

TRAINING PROGRAMME FOR ETP OPERATORS IN TEXTILE INDUSTRY

Promotion of Sustainability in the Textile and Garment Industry in Asia - FABRIC

Role and responsibilities of ETP operator

GIZ FABRIC – ETP Operator Course



Contents

- Characteristics of good ETP operators
- Good work routines
- Dealing with visitors to ETP

Characteristics of good ETP operators

Common good practices

- maintaining records and present these as proof of good work.
- staying alert and working safely, with understanding of accidents always being unexpected.
- being clear and aware about what to do, the reason of taking particular action and outcome of the action.
- having and acquiring knowledge about whole ETP and not only specific units
- being open to learning new skills and gaining new knowledge



Common tasks of ETP operators

- Switching on and off ETP units at and for right time
- Preventing overflows inside ETP or of drains as well as effluent stagnation (→ avoiding creation odour nuisance and health hazards).
- Keeping screens clean by promptly removing screenings
- Operating equipment motors at recommended levels avoiding overheating and vibrations
- Maintaining pH control and equalized quality of wastewater leaving physical treatment.
- Ensuring optimum chemical dosage and timely removal of sludge.



Common tasks of ETP operators

- Maintaining favorable conditions for biological treatment (e.g. levels of DO, MLSS, RAS/WAS, nutrients etc.)
- Managing foaming in aeration tank and sludge floating in clarifier.
- Managing proper dewatering and disposal of sludge
- Recording relevant data in log sheets.
- Carrying out routine maintenance of ETP units including oiling & greasing.



Common challenges encountered by ETP operators

- Factory management not knowledgeable about or interested in ETP operations
- Low appreciation of work in ETP by management
- Low image about ETP work (ETP = “dirty place”)
 - Same view by many ETP operators → low motivation to clean ETP
- Strong impact of factory operations on ETP → Failure (batch fail, pipeline burst) in production directly impacting ETP performance
- ETP operation to be maintained 24 hours, even if production stops
- Numerous safety & health risks in ETP operations



Creating appreciation for work of ETP operators

Some ideas

- Perfectly managing ETP to **meet all performance criteria**
- **Preventing ETP breakdowns** (→ ensuring uninterrupted operations)
- **Maintaining clean ETP** to be worth being presented to any buyers, visitors, factory and DOE inspector visitors
 - Cleanliness
 - Growing and grooming flowers and plants at ETP
- **Be proud of your achievements** (and talk about it!)
- Report and **talk about good performance** (e.g. signboards) and achievements



Moving ahead as ETP operator

Some ideas

- Join **training courses** dealing with ETP operation as main subject
- Even if fully qualified and trained, join **refresher training** courses
- **Keep** yourself **up-to-date** on new developments and requirements on pollution control (e.g. newspapers, TV, blogs)
- **Interact with technical experts** visiting your ETP and try learning as much as possible
- Consider a distance education diploma in wastewater management to **enhance your qualification levels**
 - See ZDHC requirements



Moving ahead as ETP operator

Some ideas (contd.)

- Search for additional information on internet.
 - Thousands of videos about ETP operation, many in Bangla (see YouTube)
- Participate in technical groups of ETP operational staff sharing useful information on social media (e.g. Whatsapp, Facebook...)
- Read good books or articles on pollution control (e.g. ETP operation, control, maintenance and monitoring)
- Refer to publications by DoE and various organisations (e.g. GIZ)



Be assertive and proud of your role as ETP operator

Before changing others' mind-set about your job as ETP operator, first change your mind-set!

1. ETP operator not demeaning or boring job without importance
2. Good working ETP crucial for survival of entire factory
 - Poor performance of ETP resulting of closure of factory.
3. ETP operator highly skilled job not easily replaceable
4. ETP playing important role beyond boundary of factory:
 - Preserving ground and surface water resources
 - Avoiding degradation of land



Good work routines of ETP operator

Personal routines

- Upon entering workplace, make sure
 - change into work uniform,
 - keep work uniform clean and
 - store nicely when leave workplace.
- **Keep small diary** to note down and remember important developments & points needing your attention .
- Properly **use safety gadgets & PPEs** as provided for job



Good work routines of ETP operator

General work routines

- Consult with relieving operator about major developments in previous shift.
 - Any breakdowns or accidents either needing special mention or already resolved
 - Any unfinished work from previous shifts to be completed
- Keep your reliever operator informed too



Good work routines of ETP operator

Specific work practices

- Make effort to **keep ETP clean and remove any litter** in area.
 - Sweep any sand and silt off pathways as well as keep clean and dry.
 - Clean any foam marks on walkways using water jets.
- **Regularly check operations** of pumps & machines.
 - Check for any abnormal noise, jerks or vibrations.
 - If unusual symptoms, switch off unit immediately, switch on standby unit and inform maintenance staff.
- **Check amperage** of motors using a multimeter
 - Keep chart of permitted amperage for each pump and other motors as a reference (consult electrician for the same)



Good work routines of ETP operator

Specific work practices (contd.)

- **Wear protective gloves** before touching raw effluent or any chemicals for checking
 - Avoid burns from hot raw effluent
 - Protect skin from highly sensitizing or corrosive chemicals
- Keep beaker readily available for checking/demonstrating sludge volume in aeration tank.



Good work routines of ETP operator

Preparing for visitors

Consider visitor as opportunity to present yourself as a professional!

- Impress any visitor by having information about ETP readily available
- Train yourself being able to give brief speech about your ETP, covering
 - when installed,
 - capacity of ETPs,
 - what type of pollutants in effluent,
 - overview of treatment steps installed (primary, secondary or both), chemical dosages, what type of special treatment units
 - where effluent discharged and sludge disposed.



Good work routines of ETP operator

Preparing for visitors (contd.)

- Be prepared for usual questions
 - Typical questions by DoE officials: (i) Flow rate of the day, (ii) MLSS level or DO level in aeration tanks.
 - Typical question by technical visitors:
 - Capacity of plant
 - Land area occupied
 - DO/MLSS/RAS/WAS
 - how sludge being dewatered
 - moisture content before/after dewatering
 - where dried sludge disposed
 - how much nutrients added and why
 - what chemicals used and at what dosage and dosages fixed
 - what discharge standards and information on supplier of ETP system.



Good work routines of ETP operator

Preparing for visitors (contd.)

- For casual (non-technical) visitors:
 - usually content with your general speech and basic information such as capacity and standards being met.
 - explaining treatment process in simple terms.
- Always well received:
 - Demonstrating MLSS settling rate in beaker (be sure about proper sampling practices & wear gloves when handling wet beaker).
 - Demonstrating pH correctness (if needed; keep pH paper handy or digital meter ready)
 - Presenting updated records & log sheets ready



Good work routines of ETP operator

Preparing for visitors (contd.)

BUT KEEP IN MIND

- Avoid trying to manipulate records just to make look good → intelligent visitor will find it out in no time!



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