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**Subject: Performance Assessment of Various STPs in Kanpur**

*Ref: Email dated April 23, 2024*

Shapoorji Pallonji and Company Pvt Ltd via email dated April 23, 2024 requested to carryout 24 h composite sampling through collection of grab samples at 2 h interval and analysis of various composite samples prepared by mixing grab samples in proportion to the measured flows at the inlet and outlet of 130 MLD STP (Jajmau Kanpur), 43 MLD STP (Jajmau Kanpur), 42 MLD STP (Sajari, Kanpur), 210 MLD STP (Bingawan, Kanpur) and 30 MLD STP (Pankha, Kanpur) for certain parameters.

The samples were collected by sampling team of cGanga, IIT Kanpur in presence of representatives from Shapoorji Pallonji and Co. Pvt Ltd and GPCU, UPJN during December 19-29, 2024.

The preservation and analysis of the samples were done as per the Standard Methods (Standard Methods for the Examination of Water and Wastewater, APHA). The analysis of the sample for the requested parameters started immediately after bringing it to laboratory. The results of the analysis are reported in following table.

**Estimated Parameter Values of Various STPs in Kanpur**

| Location                                | Date of Sampling | TSS (mg/l) | BOD (mg/l) | COD (mg/l) | Fecal Coliform | Total Coliform |
|---|------------------|------------|------------|------------|----------------|----------------|
| 130 MLD, Jajmau (Inlet) <sup>1</sup>    | Dec 19-20, 2024  | 512        | 240        | 550        | 4.00E+07       | 7.00E+07       |
| 130 MLD, Jajmau (Outlet) <sup>2</sup>   | Dec 19-20, 2024  | 40         | 25         | 80         | 2.50E+04       | 3.40E+04       |
| 43 MLD, Jajmau (Outlet) <sup>3</sup>    | Dec 19-20, 2024  | 52         | 48         | 160        | 2.50E+04       | 4.00E+04       |
| 42 MLD, Sajari (Inlet) <sup>4</sup>     | Dec 26-27, 2024  | 394        | 186        | 480        | 2.20E+06       | 2.70E+06       |
| 42 MLD, Sajari (Outlet) <sup>5</sup>    | Dec 26-27, 2024  | 34         | 20         | 74         | 1.70E+02       | 2.60E+03       |
| 210 MLD, Bingawan (Inlet) <sup>6</sup>  | Dec 23-24, 2024  | 480        | 190        | 520        | 3.30E+07       | 4.00E+07       |
| 210 MLD, Bingawan (Outlet) <sup>7</sup> | Dec 23-24, 2024  | 40         | 42         | 144        | 2.20E+05       | 2.70E+06       |
| 30 MLD, Pankha (Inlet) <sup>8</sup>     | Dec 28-29, 2024  | 170        | 108        | 336        | 2.70E+05       | 3.00E+05       |
| 30 MLD, Pankha (Outlet) <sup>9</sup>    | Dec 28-29, 2024  | 38         | 15         | 64         | 1.70E+02       | 2.60E+03       |

*1: Composite Sample prepared based on flow recorded as per reading of the flow meter installed; 2: Composite Sample prepared assuming uniform flow as there is no device installed for measurement of flow; 3: Composite Sample prepared assuming uniform flow as there is no device installed for measurement of flow; 4: Composite Sample prepared based on flow recorded as per reading of the flow meter installed; 5: Composite Sample prepared based on flow recorded as per reading of the flow meter installed; 6: Composite Sample prepared assuming uniform flow as there is no device installed for measurement of flow; 7: Composite Sample prepared assuming uniform flow as there is no device installed for measurement of flow; 8: Composite Sample prepared based on flow recorded as per reading of the flow meter installed; 9: Composite Sample prepared based on flow recorded as per reading of the flow meter installed.*

**Important Observations:** There is no flow in inlet and outlet observed after 01:00 am and before 05:00 am at 42 MLD STP in Sajari, after 10:00 am and before 02:00 pm at 43 MLD STP in Jajmau, after 01:00 am and before 07:00 am at 210 MLD STP in Bingawan, Kanpur due to power failure.

The results presented are based on one-time analysis of the samples collected over 24 h period on the dates mentioned in the table by cGanga, IIT Kanpur.

  
(Vinod Tare)