Minutes of Meeting for compliance to NGT order of Segment B, Phase – I in OA no 200/2014

A two day meeting was convened on 04-05.10.2017 at NMCG under the chairmanship of Sh. Hitesh Kumar S. Makwana, ED (Projects), NMCG to discuss the interventions needed at towns/ drains in the catchment of River Kali (East), River Ramganga and River Pandu in order to abate the pollution on River Ganga.

Attendees:

1. Mr. D. P. Mathuria, ED (Technical), NMCG
2. Dr. Pravin Kumar, Director, NMCG
3. Sh. Sundeep, Director, NMCG
4. Mr. Rajat Gupta, Senior Specialist, NMCG
5. Ms. Nidhi Dwivedi, Project Officer (Technical) NMCG
6. Mr. Ankit Singh, AEE, UPPCB, Ghaziabad
7. Mr. R. K. Singh, RO, UPPCB, Moradabad
8. Mr. V. K. Rajput, SA, UPPCB, Moradabad
9. Mr. Vijay, AEE, UPPCB, Meerut
10. Mr. Munna Singh, Project Manager, UPJN, Meerut
11. Mr. Krishna Mohan Yadav, General Manager, UPJN, Ghaziabad
12. Mr. S. K. Sharma, Executive Engineer, UPJN, Galoida
13. Mr. Gaurav Chaudhary, Assistant Engineer, UPJN, Bijnor
14. Mr. Praveen Kutti, Project Manager, UPJN, Rampur
15. Mr. D. K. Jain, Executive Engineer, UPJN, Amroha
16. Mr. R. P. Pandey, Superintending Engineer, UPJN, Moradabad
17. Mr. Amit Kumar, Assistant Project Engineer, UPJN, Moradabad
18. Mr. Mahendra Singh, Assistant Engineer, UPJN, Gr. Noida
19. Mr. Rajendra Kumar, Assistant Engineer, UPJN, Gr. Noida
20. Mr. Keshav Gupta, S. E., UPJN, Lucknow
21. Mr. Ram Sharan, General Manager, UPJN, Kanpur
22. Dr. Aman Sharma, Executive Director, WAPCOS
23. Ms. Nitika Gupta, Deputy Chief Engineer, WAPCOS
24. Mr. Ravi Chandra, Waste Water Expert, WAPCOS
25. Mr. Varun, Deputy Manager, EIL
26. Mr. Naveen Kumar, Deputy Manager, EIL

Record of discussions:

A. Towns/ Drains at River Kali (East)

1. Meerut:

i. There are three major drains in Meerut namely Abunala 1, Abunala 2 and Odean nala. During the discussions it emerged that the flow in Abunala 1 is around 32 mld and 4 STPs have been built and operational to cater to the sewage demand (2035) from Abunala-1 Catchment and thus adequate capacity is available. However, the existing STPs are

operating at less than 50% capacity and UPJN was advised to explore ways to improve their capacity utilization. Further, as the Abunala 1 also carries waste water (industrial) from the upstream, the action from UPPCB is needed to ensure compliance from the industries which will result in further improvement in the quality of the drain. In view of the above it was agreed that no other actions are needed for Abunala -1.

ii. Abunala -2 is reportedly dry at the entrance to the Meerut. The waste water flow was measured to be 145 mld and has three existing STPs of total 15 mld capacity. Another STP of 72 mld is under construction which would take around 40 mld of waste water from the Abunala-2 catchment area which would result in further reduction in the volume of the waste water and also reducing the BOD further from 51 ppm. The population in the Abunala -2 catchment does not justify the 145 mld flow and thus the nala may require re-examination. It is also necessary to monitor ground water extraction in this city. So, there will be efficient use of water. In consideration of the same and expected reduction of the BOD further from 51 ppm to around 35-40 ppm, the STP is not considered feasible. State was advised to explore the options of recycling of the STP treated water instead of discharging it back into drain which creates complications in I&D treatment downstream.

iii. Odean Nala is originating from within the city and is reported to be carrying 161 mld of waste water currently. There is one STP 10 mld already operational (at 25% capacity) while the 72 mld under construction STP is expected to take around 30 mld of waste water load from the Odean Catchment leaving thereby around 130 mld waste water. The population in the Odean catchment indicates waste water generation (2035) of nearly 140 mld. Considering 10 mld existing STP and 30 mld waste water treatment through under construction 72 mld STP, it is considered appropriate that I&D and 100 mld STP works may be taken up for Odean Nala. State was advised to explore the options of recycling of the STP treated water instead of discharging it back into drain which creates complications in I&D treatment downstream. Meerut cantt area was considered as one of the likely area where treated wastewater can be re-used for gardening purpose.

2. Hapur:

UPJN informed that Sewerage Network along with 30 Mld STP has already been proposed under AMRUT and it will be adequate to cater sewage load from this region.

However, as the network is approved only for the zone 1, the drain along garh road would continue to flow to river Kali and would therefore needs to be intercepted. It was

considered feasible that the drain may be tapped and brought back to the nearest trunk sewer of the zone 1 from where it could also be conveyed to the approved 30 mld STP for treatment. State may prepare the necessary proposal and take up the work.

3. **Kadrabad Drain:** The Kadrabad drain catchment includes sewage discharges from Modinagar, industrial effluent discharges from Modinagar, Pilkhuwa cluster (through pilakhuwa and Bratiyana drain), and industries en route such as simbhaoli sugar mill etc. the total discharge as measured stands at around 45 – 50 mld having BOD ~ 73 mg/l.

   State is already taking up a comprehensive sewerage network and 20 mld STP under AMRUT. The CETP at Pilkhuwa and industries at Modinagar are discharging treated effluent to this drain. Another STP is reportedly being planned at Pilkhuwa. UPPCB has been advised to ensure treated water discharge from STPs and industries and take necessary action. In consideration of the above, as the sewerage treatment at Modinagar has been addressed, no further interventions are considered necessary.

4. **Gulaothi:** The flow as measured in the Gulaothi drain is 7 mld with BOD of 139 mg/l. The drain directly meets river Kali and thus needs to be intercepted. The State indicated that the land for the STP is not available and are in the process of getting the required land parcels. It was agreed that this drain needs to be intercepted and a 10 mld STP may be constructed. It was advised since the flow is less, the STP could be of Oxidation pond / WSP type. State was advised to procure land, prepare proposal and take up the work.

5. **Bulandshahr:**

   UPJN informed that 102.6 km Sewerage Network along with 40 Mld STP has already been sanctioned under AMRUT and it will be adequate to cater sewage load from this region and the 10 drains on the right bank of the river Kali. However, I&D for the two drains on the left bank namely Cheel Ghat Drain and Faislabad Drain along with a lift station to convey the waste water to the network on the right side of the river would be required. State was advised to prepare the necessary proposal and take up the work in state sector.

6. **Dibai:** It was presented that the neem nala is the identified drain in the region and the same reportedly remain dry at least 15 kms from the confluence into river Kali. Water flows through this channel only in the monsoon month and thus no intervention was considered necessary for this drain and Dibai.

7. **Kasganj/ Amapur:** UP Jal Nigam in accordance with the directions of NGT has prepared a DPR for interception of Nadrai drain and Kasganj drain and submitted to UPSPMG. The DPR

is currently under examination at UPSPMG and will be considered on merit, if presented to NMCG for consideration under Namami Gange.

8. **Kannauj:**

Kannauj town has three drains namely Patta Nala, Adangapur Nala & Tammy Nala. Two projects are ongoing at Kannauj for comprehensive sewerage network and 13 mld STP. The project though does not have I&D component, UPJN submitted that the STP is expected to be commissioned by end of November 2017. Further, a proposal for interception and diversion of the Pata nala has been submitted to GoUP under state sector for consideration. Based on the population projections, it was considered that the 13 mld under construction STP shall be adequate for the sewage demand from Kannauj for 2035 requirements.

In consideration of the above, UPJN / State was advised to

- Follow up approval of the I&D proposal for Pata Nala so as utilize the STP being constructed.
- Expedite the completion of the network and house connections so that STP can be utilized and the flow from the drains could be avoided.
- Re-verify the flow from the drains and to assess the feasibility of intercepting the other two drains as well.

No Other interventions are considered necessary.

9. **Rampur:**

There are 3 main drains namely Barsukhiya nala, Stadium Nala and Tedha nala which join to form Rampur drain and drains into river Kosi which further travel nearly 3.5 km and merges with river Ranganga.

NGT has directed up-gradation of existing STPs (2 nos. 14 & 15 mld) and construction of another 16 mld STP before Rampur drain joins river Kosi.

UPJN presented that Rampur already has a comprehensive sewerage system in place along with 2 Nos. of STPs sufficient for the sewage treatment demand for the year 2035. However, due to low house service connections the STPs will be under-utilized. Further the sewerage scheme for part zone 3 & Zone 4 of the Rampur Town has not yet been approved and thus this zone will continue to contribute sewage to the Tedha Nala which merges with Stadium Nala and thereafter travels nearly 9.5 km before merging with Barsukhiya Nala.

In consideration of the above, it was felt and agreed that the sewage flow into Barsukhiya Nala and Stadium Nala is primarily due to low house service connections.

Accordingly UPJN / State has been advised to expedite the house service connections so that sewage could be directed to the existing STPs in zone 1 & zone 2 for treatment.

The STPs have been designed and constructed to confirm with the existing notified discharge standards and thus may not require up-gradation.

Further, with the operationalization of the STPs, and flow of the treated effluent to the Barhsukhiya Nala & Stadium Nala, the water quality is expected to be improved significantly. The discharge from part zone 3 & zone 4 into Tedha Nala may not have significant impact as it meets the stadium nala carrying treated water from zone 1 STP and Stadium nala traversing nearly 10 km, allowing for self cleansing, before merging Barsukhiya nala also carrying treated water (15 mld) and again travelling 2.5 km before merging river kosi. Therefore, with house service connections in place the situation is expected to be improved significantly and thus the proposal of STP before Rampur drain joining river Kosi may not be feasible and may be decided later based on examination after completion of house connections.

Apart from house service connections by the State, no other interventions needed.

10. Moradabad:

In Moradabad the waste water from 14 drains in zone 1, 5 drains in zone 2 and Karula drain in zone 4 falls directly into river Ramganga.

For zone 1, a project on comprehensive sewerage network, I&D of 14 drains and 58 mld is in progress under Namami Gange and no interventions needed. NGT directed that for nawabpura drain 1 & 2, a pre chemical treatment units may be provided at under construction STP. As the STP is nearly complete, this may be examined after examining the treatment results.

In zone 2 there are 5 untapped drains directly discharging into river Ramganga and thus require I&D and STP. The BOD of Vivekanand drain 1 &2 is reported to be too low (~ 20 mg/l) and thus may require re-examination.

I&D of drains and a STP of 25 mld as proposed by State is considered to be necessary subject to modifications in view of the examination of the Vivekanand drains. The State may examine the drains and prepare required proposal.

The Karula drain in zone 3 carries both domestic and industrial effluent and the BOD has been reported to be 44 mg/l. UPPCB indicated that it is taking up necessary action against

the illegal e waste units and dairies. Further, after commissioning of the STP in zone 4 the pollution load is expected to be reduced.

In consideration of the low BOD (44 mg/l) and potential for further reduction in the pollution load through action on industries, it is considered that the decision on 35 mld STP, as directed by Hon'ble NGT, may be taken after re-inspection of the drain.

11. Bareilly:

The action plan to be drawn for the Nakatiya drain after inspection of the drain post monsoon.

12. Kanpur (river Pandu):

There are 5 drains in Kanpur discharging into river Pandu namely COD nala, Halwakhanda Nala, Ganda Nala, ICI drain and Thermal Power Nala (Panki Nala). UPJN indicated that COD Nala, Halwakhanda Nala and Ganda Nala have been tapped and diverted fully to the Bingawan STP for treatment.

Hon'ble NGT has directed that a separate independent STP should be constructed having capacity of 75 mld. This STP shall serve for both Panki nala & ICI drain.

It was observed that the sewage treatment capacity at Kanpur is highly under utilized (<50%), including Bingawan STP. In such a scenario, it is not advisable to create more STPs and UPJN / State must explore ways / means to increase the utilization of the existing STPs. In the instant case, UPJN was advised to explore the interception of the ICI and Panki drain and their diversion to the existing diversion arrangements for Halwakhanda Nala to Bingawan STP.

The option of additional STP is to be considered only after exploring all options.