

FOSTERING AND ADVANCING SUSTAINABLE BUSINESS AND RESPONSIBLE  
INDUSTRIAL PRACTICES IN THE CLOTHING INDUSTRY IN ASIA

**TRAINING PROGRAM FOR OPERATORS OF EFFLUENT TREATMENT PLANTS**

**DAY 4**

**VISIT TO A PRIMARY ETP/COMBINED ETP WITH PRIMARY TREATMENT**

**WORK EXERCISE: FEED BACK FORM TO BE SUBMITTED AFTER THE VISIT**

**A. GENERAL**

Name of the Factory	
Address/Location	
Type of process	
Effluent discharged to	
Capacity of the ETP	
Land area used for ETP	
Consultant for the ETP	
Supplier of the ETP	
Resource person & ETP contact person	

## B. OBSERVATIONS IN ETP

Section of ETP	Parameter	
Effluent collection lines,	Type: underground pipe/covered channel/uncovered channel	
	Manholes: numbers, covering material (RCC slab/Steel cover)	
	Cleaning : Manual/mechanical	
Screens	N. of manual screens, bar size ( mm)	
	Frequency of cleaning	
	No. of mechanical screen, pore size (mm),	
	type of screen (drum/ brush/mechanical bar)	
	quantity of screenings collected.	
Raw effluent collection	Collection tank : present/absent	
	type (circular/rectangular)	
	Volume (m3) and retention time (hrs)	
Raw effluent pumps	Type of pumps (centrifugal/submersible)	
	Numbers (working/standby), W/S	
	Capacity: m3/h, motor power: HP	
Equalisation tank	type (circular/rectangular)	
	Volume (m3) and retention time (hrs)	
	type of aeration system (surface/submerged)	
	Diffuser: type (disc/tubular), Nos.	
	Diffuser sheet material:	
	any dead spots? If yes how much surface area is dead (%)	
	Any coarse bubbles/torn diffusers	

	Water levels maintained,	
	Aerator/Blower: type, nos., capacity (HP)	
<b>Equalised effluent transfer pumps</b>	Type of pumps (centrifugal/submersible)	
	Numbers : W & S	
	Capacity: m <sup>3</sup> /h, motor power: HP	
	Pumping control : manual / level switch/ automatic	
<b>Chemical treatment</b>	coagulant type & dosages (ppm)	
	flocculant type & dosages (ppm)	
	Polyelectrolyte : used/not used, dosage (ppm)	
	slurry concentration of each chemical (%)	
	(a) (b) (c)	
	How many tanks for each chemical dosing ( one or two)	
	Retention time of flash mixer & flocculator (mins)	
	MoC of mixer (MS / SS), grade of steel:	
	Dosing control system. : manual/automatic	
pH maintained at inlet of primary settling:		
<b>Primary settling</b>	System type: circular clarifier/hopper bottom settling/tube settler (lamella)	
	rotational speed (if it is clarifier),	
	Retention time (mins)	
	surface loading rate (m <sup>3</sup> /m <sup>2</sup> /day)	
	Material of construction of walkway and handrails : (MS/ Stainless steel/Concrete)	
	sludge evacuation frequency (one in ....hrs)	

	Sludge concentration (%)	
Polishing treatment	Present/absent	
	Type	
	No. of units and details.	
Sludge Thickener	Present/absent:	
	System type : with mechanism/without mechanism	
	Retention time of sludge : hrs	
	Percentage of inlet sludge and thickened sludge (%)	
Sludge dewatering	Mechanical system/ sludge drying beds/Not present	
	No. of units and details (capacity of unit or total area of SDBs)	
	Solids content : inlet slurry, dewatered cake (%)	
	Usage of any conditioning chemical : Name & dosage	
	Feed pumps : nos., capacity and pressure.	
	Quantity of dewatered sludge per day (kg)	
Sludge maturation	Present /absent	
	Period of sludge storage (months)	
	Moisture content in sludge after maturation (%)	
	Final disposal method	
Laboratory	In house lab - Present/absent:	
	Tests conducted: pH, TSS, TDS, BOD, COD, colour,	
	Other parameters tested:	
	Bacteriological tests, if any:	

	Heavy metal tests, if any	
Online monitoring	Present/absent:	
	If yes, what are the parameters tested online	
ETP control	Manual /automatic/semi-automatic	
	If not manual, details of control system	
Record keeping (Do not ask to show any records)	How many records are maintained: Just give the type of records maintained (e.g Flow, Operational timings of equipment, chemical records, sludge details, effluent quality parameters etc.) and not details.	

**Submission date & time:**

**Name & Signature of the Trainee:**