

REPORT OF THE OVERSIGHT COMMITTEE, NGT, U.P, LUCKNOW

IN THE MATTER OF:-
ORIGINAL APPLICATION NO. 519/2019

**NEWS ITEMS PUBLISHED IN "THE TIMES OF INDIA" AUTHORED BY JASJEEV
GANDHIOK & PARAS SINGH TITLED "BELOW MOUNTAINS OF TRASH LIE POISON
LAKES"**

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REPORT OF OVERSIGHT COMMITTEE IN COMPLIANCE OF ORDER OF HON'BLE NATIONAL GREEN TRIBUNAL PASSED IN O.A. NO. 519/2019 WITH O. A. NO. 386/2019 IN RE: NEWS ITEMS PUBLISHED IN "THE TIMES OF INDIA" AUTHORED BY JASJEEV GANDHIOK & PARAS SINGH TITLED "BELOW MOUNTAINS OF TRASH LIE POISON LAKES" WITH CENTRE FOR WILDLIFE AND ENVIRONMENT LITIGATION VS UNION OF INDIA & ORS WITH REGARDS TO THE DISPOSAL OF LEGACY WASTE DUMPED AT BHALSWA, GHAZIPUR AND OKHLA DUMPSITES IN DELHI

I. INTRODUCTION

Hon'ble National Green Tribunal dealing with the matter of **OA No. 519/2019 with O A. No. 386/2019**, vide order dated **16.03.2020** (i. e. uploaded on **23.03.2020**) considered the **News items published in "The Times of India" Authored by Jasjeev Gandhiok & Paras Singh Titled "Below mountains of trash lie poison lakes" with Centre for Wildlife and Environment Litigation Vs Union of India & Ors.** The issue for consideration is **the disposal of 'legacy' waste dumped at Bhalswa, Ghazipur and Okhla dumpsites in Delhi** where huge garbage has accumulated over the period of time adversely impacting public health and environment, which requires expeditious scientific and environmentally safe disposal as per applicable rules. The problem mentioned in the **News items published in "The Times of India" Authored by Jasjeev Gandhiok & Paras Singh Titled "Below mountains of trash lie poison lakes"**requires providing a regulatory framework for the management of disposal of legacy waste dumped in three different sites in Delhi.

As per the earlier proceedings, the **SWM Rules, 2016** shall be applied to every urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India, notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, Ports and harbours, defence establishments, special economic zones, State and Central government organisations, places of pilgrims, religious and historical importance as may be notified by respective State government from time to time and to every domestic, institutional, commercial and any other non residential

solid waste generator situated in the areas except industrial waste, hazardous waste, hazardous chemicals, bio medical wastes, e-waste, lead acid batteries and radio-active waste, that are covered under separate rules framed under the Environment (Protection) Act, 1986.

Though the order is regarding legacy waste sites in Delhi, yet it was circulated among all the States Those directions are applicable to all the States and were being followed up in **O. A. No. 606/2018 in re: Compliance of Municipal Solid Waste Management Rules, 2016.**

Hon'ble NGT considered the matter of Solid Waste Management after notifying all the concerned States and disposed of the same on 22.12.2016 requiring all the States to follow Solid Waste Management Rules, 2016 after preparing requisite action plans in a time bound manner. It directed that any State which failed to comply with the provisions of the Rules would be liable to be proceeded against under Environment Protection Act, 1986 apart from being required to pay environmental compensation and fixation of personal liability of senior-most officers of the States/local bodies. Directions also included requirement for segregation of waste, provision of buffer zones around plants and landfill sites and due monitoring. The States/Local Bodies should also create market for consumption of RDF. Tipping fee was to include the efficient and regular monitoring of the waste monitoring plants, segregation of inner waste and C&D waste and its transportation. Landfill sites were required to be bio-stabilized preventing leachate and generation of methane, enforcement of extended producer responsibility, and liability under contract being made consistent with the Rules and creation of public awareness about the facilities available at regular intervals. Copy of the judgment was circulated to all the Chief Secretaries/ Advisors of States/UTs.

II. FEW ORDERS PASSED BY THE HON'BLE NGT IN O.A. No. 519/2019 IN RELATION WITH OA NO. 606/2018

The OA No. 519/2019 is in the context of Legacy Waste in Delhi. However the Hon'ble NGT orders in this OA have all India application and are very relevant to all the States. That is why they have been circulated to other States and Chief Secretaries have been asked to ensure their compliance. We would be discussing the Hon'ble NGT orders and their implications as pertaining to Delhi in Part II of this report and discuss their compliance for the State of UP in Part III of the Report.

1. **Vide order dated 17.07.2019** it was considered that-

*"5. The action taken report of the **North Delhi Municipal Corporation (North MCD)** is that detailed project report (DPR) has been prepared on 08.03.2019 which has three options.*

- One of the options is "leaving the site as it is", which is completely out of question.*
- Second option, bio-mining for 8.8 million cubic meter waste which is said to require a period of 15 years and cost of Rs. 1178 crores.*
- The third option is of capping. Clause-J of Schedule-I of the SWM Rules provides for reduction of waste by bio-mining and waste processing followed by placement of residues in new landfills or capping with appropriate measures. According to the Commissioner of North MCD, closure and capping of the dumpsites, without bio-mining/bio-remediation is a better option to save money and to protect environment. The report relies upon a review of the DPR by a professor from the IIT, Delhi with regard to **Bhalswa landfill**.*

6. According to the report dated 09.07.2017 of **East Delhi Municipal Corporation (EDMC)**, it is stated that there was a proposal to utilize the inert

material as filling material in the widening of national highways. Some of the dumpsite gas has been extracted and flared in association with GAIL. A pilot project was conducted for bioremediation of 100 TPD for both fresh and legacy waste. Experts were consulted in regard to slope stabilization and treatment of leachate. EDMC has started decentralized waste management processes with the help of urban development fund from the Govt. of India to the tune of Rs. 70 Crores.

7. The Counsel appearing for **South Delhi Municipal Corporation (SDMC)** has handed over, during the hearing, their copy of action taken report. According to the action taken report furnished by the SDMC, it consulted experts and executed some work of sterilizing the legacy waste at **Okhla Phase-I**.

8. In **O.A. No. 386/2019**, the grievance raised was that unscientific capping process of the Bhalswa legacy waste dumpsites was against the SWM Rules and not conducive to the environment. This Tribunal, vide order dated 04.04.2019, sought opinion from a Committee comprising CPCB and Dr. G.K. Pandey, former Expert Member of this Tribunal, who is known to have expertise in the subject. Report dated 31.05.2019 has been submitted by the said Committee after visit to the Bhalswa site, visit to Bawana Waste Processing Plant and meeting with the North Delhi MC officers. Presentation was made before the said Committee by concerned officers of the North MCD as well as experts hired by the said Corporation. Some of the observations of the said Committee are as follows:

“3.5 The Cost indicated in the DPR for bioremediation is Rs.1178 Crores. However, as per CPCB Guidelines for Disposal of Legacy Waste, the cost of bioremediation and bio-mining of dumpsite is in the range of Rs.400- 700/Cum which works out in the range of Rs.440 - 560 Crore. The actual cost shall be further reduced, if cost of land

recovered by means of bio-mining/bioremediation is factored in. Hence the cost indicated by NDMC seems to be very much on the higher side. Similarly, the other issues raised by NDMC need detailed assessment.

3.6 As per CPCB Guidelines, capping of dumpsites is not advisable as it would lead to generation of more leachates and methane/landfill gas generation which would further contaminate the already heavily contaminated Groundwater (Refer Ground/surface water reports). Further as per CPCB Guidelines, gas extraction is very difficult and inefficient when attempts are made to insert suction pipes into dumped waste instead of before dumping begins. Poor success at Gorai capping led to the forced refund by Mumbai city of Rs.15 crore advance carbon credits. Taking into consideration the present height (65 m) of the landfill, extraction of leachate & gas will be even more difficult.

3.7 In addition, in the present tender documents, there is no provision for onsite treatment of leachates and utilization of gas generated as also decontamination of ground water/bio-remediation have not been envisaged in spite of the fact that ground and surface water are heavily polluted as reflected by analysis of ground water and surface water reports given in the DPR. The details of analysis reports are given below:

(a) Table-I (Refer Ground/surface water reports Annexure-VIII) pertains to ground water sampling report of hand pumps which has indicated that average levels of BOD (2.4 mg/1), COD (28.0 mg/1), TDS (2783 mg/1) are more than the prescribed acceptable limit of zero for BOD, zero for COD and 500 mg/1 for TDS. Besides, the average high level of Residual Free Chlorine of 208.7 mg/1 (limit 0.2mg/l), Chlorides 769.7 mg/1 (limit 250 mg/1), Sulphate 228.2

mg/1 (limit 200mg/l), Alkalinity 508.7 mg/1 (limit 200 mg/1), Lead 0.2 mg/1 (limit 0.01 mg/1) and Nickel 0.1 mg/1 (limit 0.02mg/l) indicates that drinking water from the hand pumps has been significantly polluted and is not drinkable.

(b) **Table-2 (Refer Ground/surface water reports Annexure-IX)** reflects ground water analysis report pertaining to 18 boreholes. The average levels of BOD (93.11 mg/1), COD (783.72 mg/1) and TDS (6841.83 mg/1) were found more as against the acceptable limit of zero for BOD, zero for COD and 500 mg/1 for TDS indicating that ground water has been significantly contaminated due to percolation of leachates from the landfill.

(c) **Table-3(Refer Ground/surface water reports Annexure-X)** pertains to analysis of surface water taken from Bhalsawa drain and Bhalsawa lake. The analysis report indicates that the average levels of BOD (68.40 mg/1), COD (547.51 mg/l) and TDS (4465.23 mg/l) were found higher as against the permissible limit for drinking water for BOD (0), COD (0) and TDS (500 mg/l) respectively indicating that surface water is significantly polluted due to discharge of untreated leachates. Besides, the average levels of residual free chlorine (179.60 mg/1, limit 0.2 mg/1), Iron (0.53 mg/1, limit 0.3), Chlorides (13119.04 mg/1, limit 250), Calcium (188.99 mg/1, limit 75), Alkalinity (1285.96 mg/1, limit 200), phenolic compound (0.07 mg/1, limit 0.001), Lead (0.15 mg/1, limit 0.01), Mercury (3.75 mg/1, limit 0.001) and Nickel (0.15 mg/1, limit 0.02) were found high indicating that surface water is very polluted and Bhalswa lake is not meeting the criteria for drinking water as toxic elements like phenolic compounds including heavy metals are present in the lake water. It is quite possible that the animals (buffalos, cows etc.) may be drinking lake water and as such the possibility of toxic chemicals and heavy metals entering the

food chain cannot be over ruled. Therefore, lake water should not be used for drinking purposes by the human beings and the animals.

(d) Table-4(Refer Ground/surface water reports Annexure-XI) leachate emanating from the BLF indicates that BOD (500 mg/1), COD (2279 mg/1) & TDS (19000 mg/1) levels are higher in comparison to leachate standards of BOD (30 mg/1), COD (250 mg/1) & TDS (2100 mg/1) as prescribed in SWM Rules,2016.

3.8 There are various technologies available for treatment of MSW such as composting, bio-methanation, incineration coupled with power generation, gasification, pyrolysis, plasma arc gasification, molten salt oxidation (non-flame thermal process for destroying organic materials) etc.

4.0 Recommendations

- i. NDMC should do a detailed assessment of the alternative technological options including Bio-mining / Bio-remediation for Bhalswa dumpsite.*
- ii. Niti Aayog has constituted a Committee to identify the technologies in Solid Waste Management for Cleaning up of Delhi. NDMC may consider the outcome of this committee's report in assessing options for Remediation of Bhalswa dumpsite.*
- iii. In case, capping of Bhalswa Dumpsite (which is not advisable as per CPCB Guidelines as mentioned at point 3.6 above) is proposed as the only option due to time and space constraints as also techno economic reasons, the DPR should be revisited especially to look into the following conditions:*

(a) Bio-mining should be undertaken to the maximum extent possible without having significant adverse environmental impacts on the adjoining population.

(b) Bio-remediation/decontamination of surface, ground water and soil should also be undertaken in the affected areas.

(c) No dumping of MSW/Garbage (about 2000 tons/day) shall be done at Bhalswa dumpsite and alternate arrangements for disposal of this waste to be made by NDMC on priority in accordance with S WM Rules, 2016.

9.

10. Information made available from Indore Municipal Corporation is as follows:

“For screening purposes, trommels of 30 MT per hour capacities are available in the market on rental basis. Necessary vehicles and equipments (like excavators, back-hoe loaders, dumpers, vibratory screens for dust removals and bundling machines for Refused Derived Fuel) are required for bio-mining and bio-remediation purposes. Normally, 20 trommels along with necessary machines and tools can process 5000 MT of legacy waste on daily basis in two shifts operation. Recently, Indore has successfully completed bio-mining/bio-remediation of 15 lakh MT legacy waste in 1 year. Rent for trommels paid by Indore to various machine manufacturers were in tune of Rs. 7.25 Lakh per trommel per month and bio-mining/bio-remediation process was followed as mentioned in the latest guidelines issued by the CPCB. Normally, the per metric tonn cost of bio-remediation process of legacy waste will range between Rs. 300- 450 depending upon area to area.

In legacy waste sites where local bodies have space constraints can initially start the bio-mining/ bio-remediation options through mobile trommels.

Similarly, Ahmedabad Municipal Corporation has started the bio-mining/bio-remediation at Pirana dumping site and they are paying Rs. 6.40 Lakh per trommel per month.

The trommel machines are very simple in fabrication and can be fabricated as per the design mentioned in CPCB guidelines by local fabricators.

Instead of having multiple machines, it is advisable to have a single trommel of 16-20 MM bore size screen and reject conveyer should have blower. This will reduce the cost due to multiple trommelling. Also, to utilise the Refused Derived Fuel ('RDF') recovered from this process should be made free from dust. Thereafter RDF can be bundled and sent to waste-to-energy plant and cement industries for further utilisation.

The recovered soil from the bio-mining/bio-remediation process can be used in filling the dead mines so as afforestation in the area can take place. Secondly, it can be used by National Highway Authorities/ State Road construction agencies and local bodies in sub-base filling.

Local bodies can install number of trommels at bio-remediation site based on availability of land and with time they can increase the number so as to complete the process as soon as possible. Once the bio-mining and bio-remediation process starts, dumping of fresh garbage should be stopped at the legacy waste dumpsites, local bodies may identify a separate piece of land to process the fresh garbage through various processes mentioned in Municipal Solid Waste Management Rules, 2016 and guidelines issued by the CPCB. "

*"12The model followed by Indore Municipal Corporation, the views of Member Secretary, CPCB and the Chief Secretary, Delhi. This opinion is also in consonance with the SWM Rules as well as the CPCB Guideline on Legacy Waste (Guidelines for Disposal of Legacy Waste (Old Municipal Solid Waste), Central Pollution Control Board, February 2019) and recent orders of this Tribunal. **A conjoint reading of Rule 15 (zj), Rule 15(zk) and***

Clause J of Schedule I of the SWM Rules leaves room for capping of old dump sites, only in cases where there is “absolute absence of potential of bio-mining and bio-remediation” and not in cases of present nature where bio-mining and bio-remediation is possible. In cases of present nature, both ex-situ and in-situ bio-mining options can be exercised according to Indore Municipal Corporation, which is not only environmentally safe but cost effective. Though plea for capping legacy waste dumpsites is being raised frequently as a convenient mode, there may be hardly any situation when bio-remediation is not possible. The option of capping of legacy wastes, which has huge environmental and health consequences, in practical terms is no option at all, except for inert waste, which again is to be disposed in a scientific secured landfill. According to Indore Municipal Corporation, bio-mining as a treatment option is environmentally safe and does not require recurrent costs on account of leachate treatment in Effluent Treatment Plant (ETP). Furthermore, only peripheral leachate can be taken to the ETP and leachate percolating underneath the dumpsite contaminates ground water and water in subterranean space. Bio-mining as a treatment option in comparison to engineering capping of legacy wastes, is not only environmentally safe and holistic but also meets the yardstick of fiscal prudence and propriety.”

2. The constitution of the Committee is to give effect to the statutory mandate under the SWM Rules. **Under Rule 14 (f) of the SWM Rules**, the Central Pollution Control Board is bound to monitor through State Pollution Control Boards or Pollution Control Committees the implementation of these rules by local bodies and the State PCBs/PCCs carry upon themselves the duty to monitor environmental standards and adherence to conditions as specified under the Schedule I and Schedule II of the SWM Rules, for waste processing and disposal sites. They additionally are required to prepare and submit the consolidated

Annual Report to the Central Pollution Control Board and Ministry of Urban Development on the implementation of these rules and action taken against non-complying local body by the 31st day of July of each year. Rule 15 (w), (zi) and (zj) of the SWM Rules make local bodies responsible to deal with the matter. Under Rule 11, Urban Development Department of the State is to take necessary action. Article 243W read with Twelfth Schedule to the Constitution make local bodies responsible on the subject.

3. While from the above order, it appears to be necessary that for protection of environment and public health, other such legacy waste dumpsites in the country are dealt with on the same pattern. This aspect has been gone into by the Hon'ble NGT in **O.A. No. 606/2018 Compliance of Municipal Solid Waste Management Rules, 2016**, *inter-alia* by order dated 16.01.2019 whereby Chief Secretaries of all the States/UTs were required to be present in person to deal with the issue of solid waste management and other concerned issues.

4. Vide order dated 20.08.2018, Hon'ble NGT considered the following points:

"i. Whether State-wise Action Plan with timelines and budgetary support/provision for management of MSW has been prepared?

ii. Whether each city/town/urban local body is covered under the 3 said Plan and individual Action Plan has timelines with budgetary provisions?

iii. What time has been fixed to completely comply with the provisions of the Rules, 2016?

iv. What are the main constraints of non-compliance of Rules, 2016?

It was directed that action plans be finalized latest by 31.10.2018 and executed latest by 31.12.2019 which was to be overseen by the Principal Secretaries of Urban/Rural Development Departments of States/UTs. States were directed to standardize technical specifications instead of leaving the

same to individual local bodies. Further directions are for installing CCTV cameras at dump sites, installing GPS system in garbage collection vans, adopting best practices including control rooms where citizens can upload photos of garbage to be looked into by responsible officers, conducting performance audit with reference to source segregation, door to door collection, public sweeping, waste processing, grievance redressal mechanism and monitoring.

5. The matter was thereafter considered on 19.11.2019 in the light of report dated 13.11.2019 filed by NCT of Delhi as:

“6. As per the statistics furnished during the hearing, about 1500 tonnes per day (TPD) of garbage is being bio-mined as against addition of more than 5000 TPD in NCT Delhi. Since the problem is continuing, there is need to increase the capacity suitably so that the garbage is cleared and land becomes available for a public purpose.

*7. Since we are informed that at **Bhalswa, capacity will be shortly increased to 3300 TPD.** The capacity at **Okhla and Ghazipur dumpsites** also needs to be enhanced; the capacity for bio-mining may be further enhanced, at all the three sites. An action plan be prepared and implemented so as to clear the legacy waste in an expedited timeline but within one year as earlier directed. It needs to be ensured bio-remediation is carried out rather than mere mechanical separation. The CPCB may verify that waste clearance is as per norms and give a report. **The implementation of action plan be monitored by the Chief Secretary, Delhi. The Chief Secretary, NCT Delhi may undertake monthly monitoring of the progress and take action if there is default in terms of speed of progress. Failure to comply may result in coercive action, including stoppage of salaries and entries in ACRs of the concerned erring officers”.***

6. In pursuance of the above, following reports/responses have been filed by the CPCB vide order dated 16.03.2020:

- i. Report of CPCB filed on 31.01.2020 on bio-remediation of Bhalswa, Gazipur and Okhla dumpsites of Delhi in the matter of O.A No. 519 of 2019; titled news item published in "The Times of India" Authored by Jasjeev Gandhiok & Paras Singh titled "Below Mountains of Trash Lie Poison Lakes" with O.A No. 386/2019 Centre for Wildlife and Environment Litigation vs UOI & Ors.*
- ii. Compliance report on behalf of Department of Urban Development, GNCT Delhi in terms of order dated 19.11.2019 filed on 20.01.2020.*
- iii. Status report regarding bio-mining/remediation of legacy waste at sanitary landfill Okhla (Dump Site) in South Delhi Municipal Corporation (SDMC) filed on 21.01.2020.*
- iv. Affidavit on behalf of the respondent North Delhi Municipal Corporation (NDMC) with respect to status report filed on 30.01.2020.*
- v. Affidavit filed on 13.03.2020 on behalf of the respondent North DMC with respect to status report.*

7. The report of CPCB vide order dated 16.03.2020 clearly shows the work being executed is inadequate in terms of quantity as well as compliance of the environmental norms. Several untenable excuses are sought to be given which can hardly be taken as justification for failure of the constitutional mandate **under Article 243 W read with Schedule XII**; directions of the Hon'ble Supreme Court and this Tribunal, which have been dealt with in *O.A. No. 606/2018*, to which Delhi Government is a party.

8. The matter was earlier considered by the Hon'ble Supreme Court *inter-alia* vide judgments reported in *(2000) 2 SCC 678* and *(2004) 13 SCC 538* directing scientific disposal of waste by setting up of compost plants, preventing water percolation through heaps of garbage, creating focused '**solid waste management cells**' in all

States and complying with the Municipal Solid Waste Management Rules, 2016 (SWM Rules, 2016) on urgent basis. **It was observed that the local authorities constituted for providing services to the citizens are lethargic and insufficient in their functioning which is impermissible. Non-accountability has led to lack of effort on the part of the employees.** Domestic garbage and sewage along with poor drainage system in an unplanned manner contribute heavily to the problem of solid waste. **Instead of “slum clearance” there is “slum creation” in cities which is further aggravating the problem of domestic waste being strewn in the open.**

Accordingly, the Hon’ble NGT directed that provisions pertaining to sanitation and public health be complied with, streets and public premises be cleaned daily, **statutory authorities levy and recover charges from any person violating laws and ensure scientific disposal of waste**, landfill sites be identified keeping in mind requirement of the city for next 20 years and environmental considerations, sites be identified for setting up of compost plants, steps be taken to prevent fresh encroachments and compliance report.

9. Further observations in the judgment of the Hon’ble Supreme Court are:

“3. The petitioner has handed over a note in the Court showing the progress that has been made in some of the States and also setting out some of the suggestions, including the suggestion for creation of solid waste management cell, so as to put a focus on the issue and also to provide incentives to those who perform well as was tried in some of the States. The said note states as under:

“1. As a result of the Hon’ble Supreme Court’s orders on 26-7-2004, in Maharashtra the number of authorisations granted for solid waste management (SWM) has increased from 32% to 98%, in Gujarat from 58% to 92% and in M.P. from NIL to 34%. No affidavits at all have been received from the 24 other States/UTs for which CPCB reported NIL or less than 3%

authorisations in February 2004. All these States and their SPCBs can study and learn from Karnataka, Maharashtra and Gujarat's successes.

2. All States/UTs and their SPCBs/PCCs have totally ignored the improvement of existing open dumps, due by 31-12-2001, let alone identifying and monitoring the existing sites. Simple steps can be taken immediately at almost no cost by every single ULB to prevent monsoon water percolation through the heaps, which produces highly polluting black run-off (leachate). Waste heaps can be made convex to eliminate standing water, upslope diversion drains can prevent water inflow, downslope diversion drains can capture leachate for recirculation onto the heaps, and disused heaps can be given soil cover for vegetative healing.

3. Lack of funds is no excuse for inaction. Smaller towns in every State should go and learn from Suryapet in A.P. (population 103,000) and Namakkal in T.N. (population 53,000) which have both seen dustbin-free 'zero garbage towns' complying with the MSW Rules since 2003 with no financial input from the State or the Centre, just good management and a sense of commitment.

4. States seem to use the Rules as an excuse to milk funds from the Centre, by making that a precondition for action and inflating waste processing costs 2-3 fold. The Supreme Court Committee recommended 1/3 contribution each from the city, State and Centre. Before seeking 70-80% Centre's contribution, every State should first ensure that each city first spends its own share to immediately make its wastes non-polluting by simple sanitising/stabilising, which is always the first step in composting viz. inoculate the waste with cow dung solution or bio culture and placing it in windrows (long heaps) which are turned at least once or twice over a period of 45 to 60 days.

5. Unless each State creates a focussed 'solid waste management cell' and rewards its cities for good performance, both of which Maharashtra has done, compliance with the MSW Rules seems to be an illusion.

6. The admitted position is that the MSW Rules have not been complied with even after four years. None of the functionaries have bothered or discharged their duties to ensure compliance. Even existing dumps have not been improved. Thus deeper thought and urgent and immediate action is necessary to ensure compliance in future."

10. In pursuance of orders of the Hon'ble Supreme Court, the Hon'ble NGT considered the matter of solid waste management after notifying all the concerned States/Regulatory Bodies and finally disposed of the same on 22.12.2016 requiring all the States/UTs to follow the SWM Rules, 2016 after preparing requisite action plans in a time bound manner with further direction that **any State/UT which failed to comply with the Rules shall be liable to be proceeded against under Section 15 of the Environment (Protection) Act, 1986 (EP Act), apart from being required to pay environmental compensation and senior most officers of the States/Local Bodies being personally liable.** The directions also include requirement for segregation of waste, providing buffer zone around plants and landfill sites and due monitoring. The States/Local Bodies were also to create market for consumption of RDF. Tipping fee was to include the efficient and regular monitoring of waste processing plant, segregation of inert and C&D material and its transportation. Landfill sites were required to be bio-stabilized preventing leachate and generation of Methane, enforcement of Extended Producer Responsibility (EPR), rights and liabilities under contracts being made consistent with the Rules.

11. On 16.01.2019 in O.A. No. 606/2018, Hon'ble NGT directed the Chief Secretary of all the States to review progress on important environmental issues and appear

in person before the Tribunal. Accordingly, Chief Secretary, Delhi appeared before the Tribunal on 11.03.2019. This Tribunal passed following order:

“32. In view of above, after discussion with the Chief Secretary, following further directions are issued:

- i. Steps for compliance of Rules 22 and 24 of SWM Rules be now taken within six weeks to the extent not yet taken. Similar steps be taken with regard to Bio-Medical Waste Management Rules and Plastic Waste Management Rules.*
- ii. Atleast three wards/zones/circles in each Municipal Corporation/New Delhi Municipal Council/Delhi Cantonment Board may be notified on the website within two weeks from today as model wards/zones/circles which will be made fully compliant within next six months.*
- iii. The remaining wards/zones/circles may be made fully compliant in respect of environmental norms within one year.*
- iv. A quarterly report be furnished by the Chief Secretary, every three months. First such report shall be furnished by June 30, 2019.*
- v. The Chief Secretary may personally monitor the progress, atleast once in a month, with all the District Magistrates.*
- vi. The District Magistrates or other Officers may be imparted requisite training.*
- vii. The District Magistrates may monitor the status of compliance of environmental norms, atleast once in two weeks.*
- viii. Performance audit of functioning of all regulatory bodies may be got conducted and remedial measures be taken, within six months”.*

12. On 10.01.2020, after reviewing the earlier orders in O.A. No. 606/2018, this Tribunal directed:

36. a. In view of the fact that most of the statutory timelines have expired and directions of the Hon’ble Supreme Court and this Tribunal to comply with Solid

Waste Management Rules, 2016 remain unexecuted, compensation scale is hereby laid down for continued failure after 31.03.2020. The compliance of the Rules requires taking of several steps mentioned in Rule 22 from Serial No. 1 to 10 (mentioned in para 12 above). Any such continued failure will result in liability of every Local Body to pay compensation at the rate of Rs. 10 lakh per month per Local Body for population of above 10 lakhs, Rs. 5 lakh per month per Local Body for population between 5 lakhs and 10 lakhs and Rs. 1 lakh per month per other Local Body from 01.04.2020 till compliance. If the Local Bodies are unable to bear financial burden, the liability will be of the State Governments with liberty to take remedial action against the erring Local Bodies. Apart from compensation, adverse entries must be made in

the ACRs of the CEO of the said Local Bodies and other senior functionaries in Department of Urban Development etc. who are responsible for compliance of order of this Tribunal.

b. Legacy waste remediation was to 'commence' from 01.11.2019 in terms of order of this Tribunal dated 17.07.2019 in O.A. No. 519/2019 para 286 even though statutory timeline for 'completing' the said step is till 07.04.2021 (as per serial no. 11 in Rule 22), which direction remains unexecuted at most of the places. Continued failure of every Local Body on the subject of commencing the work of legacy waste sites remediation from 01.04.2020 till compliance will result in liability to pay compensation at the rate of Rs. 10 lakh per month per Local Body for population of above 10 lakhs, Rs. 5 lakh per month per Local Body for population between 5 lakhs and 10 lakhs and Rs. 1 lakh per month per other Local Body. If the Local Bodies are unable to bear financial burden, the liability will be of the State Governments with liberty to take remedial action against the erring Local Bodies. Apart from compensation, adverse entries must be made in the

ACRs of the CEO of the said Local Bodies and other senior functionaries in Department of Urban Development etc. who are responsible for compliance of order of this Tribunal.

c. Further, with regard to thematic areas listed above in para 20, steps be ensured by the Chief Secretaries in terms of directions of this Tribunal especially w.r.t. plastic waste, bio-medical waste, construction and demolition waste which are linked with solid waste treatment and disposal. Action may also be ensured by the Chief Secretaries of the States/UTs with respect to remaining thematic areas viz. hazardous waste, e-waste, polluted industrial clusters, reuse of treated water, performance of CETPs/ETPs, groundwater extraction, groundwater recharge, restoration of water bodies, noise pollution and illegal sand mining.

d. The compensation regime already laid down for failure of the Local Bodies and/or Department of Irrigation and Public Health/In-charge Department to take action for treatment of sewage in terms of observations in para 31 above will result in liability to pay compensation as already noted above.

e. Compensation in above terms may be deposited with the CPCB for being spent on restoration of environment which may be ensured by the Chief Secretaries' of the States/UTs.

f. An 'Environment Monitoring Cell' may be set up in the office of Chief Secretaries of all the States/UTs within one month from today, if not already done for coordination and compliance of above directions which will be the responsibility of the Chief Secretaries of the States/UTs".

13. The non-compliance of rules relating to waste disposal results in damage to the environment and public health. Any failure needs to be visited with assessment and recovery of compensation for such damage from the persons responsible for such failure. Under orders of Hon'ble NGT, a joint Committee comprising CPCB, NEERI and IIT, Delhi was constituted to assess the monetary cost of damage caused to the environment on account of existence of legacy waste dump site at Gurgaon (Bandhewadi) vide order dated 05.03.2019 in O.A. No. 514/2018. **The report of CPCB filed on 13.02.2020 is that damage on account of the said legacy waste dump site was Rs. 148.46 crore, on account of damage to the air quality, soil and water quality, climate change and disamenity (aesthetic).** The damage has been assessed in terms of impact on health due to release of pollutants in atmosphere, release of leachate into ground /surface water and soil, due to pollution from the landfill site, damage cost associated with climate change due to carbon di-oxide and methane, damage caused due to aesthetics loss, price depreciation due to disamenity cost etc.

14. Thus, monetary cost of every legacy dump site is expected to be huge depending upon the location, quantity and quality of waste and area covered, its proximity to water body / stream and human habitation etc. Loss to the environment and public health is taking place not only on account of delay in clearing legacy waste but also for not complying with other provisions of the Rules resulting in huge gap in generation and processing of waste. It may be necessary to determine such cost for delay in clearing legacy waste at every dump site as well as for delay in complying with other rules and failure to treat sewage and recover the same from the persons responsible for action in the concerned matter.

III. MINUTES OF THE MEETING OF OVERSIGHT COMMITTEE

The compliance of the above Hon'ble NGT orders for the State of U.P. is discussed in this Part of the report.

As per the information, the dumpsites which are present in the State of U.P. are as follows:

Sr. no	Urban Agglomerations (cities with more than 10 lakh population as per census 2011) States	Landfills/dumpsites
1.	Kanpur	Panki
2.	Lucknow	Shivri Ghaila Village
3.	Ghaziabad	Pratap Vihar
4.	Agra	Kuberpur
5.	Varanasi	Saraiyyabasti
6.	Meerut	Ganwri Village
7.	Allahabad	Baswar

The meeting regarding O.A. No. 519/2019 was held on 31.07.2020 by Oversight Committee, NGT, UP through Video-Conferencing (Refer Appendix- I). The salient features of minutes of meeting are as follows:

- a) After reviewing its earlier order passed in OA No. 606 of 2018 in re: **Compliance of Municipal Solid Waste Management Rules, 2016**, Hon'ble NGT directed that in case of failure to comply with the monitoring guidelines, every Local Body with population of above 10 lakhs would have to pay compensation of Rs. 10 lakhs per month from 01.04.2020. The compensation was Rs. 5 lakhs per month for Local Bodies with population between 05-10 lakhs and Rs. 1 lakh per month for other local bodies.
- b) Apart from compensation, adverse entries were also to be made in the ACRs of CEOs of the State Local Bodies and other senior functionaries in the Urban Department who were responsible for compliance of the orders of Hon'ble NGT.

- c) Legacy Waste Remediation was to commence from 01.11.2019. Continued failure of every Local Body on the subject of commencing the work of legacy waste sites remediation from 01.04.2020 till compliance would result in liability to pay Rs. 10 lakhs per month per Local Body for population of above 10 lakhs, Rs. 5 lakhs per month per Local Body for population between 5-10 lakhs and Rs. 1 lakh per month per other local Body. In case of inability of the Local Body to clear its financial burden, the liability was of the State Government.
- d) The compliance was to be ensured in thematic areas like hazardous waste, e-waste, polluted industrial clusters, reuse of treated water, performance of CETPs/ETPs, groundwater extraction, groundwater recharge, restoration of water bodies, noise pollution and illegal sand mining. The compensation regime already laid down penalty for failure of the Local Bodies and/or Department of Irrigation and Public Health/ In-charge Department to take action for treatment of sewage in terms of compensation.
- e) It was informed by Urban Development Department that out of 650 ULBs, about 450 ULBs are very small and there is not much legacy waste. The Government is concentrating more on the 70 ULBs with population of more than 1 lakh which includes 17 Nagar Nigams also. The work will start on all these by 15th September 2020.
- f) The Urban Development Department mentioned that new tenders for legacy waste remediation have been finalized at 10 places, i.e. Lucknow, Kanpur, Aligarh, Agra, Ghaziabad, Mathura, Lalitpur, Prayagraj, Muradabad and Bareilly. The last two have been done locally and the rest have been done centrally. Agreements with the concerned ULBs will be done by 10th August, 2020 and the work will start with effect from 15th September, 2020.
- g) The four running models of legacy waste remediation-
- **Jhansi**, where they have capped legacy waste and developed a park,

- **Noida**, where legacy waste remediation has taken place and they are maintaining a park,
 - **Agra**, where they have already remediated 04 lakh metric tons of legacy waste;
 - **Meerut**, where 03 lakh metric tons of legacy waste has been remediated.
- h)** In Lucknow, there are two legacy waste plants; one at Ghaila having 4 lakh metric tons capacity and the other at Shivri, where 2 lakhs metric tons untreated waste is lying. Tenders have been awarded for Ghaila recently and the work will start very soon. For the collection system, the simplified ECPHS and two transfer stations of 350 metric tons capacity have been installed.
- i)** At Shivri Waste Processing Plant in Lucknow, an unprocessed waste of 2.5 lakhs metric tons is lying. Shivri is running properly with daily processing capacity of 1200 – 1500 metric tons. It is being run by M/s Eco Green. The operator has so far not established waste to energy plant as stipulated earlier. M/s Eco Green is doing only door-to-door collection upto about 35% of the total waste. It is transporting only 35% of municipal waste to the dumping site at Shivri. It has not made any proper arrangement for leachate collection. There is no arrangement for RDF also.
- j)** In Agra, the legacy waste plant at Kuberpur, which has 9 lakh metric tons legacy waste, out of which 4 lakh metric tons had been processed and the entire process will be completed by December, 2020. Waste to energy plant is already ready and waiting environmental clearance from the moratorium imposed at TTZ.
- k)** In Meerut, the three legacy waste plants- one existing at Gawri having 3 Lakh metric tons of legacy waste, Lohiya Nagar having 7 Lakh metric tons of legacy waste and Mangatpura, which is 30 years' old and having 7 Lakh

metric tons of legacy waste. Permission for Lohiya Nagar has been obtained and the bids are being done by inviting tenders.

- l) Notices for environmental compensation to all the defaulter units in deference to orders of Hon'ble NGT on this count be immediately issued.
- m) The procedure and the rates of legacy waste remediation have not been standardized and are evolving, Secretary, Urban Development may utilize the help of GEM Portal and work on standardization of vendors, procedures and rates for legacy waste remediation. UPPCB was directed to issue notices for environmental compensation to all the defaulter units in deference to orders of Hon'ble NGT.

IV. SUMMARY OF COMPLIANCE STATUS AS GIVEN BY URBAN DEVELOPMENT DEPARTMENT REGARDING COMPLIANCE OF THE DIRECTIONS GIVEN BY HON'BLE NGT IN O.A. NO. 519/2019

The short compliance status of the different issues in **OA No. 519/2019** in relation with **OA No. 606/2018** has been reported by UPPCB on 07.08.2020 (**Refer Appendix- II**). The details are as follows:

Based on the above, the present status in **OA No. 606/2018** is as follows:

S.No.	Directions by Hon'ble NGT	Compliance Status	Reasons for Non-Compliance
1	Monitoring mechanism: <i>An 'Environment Monitoring Cell' may be set up in the office of Chief Secretaries of all the States/UTs within one month from today, if not already done for</i>	Partially Complied	<ul style="list-style-type: none"> • UP Solid Waste Management Policy framed. • State Level Advisory Body constituted. • STFs constituted in every District. • Monitoring done by District Environment Committee (DEC) Under the Chairmanship of District Magistrate and also by

	<i>coordination and compliance of above directions which will be the responsibility of the Chief Secretaries of the States/UTs.</i>		Commissioners. <ul style="list-style-type: none"> State Level Waste Management and Monitoring Committee constituted under the Chairmanship of Principal Secretary, Urban Development UP vide O.M. dated 14-06-2019.
2	Waste Processing <ul style="list-style-type: none"> WetWaste DryWaste MRFFacility 	Not Complied	Separate space for segregation, storage, and decentralized processing of solid waste had to be demarcated. Systems are to be established for home/ decentralized and centralized composting. MRF Facilities are also required to be set up.
3	Scientific Landfill	Partially Complied	Systems for the treatment of legacy waste to be established and survey of legacy waste in all cities be made. Out of 653 ULBs, in 582 ULBs landfill sites have been identified/ procured and for the rest 70 action needs to ensure for procuring landfill sites. Hon'ble NGT had directed that for non-procurement of landfill sites, each ULB will be saddled with compensation of Rs. 10 lacs with time line of 01.04.2020. So far UPPCB has not issued notices to defaulting ULBs for realization of EC. In compliance of the orders of Hon'ble National Green Tribunal dated 10-01-2020 in O.A. No. 606/2018 Compliance of Municipal Solid Waste Management Rules, 2016, U.P. Pollution Control Board vide letter dated 07-07-2020 has issued Show Cause Notice under Section 5 of E(P) Act, 1986 to Director, Urban Local Bodies for imposition of Environmental Compensation, for a period 01-04-

			2020 to 30-06-2020 and continuance thereof till compliance, on 12 defaulter Municipal Corporations and 629 defaulter Nagar Palika Parishad/Nagar Panchayat.						
4	RDF	Not Complied	Mandatory arrangements have to be made by cement plants to collect and use RDF, from the RDF plants, located within 200 kms.						
5	Preventing solid waste from entering into water bodies	Partially Complied	Every water body should have screen mesh, grill, nets, etc to prevent solid waste entering into water bodies.						
6	User Fees	Not Complied	User charges will have to be borne by waste generators for solid waste management, as specified in the bye-laws of the local bodies.						
7	Penalty Provision	Partially Complied	Criteria had to be prescribed for levying on the spot fine for persons who litter or fail to comply with the provisions of SWM Rules. Powers had to be delegated to officers of local bodies to levy spot fines as per the by-laws framed.						
8	Realization of EC Imposed: <i>The compensation regime already laid down for failure of the Local Bodies and/or Department of Irrigation and Public Health/In-charge Department to take action for treatment of sewage in terms of observations in para 31 above will result in liability to pay compensation as already noted above.</i>	Partially Complied	<p>U.P. Pollution Control Board has taken action including imposition of EC for default related to Waste Management.</p> <p>For violation of Solid Waste Management Rules, 2016, EC of Rs. 24,28,125/- has been imposed against Nagar Nigam, Meerut. Likewise Show Cause Notices under Section 5 of E(P) Act, 1986 have been issued against ULBs for imposition of EC as detailed below :</p> <table border="1"> <thead> <tr> <th>S.No</th> <th>ULBs</th> <th>Show Cause for EC (Rs. in Crores)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Nagar Nigam,</td> <td>14.4</td> </tr> </tbody> </table>	S.No	ULBs	Show Cause for EC (Rs. in Crores)	1.	Nagar Nigam,	14.4
S.No	ULBs	Show Cause for EC (Rs. in Crores)							
1.	Nagar Nigam,	14.4							

	<i>Compensation in above terms may be deposited with the CPCB for being spent on restoration of environment which may be ensured by the Chief Secretaries' of the States/UTs.</i>		Lucknow		
			2.	Nagar Nigam, Moradabad	27.5
			3.	Nagar Nigam, Kanpur	19.0
			4.	Nagar Nigam, Varanasi	20.92
			5.	M/s Accord Hydro Solid Waste Management Plant, Firozabad	0.02
			Total		81.84 Cr.
			<p>Notices to ULBs for (a) failing to set up bio-remediation/Phyto-remediation steps in untapped drains (b) failing to commence STPs within prescribed deadlines and (c) failing to identify land for land fill and processing sites within prescribed deadlines have not been sent. CPCB and UPPCB have to take immediate action in this regard.</p>		
9	Waste to Energy	Partially Complied	<p>Lease agreement done in 02 cities i.e. Muzaffarnagar and Ghaziabad. (Commissioning December, 2021)</p>		
10	Material Recovery Facility (MRF)	Partially Complied	<p>Amount of Rupees 627 crore was released from budget i.e. Rupees 227 crore for setting up one MRF for each ULB and Rupees 400 crore for strengthening transportation/collection for ULBs. Matter be reviewed and progress report with regarding MRF installation</p>		

			be submitted to the Committee.
11	Additional Waste Processing Capacity Proposed		Time-bound action plan formulated for development of 57 MSW facilities of cumulative capacity 5855 TPD is as detailed below. After commissioning of these 57 MSW facilities the total cumulative capacity in the State shall become 10470 TPD.
		12 Plants with 4,615 TPD	Existing SW Processing Facilities
		03 Plants with 560 TPD (Mathura, Agra, Jaunpur)	Plants to be made operational (August, 2020)
		02 Plants with 335 TPD (Moradabad, Fatehpur)	Plants to be made operational (October, 2020)
		07 Plants with 860 TPD (Arbitration complete) (Sambhal, Badaun, Mirzapur, Balia, Rampur, Jhansi, Meerut)	Plants to be made operational (March, 2021)
		08 Plants with 930 TPD (Bareilly, Firozabad, Loni, Nazibabad, Bhadohi, Basti, Gorakhpur, Akbarpur)	Plants under land dispute to be resolved and commissioned
		37 Plants with 3,170 TPD	New plants sanctioned to be completed (March, 2021)
		Material Recovery Facility and decentralized	• Land identification and

			composting in 652 Urban Local Bodies (ULBs) with 6,907 TPD	<p>Commissioning (December 2020)</p> <ul style="list-style-type: none"> Rs. 219 Crore for 01 MRF in each ULB (September 2020) Rs. 400 Crore for strengthening collection/transportation system (vehicle, dustbin, protective, gear etc. (September 2020) 																				
			Land identified for SW processing site	582 UL Bs																				
			450 ULBs generating less than 10 TPD Solid Waste to have Composting Facility by September 2020.																					
12	<p>Legacy waste: Legacy waste remediation was to 'commence' from 01.11.2019 in terms of order of this Tribunal dated 17.07.2019 in O.A. No. 519/2019 para 281 even though statutory timeline for 'completing' the said step is till 07.04.2021 (as per serial no. 11 in Rule 22), which direction remains unexecuted at most of</p>	<p>Partially Complied</p> <p>Work of removal of legacy waste was to be done by 30.03.2020 and survey was to be done within a month. Barring</p>	<ul style="list-style-type: none"> Details of Completed/Ongoing Bio-remediation Projects : <table border="1"> <thead> <tr> <th>S.N</th> <th>City</th> <th>Quantity</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Noida-Sector 54</td> <td>1.0 Lakh Ton</td> <td>Completed</td> </tr> <tr> <td>2.</td> <td>Prayagraj</td> <td>0.1 Lakh Ton</td> <td>Completed</td> </tr> <tr> <td>3.</td> <td>Meerut</td> <td>3.0 Lakh Ton</td> <td>Completed</td> </tr> <tr> <td>4.</td> <td>Noida Sector-145</td> <td>2.77 Lakh Ton</td> <td>1.02 Lakh Ton remediated.</td> </tr> </tbody> </table>		S.N	City	Quantity	Status	1.	Noida-Sector 54	1.0 Lakh Ton	Completed	2.	Prayagraj	0.1 Lakh Ton	Completed	3.	Meerut	3.0 Lakh Ton	Completed	4.	Noida Sector-145	2.77 Lakh Ton	1.02 Lakh Ton remediated.
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4.	Noida Sector-145	2.77 Lakh Ton	1.02 Lakh Ton remediated.																					

<p><i>the places. Continued failure of every Local Body on the subject of commencing the work of legacy waste sites remediation from 01.04.2020 till compliance will result in liability to pay compensation at the rate of Rs. 10 lakh per month per Local Body for population of above 10 lakhs, Rs. 5 lakh per month per Local Body for population between 5 lakhs and 10 lakhs and Rs. 1 lakh per month per other Local Body. If the Local Bodies are unable to bear financial burden, the liability will be of the State Governments with liberty to take remedial action against the erring Local Bodies. Apart from compensation, adverse entries must be made in the ACRs of the CEO of the said Local Bodies and other senior functionaries in Department of Urban Development etc. who are responsible for compliance of order of this Tribunal.</i></p>	<p>Gauri, Meerut and Agra. Work has not been started anywhere regarding legacy waste. RFP for 10 towns with large quantum of legacy waste (for 39 lac tons) of legacy waste was floated. Also no estimate of legacy waste in other cities is available.</p>				Remaining 1.75 Lakh Ton under process.
		5.	Agra	8 Lakh Ton	4 Lakh Ton waste remediated. Project completion by December, 2020
<p>• Way ahead for Legacy Waste: The RFP has already been floated for 10 towns. Project completion by December, 2020. Details as below :</p>					
S. No.	Name of City	Site	Area of Site (Acre)	Quantity of Legacy Waste (Lakh Ton)	
	Kanpur	Processing Unit Site	45	1.5	
	Prayagraj	Baswar	35	5	
	Ghaziabad	Pratap Vihar	14	2.5	
	Bareilly	Bakarganj	21	5	
	Aligarh	Mathura – Sasani Gate Road	25	0.6	
	Lucknow	Ghaila	14	4	
	Mathura	Nagala Kolu	25	1	
	Lalitpur	Ram Nagar	4	2	
	Morada	Processing	30	2.5	

			bad	ng Unit Site		
			Agra	Kuberpu r	25	2
			Total			26.1
			<ul style="list-style-type: none"> • Timeline for remediation of all Legacy Waste in the State is 2 to 3 years. 			
13	Dumping sites/Buffer zones	Not Complied	There are still 70 ULBs, where suitable land has not been yet identified for developing proper processing facilities. The Master Plans should have provision for dumping sites. Buffer zones around dumping sites be notified.			

The compliance status of the different issues in **OA No. 519/2019 in relation with OA No. 606/2018** has been reported by Nagar Nigam, Lucknow on 07.08.2020 (**Appendix- III**). The details are as follows:

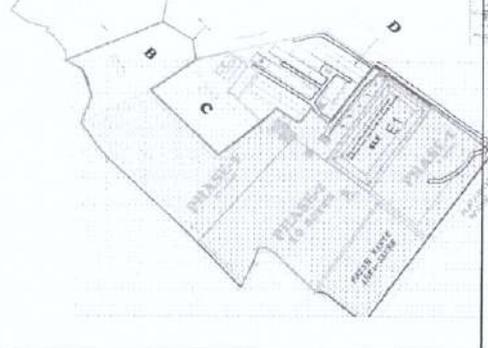
❖ **CONDITION OF GHAILA DUMPSITES AT LUCKNOW**

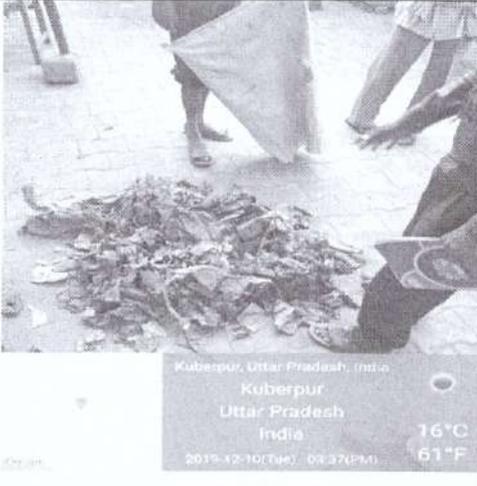
Solid Waste Management Treatment Plant has been set up at village- Shivri, Mohaan road by Municipal Corporation, Lucknow for proper processing and disposal of Solid waste originating in the Municipal Corporation area,. Prior to establishment of the plant, litter from municipal area was temporarily collected at the IIM road Ghaila site. But the waste is not being dumped at this site for the last 8 years. The quantity collected in the past is about 6 lakhs MT, for which tenders were sought earlier at the municipal level for bioremediation. But due to non-availability of funds from Uttar Pradesh Government and the tender rates seeming to be high, the proposals were received again by the Urban Development, Uttar Pradesh Govt, through the Uttar Pradesh Jal Nigam. The proposal received has been evaluated from the Government level. After completion of all off formalities, work on the site is proposed to be started from 15th September, 2020.

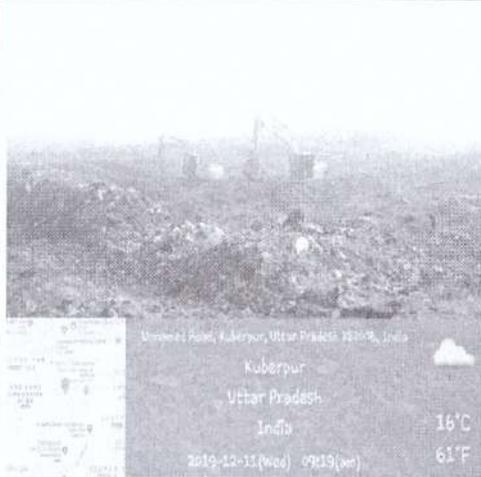
AGRA: The compliance status of the different issues in **OA No. 519/2019** in relation with **OA No. 606/2018** has been reported by Nagar Nigam, Agra on 13.08.2020 is as follows. **The details are annexed as Appendix- IV.**

Furthermore, the entire activities which have been performed under this project are summarized below:-

S.No.	Activities	Details	Photographs
1.	Infrastructure development	Admin building, internal road, shed, labour room and other civil and electrical work has been carried out.	
2.	Development of Electrical facility	The electric connections has been completed for entire project area.	
3.	Site Cleaning and Onsite Management Plan	The deposited legacy waste around the existing infrastructure has been cleaned up and onsite management plan for water use, labour room, machinery plant and other facilities has been implemented.	

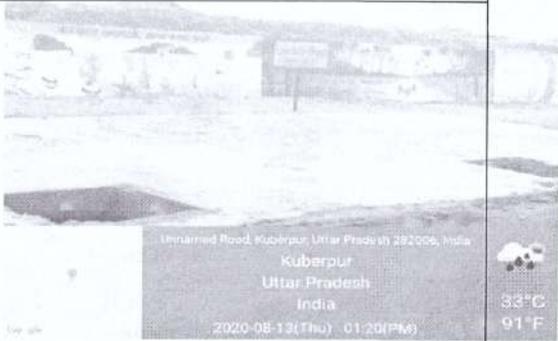
S.No.	Activities	Details	Photographs
4.	Deployment of Vehicles	Poclain, JCB and Tractor are deployed at site. Poclain- 5 No. JCB- 6 Tractor-12	
5.	Deployment of Human Resource	The competent human resources have been deployed for execution of this project.	
6.	Topography survey	Has been carried out for entire demarcated area.	
7.	Area Demarcation	Based on contour survey, physical verification and signed agreement the area has been demarcated and the same is handed over to concessionaire.	

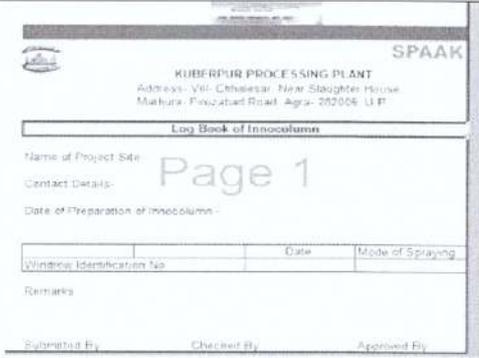
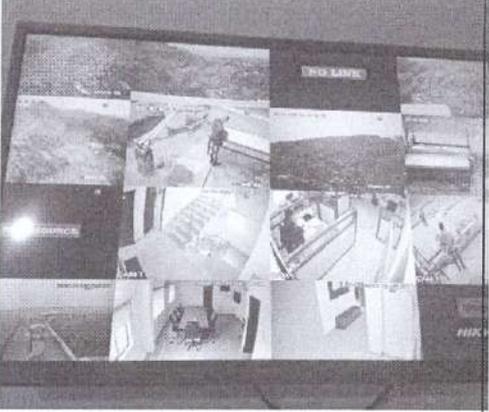
S.No.	Activities	Details	Photographs
8.	Quantification and Characterization of legacy waste	Based on topographical survey, about 9.5 Lac MT of legacy waste has been estimated. The physical analysis of the same has been carried out at different layers of waste at different locations.	
9.	Area Demarcation for fresh waste	Prior to demarcation of project area, area for fresh waste was demarcated.	
10.	Development of Green Area	Development of green area within project is integral part of planning and the same has been executed.	
11.	Phase wise demarcation of legacy waste	For effective implementation of project phase wise demarcation has been carried out.	

S.No.	Activities	Details	Photographs
12.	Windrow Formation	While following guidelines of CPCB for processing of legacy waste, windrows have been formed.	
13.	Addition of Inoculum	Addition of inoculums has been practiced two days prior to each turning.	
14.	Turning of Windrow	To stabilize organic fraction of waste, periodic turning after 7 days is being practiced.	

S.No.	Activities	Details	Photographs
15.	Stabilization of windrow	This practice is being carried out while following CPCB guidelines.	 <p>Kuberpur, Uttar Pradesh, India</p>
16.	Approval of Machine design	PMC in consultation with ANN has approved the design.	
17.	Selection of Vendor for Trommel and other machineries	Vendor of similar domain has been searched.	
18.	Joint Inspection of Machine by PMC	Prior to dispatch from workshop, in presence of PMC it has been carried out.	 <p>Kuberpur, Uttar Pradesh, India Kuberpur</p>
19.	Erection and Commissioning of machine on site	After inspection, the machine has been installed.	 <p>Kuberpur, Uttar Pradesh, India Kuberpur</p>

S.No.	Activities	Details	Photographs
20.	Trial Run of integrated set of tromell	On No load/with waste basis trial run was carried on..	
21.	Operation of tromell machine	Three sets of tromell machines are operational.	
22.	Quantification and characterization of end products	The parameters as mentioned in SWM Rules, 2016 physical and chemical analysis need to be analyzed.	
23.	Material (Rejects) Storage Plan	Within project site different location for SCF and Soil enricher has been earmarked.	
24.	Action plan of stored end products	We are approaching Cement Plant for RDF and NHAI/PWD for Soil enricher	

S.No.	Activities	Details	Photographs
25.	Environmental Assessment of Study Area	Baseline study of Valuable Environmental Components (VECs) Air, Water, Noise and Soil along with physiography, geohydrology and micro meteorology has been carried out.	
26.	Environmental Health and Safety Measures	Baseline environmental conditions of VECs have been examined. Further, dust control, odour control, fire control is integral part of EHS plan which is being implemented at site. Standard site safety measures of this sector have also been implemented.	
27.	Leachate Collection Plan	Based on topography, four different locations within project site have been identified for leachate collection. While following CPCB guidelines, it is being managed.	
28.	On Site Resource Plan	Based on daily consumption and available project planning the onsite resource has been planned.	

S.No.	Activities	Details	Photographs
29.	On Site Emergency Plan	While considering the nature of activities performed on project site, the onsite emergency plan has been prepared and the same has been approved by PMC of this project.	
30.	Development of SOP and daily progress	Based on each activity of project and to monitor the progress of different activities, the SOP and daily progress report have been formulated and approved by PMC.	
31.	IT related monitoring system (Camera)	The entire project area is being monitored with high quality camera and other state of art technologies.	

V. INSPECTION REPORTS OF LEGACY WASTE DUMPSITES IN OA 519/2019 IN CONTEXT WITH OA NO. 606/2018

The Oversight Committee directed Municipal Commissioner, Agra, Lucknow and Meerut to conduct an inspection survey. The questionnaire for inspection survey

with reference to OA No. 519 of 2019 with following OA No. 606 of 2018 was sent to them on 07.08.2020.

AGRA:

I. Inspection Report of Municipal Commissioner, Agra report received on 01.09.2020 (Refer Appendix- V)

Detailed inspection was carried out on dated 28.08.2020 by Er. Rajeev Rathi, Environmental Engineer, Agra Nagar Nigam and inspection report sent. The salient features of the inspection survey reported have been presented below:

1. **Status of Legacy Waste Dumpsite:** It was observed during inspection that the Kuberpur Municipal Waste Processing Site, Agra has 4.18 Lac MT treated legacy waste and only about 5.5 Lac MT waste is untreated. The entire treatment will be complete by June, 2021. The inspection report on MSW treatment and disposal facility at Kuberpur, Agra has installed CCTV camera at legacy waste dumpsites, installed GPS system in garbage collection vans. There is also control room set up for monitoring of waste management.
2. **Best practices have been taken up regarding legacy/ Sewage waste management in the district:** While following CPCB Guidelines for legacy waste treatment (Feb., 2019), the process of bioremediation and bio-mining of legacy waste is being carried out. Environmental mitigation measures as well as odour removal initiative has been considered at site. The by-product of treated legacy waste is being supplied to relevant stakeholders like RDF is being supplied to Geocycle while Green ford is engaged to carry bio-earth.
3. **Status of Geo-mapping and Geo-tagging for those legacy waste areas or places which are currently unknown or not on radar:** Agra Nagar Nigam is committed to dispose off their municipal solid waste at designated place, Kuberpur only which sprawls over an area of 71.8 acres. The site can be captured on GPS 27.12.27 N & 78.05.44 E.

LUCKNOW:

II. Municipal Commissioner, Lucknow (Ghaila, IIM road) (Report received on 09.09.2020) (Refer Appendix- VI)

An inspection survey was carried out in Lucknow legacy waste site by Nagar Nigam, Lucknow. The Nagar Nigam, Lucknow informed that DPR has been submitted for removal of legacy waste from its site at Ghaila. The Ghaila having about 6.0 Lacs Tonne of legacy waste. The inspection report on MSW treatment and disposal facility at Ghaila, IIM road has no any CCTV camera installed at legacy waste dumpsites. There is installation of GPS system in garbage collection vans. There is also control room set up for monitoring of waste management. Apart from that Nagar Nigam vehicles are GPS enabled and a 24x7 control room is already set up to monitor the waste collection and resolve the public grivances. Tenders are invited by MoUD, GoUP and yet to finalized very soon. Prior to establishment of the plant, litter from municipal area was temporarily collected at the IIM road Ghaila site. But the waste is not being dumped at this site for the last 8 years.

MEERUT:

III. Municipal Commissioner, Meerut (Report received on 09.09.2020) (Refer Appendix- VII)

Detailed inspection was carried out on 07.09.2020 by Mr. Brajpal Singh, Assistant Municipal Commissioner, Meerut. The salient features of the inspection survey reported as been presented below:

1. It was observed during inspection survey that the status of legacy waste in Jallaluddin Masudpur (Gawdi) has 3.0 Lac ton of treated waste and only about 0.5 Lac ton untreated waste and was completed by October 31, 2020. The inspection report on MSW treatment and disposal facility at Jallaluddin Masudpur (Gawdi) has installed CCTV camera at legacy waste dumpsites,

installed GPS system in garbage collection vans. There is also control room set up for monitoring of waste management.

2. **Best practices have been taken up regarding legacy/ Sewage waste management in the district:** Composting done on Mixed MSW and then Air Blaster Segregator has been used to segregate compost, RDF and inert. RDF is now meant for Electric Generated.
3. **Status of Geo-mapping and Geo-tagging for those legacy waste areas or places which are currently unknown or not on radar:** Meerut Nagar Nigam is committed to dispose of their municipal solid waste at Lohiya Nagar and Mangatpura.

OBSERVATIONS OF THE OVERSIGHT COMMITTEE

- The Committee observed that remediation of legacy waste at Kuberpur site is under process and the balance waste is to be remediated. In the inspection, it was found that most of the area of MSW Plant is covered by legacy waste which needs to be remediated at the earliest failing which the whole purpose of this exercise would be defeated.
 - The Committee felt that the landfill is not being utilized to store landfillable waste frequently. Proper arrangement of leachate collection and gas collection/flaring arrangement were not made.
4. The present processing capacity of Kuberpur waste processing plant is not enough to cater to the day to day processing of Agra Solid Waste. Already Agra has 4.18 Lac MT of legacy waste is treated while about 5.5 Lac MT of legacy waste is lying untreated at the site. The Committee feels that the legacy waste site would be meaningful only if bio waste remediation of Legacy waste is being done at the latter site. Otherwise it would just be an exercise in redistribution of solid waste.

5. The Committee directs that bio waste remediation should be done at all legacy waste sites within given timelines. The inspection report on MSW treatment and disposal facility at Kuberpur, Agra mentions installation of CCTV camera at legacy waste dumpsites and installation of GPS system in garbage collection vans. There is also control room set up for monitoring of waste management.
6. The Committee felt that the remediation of legacy waste needs to be verified by concerned department or through third party sources at specific intervals. Department of Urban Development and UPPCB may jointly verify the status of legacy waste in the State of Uttar Pradesh and submit the report accordingly.
7. In Agra, waste to energy plant is already ready and waiting environmental clearance from the moratorium imposed at TTZ.

VI: RECOMMENDATIONS

Remediation of Legacy Waste

1. The State has taken some steps for remediation of legacy waste. The legacy waste of about 1 Lakh Ton lying in Sector-54, Noida has been remediated and the site has been cleared. The remediation of legacy waste of about 3 Lakh Ton in **Gawri, Meerut** has started and about 2 Lakh Ton legacy waste has already been remediated with scheduled completion by year end. Similarly, the remediation of legacy waste of about 1.1 Lakh Ton in Sector-145 in Noida has also started from October, 2019 and will be completed by year end. **In Agra**, agreement has been signed and work has started for remediation of approximately 8 Lakh Ton legacy waste and the remediation is projected to be complete by December, 2020. The Request For Proposal (RFP) has already been floated for remediation of legacy waste of about 39 Lakh Ton in 09 towns namely Kanpur, Prayagraj, Ghaziabad, Bareilly, Aligarh, Lucknow, Mathura, Lalitpur and Moradabad. The State Govt.

needs to finalize these at the earliest and communicate the commencement and completion timelines.

2. The Nagar Nigam, Lucknow informed that DPR has been submitted for removal of legacy waste from its site at Ghaila. The State Govt. should communicate firm timelines for commencement and completion of the work.

3. The State Govt. needs to communicate firm timelines by which the remaining legacy waste in entire State is proposed to be assessed and remediated.

4. Presently, except 17 cities, estimation of legacy waste has not been done. Moreover, no survey has been conducted with regard to the dumping sites in the State. No process has been initiated for shifting of existing dumping sites. The Committee recommends complete survey for estimating legacy waste in the entire State within one month.

5. Work had to start on all legacy waste sites by 01.04.2020 failing which an EC of Rs. 10 lakh/ local body/ month had to be imposed. UPPCB must calculate the EC and send notices on priority basis.

6. As far as identification of land for processing/ disposal facilities is concerned, 582 ULBs have been able to identify the sites out of total 652 ULBs. The State Government needs to inform the time frame in which 582 processing/ disposal facilities will be set up. Action as per the Hon'ble NGT orders needs to be taken against the defaulting 70 ULBs.

7. The State Govt. needs to ensure that all the functional processing plants should obtain authorization from SPCB in next 3 months.

8. The Urban Local Bodies which have installed waste to compost plants are facing serious challenges in sale of compost. This has resulted in piling up of heap of compost even after investing huge amount. The compost from municipal waste has limited acceptability to the farmers because of foul odour, pathogens and presence of weed seeds which may damage the crops and deteriorate the soil condition. The State Government may consult Agricultural Universities in this regard to improve the quality of compost.

9. Housing Department has to clearly make provisions in their Master Plans for dumping sites/ waste processing plants. In addition, a buffer zone has to be declared in which no residential units can come up. Directives need to be issued to the State Government to comply with these directions within three months.

10. Hazardous waste of 25000 MT is lying at Moradabad for more than one year and despite clear instructions it has not been shifted to TSDF, Amroha. Ground water Department may conduct water testing for safety of ground water. Responsibility be fixed for negligence in not shifting this waste. The State Government be directed to shift it within one month. Likewise, chromium dump at Rania, Kanpur has not been shifted to the TSDF despite repeated directions by the Hon'ble NGT. Such negligence on part of the UPSIDA as well as other concerned authorities is unacceptable and the Committee suggests that accountability be fixed.

11. It was pointed out during the meetings that there has been a delay in procurement of equipment for SWM by ULBs because there is no standardization of specifications. Hon'ble NGT order dated 02.07.2020 in OA No. 606/2018 stated that the process of procurement of equipments should be rationalized and expedited. The Committee suggests that the State government must follow the directions given by Hon'ble Tribunal and formulate a proper action plan. The use of

GeM portal in this regard could ensure transparency and may serve to be cost effective.

12. Bijendra Energy and Research, Meerut has developed an indigenous technology for small waste to energy plant which appears to be viable from cost point of view as well as from regular availability of municipal waste point of view. This could pave the way for decentralized municipal solid waste management where a number of such plants could co-exist in a city each catering to a cluster of wards and converting their municipal waste into energy. The New Generation, Multi-Fuel Producer Gas Generator Plant developed by them can simultaneously use biomass waste, municipal solid waste and RDF fuel to produce gas/synthetic gas and further generate electricity. Conventional waste-to-energy plants that use mass-burn incineration usually on an average convert one ton of MSW to about 550 kilowatt-hours of electricity. With gasification technology, one ton of processed dry MSW Briquette (RDF) can be used to produce up to 1,000 kilowatt-hours of electricity. Gasification technology is an economically and environmentally sustainable approach for waste management.

13. Another successful model with reference to waste management is 24 Tonnes/dry "Waste to Energy" plant established by NTPC at village Karsara, Varanasi and 3 (5 Tonne/day) such Plants set up by Indian Oil Corporation at Bhelupur, Paharia Mandi, Adampur, Varanasi. These Plants are presently operational and convert municipal organic waste into manure and electricity. The operation of the Plant is based on anaerobic digestion. The solid waste is segregated and the organic portion is taken up for further processing where it is reduced in size and fed into the digester. During the feeding, semi-digested material is mixed with the fresh feed to give a seeding effect. The material undergoes anaerobic digestion producing bio-gas which is tapped and filled up in

balloons to be utilized either as fuel or to produce power through engines. The undigested material is disposed into a centrifuge which separates the solid fraction that can be used as compost up in balloons to be utilized either as fuel or to produce power through engines. The undigested material is disposed into a centrifuge which separates the solid fraction that can be used as compost.

14. Legacy Waste Remediation Rates in Agra: Apart from the issue stated above, the Committee observed that Legacy waste remediation in Agra has been undertaken at a fast pace. Estimated legacy waste at Kuberpur dump site is 8 Lakh tons out of which 4 Lakh tons had been remediated and rest of the waste is shaped in windrows for primary treatment in the area of 12 Acres. The complete legacy waste remediation is planned to be complete by December 2020. Moreover, the cost of disposal/remediation of waste is relatively low as compared to other cities/towns. The estimated project cost turned out to be 25.92 Cr. which is about Rs. 273.50 per ton of deposited legacy waste. This includes the equipment charges which are being borne by the concessionaire. It was learned by the Committee that in Delhi. The per tonne cost of legacy waste remediation of almost same quantity was Rs.380/-. Likewise in Maharashtra the average per tonne cost ranges between Rs.400-500/-. Considering such cost scenario, the authorities of Agra have been able to get reasonable rates and no extra cost like equipment cost is being borne by the Agra Nagar Nigam in the entire process. Thus, the Committee feels that given the fact that legacy waste remediation is a new area where price discovery and procedures are evolving, Agra Nagar Nigam could be considered as one of the models when we plan to standardize the legacy remediation conditions and rates.

The Member Secretary, UPPCB is directed to send this report to the Registrar General, National Green Tribunal, Principal Bench, New Delhi for placing the same before the Hon'ble Tribunal with a copy to the Chief Secretary,

Government of UP for necessary action. The report also be uploaded on the website of the committee.

11-09-2020

11-09-2020

X Anup Chandra Pandey

Dr Anup Chandra Pandey
Member, Oversight Committee
Signed by: ANUP CHANDRA PANDEY

X SVS Rathore

Justice SVS Rathore
Chairman, Oversight Committee
Signed by: SURENDRA VIKRAM SINGH RATHORE

September 11, 2020

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Appendices:

Appendix-I: Minutes of Meeting of Oversight Committee, NGT held on 31.07.2020

Appendix- II: The Compliance Report in O.A. No. 519/2019 in relation with OA No. 606/2018 submitted by UP PCB on 07.08.2020

Appendix- III: The Compliance Status in O.A. No. 519/2019 in relation with OA No. 606/2018 submitted by Nagar Nigam, Lucknow on 07.08.2020 (Condition of Ghaila dumpsites)

Appendix- IV: The Compliance Status in O.A. No. 519/2019 in relation with OA No. 606/2018 submitted by Nagar Nigam, Agra on 13.08.2020 (Bioremediation and Biomining of Legacy Waste of Kuberpur Dumping Site, Agra)

Appendix- V: The inspection survey in O.A. No. 519/2019 in relation with OA No. 606/2018 submitted by Nagar Nigam, Agra received on 01.09.2020

Appendix- VI: The inspection survey in O.A. No. 519/2019 in relation with OA No. 606/2018 submitted by Nagar Nigam, Lucknow received on 09.09.2020

Appendix- VII: The inspection survey in O.A. No. 519/2019 in relation with OA No. 606/2018 submitted by Nagar Nigam, Meerut received on 09.09.2020

Appendix- I

Meeting No.48

MINUTES OF MEETING OF NGT OVERSIGHT COMMITTEE, UP LUCKNOW
HELD ON 31.07.2020 AT 11-00 A.M IN OA NO. 519 OF 2019 IN RE: NEWS
ITEMS PUBLISHED IN "THE TIMES OF INDIA" AUTHORED BY JASJEEV
GANDHIOK AND PARAS SINGH TITLED "BELOW MOUNTAINS OF TRASH
LIE POISON LAKES"VS UNION OF INDIA AND OTHERS

(ORGANISED WITH THE HELP OF NIC THROUGH VIDEO-CONFERENCING)

Present: Hon'ble Mr Justice SVS Rathore, Chairman, and
Dr Anup Chandra Pandey, Member.

Other dignitaries present:

1. Shri Anurag Yadav, Secretary, Urban Development
2. Shri Sanjay Singh, Special Secretary, Urban Development
3. Shri Atulesh Yadav, CEO, UPPCB
4. Dr D.K. Soni, Central Pollution Control Board, Lucknow
5. Shri AK Tripathi, Central Pollution Control Board, Lucknow
6. Dr Indramani Tripathi, Nagar Ayukt, Nagar Nigam, Lucknow
7. Shri Arvind Kumar Chaurasia, Nagar Ayukt, Nagar Nigam, Meerut
8. Shri Nikhil Tikaram Funde, Nagar Ayukt, Nagar Nigam, Agra

The Oversight Committee reviewed the progress of Waste Management Rules, 2016 and other pollution abatement measures in the State of Uttar Pradesh in the light of orders of Hon'ble NGT dated 16.03.2020 passed in O.A. No. 519 of 2019 in re: ***News Item published in "The Times of India" authored by Jasjeev Gandhiok & Paras Singh Titled "Below mountains of trash lie poison lakes"***.

Though the order is regarding legacy waste sites in Delhi, yet it was circulated to all the States and those directions are applicable to all the States

and were being followed up in **OA No. 606 of 2018** in re: *Compliance of Municipal Solid Waste Management Rules, 2016*.

Hon NGT considered the matter of Solid Waste Management after notifying all the concerned States and disposed of the same on 22.12.2016 requiring all the States to follow Solid Waste Management Rules, 2016 after preparing requisite action plans in a time bound manner. It directed that any State which failed to comply with the provisions of the Rules, would be liable to be proceeded against under Environment Protection Act, 1986, apart from being required to pay environmental compensation and fixation of personal liability of senior-most officers of the States/local bodies. Directions also included requirement for segregation of waste, provision of buffer zones around plants and landfill sites and due monitoring. The States/Local Bodies should also create market for consumption of RDF. Tipping fee was to include the efficient and regular monitoring of the waste monitoring plants, segregation of inner waste and C&D waste and its transportation. Landfill sites were required to be bio-stabilised preventing leachate and generation of methane, enforcement of extended producer responsibility, and liability under contract being made consistent with the Rules and creation of public awareness about the facilities available at regular intervals. Copy of the judgment was circulated to all the Chief Secretaries/ Advisors of States/UTs.

Vide order dated 20.08.2018, the Tribunal considered the following questions:

- “i. Whether State-wise Action Plan with timelines and budgetary support/provision for management of MSW has been prepared?”*
- ii. Whether each city/town/urban local body is covered under the*

said Plan and individual Action Plan has timelines with budgetary provisions?

iii. What time has been fixed to completely comply with the provisions of the Rules, 2016?

iv. What are the main constraints of non-compliance of Rules, 2016?

It was directed that action plans be finalized latest by 31.10.2018 and executed latest by 31.12.2019 which was to be overseen by the Principal Secretaries of Urban/Rural Development Departments of States/UTs. States were directed to standardize technical specifications instead of leaving the same to individual local bodies. Further directions are for installing CCTV cameras at dump sites, installing GPS system in garbage collection vans, adopting best practices including control rooms where citizens can upload photos of garbage to be looked into by responsible officers, conducting performance audit with reference to source segregation, door to door collection, public sweeping, waste processing, grievance redressal mechanism and monitoring.

After reviewing its earlier order passed in OA No. 606 of 2018 in re: Compliance of Municipal Solid Waste Management Rules, 2016, Hon'ble NGT directed that in case of failure to the monitoring guidelines, every Local Body with population of above 10 lakhs would have to pay compensation of Rs. 10 lakhs per month from 01.04.2020. The compensation was Rs. 5 lakhs per month for Local Bodies with population between 05-10 lakhs and Rs. 01 lakh per month for other local bodies. Apart from compensation, adverse entries were also to be made in the ACRs of CEOs of the State Local Bodies and other senior functionaries in the Urban Department who were responsible for compliance of the orders of Tribunal. Legacy Waste Remediation was to

commence from 01.11.2019. Continued failure of every Local Body on the subject of commencing the work of legacy waste sites remediation from 01.04.2019 till compliance would result in liability to pay Rs. 10 lakhs per month per Local Body for population of above 10 lakhs, Rs. 05 lakhs per month per Local Body for population between 05-10 lakhs and Rs. 1 lakh per month per other local Body. In case of inability of the Local Body to clear its financial burden, the liability was of the State Government.

Hon'ble NGT in its order also mentioned above compliance in thematic areas like hazardous waste, e-waste, polluted industrial clusters, reuse of treated water, performance of CETPs/ETPs, groundwater extraction, groundwater recharge, restoration of water bodies, noise pollution and illegal sand mining. The compensation regime already laid down for failure of the Local Bodies and/or Department of Irrigation and Public Health/In-charge Department to take action for treatment of sewage in terms of observations in para 31 above will result in liability to pay compensation as already noted above.

The Oversight Committee reviewed the progress of pollution control measures in this case in the meeting in the light of above background.

Secretary, Urban Development mentioned that based on a survey, they have arrived at assessment of the legacy waste in all the ULBs. Out of 650 ULBs, about 450 ULBs are very small and there is not much legacy waste. The Government is concentrating more on the 70 ULBs with population of more than 1 lakh which includes 17 Nagar Nigams also. The work will start on all these by 15th September 2020 and they hope to finish it by the end of this year. He mentioned that new tenders for legacy waste remediation have been finalized at 10 places, i.e. Lucknow, Kanpur, Aligarh, Agra, Ghaziabad,

Mathura, Lalitpur, Prayagraj, Muradabad and Bareilly. The last two have been done locally and the rest have been done centrally. Agreements with the concerned ULBs will be done by 10th August, 2020 and the work will start with effect from 15th September, 2020. The rate was Rs. 239/- per metric ton exclusive of GST. Equipment, fuel and other things were responsibility of the vendor. Secretary, Urban Development mentioned that they have already four running models of legacy waste remediation- (i) Jhansi, where they have capped legacy waste and developed a park, (ii) NOIDA, where legacy waste remediation has taken place and they are maintaining a park, (iii) Agra, where they have already remediated 04 lakh metric tons of legacy waste; and (iv) Meerut, where 03 lakh metric tons of legacy waste has been remediated. He mentioned that Aligarh is a good example where RDF is being used for making briquettes. In Meerut, they have developed a Small Scale Power Plant with which the Pashchimanchal Vidyut Nigam has signed a PPA. However, it is not running because UPERTC has not approved the PPA so far.

Municipal Commissioner, Lucknow mentioned that they have two legacy waste plants; one at Ghaila having 4 lakh metric tons capacity and the other at Shiveri, where 2 lakhs metric tons untreated waste is lying. He mentioned that tenders have been awarded for Ghaila recently and the work will start very soon. He further mentioned that for the collection system, they have installed 87 Portable Compactor Transfer Stations (PCTS) and two transfer stations of 350 metric tons capacity. At Shiveri, they have an unprocessed waste of 2.5 lakhs metric tons. Shiveri is running properly with daily processing capacity of 1200 – 1500 metric tons. It is being run by M/s Eco Green. They have not established waste to energy plant as stipulated earlier. The sanitary landfill has inert waste. Besides, there is a problem of disposal of RDF. It was mentioned by the UPPCB that they have served a show cause notice to M/s Eco Green on

31.12.2019. It was mentioned in the meeting that M/s Eco Green is doing only door-to-door collection upto about 35% of the total waste. It is transporting only 35% of municipal waste to the dumping site at Shiveri. It has not made any proper arrangement for leachate collection. There is no arrangement for RDF also. In the sanitary landfill, besides inert waste the normal municipal waste is also being dumped. The UPPCB has already issued show cause notices to the ULBs. It may be examined whether for unsatisfactory performance, Environmental Compensation should be levied on ULBs or on the operator (M/s Eco Green), which has got authorisation from UPPCB. This matter may be examined by the UPPCB and report be sent to the Committee regarding action taken by them in response to their show cause notice of 31.12.2019.

Municipal Commissioner, Agra mentioned that they have the legacy waste plant at Kuberpur, which has 9 lakh metric tons legacy waste, out of which 4 lakh metric tons had been processed and the entire process will be completed by December 2020. He mentioned that waste to energy plant is already ready and waiting environmental clearance from the moratorium imposed at TTZ. Rate of legacy waste remediation is being charged at the rate of Rs 273/- per tons which includes machinery, electricity and fuel costs to be borne by the vendor. He mentioned that Agra Cantonment Board has legacy waste of 50-60 thousand metric tons, but since the Ministry of Defence is not providing any financial budget for it, it is not getting remediated. The Ministry of Defence may be directed to get this problem sorted out.

Municipal Commissioner, Meerut mentioned that they have three legacy waste plants- one existing at Gawri having 3 Lakh metric tons of legacy waste, Lohia Nagar having 7 Lakh metric tons of legacy waste and Mangatpura, which is 30 years' old and having 7 Lakh metric tons of legacy waste. They have got

permission for Lohia Nagar and the bids are being done by inviting tenders. The work will start next year and they hope to complete it within two years' time. The Gawri's legacy waste of 3 Lakh metric tons has almost been completed with less than one month's waste lying on the site. It has been done departmentally. Labour and material charges amount to Rs. 130-150 per ton. He mentioned that NTPC Dadri would be a good user where RDF from waste treatment plants in western UP can be diverted. He said that presently they have a zero sanitary fill project with inert material being used for construction activity, compost being used for agricultural purposes and RDF for power plants. The Committee felt that though some activity is going on regarding legacy waste remediation, yet a lot of work has to be done. Urban Development department will do well to expedite the process of implementation of legacy waste remediation. Since the procedure and the rates of legacy waste remediation have not been standardised and are evolving, Secretary, Urban Development may utilise the help of GEM Portal and work on standardisation of vendors, procedures and rates for legacy waste remediation.

UPPCB was directed to issue notices for environmental compensation to all the defaulter units in deference to orders of Hon NGT.

31-07-2020

31-07-2020

X Anup Chandra Pandey

Dr Anup Chandra Pandey
Member, Oversight Committee
Signed by: ANUP CHANDRA PANDEY

X SVS Rathore

Justice SVS Rathore
Chairman, Oversight Committee
Signed by: SURENDRA VIKRAM SINGH RATHORE

July 31, 2020

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Appendix- II

Compliance of Solid Waste Management Rules, 2016

1.	MONITORING MECHANISM	<ul style="list-style-type: none"> • UP Solid Waste Management Policy framed. • State Level Waste Management and Monitoring Committee constituted under the Chairmanship of Principal Secretary, Urban Development UP vide O.M. dated 14-06-2019. • State Level Advisory Body constituted. • STFs constituted in every District.
2.	WASTE MANAGEMENT	<ul style="list-style-type: none"> • 17,377 TPD Solid Waste is generated in all 652 Urban Local Bodies (ULBs). • Door to Door collection is being done in 11,675 wards out of total 12,007 wards (97%). • Vehicle Tracking System is installed in 3785 vehicles in 15 Nagar Nigam • All the 652 Urban Local Bodies (ULBs) in the State have become Open Defecation Free (ODF) and 409 ULBs have been declared ODF+ and 16 ULBs ODF++. • State rank in Swachh Sarvekshan 2018 : 18 • State rank in Swachh Sarvekshan 2019 : 10 • Model Cities : Lucknow, Mathura, Varanasi • Model Towns : Niwari, Shikohabad and Budhana • Model Villages : 225 Gram Panchayats selected as Model Gram Panchayats in 75 Districts (03 in each District).

3.	EXISTING PROCESSING CAPACITY	12 Municipal Solid Waste processing facilities are functional with cumulative treatment capacity of 4,615 TPD										
4.	ADDITIONAL WASTE PROCESSING CAPACITY PROPOSED	<p>Time-bound action plan formulated for development of 57 MSW facilities of cumulative capacity 5855 TPD is as detailed below. After commissioning of these 57 MSW facilities the total cumulative capacity in the State shall become 10470 TPD.</p> <table border="1" data-bbox="651 633 1378 1984"> <tr> <td data-bbox="651 633 970 757">12 Plants with 4,615 TPD</td> <td data-bbox="970 633 1378 757">Existing SW Processing Facilities</td> </tr> <tr> <td data-bbox="651 757 970 999">03 Plants with 560 TPD (Mathura, Agra, Jaunpur)</td> <td data-bbox="970 757 1378 999">Plants to be made operational (August, 2020)</td> </tr> <tr> <td data-bbox="651 999 970 1240">02 Plants with 335 TPD (Moradabad, Fatehpur)</td> <td data-bbox="970 999 1378 1240">Plants to be made operational (October, 2020)</td> </tr> <tr> <td data-bbox="651 1240 970 1671">07 Plants with 860 TPD (Arbitration complete) (Sambhal, Badaun, Mirzapur, Balia, Rampur, Jhansi, Meerut)</td> <td data-bbox="970 1240 1378 1671">Plants to be made operational (March, 2021)</td> </tr> <tr> <td data-bbox="651 1671 970 1984">08 Plants with 930 TPD (Bareilly, Firozabad, Loni, Nazibabad, Bhadohi, Basti,</td> <td data-bbox="970 1671 1378 1984">Plants under land dispute to be resolved and commissioned</td> </tr> </table>	12 Plants with 4,615 TPD	Existing SW Processing Facilities	03 Plants with 560 TPD (Mathura, Agra, Jaunpur)	Plants to be made operational (August, 2020)	02 Plants with 335 TPD (Moradabad, Fatehpur)	Plants to be made operational (October, 2020)	07 Plants with 860 TPD (Arbitration complete) (Sambhal, Badaun, Mirzapur, Balia, Rampur, Jhansi, Meerut)	Plants to be made operational (March, 2021)	08 Plants with 930 TPD (Bareilly, Firozabad, Loni, Nazibabad, Bhadohi, Basti,	Plants under land dispute to be resolved and commissioned
12 Plants with 4,615 TPD	Existing SW Processing Facilities											
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08 Plants with 930 TPD (Bareilly, Firozabad, Loni, Nazibabad, Bhadohi, Basti,	Plants under land dispute to be resolved and commissioned											

		Gorakhpur, Akbarpur)	
		37 Plants with 3,170 TPD	New plants sanctioned to be completed (March, 2021)
		Material Recovery Facility and decentralized composting in 652 Urban Local Bodies (ULBs) with 6,907 TPD	<ul style="list-style-type: none"> • Land identification and Commissioning (December 2020) • Rs. 219 Crore for 01 MRF in each ULB (September 2020) • Rs. 400 Crore for strengthening collection/transportation system (vehicle, dustbin, protective, gear etc. (September 2020)
		Land identified for SW processing site	582 ULBs
		<p>i. 450 ULBs generating less than 10 TPD Solid Waste to have Composting Facility by September 2020.</p> <p>ii. Waste to Energy Plants: Lease agreement done in 02 cities i.e. Muzaffarnagar, Ghaziabad. (Commissioning December, 2021)</p>	

5- Legacy Waste Treatment

- **Details of Completed/Ongoing Bio-remediation Projects :**

S.N.	City	Quantity	Status
1.	Noida-Sector 54	1.0 Lakh Ton	Completed
2.	Prayagraj	0.1 Lakh Ton	Completed
3.	Meerut	3.0 Lakh Ton	Completed
4.	Noida Sector-145	2.77 Lakh Ton	1.02 Lakh Ton remediated. Remaining 1.75 Lakh Ton under process.
5.	Agra	8 Lakh Ton	4 Lakh Ton waste remediated. Project completion by December 2020

- **Way ahead for Legacy Waste :** The RFP has already been floated for 10 towns. Project completion by December, 2020. Details as below :

S.No.	Name of City	Site	Area of Site (Acre)	Quantity of Legacy Waste (LakhTon)
1.	Kanpur	Processing Unit Site	45	1.5
2.	Prayagraj	Baswar	35	5
3.	Ghaziabad	Pratap Vihar	14	2.5
4.	Bareilly	Bakarganj	21	5
5.	Aligarh	Mathura – Sasani Gate Road	25	0.6
6.	Lucknow	Ghaila	14	4
7.	Mathura	Nagala Kolu	25	1
8.	Lalitpur	Ram Nagar	4	2
9.	Moradabad	Processing Unit Site	30	2.5
10.	Agra	Kuberpur	25	2
Total				26.1

- Timeline for remediation of all Legacy Waste in the State is 2 to 3 years.

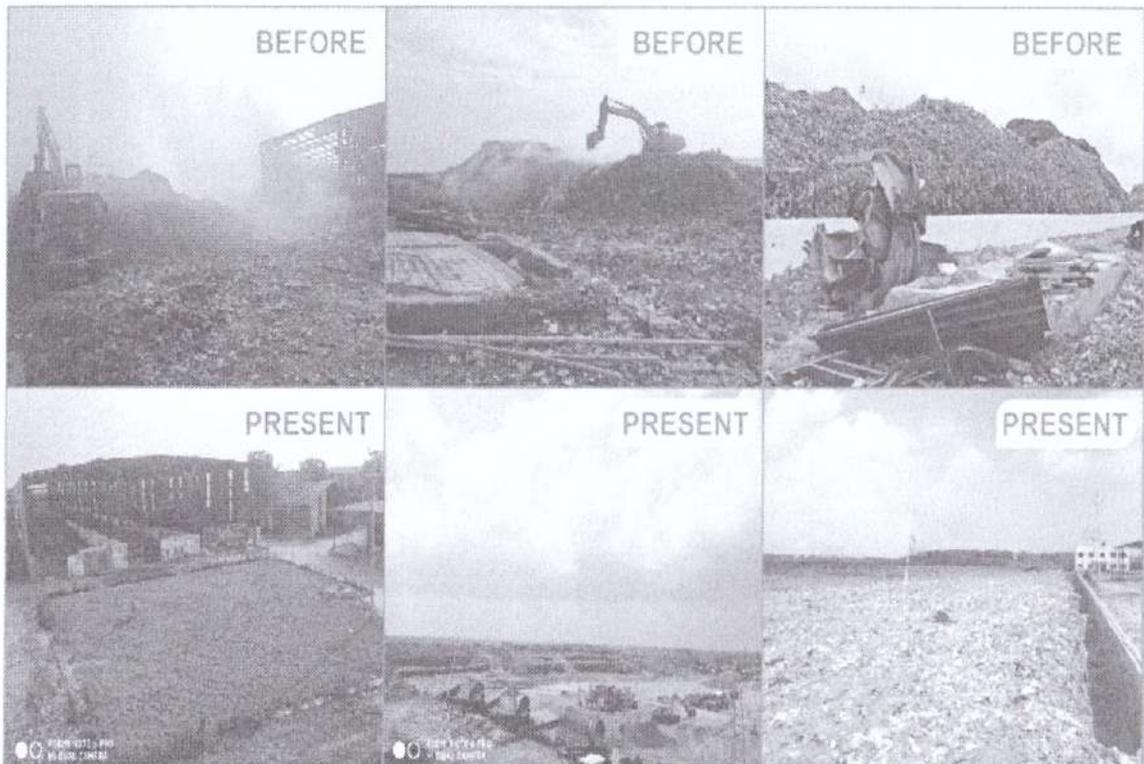
Appendix- III

घैला डम्पिंग स्थल की अद्यतन स्थिति:-

अवगत कराना है कि नगर निगम लखनऊ द्वारा नगर निगम क्षेत्र में जनित होने वाले सॉलिड वेस्ट के समुचित प्रसंस्करण एवं निस्तारण हेतु ग्राम शिवरी, मोहान रोड पर सॉलिड वेस्ट मैनेजमेन्ट प्रसंस्करण प्लान्ट की स्थापना की गयी है जो वर्तमान में संचालित है। प्लान्ट की स्थापना से पूर्व नगर निगम क्षेत्र से निकलने वाले कूड़े को अस्थायी तौर पर आई0आई0एम0 रोड घैला स्थल पर एकत्रित किया जाता था। परन्तु विगत 08 वर्षों से इस स्थल पर कूड़े को डम्प नहीं किया जा रहा है। पूर्व में एकत्रित कूड़े की मात्रा लगभग 06 लाख मीट्रिकटन है, जिसके बायो रेमीडियेशन हेतु नगर निगम स्तर पर पूर्व में निविदाएं मांगी गयी थी, परन्तु उ0प्र0 शासन से धन उपलब्ध न होने व निविदा की दरे अधिक प्रतीत होने के कारण नगर विकास विभाग उ0प्र0 शासन द्वारा सी0एण्ड0डी0एस0, उ0प्र0 जल निगम के माध्यम से पुनः प्रस्ताव प्राप्त किए गए। प्राप्त प्रस्तावों का आकलन शासन स्तर से किया जा चुका है। दिनांक 31.07.2020 को आयोजित वीडियो कॉन्फ्रेंसिंग में भी शासन द्वारा अवगत कराया गया है कि समस्त औपचारिकताएं पूर्ण करने के उपरान्त स्थल पर कार्य 15 सितम्बर, 2020 से प्रारम्भ कराया जाना प्रस्तावित है।

Appendix- IV

**Bioremediation and Biomining of Legacy Waste of
Kuberpur Dumping Site, Agra**



Client: - Agra Nagar Nigam, Agra

Concessionaire:-

Spaak Super Infra India Pvt. Ltd

Email:-sanju.spaak@gmail.com

Contact: - +91 8056120786



Project: Bioremediation and Biomining of Legacy Waste of Kuberpur Dumping Site, Agra

Submitted by: Agra Nagar Nigam, Agra, U.P

1.1. Background

Within jurisdiction of Agra Nagar Nigam, solid waste is getting generated about more than 750 TPD, which was mainly disposed in the open dumpsite located at Kuberpur. Kuberpur site having total area of 72 Acres, which was planned as an Integrated Waste Processing cum Sanitary Landfill site. The capacity of 750 TPD waste processing plant was installed for processing of generated waste, whereas a small Sanitary landfill covering an area of 15000 Sq.m was developed to fill the residual inert coming from processing plant. Kuberpur site became operational for use in December 2011. However, in 2013 the concessionaire stopped operating Processing Plant thereafter mixed waste dumping at this site is in progress. As of now approximately 42 acres of area has covered with unprocessed waste with a dumping height ranging from 5 meters to 20 meters. The accumulated waste in this dumpsite is estimated about more than 10 Lakh MT. This site is still active and receiving waste from entire jurisdiction of Agra Nagar Nigam.

Against the accumulated unprocessed waste, Agra Nagar Nigam had taken initiative to scientific closure and bioremediation of existing landfill site at Kuberpur of Agra City in 2018 but the agreement of this project was signed in June 2019. Hence, with following Guidelines for Disposal of Legacy Waste (Old Municipal Solid Waste) published by CPCB in Feb 2019 and recommendation of Hon'ble NGT order against advisable method of for treatment of legacy waste against the case no. 519/2019 on dated 17.07.2019 the entire activities of bioremediation and biomining is being practiced at Kuberpur site. The proposed project planned to stop unscientific disposal of collected municipal waste on site to controls fire, control of landfill gas emissions, re- contour, and scientific approach to bioremediate legacy waste prior to their treatment. Although a significant portion of the deposited material shall have decomposed already or may be burned. It is estimated that still some amounts of biodegradable material have remained, which may continue to generate methane gas due to their compaction. Hence, Agra Nagar Nigam has taken



initiative for clearing of unprocessed waste from demarcated area through process of bioremediation and biomining.

1.2. Need of Project

The unprocessed waste sprawl over an area of 42 acres of land at Kuberpur and their height ranging from 5 m to 15 m in non-uniform shape and it is about 9 Km away (aerial) from Tajmahal. The emission of GHGs from these accumulated wastes is uncontrollable and polluting nearby ambient air while it is envisaged that leachate generation from these wastes is source of contamination of ground water and soil.

1.3. Regulatory Requirement

The regulatory requirement for treatment of legacy waste through bioremediation and biomining can be falls under following clauses of SWM Rules, 2016:-

15. Duties and responsibilities of local authorities and village Panchayats of census towns and urban agglomerations.- The local authorities and Panchayats shall,-
(zj) investigate and analyse all old open dumpsites and existing operational dumpsites for their potential of biomining and bio-remediation and wheresoever feasible, take necessary actions to bio-mine or bio-remediate the sites;

Clause 'J' of Schedule- I

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

- (i) **Reduction of waste by bio mining and waste processing followed by placement of residues in new landfill or capping as in (ii) below,**
- (ii) Capping with solid waste cover or solid waste cover enhanced with geo-membrane to enable collection and flaring/utilization of green house gases.
- (iii) Capping as in (ii) above the additional measures (in alluvial and other coarse grained soil such as cut offs walls and extraction wells for pumping and treating contaminated ground water
- (iv) Any other method suitable for reducing environmental impact to acceptable level



1.4. Quantification and Characterization of Legacy Waste

The estimation of deposited waste within demarcated project area has been calculated through contour survey analysis. The existing feature of site reflects that unprocessed waste has been spread within entire project area in unplanned manner. After physical visit of project site, it's clearly observed that unprocessed waste is lying in undulating surface which is still not degraded completely and contributing more constituent of dry waste. The total estimated quantity of deposited waste is about 9.5 Lacs MT.

1.5. Project Progress

Till date the progress of project is as summarized below:-

- 4 Lac MT of stabilised waste has been processed.
- Total 189 No. of windrow has been formed and one layer of waste has been screened through three sets of trommel machine.
- Currently, about 1500 TPD of legacy waste is being processed through five sets of installed machine.
- Capacity will be enhanced upto 5500 TPD within a month.
- Within a year the entire project will be completed.

1.6. Approach and Methodology

Before execution of proposed project the secondary data of demarcated site and climate was explored for effective planning and minimum loss of environment. The consideration of wind direction, no of sunny days, surface hydrology and drainage pattern was major component of planning. Moreover, internal road, space management for installation of machine at site, supply of electricity and installation of IT equipment for effective monitoring of project has been considered. The following methodology is being implemented at project site for execution of bioremediation and biomining at Kuberpur, Agra-

- After contour survey, the entire area has been demarcated in three phases- Phase-I- 5 acres, Phase- II – 10 Acres and Phase-III –about 27 acres
- After demarcation of project site the area within project site was demarcated for windrow formation and machine installation.



Bioremediation and Biomining of Legacy Waste of
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- Initially, the excavation of deposited is being practiced to make the windrow of same.
- After formation of windrow the bioculture has been sprayed to degrade organic fraction and to stabilize the waste to complete the process of bioremediation.
- After turning of 3-4 weeks the stabilized waste get stored in a particulate strategic location for transportation to respective screenings machine
- Screening of stablised legacy waste is being carried out through three trommel machines (>125mm, >35 mm and >6 mm)
- Four types of rejects is being coming out after tromeing i.e soil enricher (<6 mm), Segregated Combustible Fraction (SCF) of <35 mm, C&D Waste and Inert.
- The activities of different process as depicted below:-



Deposited Legacy Waste



Windrow Formation



Turning of Windrow



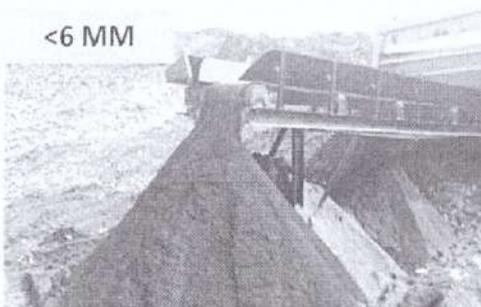
Addition of Inoculum



The ongoing segregation is as shown here:-



The rejects of each trommel is as shown below:-





1.7.Rejects Management

The rejects are heterogeneous in nature which varying in size composition. However, we are under process to sale these rejects with following CPCB Guidelines of 2019.

- The SCF is being sent to cement plant and other related vendors.
- Soil enricher is being sell out to Greenford Organic, Agra while the supply of bioearth to nursery and Govt. Horticulture Department is under progress
- Inert and C&D waste is being utilized as site and being sell for filling in Highway and other infrastructure project.

1.8.Environment Health and Safety

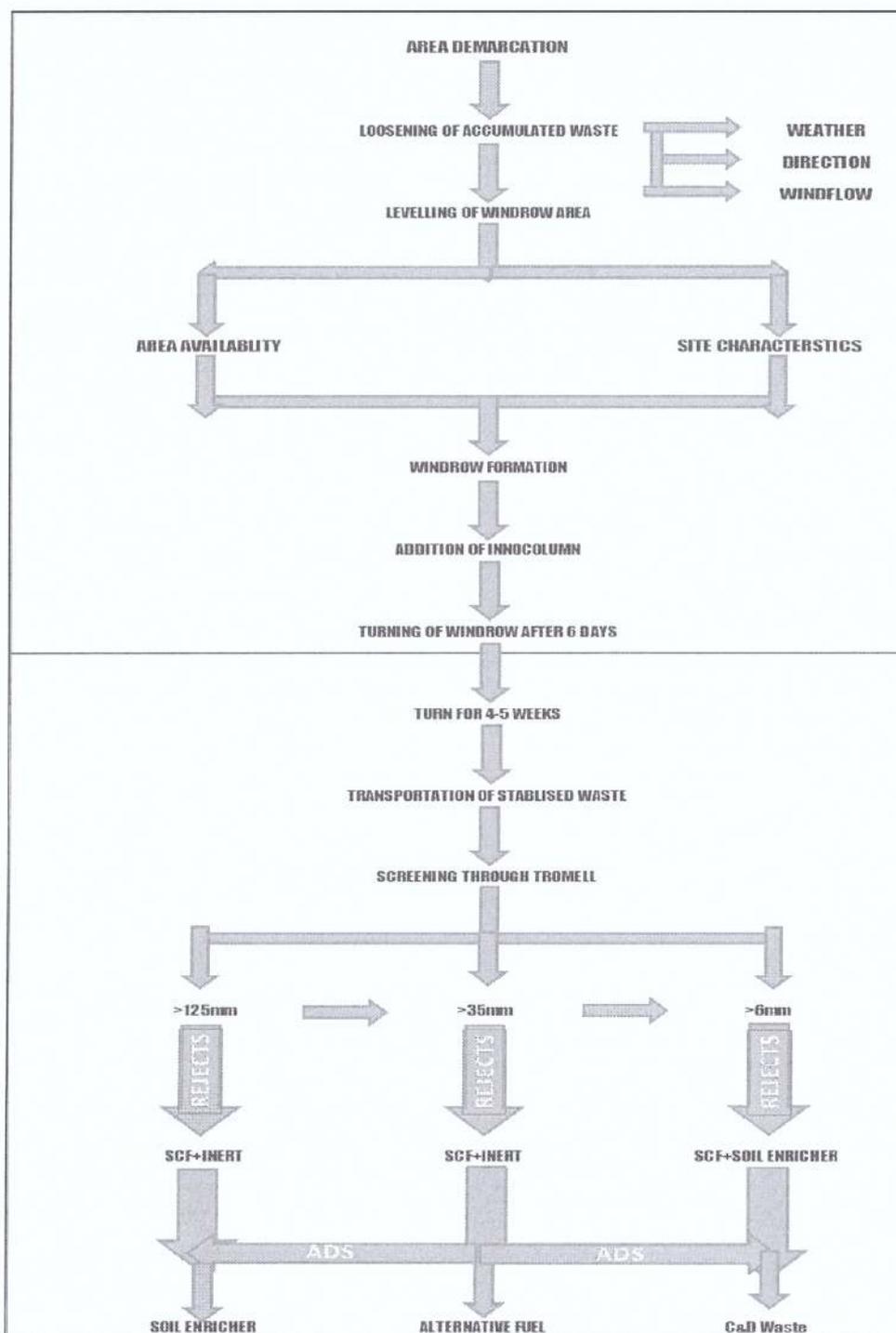
The following major EHS is being followed at project site

- All employees are following EHS Guidelines and Policies before commencement to work.
- The wind and natural environment is being considered in each planning.
- Cleanliness and hygienic environment is prime focus of our project.
- PPEs are mandatory and provided to each employee.
- Air pollution control equipment is being installed at each screening site.
- Analysis of suspected hazardous materials from segregated material is being identified prior to their storage.
- The movement of vehicle is confined in particular area.
- All ancillary activity is being carried out on impermeable layer.
- Odour, and aerobiology would be effectively mitigated naturally.
- All emergency preparedness is ready at site.





The flow sheet of entire activities as presented below:-





Bioremediation and Biomining of Legacy Waste of
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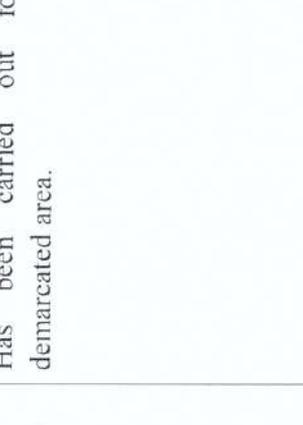
Furthermore, the entire activities which have been performed under this project as summarized below :-

S.No.	Activities	Details	Photographs
1.	Infrastructure development	Admin building, internal road, shed, labour room and other civil and electrical work has been carried out.	
2.	Development of Electrical facility	The electric connection has been distributed within entire project area.	
3.	Site Cleaning and Onsite Management Plan	The deposited legacy waste around the existing infrastructure was cleaned and onsite management plan for water use, labour room, machinery plant and other facilities has been exercised.	



Bioremediation and Biomining of Legacy Waste of
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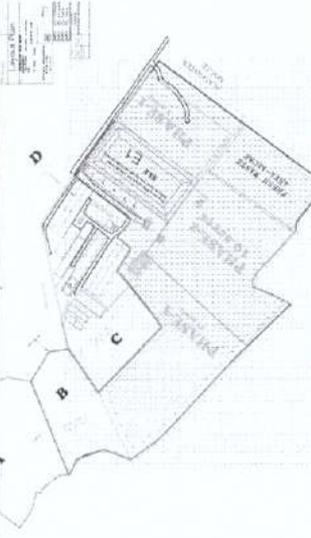
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S.No.	Activities	Details	Photographs
4.	Deployment of Vehicles	Poclain, JCB and Tractor are deployed at site. Poclain- 5 No. JCB- 6 Tractor-12	
5.	Deployment of Human Resource	The competent human resource has been deployed for execution of this project.	
6.	Topography survey	Has been carried out for entire demarcated area.	



Bioremediation and Biomining of Legacy Waste of
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S.No.	Activities	Details	Photographs
7.	Area Demarcation	Based on contour survey, physical verification and signed agreement the area has been demarcated and the same is handovered to concessionaire.	
8.	Quantification and Characterization of legacy waste	Based on topography survey, about 9.5 Lac MT of legacy waste has been estimated. The physical analysis of same has been carried out at different layer of waste at different location.	



Bioremediation and Biomining of Legacy Waste of
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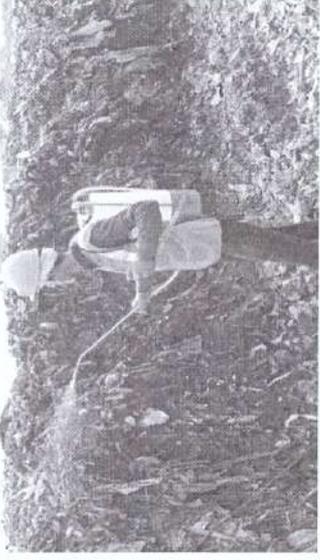
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S.No.	Activities	Details	Photographs
9.	Area Demarcation for fresh waste	Prior to demarcation of project area, area for fresh waste was demarcated.	
10.	Development of Green Area	Development of green area within project is integral part of planning and the same has been executed.	
11.	Phase wise demarcation of legacy waste	For effective implementation of project phasewise demarcation has been carried out.	



**Bioremediation and Biomining of Legacy Waste of
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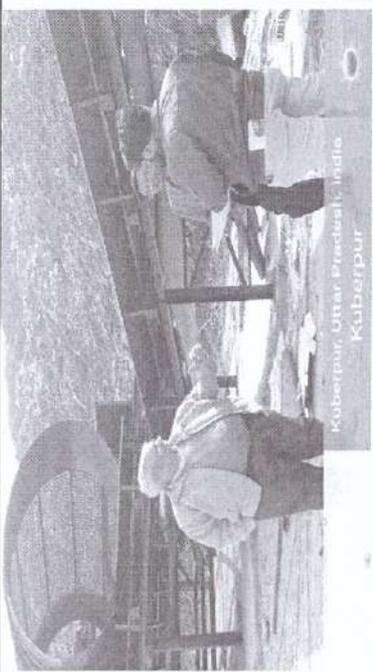
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S.No.	Activities	Details	Photographs
12.	Windrow Formation	With following guidelines of CPCB for processing of legacy waste, windrow has been formed.	
13.	Addition of Inoculum	Addition of inoculums has been practiced two days prior to each turning.	
14.	Turning of Windrow	To stabilise organic fraction of waste periodic turning after 7 days is being practiced.	



Bioremediation and Biomining of Legacy Waste of
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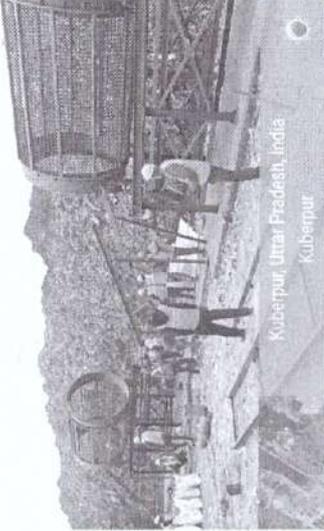
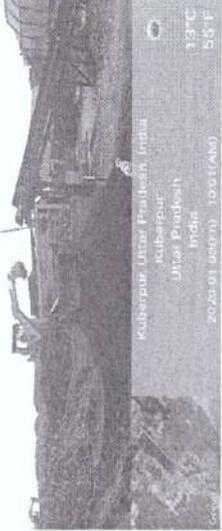
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S.No.	Activities	Details	Photographs
15.	Stabilization of windrow	This practice is being carried out with following CPCB guidelines.	 <p>Kuberpur, Uttar Pradesh, India</p>
16.	Approval of Machine designing	PMC in consultation with ANN has approved the designing.	
17.	Selection of Vendor for Trommel and other machineries	Vendor of similar domain has been searched.	
18.	Joint Inspection of Machine by PMC	Prior to dispatch from workshop, in presence of PMC it has been carried out.	 <p>Kuberpur, Uttar Pradesh, India Kuberpur</p>



**Bioremediation and Biomining of Legacy Waste of
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S.No.	Activities	Details	Photographs
19.	Erection and Commissioning of machine on site	After inspection, the machine has been installed.	 <p style="text-align: right; font-size: small;">Kuberpur, Uttar Pradesh, India Kuberpur</p>
20.	Trial Run of integrated set of tromell	On No load/with waste basis trial run was exercised.	
21.	Operation of tromell machine	Three sets of tromell machines are operational.	 <p style="text-align: right; font-size: small;">Kuberpur, Uttar Pradesh, India Kuberpur Uttar Pradesh India 2020-01-25(Thu) 10:51(AM) 32°C 58°F</p>



Bioremediation and Biomining of Legacy Waste of
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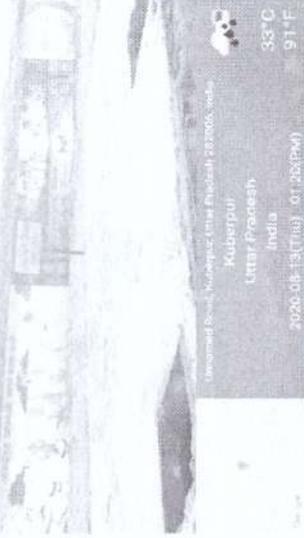
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S.No.	Activities	Details	Photographs
22.	Quantification and characterization of end products	The parameters as mentioned in SWM Rules, 2016 physical and chemical analysis need to be analysed.	
23.	Material (Rejects) Storage Plan	Within project site different location for SCF and Soil enricher has been earmarked.	
24.	Action plan of stored end products	We are approaching Cement Plant for RDF and NHAI/PWD for Soil enricher	
25.	Environmental Assessment of Study Area	Baseline study of Valuable Environmental Components (VECs) Air, Water, Noise and Soil along with physiography, geohydrology and micro meteorology has been carried out.	

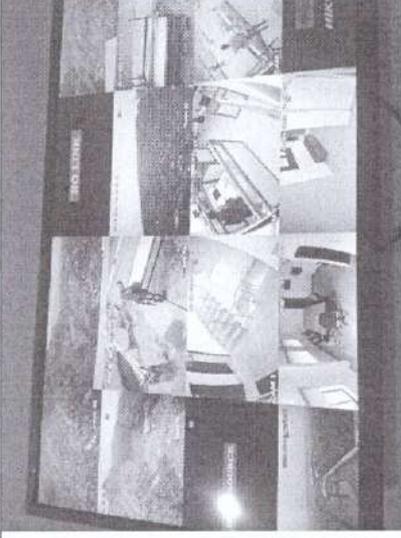


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S.No.	Activities	Details	Photographs
26.	Environmental Health and Safety Measures	Baseline environmental conditions of VECs have been examined. Further, dust control, odour control, fire control is integral part of EHS plan which is being implemented at site. Standard site safety measures of this sector have also been implemented.	
27.	Leachate Collection Plan	Based on topography, four different locations within project site has been identified for leachate collection. With following CPCB guidelines it is being managed.	
28.	On Site Resource Plan	Based on daily consumption and available project planning he onsite resource has been planned.	



S.No.	Activities	Details	Photographs
29.	On Site Emergency Plan	With considering the nature of activities performed on project site, the onsite emergency plan has been prepared and the same has been approved by PMC of this project.	
30.	Development of SOP and daily progress	Based on each activity of project and to monitor the progress of different activities, the SOP and daily progress report has been formed and approved from PMC.	
31.	IT related monitoring system (Camera)	The entire project area is being monitored with high quality camera and other state of art technologies.	



1.9. Project Benefits

The following benefits of this project are envisaged:-

- Improvement in aesthetic and quality of life around the Kuberpur;
- Avoid further contamination in nearby natural environment.
- Enhancement in green lungs around the Tajmahal;
- Improvement in the quality of Yamuna water due to avoidance of leachate;
- Elimination of fire, health hazards and breeding of flies and rodents;
- Realty value in the area shall be increased with higher property tax collection for the municipality;
- A benchmark in Urban Rejuvenation of Agra;
- Increase aesthetic and green lungs besides of dumping site;
- One of the tourist destination for SWM stakeholders;

1.10. Project Financial

The total project cost is 25.92 Cr for bioremediation, biomining and processing of 8 Lac MT legacy waste. Further, the unit rate per MT is estimated about 341.88 INR. This includes the scientific disposal of byproducts also.



Bioremediation and Biomining of Legacy Waste of
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STANDARD OPERATING PROCEDURES FOR BIOREMEDIATION AND BIOMINING OF LEGACY WASTE, KUBERPUR

(LEGACY WASTE MANAGEMENT)



Bioremediation and Biomining of Legacy Waste of
Kuberpur Dumping Site, Agra

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Version	Date	Description	Changed by	Contributors	Approved by
1.0	25 th October 2020	Initial draft for comments	Anil Kumar, SWM Consultant RCUES, Lucknow	Vivek Ojha	AMC

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Bioremediation and Biomining of Legacy Waste of
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Abbreviation or Term	Description or Explanation
MT	METRIC TON
SWM	SOLID WASTE MANAGEMENT
LTS	LITRES
RDF	REFUSED DERIVED FUEL
Q.C.	QUALITY CONTROL
FCO	FERTILIZER CONTROL ORDER
SLF	SANITARY LAND FILL

List of Equipments

Name of Equipment	No.	Make/Model

Daily Inspection Equipment/Machinery

Name of Equipment	No.	Make/Model

Name and Designation of Key Experts

Domain	Name of Expert	Contact Details



Domain	Name of Expert	Contact Details

1. Project Background

Against the accumulated unprocessed waste at Kuberpur, Agra Nagar Nigam has taken initiative to scientific closure and bioremediation of existing landfill site at Kuberpur of Agra City. The proposed project planned to stop unscientific disposal on the site, controls fire, control of landfill gas emissions, re-contour, and scientific approach to bioremediate contaminated site. Although a significant portion of the deposited material shall have decomposed already or may be burned. It is estimated that still some amounts of biodegradable material have remained, which may continue to generate methane gas after its closure. Hence, Agra Nagar Nigam has taken initiative with following as per recommendation of Hon'ble NGT on dated 17.07.2019 against the Bhalswa Dumping Site, Delhi which states via section 4.0 (iii)-

In case, capping of Bhalswa Dumpsite (which is not advisable as per CPCB Guidelines as mentioned at point 3.6 above) is proposed as the only option due to time and space constraints as also techno-economic reasons, the DPR should be revisited especially to look into following conditions:

"Biomining should be undertake to the maximum extent possible without having significant adverse environmental impacts on adjoining population"

Furthermore, as per section 4.6 of new guidelines of Central Pollution Control Board, Delhi published in February, 2019 for disposal of legacy waste (Old Municipal Solid Waste):-

"Capping should only be considered for maximum 10% residual rejects after biomining (Screening) of stabilized waste. The SWM Rules 2016 in rule 15 (zk) permits it only where biomining and bio-remediation is not possible. Perhaps the only places where this not possible are in steep inaccessible ravines and narrow valleys in mountain regions."

Section 4.7 of new guidelines of Central Pollution Control Board, Delhi published in February, 2019 for disposal of legacy waste (Old Municipal Solid Waste) states that:-

"The capping of dumpsites is not advisable. However, if any scientific landfill site for municipal waste is present which has been constructed as per the norms and guidelines of MoEF&CC and has been filled to its maximum level, possibility of capping can be explored."

Ministry of Housing and Urban Affairs (MoHUA), Gol is the implementing agency of the Swachh Bharat Mission (SBM) in urban India. SBM emanates from the vision of the Government for ensuring hygiene, waste management, and sanitation across the nation and aims for a Clean India under a collaborative framework of multiple stakeholders. As one of the key mission objectives is to develop modern and scientific municipal solid waste (MSW) practices, Gol intends to support various states and cities in undertaking such projects through providing financial assistance and capacity building support. Under this programme Agra Nagar Nigam is getting financial assistance to execute this bioremediation project at Kuberpur.

With keeping regulatory implication and their need of compliances via letter no. 1315 (1)/D/SBM/2019 dated 26.11.2019 Agra Nagar Nigam has given concurrence on alteration of scope of work from scientific closure and capping to bioremediation and biomining of legacy waste. The same was appraised Project



Management Consultant by Regional Centre for Urban & Environmental Studies (RCUES), Lucknow through letter no. AD/URC/41-2/24/2019-20 Dated 25.11.2019. Hence, the need of revision in SOP exists.

2. Engineering Survey and Site Appreciation

Before commencement of work the site specific information will be collected like:-

- Project boundaries and topography
- Geological and hydrological characteristics of the area
- Micro-metrology
- Quantification and characterization of waste (Spatial as well as at different strata)
- Baseline condition of environment around the area of project vicinity
- Area Utilization Plan

The engineering work for this project includes the following major activities:-

- Site preparation and provision of services
- Containment details
- Fencing, gates and other security
- Site access roads and secondary site roads
- Leachate drainage, collection and treatment
- Landfill gas abatement methods like loosening of accumulated waste, windrow formation, etc.
- Current landscaping and tree planting
- Surface water control measures, ditches, road drains, wheel wash water, etc.
- Demarcation of site roads

3. Waste Allocation

The entire waste deposited at the site has been estimated about 9,40,000 MT as per topographic survey. As per contour survey, total cutting depth is 1069857.49 Cu.m and total filling as 35410.07 Cu.m within demarcated 42 acres of land. According to quantification of legacy waste deposited on area of 42 acres the entire area has been divided into different phases to execute this project in a viable and limited time frame.

1. Allied Infrastructure

A- ACCESS ROAD

The all weather access road (P.C.C- minimum 300 mm) within project site exists for movement of garbage vehicle, excavator, JCB, Backhoe loader and other heavy machinery. Based on phase wise planning and lay out the transportation network has been developed.

B- SITE IDENTIFICATION AND INFORMATION BOARD

A site identification board of durable material and finish should be displayed near the site entrance providing the following information:-



Bioremediation and Biomining of Legacy Waste of
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1. Name of project Site
2. Communication Details of Concessionaire
3. Client Details
4. Contact and Emergency Phone No.

C- SECURITY

It is imperative that landfill sites are secure from unauthorised access. Only vehicle related to waste, construction material, engaged resource and visitor will be permitted.

A- REJECTS – OUT FORMATE

Sl.no	Date	Type of vehicle	Vehicle no	Gross weight	Tear weight	Net Weight	Time In	Time Out	Driver Name	Sign Security

B- GOODS ENTRY – FORMATE

SL NO	DATE	PARTY NAME	ITEM	BILL NO.	QTY.	CARRIED BY	TIME	SIGN SECURITY

C- VISITORS REGISTER FORMATE

SL.NO	DATE	PERSONS NAME	PURPOSE	MEET TO WHOM	IN TIME	OUT TIME

D- ADMIN OFFICE

Buildings and structures for administration of the site and for monitoring of entire activity has been furnished and its space is adequate accommodation for the site workforce. The building has a water supply and associated cleaning facilities, toilet, internet and electricity. IT enable facilities camera and sensor based monitoring has been equipped for effective monitoring.

E- REJECTS STORAGE AREA



Bioremediation and Biomining of Legacy Waste of
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The legacy waste from low lying area is being stored at temporary site prior to their dispatch of relevant vendor.

Activity Group	SITE IDENTIFICATION FOR BIOREMEDIATION
-----------------------	---

Sr. No	Activity	Activity Owner
1	<ul style="list-style-type: none"> Demarcate the identified area as per box of contour drawing 	Supervisor
2	<ul style="list-style-type: none"> Check the disposition of methane, compaction and quality of deposited waste. The life of deposited waste can also be estimated. Based on such facts, the quality of deposited waste can be categorized into followings:- 	Supervisor/ Lab Incharge
3	<ul style="list-style-type: none"> Bio degradable : The form of biodegradable items like leaves, vegetables, grass, waste fooding items, Petha waste, Hotel waste and other rich quantity of inert . 	Machine operator / supervisor
4	<ul style="list-style-type: none"> Non-Biodegradable : The form of non biodegradable Like plastic , rubber , thermocol , cotton, wodden pieces, C&D Waste, gunny bags & shoe cutting . 	Machine operator / supervisor
5	<ul style="list-style-type: none"> Recyclable materials : By manual segregation of non biodegradable items like iron , plastic , glass , Brick ballast (debris) etc 	Casual workers

F- WORKSHOP AND MACHINERY STORAGE AREA

The list of Machinery, equipment and materials will be recorded every day and will be enlisted for their monitoring and supervision. The activity of same shall be as follows:-

S.No.	Machinery/Material/Equipment	Date of Inspection	Status
Checked by:		Inspected By:	



A. Introduction

This operation manual details out the standard operating procedures to be followed for Bioremediation and Biomining Project of Legacy Waste, Agra by producing soil enricher (Bio Earth), SCF, C&D Waste and Inerts.

The various processes covered in this document are as below:

Excavation of Deposited Waste:

1. **Quality Inspection** : Prior to excavation and loosening of waste the area will be check for poclain movement, environment and health safety.
2. **Work Permit** : After checking by the field supervisor and lab assistant, Poclain in first phase will be engaged for excavation of deposited material.
3. **Windrow** : Excavated unprocessed material is put on windrow pad in specified shape by using aerobic system by weekly turning , culturing and proper maintenance of windrow temperature etc. Every windrow must be in desired shape & size moisture & temperature & weekly turning. After completion 4 week by following above parameters, we will get material ready to biostablization and bio earth compost.
4. **Biomining**: After completing cycle period of windrows now the materials are ready to biomining.
 - a- **Feeding**: The feeding of stabilised waste will be placed in hopper through poclain.
 - b- **Manual Separation**: Segregation of C&D waste, Inert and large particle will be separated manually prior to their entrance in 125 mm.
 - c- **Primary screening (125 mm)** : The feeding material will get segregated through 125 mm sieve of trommel.
 - d- **Secondary screening (35 mm)** : The segregated waste of -125 mm will be screened through 35 mm sieve of trommel.
 - e- **Tertiary Screening (6 mm)** : The -35 mm screened material will be passed through -6 mm trommel which will be final segregation as per requirement.
5. **SCF** : (Segregated Combustible Fraction) materials like glass pieces, brick ballast, iron & plastic are segregated and rest combustible material like Gunny bag, Old cloth, thermocole, rubber, shoe cutting, tyre & light plastic goes to SCF purpose.



Bioremediation and Biomining of Legacy Waste of
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6. **Soil Enricher (Bio Earth) :** The particle size between -35 mm and 6 mm segregated stabilised legacy waste will be sieved through 6 mm trommel which will produce bio earth (-6 mm) and inert (+6 mm to -35mm).
7. **C&D Waste :** The C&D waste collected from segregation of biomining of legacy waste will be collected separately for further uses with following C&D Waste management rules, 2016.
8. **Inerts:-** The produced inerts at different sieve size will be stored separately shall be analysed chemically prior to their final and safe disposal.

ACTIVITY GROUP

Activity Group	<u>BIOREMEDIATION OF LEGACY WASTE</u>
-----------------------	--

SL. No	Activities	Activity Owner
1	<ul style="list-style-type: none"> • By getting excavated material from accumulated waste 	Q.C
2	<ul style="list-style-type: none"> • Make windrow through specific line & length LWH-with considering maximum sun exposure and minimum wind speed direction 	Q.C.
3	<ul style="list-style-type: none"> • Tagging of windrow – by date, time & last turning date. 	Q.C. head
4	<ul style="list-style-type: none"> • Spraying of EM culture after a week 	Q.C. supervisor
5	<ul style="list-style-type: none"> • Weekly turning by windrow turner & JCB 	Q.C. supervisor
6	<ul style="list-style-type: none"> • After last turning this windrow must be qc check & Shift in to monsoon shed. 	Q.C. head
7	<ul style="list-style-type: none"> • Windrow area leveling for next phase preparation 	Q.C. Supervisor
8	<ul style="list-style-type: none"> • Collection of stabilised windrow 	Q.C. Supervisor
10	<ul style="list-style-type: none"> • Proper maintain record & board 	Q.C. head



Bioremediation and Biomining of Legacy Waste of
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Activity Group BIOMINING OF LEGACY WASTE

SL. No	Activity	Activity Owner
1	• Identification of stabilised windrow for feeding	Q.C
2	• Loading of stabilised windrow in Tipper	Q.C.
3	• Unloading of tipper at allocated trommel no.	Q.C. head
4	• Receiving of work permit to start trommel of respective size	Driver
5	• Feeding of stabilised waste on hopper	Q.C. supervisor
6	• Segregation of large items manually	Q.C. head
7	• Inspection of feeding material through their byproducts	Q.C. head
7	• Heap out of reject materials of different size rejects	Q.C. Supervisor
8	• Proper maintain record	Q.C. head



Bioremediation and Biomining of Legacy Waste of
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Activity Group

BYPRODUCTS MANAGEMENT OF LEGACY WASTE

SL. No	Activities	Activity Owner
1	• Work Permit of Vehicle Deployment for Reject Transportation	Q.C
2	• Loading of byproducts on the basis of their types	Q.C.
3	• Work Permit of Vehicle Deployment for Reject Loading	Q.C. head
4	• Transportation of byproducts >125 mm , >35 mm, >6 mm and <6 mm materials	Q.C. supervisor
5	• Covering of loaded vehicle prior to their dispatch at designated place	Q.C. supervisor
6	• Weighing of loaded vehicle	Q.C. head
7	• Unloading of rejects at their designated place.	Q.C. head
8	• Selling/Dispatch of rejects/byproducts to their respective vendor after weighing and other compliances.	Q.C. head



2. Environmental Management Plan

Based on exiting features, micro metrology and operational strategy the site specific Environmental Management Plan has been framed which includes:-

S. No	Impacts	Negative Impact		Positive Impact		No Impact	Responsibility
		Short Term	Long Term	Short Term	Long Term		
A	Project Siting						
i.	Change of land use						
ii.	Loss of trees/vegetation						
iii.	Shifting of utilities						
B	Construction Phase						
i.	Impact on local infrastructure						
ii.	Contamination of Soil						
iii.	Impact on water quality						
iv.	Impact on air quality including dust generation						
v.	Noise pollution						
vi.	Traffic congestion and loss of access						
vii.	Staking and disposal of construction material						
viii.	Public health and safety						
ix.	Occupation health impact						
C	Operational Phase						
i.	Increase in air and noise levels						
ii.	Disposal of waste water						
iii.	Disposal of solid waste and landscape waste						
iv.	Induced development						



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S. No	Impacts	Negative Impact		Positive Impact		No Impact	Responsibility
		Short Term	Long Term	Short Term	Long Term		
v.	Quality of life						

The anticipated Environmental hazard from proposed activities is as envisaged below:-

S. No.	ACTIVITIES	ENVIRONMENTAL HAZARDS	Supervision
1.	Storage of Waste	Odour due to biodegradation	Environmental Specialist
		Aesthetic and Health Impact	EHS Expert
2.	Loading of the solid waste in the transportation vehicle	Blowing of dust	EHS Expert
		Leakage from the trolley	EHS Expert
		Adverse health impacts on the laborers	Environmental Specialist
3.	Transportation of the waste	Littering of the waste on the road	EHS Expert
		Leakage of the slurry of the waste on the way	EHS Expert
		Disposal of the waste at unwanted places	EHS Expert
4.	Handing of the waste at project site	Health Hazard for the personnel handing the waste	Environmental Specialist
5.	Temporary storage of the waste at the site	Leachate generation	Environmental Specialist
		Blowing away of waste dust with wind	Environmental Specialist
6.	Operation of the Biomining area	Odour	Environmental Specialist
		Leachate Management	Environmental Specialist
		Dust	Environmental Specialist
7.	Site Management	Fly and insects	Environmental Specialist
		Leachate Management	Environmental Specialist
		Odour	Environmental Specialist
		Bird and menance	Environmental Specialist
		Landfill Gases	Environmental Specialist
		Health and Safety	EHS Expert



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LOG BOOK FORMATS

A. WINDROW FORMATION

 		
KUBERPUR PROCESSING PLANT Address- Vill- Chhalesar, Near Slaughter House, Mathura- Firozabad Road, Agra- 282006, U.P		
Log Book of Windrow		
Name of Project Site-		
Contact Details-		
Windrow Identification No.-	Date-	
Shape of Windrow:		
Date of Formation:	No. of Windrow Formed:	
Dimension of Windrow:		
Avg. Length:		
Avg. Width:	Top	Bottom
Avg. Height:		
Remarks:		
Submitted By	Checked By	Approved By



Bioremediation and Biomining of Legacy Waste of
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B. WINDROW TURNING



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KUBERPUR PROCESSING PLANT
 Address- Vill- Chhalesar, Near Slaughter House,
 Mathura- Firozabad Road, Agra- 282006, U.P

Log Book of Windrow

Name of Project Site-

Contact Details-

Windrow Identification No.- Date-

Shape of Windrow:

Date of Formation:

	Date	Colour	Deployed Vehicle
1st Turning:			
2nd Turning			
3rd Turning			
4th Turning			
5th Turning			

Remarks:

Submitted By Checked By Approved By



C. ADDITION OF INOCULUM





SPAAK

KUBERPUR PROCESSING PLANT
 Address- Vill- Chhalesar, Near Slaughter House,
 Mathura- Firozabad Road, Agra- 282006, U.P

Log Book of Innoculum

Name of Project Site-

Contact Details-

Date of Formation: Qty. of Inoculum :

Date of Preparation of Inoculum-

Windrow Identification No.	Date	Mode of Spraying

Remarks:

Submitted By

Checked By

Approved By



Bioremediation and Biomining of Legacy Waste of
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D. DUTY SLIP OF VEHICLE

 		
KUBERPUR PROCESSING PLANT Address- Vill- Chhalesar, Near Slaughter House, Mathura- Firozabad Road, Agra- 282006, U.P		
DUTY SLIP OF VEHICLE		
Name of Project Site:	Date:	
Vehicle No.:	Driver's Name:	
Reporting Site:		
Time Leaving Garage:	K.M	
Time at Reporting Site	K.M	
Time of Release	K.M	
Time of Garaging	K.M	
Releasing Place:	Date:	
Remarks:		
Submitted By	Checked By	Approved By



E. TROMELLING

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KUBERPUR PROCESSING PLANT
 Address- Vill- Chhalesar, Near Slaughter House,
 Mathura- Firozabad Road, Agra- 282006, U.P

Log Book of Screening Machine

Name of Project Site- _____ Date- _____

Contact Details of Operator- _____

Site Identification No.- _____ Shift No.- _____

Source of Stabilised Waste: _____

Windrow Identification No.: _____

Excavator Engaged for Loading: _____

Vehicle Engaged for Transportation: _____

Vehicle Engaged for Feeding to Hopper: _____

Screening Machine Details:

	Trommel (>125 mm)	Trommel (>35 mm)	Trommel (<6 mm)
Starting Time			
Closure Time			
Remarks			
Starting Time			
Closure Time			
Remarks			
Starting Time			
Closure Time			
Remarks			

Submitted By _____

Checked By _____

Approved By _____



F. REJECTS MANAGEMENT

SPAAK					
<p>KUBERPUR PROCESSING PLANT Address- VIII- Chhalesar, Near Slaughter House, Mathura- Firozabad Road, Agra- 282006, U.P</p> <p>Log Book of Rejects Storage</p>					
Name of Project Site-			Date:-		
Contact Details of Operator-					
Site Identification No:-		Shift No:-		1	2
Rejects Storage Details:					
	Vehicle Engaged for Loading	Vehicle Engaged for Transportation	No. of Trips	Weight Per Trip	Location of Storage
Rejects (>125 mm)					
Rejects (>35 mm)					
Trommel (>6 mm)					
Trommel (<6 mm)					
Remarks:					
Submitted By		Checked By		Approved By	



Bioremediation and Biomining of Legacy Waste of
Kuberpur Dumping Site, Agra

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CONTACT US

Spaak Super Infra India Pvt. Ltd

Project Site Office

Bioremediation and Biomining Project

Vill- Chhalesar, Near Slaughter House

Mathura- Firozabad Road, Agra- 282006, U.P

Mob: - +91 8056120786

Email: - sanju.spaak@gmail.com

Appendix-V



आगरा नगर निगम
AGRA MUNICIPAL CORPORATION



Ph. No. : 0562-2850670/2520616
FAX No. : 0562-2850499
E-mail : amcagra@yahoo.com
amcagra1@gmail.com

प्रेषक,

नगर आयुक्त,
नगर निगम, आगरा।

सेवा में,

माननीय चेयरमैन,
ओवर साइट कमेटी,
मा0 एन0जी0टी0, उ0प्र0,
लखनऊ।

पत्रांक : 121/D/SBM/2020

दिनांक : 01/09/2020

महोदय,

कृपया स्वकीय ई-मेल दिनांक 07.08.2020 का संदर्भ ग्रहण करने का कष्ट करें जो मा0 एन0जी0टी0 ओ0ए0 नं0 519/2019 में पारित आदेश के अनुपालन में लिगेसी वेस्ट के निपटान हेतु निरीक्षण रिपोर्ट प्रस्तुत किये जाने के सम्बन्ध में है।

तदक्रम में नगर निगम, आगरा से वांछित रिपोर्ट एतद पत्र के साथ निर्धारित प्रारूप पर संलग्न कर प्रेषित की जा रही है।

संलग्नक :- उपरोक्तानुसार।

भवदीय

1/20/09/2020

नगर आयुक्त,
नगर निगम, आगरा

Block 1: To oversee the remedial action taken for treatment and scientific disposal of legacy waste in the district as per Hon'ble NGT directions

S. No.	Name & Location of Legacy Waste Site	Qty. Disposed /treated	Qty. Not-Disposed/ Untreated	Expected Date of complete clear off of Waste dump	Status of installation of CCTV cameras at legacy waste dump sites (Yes=1; No=2)	Status of installation of GPS system in garbage collection vans (Yes=1; No=2)	Control rooms set up for monitoring of waste management (Yes=1; No=2)	Compliance =1; Non-Compliance=2	If Non-Compliance then Compensation Imposed (Yes=1; No=2)	Any alternative arrangement made (Yes=1; No=2)
1	Kuberpur Municipal Waste Processing Site, Kuberpur, Agra	4.18 Lac MT Treated	About 5.5. Lac MT	June, 2021	1	1	1	1	2	2

Block 2: What best practices have been taken up regarding legacy/ Sewage waste management in the district? Give Details.
 With following CPCB Guidelines for legacy waste treatment (Feb, 2019) the process of bioremediation and biomining of legacy waste is being carried out. Environmental mitigation measures as well as odour removal initiative has been considered at site. The byproduct of treated legacy waste is being supplied to relevant stakeholders like RDF is being supplied to Geocycle while Greenford is engaged to carry bioearth.

Block 3: What is the current status of Geo-mapping and Geo-tagging for those legacy waste areas or places which are currently unknown or not on radar? Provide details.

Agra Nagar Nigam is committed to dispose off their municipal solid waste at designated place, Kuberpur only which sprawl over an area of 71.8 acres. The site can be captured on GPS 27.12.27N, 78.05.44E

R. Singh
31/12/2020

The required information w.r.t. O.A No. 519/2019 and O.A. No. 386/2019 with following O.A No. 606/2018 regarding scientific and environmental friendly disposal of solid waste with following SWM Rule, 2016 is enriched in prescribed performa as below.

General Information

Name of the Officer: Er. Rajeev Rathi

Designation & Department: Environmental Engineer, Agra Nagar Nigam

Location of work: Agra Nagar Nigam

Contact number: +91 7300740631

Email ID: amcagra1@gmail.com

Date of Survey: 28.08.2020

2
31/8/2020
ER

Appendix- VI

To oversee the remedial action taken for treatment and scientific disposal of legacy waste

Nagar Nigam Lucknow

S. No.	Name and location of legacy waste site	Qty Disposed / Treated	Qty Not- disposed / untreated	Expected date of complete clear off of waste dump	Status of installation of CCTV cameras at legacy waste dump site (Yes=1, No=2)	Status of installation of GPS system in garbage collection van (Yes=1, No=2)	Control Room set up for monitoring of waste management (Yes=1, No=2)	Compliance=1 Non- compliance=2	If Non- compliance, then Compensation imposed (Yes=1, No=2)	Any alternative arrangement made (Yes=1, No=2)	Remarks
1	GHAILLA (IIM Road)	Nil	6.0 Lacs Tonne	-	2	1	1	1	-	-	Nagar Nigam vehicles are GPS enabled and a 24x7 control room is already set up to monitor the waste collection and resolve the public grievances. Tenders are invited by MoUD, GoUP and yet to be finalised.

Appendix- VII

INSPECTION BY MUNICIPAL COMMISSIONERS REGARDING O.A. NO. 519/2019 WITH O. A. NO. 386/2019 IN RE: NEWS ITEMS PUBLISHED IN “THE TIMES OF INDIA” AUTHORED BY JASJEEV GANDHIOK & PARAS SINGH TITLED “BELOW MOUNTAINS OF TRASH LIE POISON LAKES” WITH CENTRE FOR WILDLIFE AND ENVIRONMENT LITIGATION VS UNION OF INDIA & ORS. WITH REGARDS TO THE DISPOSAL OF LEGACY WASTE

Hon'ble National Green Tribunal dealing with the matter OA No. 519/2019 and OA No. 386/2019 considered the disposal of legacy waste dumped at *Bhalswa, Ghazipur* and *Okhla* dumpsites in Delhi where huge garbage has accumulated over the period of time adversely impacting public health and environment, which requires expeditious scientific and environmentally safe disposal as per applicable rules. This case is also related to OA No. 606/2018.

As per the earlier proceedings, the **SWM Rules, 2016** shall be applied to every urban local body, outgrowths in urban agglomerations, census towns as declared by the Registrar General and Census Commissioner of India, notified areas, notified industrial townships, areas under the control of Indian Railways, airports, airbases, Ports and harbours, defence establishments, special economic zones, State and Central government organisations, places of pilgrims, religious and historical importance as may be notified by respective State government from time to time and to every domestic, institutional, commercial and any other non residential solid waste generator situated in the areas except industrial waste, hazardous waste, hazardous chemicals, bio medical wastes, e-waste, lead acid batteries and radio-active waste, that are covered under separate rules framed under the Environment (Protection) Act, 1986.

The **Solid Waste Management Rules, 2016 (SWM Rules)** had laid down statutory mandate for the manner of disposal of old dumpsites but it is not being followed properly.

In view of the above, the Oversight Committee, NGT is instructing to conduct an inspection in areas where legacy waste dumpsites are present in the state of Uttar Pradesh.

Questionnaire for Inspection**General Information**

Name of the Officer: Brajpal singh

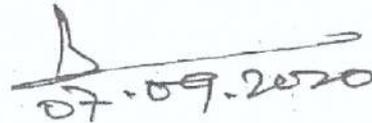
Designation & Department: Assistant Municipal Commissioner

Location of work: ...Meerut

Contact number: ...9837724143

Email ID:amc.nnm@gmail.com

Date of Survey (DD/MM/YYYY)...07/09/2020


07.09.2020

Block 1: To oversee the remedial action taken for treatment and scientific disposal of legacy waste in the district as per Hon'ble NGT directions

S.No.	Name and Location of Legacy Waste Sites	Qty. Disposed/Treated	Qty. Not-disposed/Untreated	Expected Date of complete clear off of waste dump	Status of installation of CCTV cameras at legacy waste dump sites (Yes=1; No=2)	Status of installation of GPS system in garbage collection vans (Yes=1; No=2)	Control rooms set up for monitoring of waste management (Yes=1; No=2)	Compliance =1; Non-Compliance =2	If Compliance then Compensation Imposed (Yes=1; No=2)	Any alternative arrangement made (Yes=1; No=2)	Remarks
1	Jallaluddin Masudpur (Gawdi)	3 Lack Ton	0.5 Lack Ton	31 Oct 2020	Yes=1	Yes=1	Yes=1	Yes=1	No=2	Yes=1	

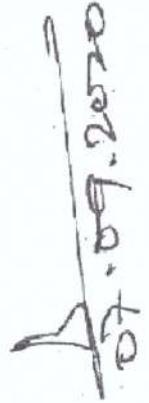
Note: Provide specific details or information in the remarks column

Block 2: What best practices have been taken up regarding legacy/ Sewage waste management in the district? Give Details.

Composting done on Mixed MSW and then Air Blaster Segregator has been used to Segregate Compost, RDF and Inert. RDF is now meant for Electric Generated.

Block 3: What is the current status of Geo-mapping and Geo-tagging for those legacy waste areas or places which are currently unknown or not on radar? Provide details.

At Lohiya Nagar and Mangatpura.


07.09.2020