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/47
Sample Description	1.2 MLD STP, Nava Raipur - Outlet	Requisition No.	131
Date of sample collection	12.06.2024	Date	20.06.2024
Date of sample receipt	13.06.2024	Type of sample	Grab
Date of analysis	13.06.2024 to 20.06.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**8.45**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**4**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**13**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**5**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**2**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.008**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.24**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**84**	**APHA 9221-E**
34	Bioassay Test	% Survival	-	APHA 8910 A-C
35	Bioassay Test	% Survival	-	APHA 8910 A-C
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Prepared by:

Laboratory Head

CPCB

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
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Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	**NGT Case No. 606/2018**	**Test Report No.**	**WW/24-25/46**
Sample Description	**1.2 MLD STP, Nava Raipur - Intlet**	**Requisition No.**	131
Date of sample collection	12.06.2024	**Date**	20.06.2024
Date of sample receipt	13.06.2024	**Type of sample**	Grab
Date of analysis	13.06.2024 to 20.06.2024	**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.6**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**8**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**37**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**12**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Bioassay Test	% Survival	-	APHA 8910 A-C
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
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Prepared by:

Laboratory Head

Kumar Nimje
वैज्ञानिक / सरकारी विश्लेषक
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Central Pollution Control Board, Bhopal (M.P.)

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Test Report : Waste Water (Physico Chemical Parameter)

Project Name		**NGT Case No. 606/2018**		**Test Report No.**	**WW/24-25/61**
Sample Description		**30 MLD STP, Bhilai (CG) - Outlet**		**Requisition No.**	133
Date of sample collection		13.06.2024		**Date**	25.06.2024
Date of sample receipt		16.06.2024		**Type of sample**	Grab
Date of analysis		16.06.2024 to 25.06.2024		**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah
S.No.	**Parameters**	**Unit**	**Result**	**Method**	
1	Temperature	°C	-	-	
2	Odour	-	-	-	
3	Appearance	-	-	-	
4	Colour	Pt-Co Scale	-	APHA, 2120-B	
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B	
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C	
7	**pH**	**pH unit**	**7.32**	**APHA, 4500H+B**	
8	Specific Conductivity	µmho/cm	-	APHA 2510 B	
9	**Suspended Solids**	**mg/L**	**11**	**APHA 2540 D**	
10	Total Dissolved Solids	mg/L	-	APHA 2540 C	
11	Total Solids	mg/L	-	APHA 2540 B	
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E	
13	**COD**	**mg/L**	**23**	**APHA, 5220 B**	
14	**BOD (3 days, 27°C)**	**mg/L**	**5**	**IS 3025, 1993**	
15	Chloride	mg/L	-	APHA, 4500-CL-B	
16	Total Alkalinity	mg/L	-	APHA 2320-B	
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C	
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B	
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B	
20	**Oil & Grease**	**mg/L**	**6·4**	**APHA 5520-D**	
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C	
22	Turbidity	N.T.U.	-	APHA, 2130-B	
23	**Phosphate (as P)**	**mg/L**	**0.01**	**APHA 4500-P-D**	
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E	
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F	
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B	
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.804**	**APHA 4500-NO_3B**	
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D	
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B	
30	Potassium (as K)	mg/L	-	APHA 3500-K-B	
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B	
32	Boron (as B)	mg/L	-	APHA 4500-B-C	
33	**Faecal Coliform**	**MPN/100ml**	**170**	**APHA 9221-E**	
34	Total Coliform	MPN/100ml	-	APHA 9221-B	
35	Bioassay Test	% Survival	-	APHA 8910 A-C	
36					
37					
38					

Prepared by:

Laboratory Analyst

863

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Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	**NGT Case No. 606/2018**	**Test Report No.**	**WW/24-25/60**
Sample Description	**30 MLD STP, Bhilai (CG) - Inlet**	**Requisition No.**	133
Date of sample collection	13.06.2024	**Date**	25.06.2024
Date of sample receipt	16.06.2024	**Type of sample**	Grab
Date of analysis	16.06.2024 to 25.06.2024	**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.06**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**15**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**27**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**6**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**		**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
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Prepared by:

मिलिंद कुमार निमजे / Milind Kumar Nimje
वैज्ञानिक 'डी' एवं प्रयोगशाला प्रमुख एवं सरकारी विश्लेषक
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CPCB

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab

Test Report : Waste Water (Physico Chemical Parameter)

Project Name		**NGT Case No. 606/2018**		**Test Report No.**	**WW/24-25/63**
Sample Description		**6.2 MLD STP, Rajnandgaon (CG) - Outlet**		**Requisition No.**	133
Date of sample collection		14.06.2024		**Date**	25.06.2024
Date of sample receipt		16.06.2024		**Type of sample**	Grab
Date of analysis		16.06.2024 to 25.06.2024		**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah
S.No.	**Parameters**	**Unit**	**Result**	**Method**	
1	Temperature	°C	-	-	
2	Odour	-	-	-	
3	Appearance	-	-	-	
4	Colour	Pt-Co Scale	-	APHA, 2120-B	
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B	
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C	
7	**pH**	**pH unit**	**7.35**	**APHA, 4500H+B**	
8	Specific Conductivity	µmho/cm	-	APHA 2510 B	
9	**Suspended Solids**	**mg/L**	**12**	**APHA 2540 D**	
10	Total Dissolved Solids	mg/L	-	APHA 2540 C	
11	Total Solids	mg/L	-	APHA 2540 B	
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E	
13	**COD**	**mg/L**	**31**	**APHA, 5220 B**	
14	**BOD (3 days, 27°C)**	**mg/L**	**6**	**IS 3025, 1993**	
15	Chloride	mg/L	-	APHA, 4500-CL-B	
16	Total Alkalinity	mg/L	-	APHA 2320-B	
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C	
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B	
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B	
20	Oil & Grease	mg/L	3-4	APHA 5520-D	
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C	
22	Turbidity	N.T.U.	-	APHA, 2130-B	
23	**Phosphate (as P)**	**mg/L**	**0.014**	**APHA 4500-P-D**	
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E	
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F	
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B	
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.048**	**APHA 4500-NO_3B**	
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D	
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B	
30	Potassium (as K)	mg/L	-	APHA 3500-K-B	
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B	
32	Boron (as B)	mg/L	-	APHA 4500-B-C	
33	**Faecal Coliform**	**MPN/100ml**	**540**	**APHA 9221-E**	
34	Total Coliform	MPN/100ml	-	APHA 9221-B	
35	Bioassay Test	% Survival	-	APHA 8910 A-C	
36					
37					
38					

Prepared by:

मिलिन्द कुमार निमजे/Milind Kumar Nimje
वैज्ञानिक-'ग' एवं प्रमुख एवं सरकारी विश्लेषक
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CPCB

Central Pollution Control Board
Regional Directorate (Central)
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Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	**NGT Case No. 606/2018**			**Test Report No.**	**WW/24-25/62**
Sample Description	**6.2 MLD STP, Rajnandgaon (CG) - Inlet**			**Requisition No.**	133
Date of sample collection	14.06.2024			**Date**	25.06.2024
Date of sample receipt	16.06.2024			**Type of sample**	Grab
Date of analysis	16.06.2024 to 25.06.2024			**Sample collected by**	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah
S.No.	**Parameters**	**Unit**	**Result**	**Method**	
1	Temperature	°C	-	-	
2	Odour	-	-	-	
3	Appearance	-	-	-	
4	Colour	Pt-Co Scale	-	APHA, 2120-B	
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B	
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C	
7	**pH**	**pH unit**	**7.1**	**APHA, 4500H+B**	
8	Specific Conductivity	µmho/cm	-	APHA 2510 B	
9	**Suspended Solids**	**mg/L**	**58**	**APHA 2540 D**	
10	Total Dissolved Solids	mg/L	-	APHA 2540 C	
11	Total Solids	mg/L	-	APHA 2540 B	
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E	
13	**COD**	**mg/L**	**122**	**APHA, 5220 B**	
14	**BOD (3 days, 27°C)**	**mg/L**	**14**	**IS 3025, 1993**	
15	Chloride	mg/L	-	APHA, 4500-CL-B	
16	Total Alkalinity	mg/L	-	APHA 2320-B	
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C	
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B	
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B	
20	**Oil & Grease**	**mg/L**		**APHA 5520-D**	
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C	
22	Turbidity	N.T.U.	-	APHA, 2130-B	
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D	
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E	
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F	
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B	
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B	
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D	
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B	
30	Potassium (as K)	mg/L	-	APHA 3500-K-B	
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B	
32	Boron (as B)	mg/L	-	APHA 4500-B-C	
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E	
34	Total Coliform	MPN/100ml	-	APHA 9221-B	
35	Bioassay Test	% Survival	-	APHA 8910 A-C	
36					
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Prepared by:

Laboratory Head

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वैज्ञानिक-'सी',लैब प्रमुख एवं सरकारी विश्लेषक
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EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/65
Sample Description	54 MLD STP, Domuhani Bilaspur-Outlet	Requisition No.	134
Date of sample collection	25.06.2024	Date	05.07.2024
Date of sample receipt	28.06.2024	Type of sample	Grab
Date of analysis	28.06.2024 to 05.07.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**8.01**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**19**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**35**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**14**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**2**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.1917**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.6432**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**280**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
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Prepared by:

मिलिन्द कुमार निमजे/Milind Kumar Nimje
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Central Pollution Control Board,Bhopal (M.P.)

CPCB

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Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/64
Sample Description	54 MLD STP, Domuhani Bilaspur- Inlet	Requisition No.	134
Date of sample collection	25.06.2024	Date	05.07.2024
Date of sample receipt	28.06.2024	Type of sample	Grab
Date of analysis	28.06.2024 to 05.07.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.74**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**96**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**233**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**68**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
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Prepared by:

मिलिन्द कुमार निमजे/Milind Kumar Nimje
वैज्ञानिक-'ग'/प्रभारी प्रमुख एवं सरकारी विश्लेषक
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Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/67
Sample Description	17 MLD STP, Chilhati, Bilaspur- Outlet	Requisition No.	134
Date of sample collection	25.06.2024	Date	05.07.2024
Date of sample receipt	28.06.2024	Type of sample	Grab
Date of analysis	28.06.2024 to 05.07.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.63**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**7**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**18**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**11**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**2**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.6645**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**1.9848**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**180**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
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Prepared by:

मिलिन्द कुमार निमजे/Milind Kumar Nimje
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Paryavaran Parisar, E-5, Arera Colony, Bhopal
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Test Report : Waste Water (Physico Chemical Parameter)

F/LAB/06/TR-02

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/66
Sample Description	17 MLD STP, Chilhati, Bilaspur- Inlet	Requisition No.	134
Date of sample collection	25.06.2024	Date	05.07.2024
Date of sample receipt	28.06.2024	Type of sample	Grab
Date of analysis	28.06.2024 to 05.07.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.6**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**123**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**214**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**56**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

मिलिन्द कुमार निमजे Milind Kumar Nimje
वैज्ञानिक-'ग', क्षेत्रीय प्रयोगशाला एवं सरकारी विश्लेषक
Scientist-'C' Lab Head & Government Analyst
क्षेत्रीय निदेशालय / Regional Directorate
केन्द्रीय प्रदूषण नियंत्रण बोर्ड,भोपाल (म.प्र.)
Central Pollution Control Board,Bhopal (M.P.)

CPCB

870

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

CUSTOMER COPY
MASTER COPY
COPY FOR LAB I/C
F/LAB/06/TR-02

Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/69
Sample Description	25 MLD STP, Banjipali, Raigarh- Outlet	Requisition No.	134
Date of sample collection	26.06.2024	Date	05.07.2024
Date of sample receipt	28.06.2024	Type of sample	Grab
Date of analysis	28.06.2024 to 05.07.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.6**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**14**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**27**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**6**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**2**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.8477**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.5672**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**920**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

Laboratory Head / Scientist / Analyst
क्षेत्रीय निदेशालय / Regional Directorate
केन्द्रीय प्रदूषण नियंत्रण बोर्ड, भोपाल (म.प्र.)
Central Pollution Control Board, Bhopal

CPCB

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/68
Sample Description	25 MLD STP, Banjipali, Raigarh- Inlet	Requisition No.	134
Date of sample collection	26.06.2024	Date	05.07.2024
Date of sample receipt	28.06.2024	Type of sample	Grab
Date of analysis	28.06.2024 to 05.07.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.58**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**112**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**233**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**70**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

मिलिन्द कुमार निमजे/Milind Kumar Nimje
वैज्ञानिक-'ग',प्रभारी प्रमुख एवं सरकारी विश्लेषक
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Central Pollution Control Board,Bhopal (M.P.)

Laboratory Head

CPCB

872

Central Pollution Control Board
Regional Directorate (Central)
"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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COPY FOR LAB I/C.....

Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/71
Sample Description	07 MLD STP, Bade Atarmoda, Raigarh-Outlet	Requisition No.	134
Date of sample collection	26.06.2024	Date	05.07.2024
Date of sample receipt	28.06.2024	Type of sample	Grab
Date of analysis	28.06.2024 to 05.07.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**8.3**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**15**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**29**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**8**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	**Oil & Grease**	**mg/L**	**2**	**APHA 5520-D**
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	**Phosphate (as P)**	**mg/L**	**0.6688**	**APHA 4500-P-D**
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	**Nitrate Nitrogen (as NO_3)**	**mg/L**	**0.2784**	**APHA 4500-NO_3B**
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	**Faecal Coliform**	**MPN/100ml**	**540**	**APHA 9221-E**
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

मिलिन्द कुमार निमजे/Milind Kumar Nimje
वैज्ञानिक-'बी', क्षेत्र प्रमुख एवं सरकारी विश्लेषक
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Central Pollution Control Board Bhopal (M.P.)

Laboratory Head

CPCB

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"Parivesh Bhawan"
Paryavaran Parisar, E-5, Arera Colony, Bhopal
EPA Recognised Lab
Test Report : Waste Water (Physico Chemical Parameter)

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COPY FOR LAB I/C.....

Project Name	NGT Case No. 606/2018	Test Report No.	WW/24-25/70
Sample Description	07 MLD STP, Bade Atarmoda, Raigarh-Inlet	Requisition No.	134
Date of sample collection	26.06.2024	Date	05.07.2024
Date of sample receipt	28.06.2024	Type of sample	Grab
Date of analysis	28.06.2024 to 05.07.2024	Sample collected by	Dr. Y K Saxena, Sh. R Kumar, Sh. R Bandewar, Sh. S S Kushwah

S.No.	Parameters	Unit	Result	Method
1	Temperature	°C	-	-
2	Odour	-	-	-
3	Appearance	-	-	-
4	Colour	Pt-Co Scale	-	APHA, 2120-B
5	Residual Chlorine	mg/L	-	APHA 4500-Cl-B
6	Dissolved Oxygen	mg/L	-	APHA 4500-O-C
7	**pH**	**pH unit**	**7.66**	**APHA, 4500H+B**
8	Specific Conductivity	µmho/cm	-	APHA 2510 B
9	**Suspended Solids**	**mg/L**	**94**	**APHA 2540 D**
10	Total Dissolved Solids	mg/L	-	APHA 2540 C
11	Total Solids	mg/L	-	APHA 2540 B
12	Fixed Dissolved Solid	mg/L	-	APHA 2540 E
13	**COD**	**mg/L**	**240**	**APHA, 5220 B**
14	**BOD (3 days, 27°C)**	**mg/L**	**65**	**IS 3025, 1993**
15	Chloride	mg/L	-	APHA, 4500-CL-B
16	Total Alkalinity	mg/L	-	APHA 2320-B
17	T. Hardness (as $CaCO_3$)	mg/L	-	APHA 2340-C
18	Ca Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Ca-B
19	Mg Hardness (as $CaCO_3$)	mg/L	-	APHA 3500-Mg-B
20	Oil & Grease	mg/L	-	APHA 5520-D
21	Total Kjehdal Nitrogen	mg/L	-	APHA 4500-Norg-C
22	Turbidity	N.T.U.	-	APHA, 2130-B
23	Phosphate (as P)	mg/L	-	APHA 4500-P-D
24	Sulphate (as SO_4)	mg/L	-	APHA 4500-SO_4-E
25	Ammo. Nitrogen (as NH_3)	mg/L	-	APHA 4500-NH_3-F
26	Nitrite Nitrogen (as NO_2)	mg/L	-	APHA 4500-NO_2-B
27	Nitrate Nitrogen (as NO_3)	mg/L	-	APHA 4500-NO_3B
28	Fluoride (as F)	mg/L	-	APHA 4500-F-D
29	Sodium (as Na)	mg/L	-	APHA 3500-Na-B
30	Potassium (as K)	mg/L	-	APHA 3500-K-B
31	Chromium (as Cr^{+6})	mg/L	-	APHA 3500-Cr B
32	Boron (as B)	mg/L	-	APHA 4500-B-C
33	Faecal Coliform	MPN/100ml	-	APHA 9221-E
34	Total Coliform	MPN/100ml	-	APHA 9221-B
35	Bioassay Test	% Survival	-	APHA 8910 A-C
36				
37				
38				

Prepared by:

मिलिन्द कुमार निगले Milind Kumar Nigle
वैज्ञानिक- / Scientist- / Head & Government Analyst
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केन्द्रीय प्रदूषण नियंत्रण बोर्ड, भोपाल (म.प्र.)
Central Pollution Control Board

Annexure V

Fraction Of Legacy Waste as per CPCB Guidelines

Total area of milestone 1 – 11.87 Acre

Tentative Wt. in Milestone 1 – 1.75 Lac MT

Legacy Fractions	Tentative percentage as per the CPCB guidelines	Tentative Weight (MT)	Trips disposed of (Nos.)	disposed of Quantity (MT)	Percentage of disposed of quantity	Remarks
RDF	16%	28000	613	14200	51%	Sent to GG Wastech Pvt Ltd for further disposal in the cement plant. Details attached in Annexure
Inert	20%	35000	875	20124	57%	will be used in filling low land of the municipal corporation Raipur. Detail Attached in the Annexure
Soil	50%	87500	2453	63778	73%	Disposed of in Sachdeva's land. Disposing of is going on. Details attached in the annexure
C&D	6%	10500		7350	70%	Used in filling lowland areas in dump site.

Authorised Signatory

HBMCPL AND EOWS IV

Annexure-12

कार्यालय, नगर पालिक निगम बीरगांव, जिला–रायपुर (छ.ग.)

डेरापारा (मठपारा) एस.एल.आर.एम. सेंटर की जानकारी

क्र.	विवरण		
1	एस.एल.आर.एम. सेंटर का नाम	डेरापारा, एस.एल.आर.एम. सेंटर (वार्ड 27)	
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	11 (वार्ड 20,22,23,25,26,27,28,29,30,31,35)	
3	कुल मकानों की संख्या	8456	
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	44	
5	सेंटर में वाहनों की संख्या	24	
6	वाहनों का प्रकार	हाथ रिक्शा 13	ई–रिक्शा 07
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा – 0.250	ई–रिक्शा – 0.400
8	कम्पोस्ट पिट की संख्या	7	
9	कम्पोस्ट पिट की क्षमता (टन में)	3 TPD (2 TPD Compost Mashine + 1 TPD Compost Pit)	
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	8-853	
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	7.5	
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	1.5	
13	प्रति दिवस एकत्रित परिमय संकट औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.01	
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.070	
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	22500	
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 2500.00 रु.	
		प्रतिमाह विक्रय से प्राप्त आय – 75000.00 रु.	
		विगत 01 वर्ष में विक्रय से प्राप्त आय – 6,12,734.00 रु.	
19	सीमेंट प्लांट में भेजे जाने वाले SCF की औसतन मात्रा (टन में)	19 टन प्रतिमाह	
20	उत्पादित कम्पोस्ट की मात्रा (टन में)	15 टन प्रतिमाह	
21	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	8 टन	
22	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	48000.00 रू.	
23	स्वयं उपयोग किये गये कम्पोस्ट की मात्रा (टन में)	7 टन	

कार्यालय, नगर पालिक निगम, भिलाई

गौतम नगर एस.एल.आर.एम. सेंटर की जानकारी

क्र.	विवरण	
1	एस.एल.आर.एम. सेंटर का नाम	गौतम नगर एस.एल.आर.एम. सेंटर (वार्ड 42)
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	14 (वार्ड 38,39,40,41,42,43,44,45,46,47,48,49,50,51)
3	कुल मकानों की संख्या	23817
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	35
5	सेंटर में वाहनों की संख्या	70
6	वाहनों का प्रकार	हाथ रिक्शा 30, ई–रिक्शा 24, एप्पे 17
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा – 0.250, ई–रिक्शा – 0.400, एप्पे – 1.250
8	कम्पोस्ट पिट की संख्या	85
9	कम्पोस्ट पिट की क्षमता (टन में)	189.5
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	32.2
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	13.0
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	19.0
13	प्रति दिवस एकत्रित परिमय संकट औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.067
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.068
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	128000
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 39000.00 रु.
		प्रतिमाह विक्रय से प्राप्त आय – 1175000.00 रु.
		विगत 01 वर्ष में विक्रय से प्राप्त आय – 14100000.00 रु.
19	सीमेंट प्लांट में भेजे जाने वाले **SCF** की औसतन मात्रा (टन में)	100 टन प्रतिमाह
20	उत्पादित कम्पोस्ट की मात्रा (टन में)	183 टन प्रतिमाह
21	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	63.7 टन
22	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	70070.00 रू.
23	स्वयं उपयोग किये गये कम्पोस्ट की मात्रा (टन में)	119.3

कार्यालय, नगर पालिक निगम, भिलाई

बटालियन एस.एल.आर.एम. सेंटर की जानकारी

क्र.	विवरण	
1	एस.एल.आर.एम. सेंटर का नाम	बटालियन एस.एल.आर.एम. सेंटर (वार्ड 06)
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	5 (वार्ड 04,05,06,69,70)
3	कुल मकानों की संख्या	5270
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	35
5	सेंटर में वाहनों की संख्या	17
6	वाहनों का प्रकार	हाथ रिक्शा 12, ई–रिक्शा 4, एप्पे 01
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा – 0.250, ई–रिक्शा – 0.400, एप्पे – 1.250
8	कम्पोस्ट पिट की संख्या	11
9	कम्पोस्ट पिट की क्षमता (टन में)	27.5
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	8.5
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	3.5
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	5.0
13	प्रति दिवस एकत्रित परिमय संकट औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.066
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.067
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	58000
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 10633.00 रु.
		प्रतिमाह विक्रय से प्राप्त आय – 319000.00 रु.
		विगत 01 वर्ष में विक्रय से प्राप्त आय – 3800000.00 रु.
19	सीमेंट प्लांट में भेजे जाने वाले SCF की औसतन मात्रा (टन में)	28 टन प्रतिमाह
20	उत्पादित कम्पोस्ट की मात्रा (टन में)	30 टन प्रतिमाह
21	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	16 टन
22	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	17600.00 रू.
23	स्वयं उपयोग किये गये कम्पोस्ट की मात्रा (टन में)	14

कार्यालय महाप्रबन्धक (प्रवर्तन एवं जन स्वास्थ्य विभाग)
नगर सेवाएँ
भिलाई इस्पात संयंत्र

क्र.	--	विवरण
1	एस.एल.आर.एम.सेन्टर का नाम	एस.एल.आर.एम.सेन्टर, भिलाई इस्पात संयंत्र, नेवई
2	सेन्टर में कलेक्शन किये जाने वाले सेक्टर की संख्या	14
3	कुल मकानों की संख्या	33000
4	सफाई कार्य मे कार्यरत कामगारों की संख्या	203
5	सफाई कार्य मे कार्य में आने वाले वाहनों की संख्या	हाथ रिक्शा 60, ई-रिक्शा 42, टाटा एस 12, ट्रेक्टर 4 अतः कुल 116
6	वाहनों का प्रकार	हाथ रिक्शा 60, ई-रिक्शा 42, टाटा एस 12, ट्रेक्टर 4 अतः कुल 116
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा (0.150) ई-रिक्शा (0.250), टाटा एस (0.450), ट्रेक्टर (1.0)
8	कम्पोष्ट पिट की संख्या	44
9	कम्पोष्ट पिट की क्षमता (टन में)	4X42, 6x2
10	प्रतिदिन एकत्रित कुल अपशिष्ट	औसतन 32 टन
11	प्रतिदिन एकत्रित सूखे अपशिष्ट की मात्रा	औसतन 12 टन
12	प्रतिदिन एकत्रित गीले अपशिष्ट की मात्रा	औसतन 20 टन
13	प्रतिदिन एकत्रित हजार्डस अपशिष्ट की मात्रा	औसतन 0.035 टन
14	प्रतिदिन एकत्रित सेनेटरी अपशिष्ट की मात्रा	औसतन 0.05 टन
15	प्रतिमाह विक्रय सूखे अपशिष्ट	ठेका शर्तों के अनुसार ठेकेदार की सम्पत्ति
16	विक्रय सूखे अपशिष्ट से आय	कण्डिका 15 के अनुसार
17	सीमेंट प्लांट भेजे गये अपशिष्ट	एकमुश्त 321 टन
18	उत्पादित कम्पोष्ट की मात्रा	10 टन प्रतिमाह
19	विक्रय किये कम्पोष्ट की मात्रा	ठेका शर्तों के अनुसार ठेकेदार की सम्पत्ति
20	विक्रय से प्राप्त आय	कण्डिका 19 के अनुसार
21	स्वयं उपयोग किये कम्पोष्ट की मात्रा	कण्डिका 19 के अनुसार

कार्यालय, नगर पालिक निगम, दुर्ग

बोरसी हाट बाजार एस.एल.आर.एम. सेंटर की जानकारी

क्र.		विवरण	
1	एस.एल.आर.एम. सेंटर का नाम	बोरसी हाट बाजार एस.एल.आर.एम. सेंटर (वार्ड 53)	
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	5 (वार्ड 49,51,52,53,54)	
3	कुल मकानों की संख्या	6907	
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	67	
5	सेंटर में वाहनों की संख्या	33	
6	वाहनों का प्रकार	हाथ रिक्शा 26	ई–रिक्शा 06
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा – 0.250	ई–रिक्शा – 0.400
8	कम्पोस्ट पिट की संख्या	21	
9	कम्पोस्ट पिट की क्षमता (टन में)	63	
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	8.853	
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	3.347	
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	5.150	
13	प्रति दिवस एकत्रित परिमय संकट औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.034	
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.051	
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	54000	
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 4250.00 रु.	
		प्रतिमाह विक्रय से प्राप्त आय – 127000.00 रु.	
		विगत 01 वर्ष में विक्रय से प्राप्त आय – 1520000.00 रु.	
19	सीमेंट प्लांट में भेजे जाने वाले SCF की औसतन मात्रा (टन में)	23 टन प्रतिमाह	
20	उत्पादित कम्पोस्ट की मात्रा (टन में)	19 टन प्रतिमाह	
21	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	7 टन	
22	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	38000.00 रु.	
23	स्वयं उपयोग किये गये कम्पोस्ट की मात्रा (टन में)	12 टन	

कार्यालय, नगर पालिक निगम,राजनंदगांव

नवागांव एस.एल.आर.एम. सेंटर की जानकारी

क्र.	विवरण		
1	एस.एल.आर.एम. सेंटर का नाम	नवागांव एस.एल.आर.एम. सेंटर (वार्ड 53)	
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	5 (वार्ड 49,51,52,53,54)	
3	कुल मकानों की संख्या	6907	
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	67	
5	सेंटर में वाहनों की संख्या	33	
6	वाहनों का प्रकार	हाथ रिक्शा 26	ई–रिक्शा 06
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा – 0.250	ई–रिक्शा – 0.400
8	कम्पोस्ट पिट की संख्या	21	
9	कम्पोस्ट पिट की क्षमता (टन में)	63	
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	8.853	
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	3.347	
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	5.150	
13	प्रति दिवस एकत्रित परिमय संकट औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.034	
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.051	
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	54000	
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 4250.00 रु.	
		प्रतिमाह विक्रय से प्राप्त आय – 127000.00 रु.	
		विगत 01 वर्ष में विक्रय से प्राप्त आय – 1520000.00 रु.	
19	सीमेंट प्लांट में भेजे जाने वाले **SCF** की औसतन मात्रा (टन में)	23 टन प्रतिमाह	
20	उत्पादित कम्पोस्ट की मात्रा (टन में)	19 टन प्रतिमाह	
21	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	7 टन	
22	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	38000.00 रू.	
23	स्वयं उपयोग किये गये कम्पोस्ट की मात्रा (टन में)	12 टन	

कार्यालय, नगर पालिक निगम, बिलासपुर (छ.ग.)

मोपका एस.एल.आर.एम. सेंटर की जानकारी

क्र.	विवरण		
1	एस.एल.आर.एम. सेंटर का नाम	मोपका एस.एल.आर.एम. सेंटर (वार्ड 47)	
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	2 (वार्ड 47, 48)	
3	कुल मकानों की संख्या	6712	
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	30	
5	सेंटर में वाहनों की संख्या	9	
6	वाहनों का प्रकार	हाथ रिक्शा 02	ई–रिक्शा 01, मिनी टीपर – 06
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा– 0.250	ई–रिक्शा – 0.400, मिनी टीपर – 0.750
8	कम्पोस्ट पिट की संख्या	63	
9	कम्पोस्ट पिट की क्षमता (टन में)	126	
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	4.1	
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	1.6	
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	2.4	
13	प्रति दिवस एकत्रित परिसंकटमय औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.012	
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.016	
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	1662	

16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 450.00 रु.
		प्रतिमाह विक्रय से प्राप्त आय – 13500.00 रु.
		विगत 01 वर्ष में विक्रय से प्राप्त आय– 162000.00 रु.
17	सीमेंट प्लांट में भेजे जाने वाले **SCF** की औसतन मात्रा (टन में)	3.8 टन प्रतिमाह
18	उत्पादित कम्पोस्ट की मात्रा (टन में)	5 टन
19	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	1.5 टन
20	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	3000 रू.
21	स्वयं उपयोग किये गये कम्पोस्ट की मात्रा (टन में)	0.05 टन

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छठघाट एस.एल.आर.एम. सेंटर की जानकारी

क्र.	विवरण		
1	एस.एल.आर.एम. सेंटर का नाम	छठघाट एस.एल.आर.एम. सेंटर (वार्ड 51)	
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	2 (वार्ड 51, 52)	
3	कुल मकानों की संख्या	5600	
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	25	
5	सेंटर में वाहनों की संख्या	10	
6	वाहनों का प्रकार	हाथ रिक्शा 02	ई–रिक्शा 03, मिनी टीपर – 05
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा– 0.250	ई–रिक्शा – 0.400, मिनी टीपर – 0.750
8	कम्पोस्ट पिट की संख्या	34	
9	कम्पोस्ट पिट की क्षमता (टन में)	68	
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	3.3	
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	1.3	
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	1.9	
13	प्रति दिवस एकत्रित परिसंकटमय औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.01	
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.015	
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	1242	
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 400.00 रु.	
		प्रतिमाह विक्रय से प्राप्त आय – 12000.00 रु.	
		विगत 01 वर्ष में विक्रय से प्राप्त आय– 144000.00 रु.	
17	सीमेंट प्लांट में भेजे जाने वाले **SCF** की औसतन मात्रा (टन में)	4.5 टन प्रतिमाह	

18	उत्पादित कम्पोस्ट की मात्रा (टन में)	2 टन
19	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	1 टन
20	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	2000 रू.
21	स्वयं उपयोग किये गये कम्पोस्ट की मात्रा (टन में)	0.034 टन

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बांझीनपाली एस.एल.आर.एम. सेंटर की जानकारी

क्र.		विवरण
1	एस.एल.आर.एम. सेन्टर का नाम	बांझीनपाली एस.एल.आर.एम. सेंटर (वार्ड क्र. 32)
2	सेन्टर में कलेक्शन किया जाने वाले वार्डो की संख्या	03 (32, 33, 34)
3	कुल मकानों की संख्या	1371
4	सेंटर में कार्यरत स्वच्छता दीदीयों की संख्या	13
5	सेन्टर में वाहनों की संख्या	07
6	वाहनों का प्रकार	ट्राय सायकल – 07
7	वाहनों की क्षमता (टन में)	ट्राय सायकल – 0.25
8	कम्पोस्ट पिट की संख्या	24
9	कम्पोस्ट पिट की क्षमता (टन में)	52
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	0.73
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	0.16
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	0.56
13	प्रति दिवस एकत्रित परिमय संकट औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.01
14	प्रति दिवस एकत्रित सेनेटरी अपशिष्ट की औसतन मात्रा (टन/दिवस)	0.001
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	4320
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 1200 रू.
		प्रतिमाह विक्रय से प्राप्त आय – 35999 रू.
		विगत 01 वर्ष में विक्रय से प्राप्त आय – 431992 रू.
17	सीमेंट प्लांट में भेजे जाने वाले SCF की औसतन मात्रा (टन में)	0.48 टन प्रतिमाह
18	उत्पादित कम्पोस्ट की मात्रा (टन में)	3.36 टन प्रतिमाह
19	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	2.11 टन
20	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	10550 रू.
21	स्वयं उपभोग किये गये कम्पोस्ट की मात्रा (टन में)	2.52 टन प्रतिमाह

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पोड़ीबहार एस.एल.आर.एम. सेंटर की जानकारीः–

क्र.	बिन्दु	विवरण
1	एस.एल.आर.एम. सेंटर का नाम	पोड़ीबहार एस.एल.आर.एम.सेंटर (वार्ड–29)
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	3 (वार्ड – 29,32,33)
3	कुल मकानों की संख्या	3535
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	26
5	सेंटर में वाहनों की संख्या	13
6	वाहनों का प्रकार	हाथ रिक्शा 06 , ई–रिक्शा – 05, मिनी टिप्पर–2
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा 0.250 , ई–रिक्शा – 0.400, मिनी टिप्पर–0.5
8	कम्पोस्ट पिट की संख्या	24
9	कम्पोस्ट पिट की क्षमता (टन में)	72
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	4.30
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दवस)	1.67
12	प्रति दिक्स एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दवस)	2.49
13	प्रति दिवस एकत्रित परिसंकटमय औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.052
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.077
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	42585
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 1083 रू
		प्रतिमाह विक्रय से प्राप्त आय – 32500 रू
		विगत 01 वर्ष में विक्रय से प्राप्त आय – 390000 रू
17	सीमेंट प्लांट में भेजे जाने वाले SCF की औसतन मात्रा (टन में)	9 टन प्रतिमाह
18	उत्पादित कम्पोस्ट की मात्रा (टन में)	18.5 टन प्रतिमाह
19	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	3.5 टन प्रतिमाह
20	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	17500 रू. एवं विभागीय उद्यान
21	स्वंय उपयोग किये गये कम्पौस्ट की मात्रा (टन में)	15 टन प्रतिमाह उद्यानों एवं किसानो को निःशुल्क

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वैशाली नगर एस.एल.आर.एम. सेंटर की जानकारीः–

क्र.	बिन्दु	विवरण
1	एस.एल.आर.एम. सेंटर का नाम	वैशाली नगर एस.एल.आर.एम.सेंटर (वार्ड 59)
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	3 (वार्ड – 54,58,59)
3	कुल मकानों की संख्या	3345
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	35
5	सेंटर में वाहनों की संख्या	12
6	वाहनों का प्रकार	हाथ रिक्शा 5 , ई–रिक्शा – 06, मिनी टिप्पर–1
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा 0.250 , ई–रिक्शा – 0.400, मिनी टिप्पर–0.5
8	कम्पोस्ट पिट की संख्या	24
9	कम्पोस्ट पिट की क्षमता (टन में)	72
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	4.2
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	1.63
12	प्रति दिक्स एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	2.43
13	प्रति दिवस एकत्रित परिसंकटमय औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.051
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.075
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	41565
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 540 रू
		प्रतिमाह विक्रय से प्राप्त आय – 16200 रू
		विगत 01 वर्ष में विक्रय से प्राप्त आय – 194400 रू
17	सीमेंट प्लांट में भेजे जाने वाले SCF की औसतन मात्रा (टन में)	5 टन प्रतिमाह
18	उत्पादित कम्पोस्ट की मात्रा (टन में)	7.5 टन प्रतिमाह
19	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	1.0 टन
20	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	3700 रू एवं विभागीय उद्यान
21	स्वंय उपयोग किये गये कम्पौस्ट की मात्रा (टन में)	06 टन प्रतिमाह उद्यानों एवं किसानो को निःशुल्क

कार्यालय, नगर पालिक निगम, कोरबा (छ.ग.)		
एन.टी.पी.सी. एस.एल.आर.एम. सेंटर की जानकारीः–		
क्र.	**बिन्दु**	**विवरण**
1	एस.एल.आर.एम. सेंटर का नाम	एन.टी.पी.सी. सोलिड वेस्ट मैनेजमेंट सेंटर
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	2 (वार्ड– 49,50)
3	कुल मकानों की संख्या	1293
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	17
5	सेंटर में वाहनों की संख्या	6
6	वाहनों का प्रकार	रिक्शा
7	वाहनों की क्षमता (टन में)	0.3 टन
8	कम्पोस्ट पिट की संख्या	3
9	कम्पोस्ट पिट की क्षमता (टन में)	900 मीटर क्यूब
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	0.2 टन
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दवस)	0.020 टन
12	प्रति दिक्स एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दवस)	0.180 टन
13	प्रति दिवस एकत्रित परिसंकटमय औसतन अपशिष्ट की मात्रा (टन/दिवस)	शून्य
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.004 टन
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	शून्य
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	शून्य
17	सीमेंट प्लांट में भेजे जाने वाले SCF की औसतन मात्रा (टन में)	3.3 टन प्रतिवर्ष
18	उत्पादित कम्पोस्ट की मात्रा (टन में)	5.00 टन प्रतिपर्ष
19	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	शून्य
20	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	शून्य
21	स्वंय उपयोग किये गये कम्पौस्ट की मात्रा (टन में)	5.00 टन प्रतिपर्ष

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बालको एस.एल.आर.एम. सेंटर की जानकारीः–

क्र.	बिन्दु	विवरण
1	एस.एल.आर.एम. सेंटर का नाम	बालको सोलिड वेस्ट मैनेजमेंट सेंटर
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	2 (वार्ड– 38,39)
3	कुल मकानों की संख्या	2855
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	28
5	सेंटर में वाहनों की संख्या	9
6	वाहनों का प्रकार	8 Tata Ace, 1 Tractor
7	वाहनों की क्षमता (टन में)	Tata Ace - 0.5 , Tractor - 2.0
8	कम्पोस्ट पिट की संख्या	8
9	कम्पोस्ट पिट की क्षमता (टन में)	900 मीटर क्यूब
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	4.9 टन
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दवस)	3.68 टन
12	प्रति दिक्स एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दवस)	1.10 टन
13	प्रति दिवस एकत्रित परिसंकटमय औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.020 टन
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.10 टन
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	शून्य
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	शून्य
17	सीमेंट प्लांट में भेजे जाने वाले SCF की औसतन मात्रा (टन में)	24 टन प्रतिमाह
18	उत्पादित कम्पोस्ट की मात्रा (टन में)	39.6 टन प्रतिपर्ष
19	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	शून्य
20	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	शून्य
21	स्वंय उपयोग किये गये कम्पौस्ट की मात्रा (टन में)	39.6 टन प्रतिपर्ष स्वयं के गार्डन एवं इत्यादि में उपयोग

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कार्यालय, नगर पालिक निगम, अम्बिकापुर

डी.सी रोड एस.एल.आर.एम. सेंटर की जानकारी

क्र.	विवरण		
1	एस.एल.आर.एम. सेंटर का नाम	डी. सी रोड वार्ड क्र 19	
2	सेंटर में कलेक्शन किये जाने वाले वार्डों की संख्या	3 (वार्ड 19,27,28)	
3	कुल मकानों की संख्या	1812	
4	सेंटर में कार्यरत स्वच्छता दीदियों की संख्या	27	
5	सेंटर में वाहनों की संख्या	9	
6	वाहनों का प्रकार	हाथ रिक्शा 8	ई–रिक्शा 01
7	वाहनों की क्षमता (टन में)	हाथ रिक्शा –	ई–रिक्शा – 0.400
8	कम्पोस्ट पिट की संख्या	25	
9	कम्पोस्ट पिट की क्षमता (टन में)	62.5	
10	प्रति दिवस एकत्रित कुल अपशिष्ट की औसतन मात्रा (टन/दिवस)	3.6	
11	प्रति दिवस एकत्रित सूखे अपशिष्ट की औसतन मात्रा (टन/दिवस)	1.39	
12	प्रति दिवस एकत्रित गीले अपशिष्ट की औसतन मात्रा (टन/दिवस)	2.1	
13	प्रति दिवस एकत्रित परिमय संकट औसतन अपशिष्ट की मात्रा (टन/दिवस)	0.04	
14	प्रति दिवस एकत्रित सैनेटरी अपशिष्ट औसतन की मात्रा (टन/दिवस)	0.07	
15	प्रतिमाह विक्रय किये गये सूखे अपशिष्ट की औसतन मात्रा (कि.ग्रा. में)	1.39	
16	विक्रय किये गये सूखे अपशिष्ट से प्राप्त औसतन आय की जानकारी	प्रतिदिन विक्रय से प्राप्त आय – 2350.00	
		प्रतिमाह विक्रय से प्राप्त आय – 70000.00	
		विगत 01 वर्ष में विक्रय से प्राप्त आय –	
19	सीमेंट प्लांट में भेजे जाने वाले **SCF** की औसतन मात्रा (टन में)	8 टन प्रतिमाह	
20	उत्पादित कम्पोस्ट की मात्रा (टन में)	12.6 टन प्रतिमाह	

21	विक्रय किये गये कम्पोस्ट की मात्रा (टन में)	8 टन
22	विक्रय किये गये कम्पोस्ट से प्राप्त राशि	16500.00 रू.
23	स्वयं उपयोग किये गये कम्पोस्ट की मात्रा (टन में)	4.6 टन

Municipal Corporation, Durg

Details of Dumpsite Remediation

S. No.	Area of Dumpsit (In Acre)	Total Waste to be Remediated (in Ton)	Type of Waste Remediated (in Ton)				
			RDF	C&D	Inert	Good Earth (Bio Soil)	Miscellaneous
1	10.38	144000	11520	18720	21600	87840	4320

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Annexure-13

Annexure-14

Status of Legacy Waste Management

S/No.	Particulars	Joint committee findings
1.	No. of legacy waste dumpsites	1
2.	Legacy waste quantity (Tons)	53934
3.	No. of bio-mining sites	1
4.	Start & end date of remediation	Start Date - 15.11.2022 to End Date - 15.03.2023
5.	Total quantity of legacy waste bio mined (Tons)	53934
6.	Total quantity of reject generated (Tons)	• RDF – 4315 Tons • C&D – 7011 Tons • Inerts – 8090 Tons • Good Earth – 34518 Tons
7.	Process used for legacy waste remediation	Bio-Remediation and Bio-mining
8.	Mode of Utilization / disposal of Rejects	• RDF Sent to Ultratech Cement limited, Rawan, Chhatisgarh • C&D Used in low lying area • Inerts Used in low lying area • Good Earth Self Used by the agency
9.	Use of recovered land after remediation	Land is developed as Oxyzone and MRF Center