

**Report No 2 on Handing over of Common Effluent Treatment
Plants (CETPs) to the CETP societies**

(In the matter of W.P.(C) No.4677 of 1985; M.C. Mehta v/s UOI & others)
I.A. NO. 1531 IN I.A. NO.22

January 2006

**Environment Pollution (Prevention & Control) Authority
for the National Capital Region**

1. Background

The Hon'ble Supreme Court in its order of August 31, 2005, directed the Environment Pollution (Prevention and Control) Authority (EPCA), to examine the problem of under-utilization of CETPs, and issue necessary directions to parties concerned. It also ordered the GT Karnal CETP society to sign the agreement for operation and maintenance of the CETP in two week's time.

Prior to this, the Hon'ble Court had, by its order dated April 26, 2005, directed the EPCA to supervise the handing over of operation and maintenance of CETPs to the industrial societies.

2. Status report

EPCA has been convening weekly meetings to discuss outstanding issues with the different stakeholders. After months of work and deliberation it has set up the following process for handing over the operation and maintenance of the CETPs to the societies.

- a. Setting out the terms in an agreement, to be signed by the different parties – industrial societies and government agencies, specifying the duties and responsibilities of each.
- b. Directing NEERI to conduct a trial run of the CETP and to report on the operational problems. The trial run would be done jointly with the societies;
- c. Directing the government to ensure that all the problems identified in the trial run were sorted out in consultation with the societies;
- d. Directing the Delhi Pollution Control Committee (DPCC) to monitor the inlet and outlet effluents of the CETPs;
- e. Directing the societies to undertake checks to ensure that the operational problems of the CETP are resolved and that they can take over the CETPs;
- f. Directing Delhi Jal Board to ensure that the drainage problem identified by the societies and agencies are resolved urgently.

2. a. Summary: Overall status of the CETPs is as given below:

1. GT Karnal road CETP Society signed the agreement for O&M in September 2005;
2. The status of handing over the CETPs is as follows:
 - a. Five CETPs (Nangaloi, GT Karnal Road, Mayapuri and Mangolpuri were handed over to CETP Societies in November and Jhilmil in January 2006); All of them functional except GT Karnal Road CETP. As per Delhi Pollution Control Committee (DPCC) they meet the EPA standards except for Total Dissolved Solids (TDS); EPCA is currently looking into the matter to see how the problem of TDS should be resolved.
 - b. Three CETPs (Wazirpur, Badli, Okhla industrial area,) were yet to be handed over;
 - c. The 9th CETP -- SMA is to be handed over by March 15, 2006
 - d. The 10th CETP -- Nangaloi is to be handed over by April 30, 2006
3. As per the status report submitted by DSIDC on November 21, 2005 capacity utilisation improved to 43-50 million litres per day (mld) from 12-18 mld out of 133 mld installed capacity.
4. There is an outstanding issue regarding the disposal of sludge, which has accumulated in the plants. The societies contend that they will only take over the plants after the issue has been sorted out. However, EPCA does not agree with this contention. It has directed

DPCC to submit a detailed plan for hazardous waste generated by the CETPs. This will detail out temporary as well as permanent plans for sludge, the amount of waste and the tentative costs. It will take the necessary decision based on this information.

2. b. Progress made in handing over of CETPs: Status as on January 7, 2006

Process of handing over:

In response to Hon'ble Court's order, the EPCA had been facilitating the process of handing over of the CETPs to industrial societies. As mentioned in the July report, a memorandum of agreement for the operation and maintenance was drafted and signed between the Department of Industries, Delhi State Industrial Development Corporation (DSIDC), and the Delhi Jal Board (DJB). As per the Hon'ble Courts directions, the GT Karnal society also signed this agreement in September 2005.

As there were a lot of concerns regarding the technical performance of the CETPs EPCA initiated joint evaluations and trial runs under the supervision of the Central Pollution Control Board (CPCB) and National Environmental Engineering Research Institute (NEERI) in the presence of DSIDC and concerned CETP society. During the month long trial runs, performance was evaluated and deficiencies were pointed out. DSIDC was directed to rectify them within a stipulate time frame. In the meeting convened on September 10, 2005 EPCA drew up a time frame for handing over of CETPs as given below:

- October 15, 2005: Nangaloi, GT Karnal Road, Mayapuri and Mangolpuri
- December 10, 2005: Wazirpur, Badli, Okhla industrial area, Jhilmil and SMA

Regarding Lawrence Road CETP, DSIDC was directed to complete the rectification works, carry out performance evaluation and report back to the EPCA by October 8, 2005. DSIDC was also directed to present the status of the remaining five CETPs by the same date (see Annexure I: Detailed time frame for handing over of CETPs).

Thereafter a series of meeting were convened during October-December 2005 to address and sort out the issues concerning all the stakeholders. Finally it was informed by DSIDC November 19, 2005 that four CETPs had been handed over to CETP societies and whereas another 4 would be handed over by December 15, 2005.

Progress: December 17, 2005

The progress was again reviewed on December 17, 2005. In this meeting EPCA allowed an extension of deadline from December 10, 2005 to the dates given below considering the request of the DSIDC for completing the works suggested by NEERI and the CETP societies.

Table: Revised deadlines as on December 17, 2005

S No	Name of CETP	Revised deadline for handing over
1	Badli	December 31, 2005
2	Jhilmil	December 31, 2005
3	Okhla	December 31, 2005
4	Wazirpur	January 31, 2006

It was also informed by DSIDC and DPCC that amongst the handed over CETPs, GT Karnal road was not operational for want of chemicals. EPCA directed the Department of Industries to issue show cause notice to the CETP society as well as individual industries asking for the reasons for the closure of the CETPs. It was also directed issue a public advertisement notice stating that the failure on behalf of the society to operate the CETP would lead to closure of industries in the area.

Progress: January 7, 2006

On January 7, 2006 EPCA reviewed the progress made on handing over. It was observed that the deadline of December 31, 2005 for handing over was not met in the case of the second set of CETPs. The status as on January 7, 2006 is as presented below

A. Status of plants already handed over

S No	Name of CETP	Status as on Jan 7, 2006	Directions issued by EPCA
1	GT Karnal road	Handed over to the society; not operational	Department of Industries to issue notices to disconnect water supply and electricity if the deadline of January 5, 2006 for running the CETPs is not met
2	Mayapuri	Handed over and functional	DJB and CETP Society to work out a operation cost sharing formula for Khajan Basti effluent
3	Mangolpuri	Handed over and functional	-----
4	Nangloi	Handed over and functional	-----

B. Status of CETPs which have to be handed over to societies

	Name of CETP	Deadline for handing over	Status as on Jan 7, 2006	Directions issued
1	Badli	December 31, 2005	Not done: Society has requested for a joint evaluation on Jan 11; then joint trial run	DSIDC will sort the issues and report back by January 14, 2006
2	Jhilmil	December 31, 2005	Handed Over on January 2, 2006	
3	Okhla	Before December 31, 2005	Dispute between the 3 societies regarding the legal status: Society gave a list of deficiencies to DSIDC on Dec 23	Notices to society and government directing to adhere to the deadlines and to share all responsibilities as per the MoU. Deadline for handing over given final extension till January 2006.
4	Wazirpur	January 31, 2006	DSIDC not confident of meeting this deadline; repair work still going on	DSIDC directed to adhere to the deadline.

C. Status of CETPs where work is going on

	Name of CETP	Deadline for handing over	Work plan
1	SMA	March 15, 2006	DJB to complete the work on conveyance system by January 31, 2006; Thereafter performance evaluation and trial run
2	Lawrence Road	April 2006	Replacement of activated carbon by February 2006; Thereafter performance evaluation and trial run

Operation and maintenance costs: Regarding the queries on operation and maintenance costs, EPCA has directed all the parties to follow the provisions in the tripartite agreement. Since the time of handing over, O&M and the costs incurred will be the liability of the societies. They are empowered by the agreement to work out a formula for cost sharing amongst the member industries. All the costs incurred before handing over will be borne by the DSIDC. The industries department has issued necessary directions and informed the industries of the arrangement.

Water quality monitoring: DPCC had been monitoring the performance of the CETPs and the results were presented before the EPCA. As per the monitoring done on December 8, 2005, Mangolpuri (except total dissolved solids (TDS)), Mayapuri (chloride and TDS) and Nangloi (chloride and TDS) the treated effluents were meeting the EPA standards. Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) were well within the limits of 30 and 250 milligramme per litre (mg/l). Heavy metals were also well within the prescribed limits. (See Annexure 2: Water quality monitoring report on December 9, 2005)

It was informed that DPCC was not monitoring the flow in the CETPs. DSIDC, which used to monitor the flows earlier on has stopped doing this ever since the handing over is done. Considering this, the EPCA directed the DPCC to monitor the incoming flow in each of the CETPs and report the quantities along with the water quality trends.

There were a number of concerns regarding the quality standards of treated effluents from the CETPs. In this context, it was clarified by the EPCA that standards as per MOU has to be followed by CETPs i.e. standards notified under Environment Protection Act 1986. However, it was also decided that standard for TDS may not be insisted for the time being and the matter will be reviewed later.

2.c Capacity utilization: Status and action taken

Status as on January 7, 2006: In the July 2005 report EPCA pointed out that only 12-18 million litres per day (mld) out of 133 mld installed capacity was being utilized at the 8 CETPs and the remaining two (Wazirpur and Badli) were not in operation. As per the status report submitted by DSIDC on November 21, 2005 this has improved to 43-50 mld. (See Annexure: Capacity utilization in CETPs) Though this is an encouraging trend, it falls short of the objectives of full capacity utilization set by the Hon'ble court. What also compounds the problem is the fact that except for the Wazirpur CETP and the Mayapuri, the utilization levels have not improved much in the last four months. In order to address this issue EPCA initiated the following:

Actions initiated by EPCA: While reviewing the matter on the directions of the Hon'ble Court, EPCA found that none of the CETPs have a proper drainage map indicating the source and direction of flow of sewage. What existed was a sewerage map prepared by the DJB showing the details of sewer lines. As a result, though the open drains in the industrial areas have wastewater discharges, the CETPs built up spending crores of rupees remain under utilized.

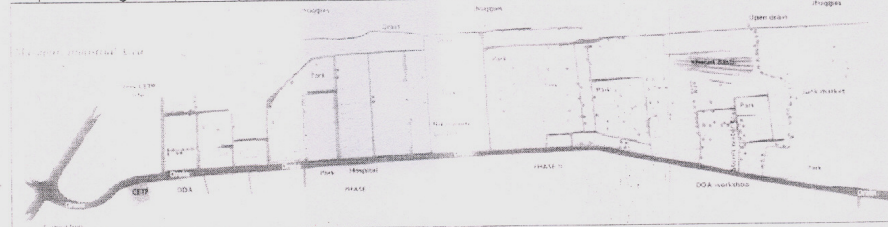
Task force constituted: In order to resolve the issue of under utilization of the CETPs, EPCA constituted a task force on September 3, 2005 comprising of DSIDC, DJB, DPCC, CETP Societies and the Centre for Science and Environment. The mandate of the task force was to examine the case of CETP at Mayapuri and suggest the following for all the ten CETPs:

- Options and methodology to assess the options for enhancing the utilisation of capacities in CETPs;
- Options and methodology to assess the reuse possibilities of treated effluents from the CETPs

The survey also revealed that the internal stormwater drainage system was in a dilapidated condition and pools of stagnant water observed at a number of places. This explains why the CETP remain underutilised.

Based on the experience from Mayapuri industrial area, EPCA is planning to direct the Delhi Government to prepare the drainage map for all the CETPs and the industrial areas catered to by these CETPs. This would help in identifying the wastewater that is available within the industrial area and not tapped by the CETPs.

Map: Drainage map of Mayapuri



Capacity utilization enhancement: The task force is considering two options:

- These options are being weighed in the context of quality of wastewater available and the capability of CETPs to deal with it and the cost of transporting the wastes. Quantification of

volumes and analysis of water quality are being undertaken in the Mayapuri area to ascertain the feasibility of these options. EPCA and the task force are jointly reviewing this matter.

Lessons from the Mayapuri industrial area will later be applied in the case of all the other CETPs to draw up a comprehensive action plan to deal with the matter of under utilization of CETPs.

3. Future action plan

3. a. Focus areas

1. EPCA is reviewing not only the handing over of the CETPs to the industrial societies but also the performance of the already handed over CETPs; In the days to come the monitoring system as worked out by the agreement will be implemented;
2. Having resolved the issues pertaining to handing over, EPCA's focus will be the following:
 - a. To ensure that the entire wastewater generated in the industrial area is incepted and transported to CETPs;
 - b. To ensure regular monitoring to check the operation and maintenance and to ensure that the CETPs meet the EPA standards;
 - c. To work out a strategy to reuse the treated wastewater so that the treated water is not discharged into the same stormwater drains which negates the efforts to control pollution. As mentioned in the earlier report of EPCA, this is crucial. Currently, the treated effluent is discharged into the municipal drains – closed or open, which carry untreated effluents.
 - d. To resolve the issue of sludge management as the city does not have adequate facilities to dispose off its hazardous sludge. EPCA is also looking into options to see if this sludge can be disposed off, by using it in industries like cement, which worldover consume hazardous waste in their incinerators.

3. b. Action plan with deadlines:

Action plan for the next few months is appended below. EPCA aims to sort out the issue of capacity utilisation by June 2006 and by the same time strategy is being worked out to achieve atleast 50 per cent reuse of treated effluents.

S No	Task	Agencies/Officer responsible	Deadline
I	Enhancing utilisation		
1	Preparation of drainage maps	Executive Engineers of DSIDC & DJB who is in charge of the CETP and the industrial area	March, 2006

2	Survey of industries in the industrial area covered by CETPs	Commissioner Industries	March, 2006
3	Finalising the plan for capacity utilisation enhancement	Executive Engineers of DSIDC & DJB who is in charge of the CETP and the industrial area	March, 2006
4	Implementing the plan for enhancement of capacity utilisation	Executive Engineers of DSIDC & DJB who is in charge of the CETP and the industrial area and president CETP Society	June, 2006
II	Reuse of treated water		
1	Identifying the reuse options and agencies to buy treated water	Commissioner Industries	February 2006
2	Finalising agreements for reuse (sale) of treated water	Commissioner Industries	March 2006
3	Achieving atleast 50 per cent reuse of treated effluents	Commissioner Industries; Chief Executive Officer DJB & President CETP Society	June 2006

4. ANNEXURES

Annexure 1: Deadlines agreed and finalized on September 10, 2005

Phase of handing over	Name of CETPs	Decisions and deadlines
I	- Mayapuri CETP - Nangaloi CETP - GT Karnal Road CETP - Mangol Puri CETP	By September 20, 2005: DSIDC, based on the report of NEERI on functioning of plant and its defects and the DPCC report on effluent quality and standards, will resolve all the issues with CETP society From September 21 to October 10, 2005 DSIDC is directed to rectify the defects pointed out by NEERI/DPCC and CETP Society. October 8, 2005: All parties to jointly inform EPCA that the CETPs are ready for handover By October 15, 2005 all four CETPs will be handed over to CETP society.
II	- Wazirpur CETP - Badli CETP - Okhla Industrial Area CETP - Jhilmil & Friends Colony CETP - SMA CETP	September 23, 2005: DSIDC informed EPCA that NEERI will submit the performance evaluation report of these CETPs. (DSIDC would predictably argue that they did not receive the report from NEERI and hence the other deadlines not applicable. The question is if at all they followed the matter with NEERI?) During September 23, 2005 to October 3, 2005 DSIDC is directed to resolve all issues pointed out by NEERI in its report. From October 5, 2005 a month long trial run will start. November 5, 2005 will be the scheduled date for completion of trial run. By December 5, 2005 DSIDC is directed to resolve all the issues highlighted by CETP society and DPCC during the trial run. December 10, 2005 Plant will be handed over to CETP Society by.
III	Lawrence Road CETP	By September 20, 2005: Work on rectification of invert level difference in the conveyance system to be completed. Thereafter, DSIDC to request NEERI to carry out performance evaluation at this CETP October 8, 2005: DSIDC to present the progress before EPCA
IV	Remaining 5 CETPs	October 8, 2005: DSIDC to provide status