EFFLUENT QUALITY ASSURANCE PROGRAMME

Lecture 9
• Waste Auditing and Minimisation
• Waste Assessment Report
• Monitoring and Re-evaluation
In this lecture, a Quality Assurance Programme for textile effluent before discharging is suggested.

- This programme is based on waste auditing, monitoring and compliance with prescribed norms.
WASTE AUDITING AND MINIMIZATION

• Introduction and enforcement of complex environmental regulations, have forced industries to regulate the environmental effects and to reconsider their approaches towards waste management.

• The emphasis in Textile industry is now on improving process efficiency, minimizing wastes and optimizing waste treatment and disposal practices to ensure compliance with discharge and disposal regulations.

• The waste auditing approach involves a detailed analysis of a company's processes and waste aimed at minimizing, or even eliminating, discharges.

• The audit procedures are tailored to meet different objectives to establish waste management options and priorities.
Elements of a Waste Minimization Assessment

Following elements form the basis of a waste minimization assessment:

• Program initiation

• Data collection and audit preparation

• Waste audit

• Identification and prioritization of waste minimization alternatives

• Feasibility analysis
Program Initiation

Waste assessment team can involve many groups within the company and therefore management support and an organized approach are essential to ensure the success of the programme. A team leader should be nominated. He should see that the company issues a policy statement and disseminate information on the waste assessment to project the company's commitment to the programme and increase awareness and the enthusiasm for the programme in the plant. It is important to define the goals and time frame for the assessment.
Typical Goals

Typical goals can include:

1. Reducing the quantity of wastes that are shipped offsite to reduce disposal cost and long-term liability

2. Compliance with discharge or emission regulations

3. Reducing water usage in processing operations

4. Reducing solid waste generation
Data Collection and Audit Preparation

As a first step in the audit preparation the audit team should be finalized. The team leader will already be in place and he should have a team with collective experience in the following areas:

1. knowledge of all the operations used in the factory
2. knowledge of applicable waste and environmental regulations
3. understanding of potential waste minimization alternatives
4. ability to make technical and economical appraisals of waste minimization alternatives.
Waste Audit Team

A waste audit team could include, the team leader (engineering manager), site process engineer, production supervisor and an environmental consultant. It is helpful to include at least one team member with waste minimization experience from outside the plant personnel, either a consultant or corporate employee, who can act as a catalyst who sees things with unbiased angle and provides "external" and unconstrained input.