

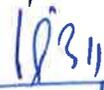
T-03/2016-17/534/NMCG/Phase-II
National Mission for Clean Ganga
Ministry of Water Resources, River Development &
Ganga Rejuvenation

1st Floor,
Major Dhyan Chand National Stadium
India Gate, New Delhi-110002
Dated: 13th December, 2017

OFFICE MEMORANDUM

Subject: Minutes of Meeting of Principal Committee in the matter of O.A. No. 06 of 2012 – held on 21.11.2017 at 11.00 AM under the chairmanship of Secretary, MoWR, RD&GR.

A copy of Minutes of Meeting of Principal Committee held at Conference Room, MoWR, RD&GR on 21.11.2017 at 11.00 AM under the chairmanship of Dr. Amarjit Singh, Secretary, Ministry of Water Resources, RD&GR is forwarded herewith for information/necessary action.


(D. P. Mathuria) 13.12.2017
Executive Director (Technical)
Member Secretary, Principal Committee

Encl: As above.

To,

1. Shri Shashi Shekhar, C – II/155, Satya Marg, Chanakyapuri, New Delhi – 110021
2. Additional Secretary, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi – 110032
3. Joint Secretary (PP), Ministry of Water Resources, RD&GR Shram Shakti Bhavan, Rafi Marg, Sansad Marg Area, New Delhi, Delhi 110001
4. Chief Secretary, GNCTD, Delhi Secretariat, IP Estate, Near Indra Gandhi Indoor Stadium, Delhi - 110002
5. Secretary, Irrigation Department, Govt. of Haryana, Haryana Civil Secretariat, Sector-1, Chandigarh, Haryana
6. Secretary, Irrigation Department, Govt. of Himachal Pradesh, H.P. Secretariat, Shimla-171002
7. Secretary, (UP) Irrigation Department, Babu Bhawan Sachivalya, Government of UP, Lucknow – 226 001
8. Secretary, Irrigation Department, Govt. of Uttarakhand, 4 Subhash Road, Secretariat, Forth Floor, New Building Dehradun, Pin code-248001
9. Secretary, Department of Environment, Govt. of NCT of Delhi, 6th Floor, Delhi Secretariat, IP Estate, New Delhi (Fax – 011 23392034)
10. Secretary, Department of Irrigation & Flood Control, Varunalaya Complex (Phase-II), Karol Bagh, New Delhi-110005
11. CEO, Delhi Jal Board, Delhi Jal Board, Varunalaya Complex (Phase-II), Karol Bagh, New Delhi-110005

12. Dr. A. K. Gosain, Professor of Civil Engineering, Indian Institute of Technology Delhi
Hauz Khas, New Delhi - 110 016
13. Dr. C.R. Babu, Centre for Environmental Management of Degraded Ecosystems, School of
Environment Studies, University of Delhi-110007
14. Dr. A. A. Kazmi, Civil Engineering Department, Indian Institute of Technology Roorkee,
Roorkee, Uttarakhand 247667 IIT Roorkee
15. Commissioner, East Delhi Municipal Corporation, 419, Udyog Sadan, Patparganj Industrial
Area, Patparganj, New Delhi, Delhi 110096

Copy for kind information to:

1. PPS to Secretary, Ministry of Water Resources, RD&GR Shram Shakti Bhavan, Rafi Marg,
Sansad Marg Area, New Delhi, Delhi 110001
2. PS to DG, NMCG
3. PS to ED (Project/Finance/Admin), NMCG

Minutes of Meeting of the Principal Committee held at Conference Room,

MoWR, RD&GR

3rd meeting of the Principal Committee reconstituted by Hon'ble NGT vide order dated 8th August 2017 in the matter OA No. 6 of 2012, was held on 21-11-2017 at Conference Room, MoWR, RD&GR under the chairmanship of Secretary, MoWR, RD&GR. The list of participants is at **Annexure-I**.

Following discussions were held in the meeting:

A. Draft Report on 'Integrated Municipal Solid Waste Management for EDMC Area'

Dr. Vasant G Havanagi, Senior Principal Scientist & Professor, CSIR- Central Road Research Institution, briefed about the study carried out by CRRI for utilizing 200 tons of Municipal Solid Waste (MSW) picked from different vertical profiles of Ghazipur, East Delhi as an embankment fill material. The waste was segregated into different sizes using sieves in the existing compost plant at Okhla and was then characterized for its geotechnical characteristics. Subsequently, detailed stability analysis and settlement analysis was also carried out to investigate its feasibility for embankment construction.

Their study concluded that about 65-75% of segregated Municipal Solid wastes can be used for embankment construction. Other than soil, plastics and textiles were observed to be major constituents in different segregated MSW (the percentage content of metals, wood, paper, rubber, glass was observed to be less than 1% in different segregated MSW). There is no variation in the soil content or other constituents with the age of the MSW. Leachate studies indicate that MSW is a non- hazardous material as concentration of heavy metals is within the permissible limit. The fraction passing 16mm sieve shows a minimal amount of plastics. Considering the higher percentage of this material in the MSW (44-48%), and the fact that its MDD satisfies the MORTH specification, this fraction can be directly used for embankment construction. The final MSW selected for embankment construction is a non-plastic, non-swelling coarse grained material and classified as GM i.e. a silty gravel material.

Dr. Havanagi also informed that based on the study, CRRI is also preparing guidelines for safe utilization of MSW for construction of roads, pavements and embankments. It was informed that for construction of 1 km of road (32 m wide) with embankment in 1:2 slope

having a height of 3m, approximately 2 lakh ton of MSW is required. The quantity of MSW required is dependent on the height and width of the road.

Mr. R. P. Singh, General Manager, NHAI informed that based on the recommendations of CRRI, NHAI had proposed a project to clear the accumulated MSW from the entire Ghazipur landfill site by utilizing the MSW in construction. The bid value received for the project was Rs. 873 crore with a timeline of 2 years. Therefore, NHAI limited the area and floated the tender for a pilot project to clear up 10 acres of land by utilizing 3 million ton of MSW. Owing to stringent pre-qualification (PQ) criteria, only 2 bidders namely Ramsky and IL&FS qualified in the process with an approximate bid value of Rs. 1067 per ton of MSW. As the bid value is four times to the value estimated by NHAI, which is Rs. 240 per ton, therefore NHAI has re-invited the tender with relaxation in PQ in order to increase the number of competitors. The expected timeline for completing the tendering process is 1 month and the completion of the project is 6 months. It was also informed that cost of using fresh soil in embankment construction is approx Rs.100 per ton.

Based on site visits, Prof. Shashank Bishnoi, IIT Delhi highlighted that segregation of waste is an important aspect which needs to be worked on by Municipal bodies. After utilization of 65% waste for road construction and the remaining by WtE plant, still 20-30% of waste which cannot be further processed will require landfill disposal. It was also informed that presence of leachate in old as well as new waste will be there, which will need to be extracted and treated. Therefore, mass-balance of the system should be considered before proceeding further. It was further observed that cost of using MSW in embankment construction including its segregation etc as Rs. 1000/ per ton per the bid of NHAI is appropriate and reasonable.

The Principal Committee observed that the bid value of ~Rs. 1000 per ton received by NHAI is reasonably in order as heavy machinery is involved in the process. However the cost estimated by NHAI may be examined by the experts of IIT Delhi and presented before the Committee. By such time, NHAI would also be completing its process of retendering.

Secretary, MoWR, RD&GR informed that during his visit to the WtE plant and C&D plant, IL&FS had desired permission from EDMC for 10 acres of land in the landfill site and for processing waste from the landfill site without any financial assistance. It was also confirmed that after sustenance of the plant, about in 15 years, the recovery cost would be shared with EDMC.

It was also discussed that after execution and sustenance of the project, the number of truck utilized by EDMC for transporting the waste will be reduced from 300 to 60.

IIT Delhi representative raised concern over the quality of fly ash produced in the WtE plant processing the fresh waste. CRRI responded that the fly ash can be utilized for road construction.

Secretary, MoWR, RD&GR recommended that NMCG may brief the details of the project proposal to the Hon'ble Minister of MoWR, RD&GR and Ministry of Road, Transport and Shipping for consideration and sanctioning of funds as the project is of critical importance. It was also suggested that Prof. C. R. Babu along with NMCG officials may visit the landfill site, WtE, Compost and C&D plant.

Secretary, MoWR, RD&GR appreciated the efforts of EDMC, CRRI, NHAI and experts from IIT Delhi for their contribution in the project. This is likely to help in development of sustainable integrated waste management solution for adoption by different urban centers.

B. Draft River Yamuna Action Phase-II Plan by Delhi Jal Board

Delhi Jal Board informed that engagement of ICMR is underway for studying the impact of water quality on public health and scope of work among others is being finalized. It was decided that CSIR-Indian Institute of Toxicology Research, Lucknow being premier institute may also be considered for carrying out the study.

Delhi Jal board informed that 200 drains have been identified and mapped on GIS. During the survey, DJB observed that many sewerage areas are discharging into the drains which then meet the river directly/ indirectly. Therefore DJB is preparing Master Plan for sewerage areas in Delhi with the help of Prof. A. K. Gosain, IIT Delhi, which will cater to adequacy of infrastructure. It was observed that action was desired in the last meeting on having an operational plan for the sewerage areas from where the sewage is being led into drains by puncturing the sewers etc. Accordingly DJB would be working on the same.

Prof. A. A. Kazmi recommended that the approach of establishment of decentralized STPs having capacity more than 3 MLD in Delhi may not be economically feasible, therefore centralized approach may be considered.

DJB informed that pending payment of Rs. 10 crore for repair and rehabilitation of Drain No. 6 to Haryana government is in process. As the amount exceeds Rs. 3 crore, administrative approval from the Board is required before making the payment.

C. Action Plan of Himachal Pradesh

NMCG informed that the proposal of upgradation of 1 MLD STP and construction of new 1.72 MLD STP at Paonta Sahib having an estimated cost of Rs. 5.65 crore was examined. It was observed that BOD ranges from 1.3 mg/l – 1.2 mg/l in upstream and downstream of Paonta Sahib respectively. Therefore, it was recommended that State Government may take up the work for septage management owing to low pollution level, lesser population and low financial requirement.

Principal Committee accepted the recommendations of NMCG.

D. Action Plan of Uttarakhand

The representatives from Uttarakhand informed that the drain monitoring has not been carried out as the discharges and water quality parameters are within the stipulated standards. The State Government has prepared plan for laying of sewer network and STP for the entire State including that for towns whose drains fall into river Yamuna, at an estimated cost of Rs. 150 million. It was observed that plan of the State government is yet to be shared with NMCG. Further that as the population in these towns is very low and during lean season these drains with less or no natural flows carry mainly sewage, therefore STPs of less capacity (less than 1 MLD) are proposed in the plan.

Secretary MoWR, RD&GR asked NMCG to obtain the action plan in respect of river Yamuna and review the same.

E. Action Plan of Uttar Pradesh

NMCG informed that the Action Plan submitted by UP consists of cleaning the drains, details which were to be submitted by States in accordance to the NGT judgement dated 13th July 2017 for Phase – I Segment B of river Ganga. UP State has requested for funds for carrying out these works. DG NMCG informed that the funds for drain cleaning and dredging should be sought from the State Government.

NMCG highlighted that NGT in its chamber meeting held on 08.08.2017 asked UP Government to submit complete action plan with regard to Hindon river, Noida, Loni and Sahibabad drains and any other drain falling into river Yamuna upstream of Okhla barrage so that these drains do not carry any pollution. The Action Plan should include details such as length of drain, quality, quantity, intervention required, number of STPs and CETPs (existing, under construction, proposed), industries located in the catchment area. The officials from the State confirmed that they will be submitting the information as desired.

The meeting ended with vote of thanks to the chair.

List of participants:

1. Dr. Amarjit Singh, Secretary, MoWR, RD&GR– *in chair*-
2. Shri. U. P. Singh, Director General, NMCG
3. Shri. Keshav Chandra, CEO, Delhi Jal Board& Secretary, DOE and I&FC, Delhi
4. Dr. C. R. Babu, DU
5. Prof. A. A. Kazmi, IIT Roorkee
6. Shri. D. P. Mathuria, Executive Director – Technical, NMCG
7. Dr. Ranbir Singh, Commissioner, EDMC
8. Shri Praveen Khandelwal , EDMC
9. Shri. C. P. Tripathi, Special Secretary, UP
10. Shri. Sandeep Tange, CE, Irrigation Department Haryana
11. Shri. Pradeep Yadav, SE, Irrigation Department Haryana
12. Shri. S. K. Dhiman, SE, Irrigation Department Himachal Pradesh
13. Shri. A. P. Singh, Chief Engineer, Irrigation, UP
14. Shri. Ajay Bansal, UP Irrigation Department
15. Shri. Shashank Bishnoi, Associate Professor, IIT Delhi
16. Shri Y.K.Sharma, SE, I&FC Department GNCT
17. Shri. R. S. Negi, Member (Drainage), DJB
18. Shri R. S. Tyagi, Member (WS) DJB
19. Shri. V. K Gupta, Chief engineer, DJB
20. Shri. Arvind Kumar R.O. UPPCB, Mathura
21. Ms. Mriganka Saxena, Sr. Consultant, DJB
22. Shri Mukul Bhardwaj, SE (Dr.) PR E/NE, DJB
23. Shri. S. K. Basligal, EE, Irrigation Department, Uttarakhand
24. Shri. Praveen Kumar Johari, Deputy General Manager, UJVNL
25. Shri. O. P. Shrivastava, CE, I&FC Department GNCT
26. Shri. Sanjay Saxena, CE, I&FC Department GNCT
27. Shri. Jiten Hindocha, IL&FS Environment
28. Shri. R. Singh, GM, NHAI
29. DR. Vasant G. Havangi, CSIR-CRRI
30. Shri Sumeet Salhotra, IL&FS
31. Shri J. P. Singh, EE, HSPCB
32. Shri V. K. Pandey, OHWD
33. Shri Puran Chandra, CE, Irrigation department, Uttarakhand
34. Shri Prabhat Raj, Technical AdI&FC Department GNCTor, SPMCG - Uttarakhand
35. Dr, Rajendra Singh, ASO, UEPPCB
36. Shri Sundeep, Director Technical – II, NMCG
37. Dr. Pravin Kumar, Director Technical - III, NMCG