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Environmental diagnostic at an animal feed production plant

1. Purpose

The environmental diagnostic, also referred to as the "preliminary environmental analysis", is designed to:

- assess the status of an industrial site in terms of its environmental context,
- identify and rank possible steps for improvements,
- create an environmental database, updated on a regular basis, that will form the baseline reference for an environmental management process.

2. Environmental context of an industrial site

The environmental context of an industrial site is defined according to:

- site constraints (regulatory constraints, market constraints, neighbourhood constraints, etc.)
- existing issues:
  - regulatory issues: criminal liability and penalty in the event of an accident or incident...
  - economic issues: control of environmental costs, improved competitiveness ranking...
  - business issues: taking account of customer demand, winning new contracts...
  - human issues: motivation of company staff around a unifying project...
- the activity's potential risks (explosion, contamination, etc.) and impacts on the environment.

3. Position of the diagnostic in an environmental management process

The environmental diagnostic is the first step in an environmental management process.
Based on the results of the preliminary environmental analysis, the company's management can decide:

- to move the process towards:
  - corrective actions that would be one-off, targeted and often immediate,
  - actions to set up an environmental management system of the type ISO 14001 or ECO-AUDIT.
- or to halt the process.

4. Performing an environmental diagnostic

4.1. Factors to consider prior to starting the diagnostic

4.1.1. Company involvement and motivation

This type of project requires the Management's end-to-end commitment throughout the environmental diagnostic.
Management has to:

- drive the project forwards,
- be aware of the value of the diagnostic and the workload involved,
- appoint an "environment manager" tasked with coordinating the works during the diagnostic,
- set up a work group,
- notify company staff in order to ensure their involvement in the diagnostic.

4.1.2. Guidance from external actors and/or training in diagnostic methods

The person or persons responsible for carrying out the diagnostic should have the following skills and expertise:

- environmental issues (knowledge of the regulations, processes, etc.)
- technical issues (processes, etc.).

The company is responsible for specifying its baseline skills level in order to define its needs:

- in terms of training - focusing on learning how to carry out an environmental diagnostic,
- in terms of external actors - mainly to guide and validate the diagnostic.

4.2. Roll-out

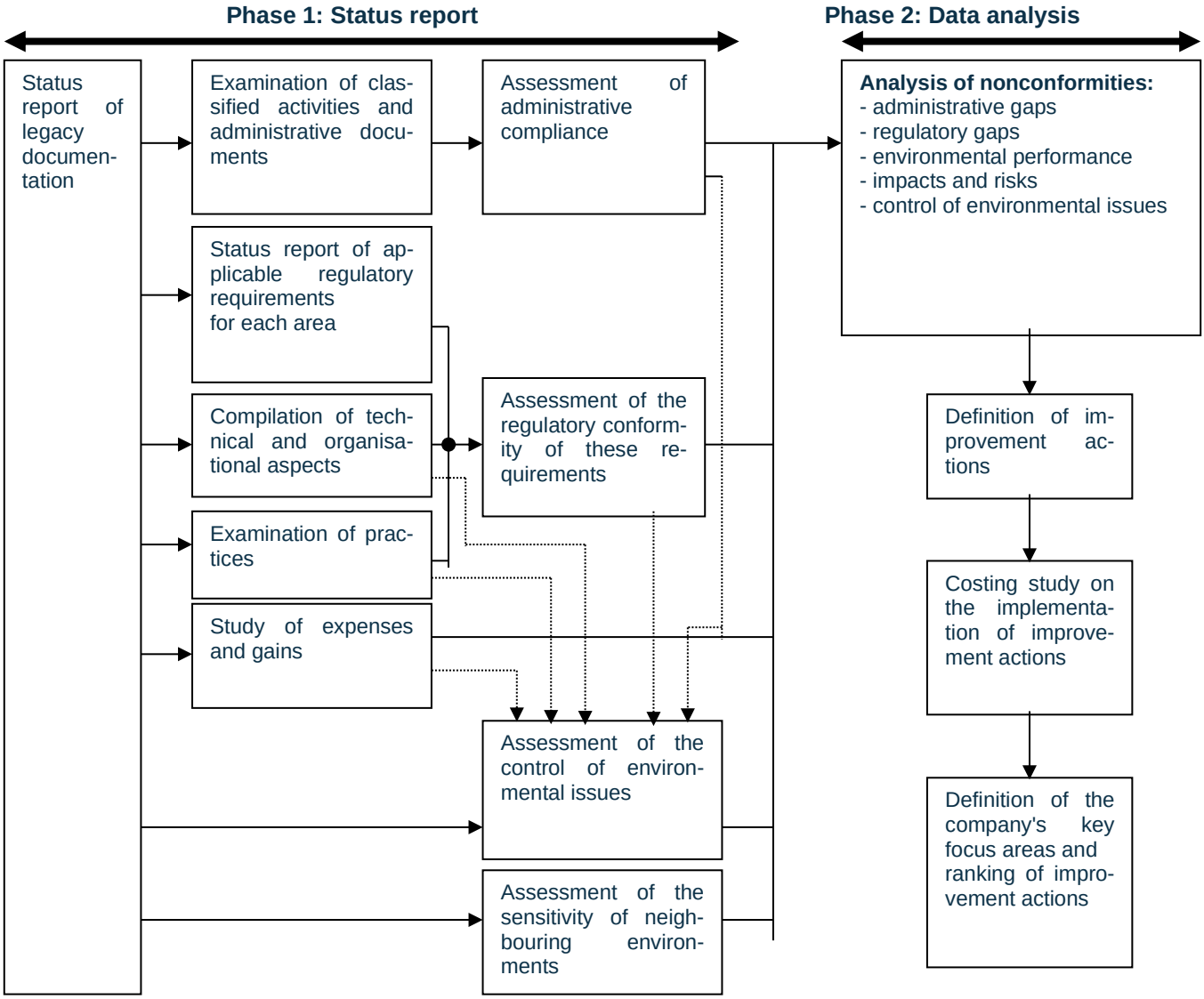
The diagnostic is rolled out in 2 phases (see the flowchart below):
The first phase consists in carrying out an status report to collate and assess all pertinent site data.
The second phase consists in using the collected data to analyse any identified nonconformities, and to define and rank possible improvement actions.

The status report collates the data via an investigation questionnaire consisting of data compilation sheets.

The completed sheets will then form part of the company's environmental database.
The investigation questionnaire is divided into 13 sections that each address a specific environmental topic:

- Topic 1: Regulation governing Installations Classified for the Protection of the Environment
- Topic 2: General information on the Company
- Topic 3: Sensitivity of receiving environments
- Topic 4: Facilities-Equipment-Storage
- Topic 5: Waste
- Topic 6: Water and Effluents
- Topic 7: Air
- Topic 8: Noise
- Topic 9: Safety and security of the facilities
- Topic 10: Energy
- Topic 11: Transport and Procurements
- Topic 12: Environmental management
- Topic 13: Financial analysis

Flowchart illustrating diagnostic roll-out
(solid line and dashed line arrows represent the diagnostic flow)



4.3. Diagnostic roll-out

4.3.1. Purpose

The aim is to enable the company to obtain a rapid assessment of its environmental status.
The team tasked with carrying out the diagnostic (whether internal or external to the company) therefore has to:

- prepare the status report,
- carry out the status report,
- analyse the data and study the findings of the analysis with the Management.

4.3.2. Preparing the status report

The diagnostic team:

- keeps Management informed of the diagnostic's organisation and workload,
- collects and reviews all the necessary documentation,
- sets the dates and tailors the duration of the status report to suit the size of the site (2 to 3 days for an animal feed production plant).
- drafts a detailed programme for organising and scheduling data collection.

4.3.3. Drafting the status report

The status report on an industrial site always starts by examining regulatory status, in particular, by reviewing the site's administrative compliance. The regulations provide the baseline reference for assessing how an industrial site stands with respect to its environmental context.
The status report covers the full range of environmental topics.

4.3.4. Data analysis

This analysis covers:

- The company's situation in terms of:
  - current regulations,
  - environmental performance (specific energy consumption, water tariff, quantity of waste generated, cost of treating waste, etc.),
  - control of environmental issues,
  - the activity's potential for generating environment impacts and risks (change in the quality of receiving environments, population disturbances, etc.),
  - recorded nonconformities,
  - proposals for possible improvement actions supported by data on:
    - their implementation cost,
    - their financial impact (feedback times, higher operating costs, etc.).
  - if necessary, the information that will have to be collated in order to complete the status analysis.

4.4. Conclusion: Process focus

On completing the data analysis, the Management defines the company's key focus areas and the environment manager ranks the improvement actions (see example in paragraph 6).
This classification will provide the basis for defining and implementing future action plans.

Once this has been done, the company will be able to set out its corporate strategy based on a range of options.
If the environmental analysis is deemed satisfactory (the data is both sufficient and useful), the focus can then move to:

- either, firstly bringing the company up to regulatory compliance (case of a company with several nonconformities or major nonconformities)
- or, defining one or more specific action programmes associated or not with a regulatory compliance initiative.
- or, setting up an environmental management system of the type ISO 14001 or ECO-AUDIT.

If there are significant gaps in the data that prevent the company manager from establishing an accurate environmental status analysis, a second step will be required in order to set up a specific action plan designed to supplement the initial diagnostic (measurement campaign, data searches, etc.).

5. Setting up the environmental diagnostic

i'Doc_E3, 1999 - Environmental diagnostic – Technical guide for the animal feed industry.

6. Example of an improvement classification summary

Topic	Improvement actions	Focus area 1	2	3	Impact on costs
Air	No open burning	☑	❑	❑	No
	Sampling points	☑	❑	❑	No
	Suction unit	☑	❑	❑	Yes-180 000 F
	Asses stack heights	❑	☑	❑	No
	Specify the change of filter	❑	☑	❑	No
	Sieve shaker housing	❑	☑	❑	YES- not assessed
Water and effluents	Sludge separator-grease trap	☑	❑	❑	YES-59 600 F
	Plan of the water systems	☑	❑	❑	No
	Water meter	❑	☑	❑	YES-500 F
	Pipe maintenance	❑	❑	☑	No
	Run-off water	❑	❑	☑	YES- not assessed
	Agreement	❑	❑	☑	No
Waste	Waste register	☑	❑	❑	No
	CIW carrier accreditation	☑	❑	❑	No
	SIW collector accreditation	☑	❑	❑	No
	Request a tracking slip	☑	❑	❑	No
	Cover waste with a tarpaulin	❑	❑	☑	YES-purchase: 1500 to 2000 F
Facilities - Equipment - Storage	Buried tank test	☑	❑	❑	YES-9 500 F/tank
	Filling control system	☑	❑	❑	YES- not assessed
	Retention tank	☑	❑	❑	YES-46 292 F
Safety and security of facilities	Lightning arrester	☑	❑	❑	YES- not assessed
	Safety training	☑	❑	❑	YES-3 530 F/person
	Diesel distribution system protection	☑	❑	❑	No
	Fire-fighting means	☑	❑	❑	No
	Instructions - incident	☑	❑	❑	No
	Intervention diagrams	☑	❑	❑	No
	Actions in the event of an incident	☑	❑	❑	No
	Earth resistance test	❑	☑	❑	No
	Mechanical check	❑	☑	❑	No
	Total	**19**	**6**	**4**	

Total number of recorded improvements: 29
Number of improvements not involving investment: 18
Number of improvements involving investment: 11