

8th REPORT ON PK KAUL COMMITTEE RECOMMENDATIONS
(Hon'ble Supreme Court order, dated March 24, 2003 in Writ Petition{C} No 914/1996)

Special report on the status of compliance of Supreme Court orders in the matter of W.P. (C) 914/1996 – Sector 14 (Noida) Residents Welfare Association & Others Vs. State of Delhi & Others (P.K. Kaul Committee Report / Recommendations)

April, 2009

ENVIRONMENTAL POLLUTION (PREVENTION AND CONTROL) AUTHORITY
FOR THE NATIONAL CAPITAL REGION

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I. Background

This is a special report on the progress made in the directives of the Hon'ble Supreme Court in Sector 14 Residents Welfare Association and others Vs State of Delhi (Writ Petition {C} No 914/1996), dated Feb 7, 2007. The order outlined a synchronized action plan with deadlines to stop the flow of polluted water from Delhi through NOIDA into the river Yamuna, as given below:

1. Treated water from Yamuna Vihar STP to the Yamuna directly so that treated effluents do not mix with untreated effluents
2. Treated water from Kondli STP should be carried directly to river Yamuna by a covered drain without mixing the same with untreated waste
3. Construct an STP at Chilla with capacity 40 million litres per day (mld) to tap flow between Kalyanpuri and Chilla the flow is about 40 mld. UP to hand over additional 1.5 acres for Chilla STP and 2.5 acres for Kalyanpuri pumping station. To be completed in 2.5 years for the possession of land
4. 318 mld pumping station at Kalyanpuri to intercept Ghazipur drain and pump sewage to Kondli STP
5. Online treatment of wastewater in drains as suggested by EPCA to continue till the construction of Chilla STP
6. State of UP to stop 127 mld sewage from Sahibabad drain and drain number 1 and treat them by setting up STPs with suitable capacity

During the period 1998-2007 various directives were issued by the Hon'ble Court to make the region pollution free. Basis of the orders were the recommendations of the expert committee headed by the former Cabinet Secretary PK Kaul appointed by the Hon'ble Court. Despite implementing the activities suggested by this committee (which formed a part of the 1998 and 2000 orders), the objective of pollution control has still not been achieved. Many of these orders have not yet been implemented in letter and spirit. While the implementing agency is chasing targets, the pollution levels in the region have only increased.

The Hon'ble Supreme Court vide its order dated March 23, 2004 directed the Environmental Pollution (Prevention and Control) Authority for the National Capital Region (EPCA) to monitor the progress in the Hon'ble Court's directives based on the Kaul committee recommendations. The Hon'ble Court also transferred all applications for extension of time filed by the various agencies to the EPCA for its recommendations. Since then the EPCA has filed several reports on the progress made in the various directions. In its fifth, sixth and the seventh reports, the EPCA submitted before this Hon'ble Court an action plan for pollution control and management in the trans Yamuna region to achieve the following key objectives:

- Objective 1: To ensure that entire wastewater of East Delhi is collected and treated
- Objective 2: To ensure that the treated effluent is not mixed with untreated waste before it flows to Yamuna
- Objective 3: To ensure that the Shahdara drain does not collect the untreated effluent of the Noida segment
- Objective 4: To ensure regular and accurate monitoring of quantity and quality

The synchronised action plans directed by the Hon'ble Supreme Court vide its order dated February 7, 2007 laid a comprehensive foundation for the attainment of the above outlined objectives.

II. Progress made in implementation of the Court order

EPCA convened a meeting on Jan 24, 2009 with the government agencies responsible for implementation of the Court order namely the Delhi Jal Board, the Ghaziabad Development Authority and the Uttar Pradesh Jal Nigam to assess the progress made in the directives of the Hon'ble Court. The EPCA also directed these stakeholders (Delhi Jal Board, the Ghaziabad Development Authority, the Uttar Pradesh Jal Nigam and the Uttar Pradesh Pollution Control Board) to file a detailed status report on the implementation of the February 7, 2007 order. (see Annexure 1: Minutes of the EPCA meeting Jan 24, 2009). However till date, neither Delhi Jal Board nor the Uttar Pradesh government has filed any status reports to the EPCA.

Based on the discussions held on January 24, 2009 and the analysis of the affidavits filed by DJB and Uttar Pradesh government, EPCA is of the view that very little progress has been made in the implementation of the Court orders. Other than handing over of land nothing has happened on ground. This is despite the lapse of almost two years. At this pace, all the deadlines will be missed by the agencies concerned. (see table1: Progress made in the directives of the Hon'ble Court). A detailed status report is presented below:

Table 1: Progress made in the directives of the Hon'ble Court

S no	Orders of the Supreme Court dated Feb 7, 2007	Original deadlines as given in the order	Status as per affidavit of DJB	EPCA's observations
1	Treated water from Yamuna Vihar STP to the Yamuna directly:	31-Dec-07	About 70 per cent work completed. Deadline was extended to June 30, 2008; Filed an application for extension till Dec 2009	This matter is pending since 2004. Several deadlines have expired. But the DJB states that they are left with about 30 per cent of the work. As a result the treated effluent is mixed with untreated effluent and flows into the Yamuna
2	Treated water from Kondli STP should be carried directly to river Yamuna by a covered drain without mixing the same with untreated waste. DJB and state of UP to carry out a joint inspection and explore possibility of covering the area, which will carry, treated water.		No progress made. On Nov 2007, Court gave permission to construct the covered duct from Kondli to Okhla.	No action initiated. The treated effluent is still mixed with untreated effluents in the Shahdara drain negating the efforts made on clean up.

3	Construct an STP at Chilla with a capacity 40 mld to tap flow between Kalyanpuri and Chilla the flow is about 40 mld. UP to hand over additional 1.5 acres for Chilla STP and 2.5 acres for Kalyanpuri pumping station	Land to be identified and transferred in two months (April 2007) and work to be complete in 30 months from date of award of work (October 2009)	As per DJB's affidavit of August 2008, land transferred in July 2007. DJB affidavit stated that tenders were to be received by Sept 2008 and work to be started in 60 days (i.e., Nov 2008). And work to be complete in 15 months from date of award of work—i.e., Feb 2010. Current status: Unknown.	DJB has not yet filed the progress report to EPCA as directed in the January 24, 2009 meeting. Deadline fixed by the Hon'ble Court (October 2009) will be missed.
4	318 mld SPS at Kalyanpuri to intercept Ghazipur drain and pump sewage to Kondli STP	Land to be identified and transferred in two months (April 2007) and work to be complete in 30 months from date of award of work (October 2009)	Status: As per DJB's affidavit of August 2008, Land transferred on July 31, 2007. Tenders to be received by Sept 2008 and work to be started in 60 days (i.e., Nov 2008). DJB affidavit of August stated that work was to be completed in 15 months from date of award of work—i.e., Feb 2010 Current status: Latest affidavit has asked for an extension till January 2010	DJB has not yet filed the progress report to EPCA as directed in the January 24, 2009 meeting. Deadline fixed by the Hon'ble Court (October 2009) will be missed.
5	Online treatment of wastewater in drains as suggested by EPCA to continue till the construction of Chilla STP		Progress not reported in the affidavits of DJB	No progress made. DJB has not yet filed the progress report to EPCA as directed in the January 24, 2009 meeting. Given the slow progress, the deadline fixed by the Hon'ble Court (October 2009) will be missed.
6	State of UP to stop 127 mld sewage from Sahibabad drain nos 1 and treat them by setting up STPs with suitable capacity		Affidavit filed by Special Secretary Urban Development UP govt on July 28, 2008 states that work in the Loni catchment would be	UP affidavit seems to be suggesting that flow into the Shahdara drain from Sahibabad is only 64 mld. No figures presented for Loni

			<p>complete in 2 years (August 2010). However, in Sahibabad catchment UP government stated that a detailed project report is being prepared for 51 mld sewage out of 64 mld discharged into the Shahdara drain.</p>	<p>(Indira Puri drain). In the meanwhile, as per the monitoring of the CPCB the flows from Uttar Pradesh have increased to about 160 mld (average for the year 2008) with peaks of 200, 230 and 190 mld during September-November 2008)</p> <p>EPCA has directed the UP government to file a detailed affidavit showing the flows. No reports filed yet.</p>
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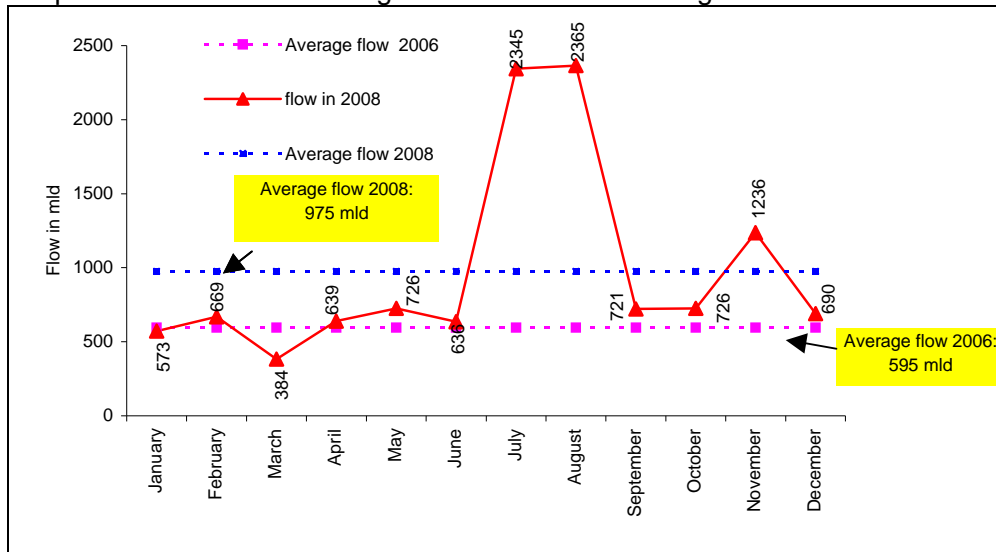
III. EPCA's observations and assessment of the situation

During the period 2007-2008, the pollution levels in the Shahdara drain and the river Yamuna has only worsened. As the following analysis suggests, the quantity of wastewater flowing in the Shahdara drain and therefore, the pollution load has increased manifolds.

a. Status of pollution in the Yamuna due to the Shahdara drain

i. Wastewater flow in the Shahdara drain has increased: Based on the monitoring by the Central Pollution Control Board, it is evident that the wastewater flow in the Shahdara drain has increased phenomenally. As compared to 595 mld flow as reported by EPCA in its seventh report (December 2006), the average flow in Shahdara drain increased to 975 mld in 2008. (See graph: wastewater discharge in the Shahdara drain). In other words, in two years wastewater generation has increased by 1.6 times. As against this the sewage treatment capacity has remained the same, leading to increased volumes of untreated sewage flowing into the river Yamuna.

Graph 1: Wastewater discharge into the Yamuna through the Shahdara drain



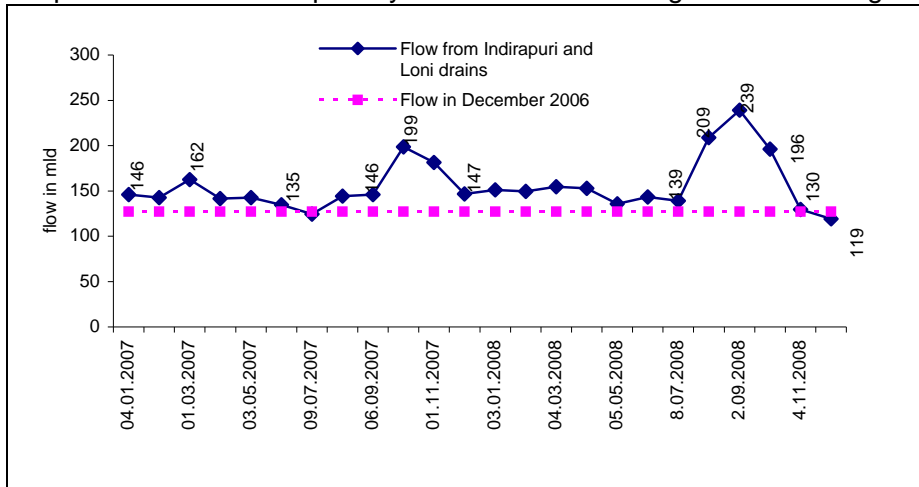
Source: Central Pollution Control Board, 2008

Correspondingly the pollution load (bio-chemical oxygen demand load) discharged into the river Yamuna through the Shahdara drain has also increased from less than 50 tonnes per day (tpd) to about 60 tpd during 2007-2008. (see Annexure 2: BOD load in Shahdara drain)

ii. Wastewater flow from Uttar Pradesh has only increased:

Despite the clear directives from the Hon'ble Court, the monitoring by CPCB is indicative of the fact that the wastewater flows from Uttar Pradesh has only increased. The graph shows that during 2008, on an average about 160 mld sewage is being disposed off into the Shahdara drain from Uttar Pradesh. During December 2006, this was 127 mld. (see graph: Fluctuation in wastewater flow into Shahdara drain from UP during 2007-2008). An analysis of the BOD values clearly indicates that untreated sewage is being let off into the Shahdara drain from UP. (see Annexure: BOD in the flows observed in Loni and Sahibabad drain)

Graph 3: Fluctuation in quantity of wastewater flowing from UP during 2007-2008

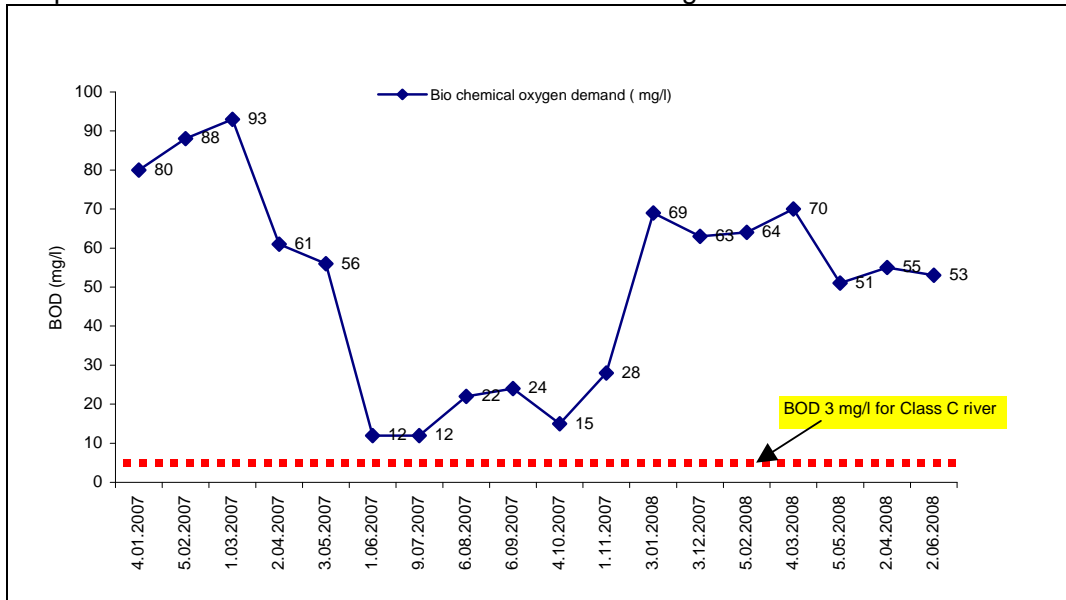


Source: Central Pollution Control Board, February 2009

iii. Pollution in the river Yamuna after meeting the Shahdara drain: CPCB

monitoring shows that there is no dissolved oxygen in the river Yamuna after meeting the Shahdara drain. It can also be seen that the river when it leaves Okhla after meeting the Shahdara drain the BOD levels are in the range of 50-80 mg/l. This is much higher than the BOD of 3 mg/l specified for class C waters (water body fit for bathing). (See graph 2: BOD levels in the river Yamuna after meeting Shahdara drain)

Graph 2: BOD levels in the river Yamuna after meeting Shahdara drain



Source: Central Pollution Control Board, 2008

b. Functioning of the STPs: There are two critical and unresolved issues. Firstly, the under-utilisation of existing infrastructure and secondly, the growing gap between sewage generated and treatment capacity.

i. Under-utilisation: It is clear from the monitoring by the CPCB that DJB has not yet been able to fix the issue of under utilisation of existing sewage treatment plants. As compared to 2006, the utilization levels in 2008 have declined. Highlights are as follows:

- Of the STP capacity of 293 mld that exists in east Delhi, as per the monitoring done by the Central Pollution Control Board, only 57 per cent (or 167 mld) is utilised.
- The Yamuna Vihar STP is operated at 55 per cent of its installed capacity whereas the Kondli STP at 58 per cent. (see table: Utilisation of sewage treatment plants in east Delhi)
- This is even worse than the utilisation levels in February 2006 as reported by EPCA in its sixth report. It was reported that in east Delhi 81 per cent of the treatment capacity was utilised (Yamuna Vihar STP operational at 40 per cent and Kondli STP at 80 per cent). (See Table: Utilisation of sewage treatment plants in east Delhi)

Table 2: Utilisation of sewage treatment plants in east Delhi during 2008

STP	Installed capacity (mld)	Actual flow (mld)	% utilisation
Yamuna Vihar Phase I	45	31.5	70%
Yamuna Vihar Phase II	45	18	40%
Sub total	90	49.5	55%
Kondli STP Phase I	45	45	100%
Kondli STP Phase II	113	47	42%
Kondli STP Phase III	45	26	57%
Sub total	203	118	58%
Total for east Delhi	293	167	57%

Table: Utilisation of sewage treatment plants in east Delhi;
Source: Central Pollution Control Board, 2008

ii. Gap between sewage treatment and existing capacity: The Kaul committee in 1998 had recommended the government to set up 495 mld of treatment facilities for cleaning the wastewater. A deadline of March 2000 was fixed. However nine years later, only little over half this capacity (293 mld) has been created. Based on the average flow in Shahdara drain during 2008, this capacity is just enough to treat one-third of waste generated in the region. Based on the utilization data for 2008, at least 800 mld of wastewater is discharged untreated into the Yamuna through this drain.

IV. Directives sought from the Hon'ble court

- a. The Delhi Jal Board and the Uttar Pradesh Government may be directed to adhere to the synchronised plan and the deadlines as issued by the Hon'ble Supreme Court Vide its order dated February 7, 2007. No alterations on the same may be allowed. This would ensure that the following objectives are met:
 - o Objective 1: To ensure that entire wastewater of East Delhi is collected and treated
 - o Objective 2: To ensure that the treated effluent is not mixed with untreated waste before it flows to Yamuna
 - o Objective 3: To ensure that the Shahdra Drain does not collect the untreated effluent of the Noida segment

- b. Delhi Jal Board and the Uttar Pradesh Government may be asked to file a monthly progress report on the progress made in the implementation of the Hon'ble Courts order.

V. Annexure

Annexure 1: Minutes of the EPCA meeting Jan 24, 2009

**Minutes of the Meeting of
The Environment Pollution (Prevention and Control) Authority for the NCR
held on January 24, 2009 (Saturday) (11.45 AM)**

Agenda items: Status of compliance of Supreme Court orders in the matter of W.P. (C) 914/1996 – Sector 14 (Noida) Residents Welfare Association & Others Vs. State of Delhi & Others (P.K. Kaul Committee Report / Recommendations)

In attendance:

1. Dr. Bhure Lal, Chairman, EPCA
2. Ms. Sunita Narain, Member, EPCA

Delhi

3. Mr. R. B. Mahor, CE (Dr.), P-II, Delhi Jal Board (DJB)
4. Dr. A. K. Ambasht, M.S., Delhi Pollution Control Committee (DPCC)
5. Mr. B. Kumar, Senior Environmental Engineer, DPCC
6. Mr. M. S. Rawat, AEE, DPCC

U.P.

7. Mr. S. P. Misra, Spl. Secretary, Urban Development, Govt. of U.P.
8. Mr. M. P. Jain, G.M., U.P. Jal Nigam
9. Dr. C. S. Bhatt, M.S., U. P. Pollution Control Board (UPPCB)
10. Mr. T. U. Khan, R.O., UPPCB, Ghaziabad
11. Mr. Paras Nath, R.O., UPPCB, Noida

12. Nazimuddin, Environmental Engineer, CPCB

EPCA discussed the status of compliance of the Hon'ble Supreme dated February 7, 2007 in the matter of W.P. (C) 914/1996 – Sector 14 (Noida) Residents Welfare Association & Others Vs. State of Delhi & Others. EPCA decided to direct as under:

DJB:

1. DJB to file in fifteen days a detailed status report on the compliance in the order of the Hon'ble Supreme dated February 7, 2007
2. DJB to file in fifteen days a time bound plan for implementation of each of the directives of the Hon'ble Supreme dated February 7, 2007 and the operationalisation of the same.
3. DJB to furnish in fifteen days the details of the proposed interceptor plan (including the volume of sewage, details regarding the interception and pumping, costs, time line etc) for the Shahdra drain (east Delhi)

UP Government:

1. UP Government to file in fifteen days a detailed status report on the compliance in the order of the Hon'ble Supreme dated February 7, 2007
2. UP Government to file in fifteen days a time bound plan to stop the discharge of treated/untreated wastewaters flowing from the Loni and Sahibabad catchment area into the Drain no 1 and the Ghazipur drain flowing through Delhi as per the Hon'ble Court order dated Feb 7, 2007. Provide all the techno economic details with the schedule for implementation and operationalisation.
3. UP Government to furnish in fifteen days the details of the flow monitoring report (in Loni and Sahibabad catchment areas) as indicated in the affidavits to the Supreme Court dated August and Sept 2008.
4. UP Government and the NOIDA Authority to file in fifteen days the progress reports on the implementation of the Court order dated September 12, 2000 regarding the construction of water treatment plants in Noida. Indicate the number, capacity and location of the treatment plants set up and the volume and quality of treated water supplied to residents of Noida.

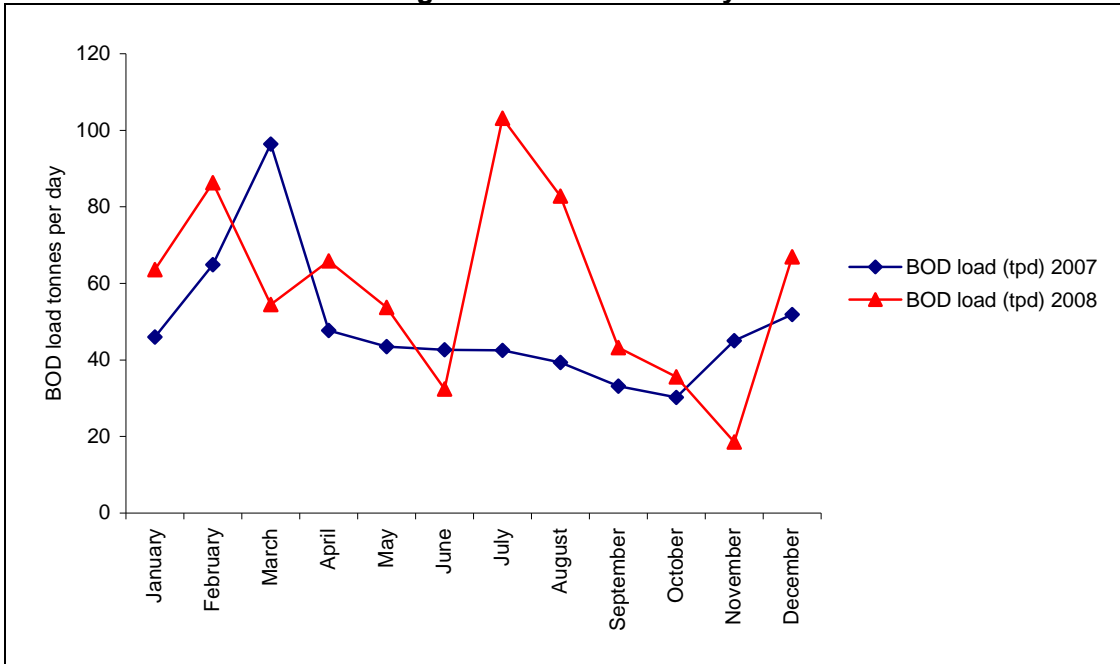
UP Pollution Control Board:

1. UP Pollution Control Board to submit in fifteen days a detailed report on the functioning of the existing sewage treatment plant at Indirapuram indicating the sewerage zone, volume of sewage treated (in last six months), quality of raw and treated sewage (BOD, TSS, Coliform), mode of disposal of treated effluent and the quality of the receiving water body after the disposal of treated effluent.
2. UP Pollution Control Board to submit in fifteen days a detailed report of the industrial pollution in the Loni and Sahibabad catchment area (indicating no of industries, volume of wastewater generated, capacity of effluent treatment plants and the volume of wastewater treated).

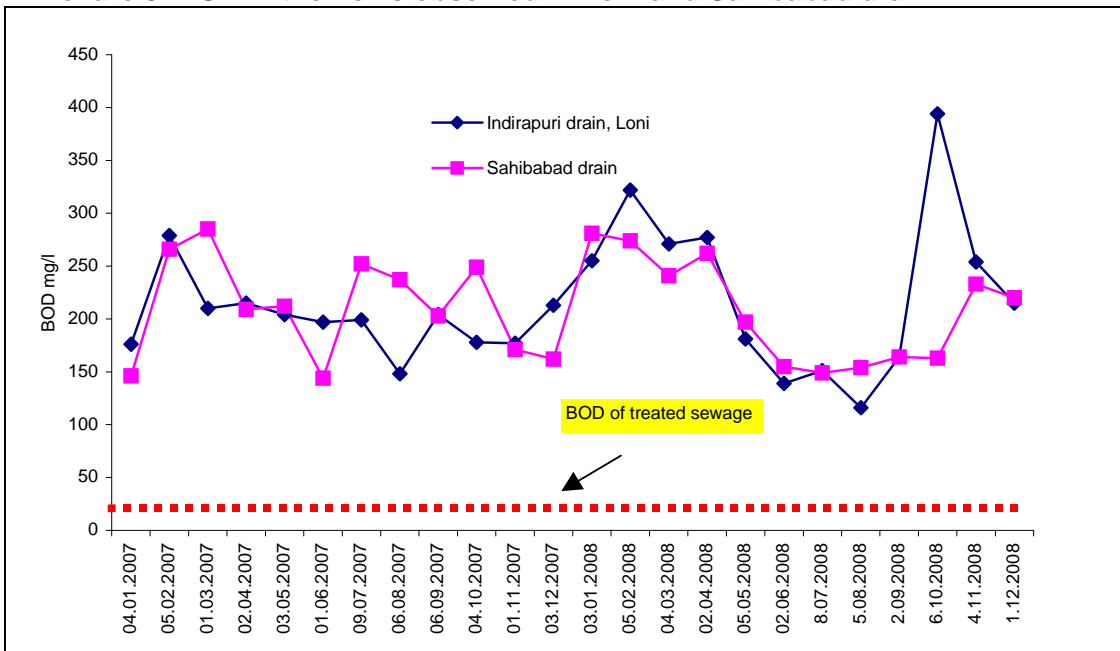
CPCB:

1. CPCB to survey the Hindon Cut from its origin to the outfall in the river Yamuna and identify and map the sources and the extent of its pollution. CPCB shall also assess the water quality in the Hindon cut (including pH, BOD, COD, TSS, TDS, NH3-N, TKN, NO3, Phosphates, FC/TC, heavy metals, etc) at all critical points. Report shall be submitted to EPCA in fifteen days.

Annexure 2: BOD load discharged into the Yamuna by the Shahdara drain



Annexure 3: BOD in the flows observed in Loni and Sahibabad drain



Source: Central Pollution Control Board, February 2009