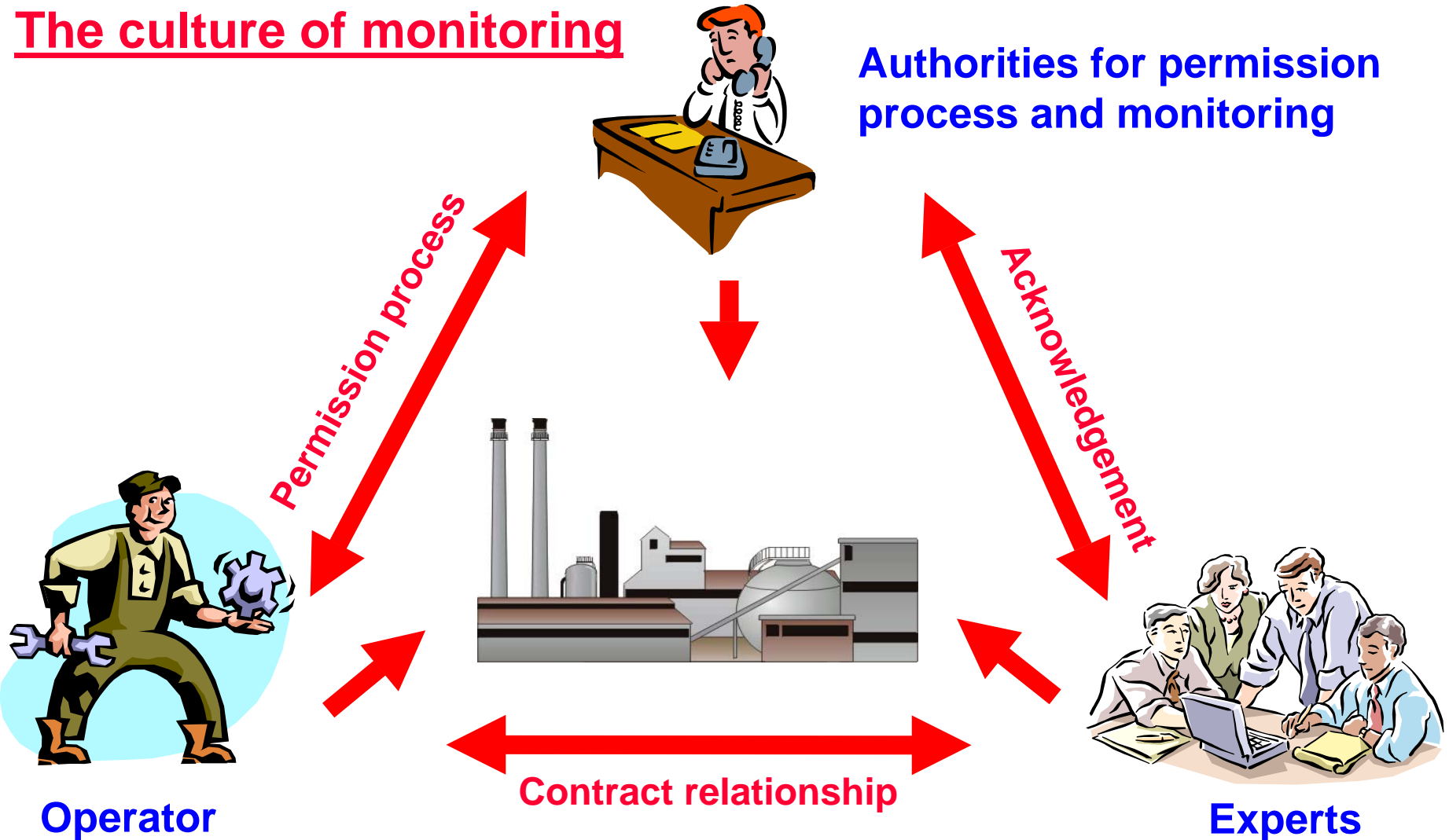




Plant monitoring

The culture of monitoring





Plant Operator

Define in-house responsibilities for specifying and checking safety measures:

- ➔ **Guaranteeing the efficiency of each plant unit**
- ➔ **constant monitoring of the tightness of the whole plant as well as the efficiency of the safety equipments**
- ➔ **Documenting in writing all regular checks that has taken place**

Plant Operator



In case of Accidents/emergency:

➔ Report any accidental release of substances hazardous to water to the local authority or a central office immediately

➔ Significant failure in the normal operation of the plant must be documented and evaluated

➔ Prepare a detailed report on the causes and consequences of an industrial accident to be submitted to the local authority. This report must also state measures to prevent any repetition

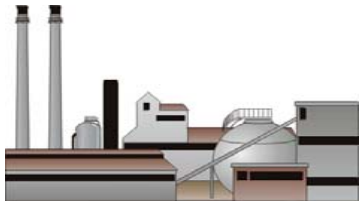
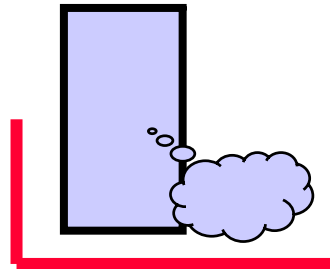
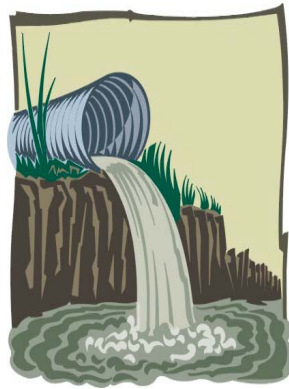
➔ Using the checklists when there is a failure in the normal operation of the plant

Plant monitoring



Plant Operator

Formulation of a Safety concept:



The potential of danger to water

Sources of release

Protective precautions

Need for protection

Properties of substance

Emergency scenarios

Plant Design

Sensitivity of the environment

Plant Design

Plant monitoring



Plant Operator

Concept of continual monitoring

Release of substances on the basis of the emergency scenarios



Monitoring of relevant parameter



Chemical (c, pH)

Physical (T, p)

Biological
(Bacterial toxicity)

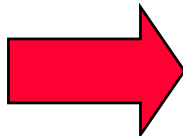


Immediate Alarm:

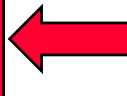
Exceeding the limiting value
Failure of monitoring devices



Release of substances



Monitoring devices



Changing the Emergency scenarios as the case may be





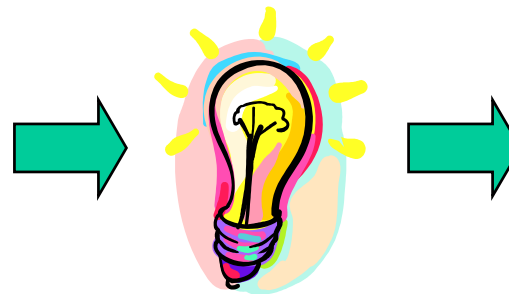
Plant Operator

In-house monitoring measures

Location: at such spots where the release of substances hazardous to water should be prevented

Aim: immediate detection → Initiating of counter-measures is immediately possible

Focus is on plant components where substances hazardous to water can be released



Detection

Counter-measures

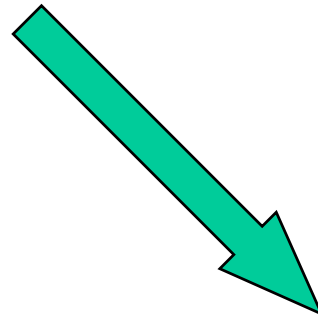
Plant monitoring



Authority



Ensuring that **plant operators** live up to their responsibility in regard to plant monitoring



In-house checks (Sampling)

or

Checks conducted by external experts

Checking to know if:



→ the **operator** contracted experts to do the monitoring

→ certain requirements should be met as a result of the check

Plant monitoring



Experts

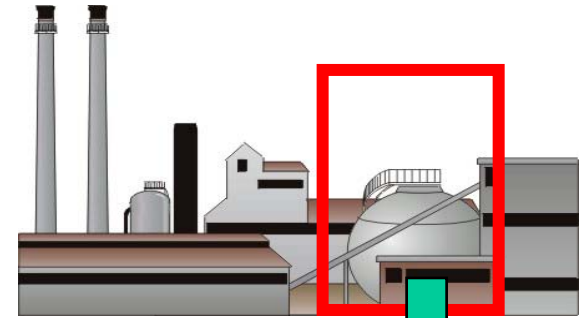


Are contracted by the operator

recognised by the authority

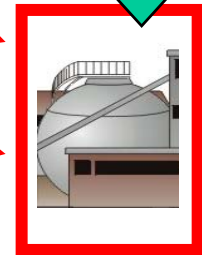
Independent

Experts on special field



Before commissioning

In regular interval



Safety-relevant plant components

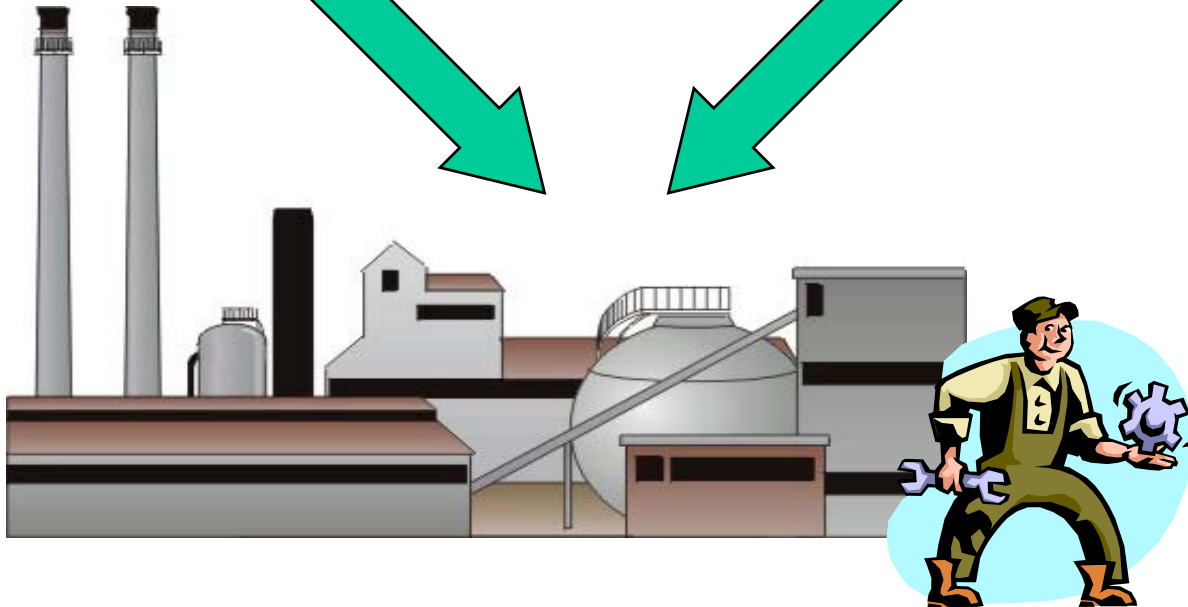
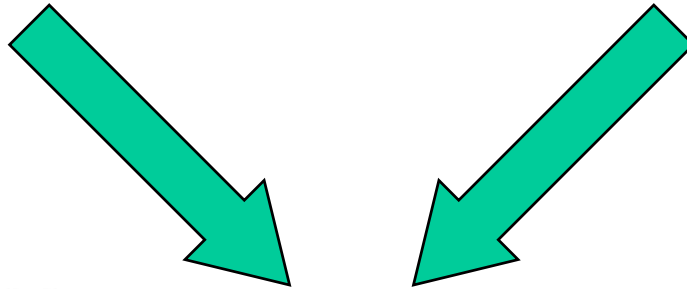


They can also be contracted directly by the authority

Plant monitoring



Coordination:
→ Time
→ Monitoring duties





Water pollution control systems

- accidental discharge of substances hazardous to water
- through measuring and Alarm
- regional und inter-regional detection and control