

Fact-sheet – Effluent Treatment Plant (ETP) – Skills and responsibilities of the operator



What is the objective?

The objective is to make sure the staff is able to ensure a proper operation of the ETP. Therefore the factory needs to control that:

- The ETP operator is competent and knowledgeable to control the ETP;
- The ETP operator's tasks and responsibilities are clearly defined and followed.



How to achieve this objective?

Step 1: Recruit or appoint an ETP manager/operator who will be the responsible person for the overall ETP operation and maintenance. The profile of the ETP operator should be in line with the requirements below:

- Technical background experience in operating a wastewater treatment plant;
- Knowledge in microbiology and environmental chemistry and experience in sampling and testing water;
- Experience in performing daily checks of the wastewater treatment process;
- Understanding of the machinery used for wastewater treatment and pumping system;
- Ability to diagnose and correct wastewater treatment plant malfunctions;

Step 2: Provide clear duties and responsibilities to the ETP operator (who might share the tasks among his team) and make sure he/she knows how to use the ETP operation & maintenance manual and understands its content. Operator's tasks are:

- **Follow** the instructions of the ETP operation & maintenance manual;
- **Control** dosage of chemicals and nutrients based on the wastewater characteristics;
- **Operate** and maintain the screens, grit removal devices, pumps, aerators, etc.;
- **Perform** the daily, weekly and monthly controls and preventive maintenance operations and detect troubles*;
- **Ensure** the water quality monitoring before, during and after treatment**;

Step 3: Request the ETP operator to review and improve the ETP procedures and prepare formats for keeping the records (e.g. create templates for the records of ETP controls and maintenance, write water quality testing instructions, prepare ETP performance report, etc.). See on the right an example¹ of format for a daily task:

Computations of daily figures for the System:

Date / Month / Year	Daily Flow	Raw Effluent		Treated Effluent		Organic load removed	SS passed into outfall
		BOD	SS	BOD	SS		
	m ³ /day	mg/L	mg/L	mg/L	mg/L	Kg/day	Kg/day

*For the maintenance operations, the support of electrician and mechanical technicians will be required.

**For this task, the operator must have an experience as laboratory analyst; otherwise there should be a lab analyst in the staff. This person has knowledge in water chemistry, how to collect a sample, how to use the testing instruments, how to preserve the sample, etc.



- **Make sure there is a backup in case the ETP operator is not present:** during holidays and weekends, there should be staff coverage. A good practice would be to have a calendar indicating who is in charge of supervising the ETP when.



Common non-compliances

ETP operator not well trained and no tasks and responsibilities assigned

The factory is providing an ETP operation and maintenance manual and other instructions to run the ETP in English to an operator who speaks only the local language. The operator states that he doesn't need to follow the instructions but he is not able to explain clearly what are his tasks and responsibilities, how frequently he undertakes some maintenance checks, which parameters should be tested to control the compliance with the law, etc. There is no formal process in this factory to control the ETP operation and no evidence the ETP operator is qualified for the job.

¹ Source: Guideline for Operation & Maintenance of Effluent Treatment Plants, Maharashtra Pollution Control Board (India), November 2004