



Commission of European Communities, for  
and on behalf of the Government of  
Albania,

Ref.: EuropeAid/124909/C/SER/AL

## Implementation of the National Plan for Approximation of Environmental Legislation in Albania

### ***Environmental Inspectors' Handbook***



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Component C: Permitting & Enforcement

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## List of Abbreviations

BAT	Best Available Technique
BREF	BAT Reference Documents
EFA	Environment and Forests Agency
ELV	Emission Limit Value
EQS	Environmental Quality Standard
EIA	Environmental Impact Assessment
EU	European Union
GBR	General Binding Rule
ID	Identification
IPPC	Integrated Pollution Prevention and Control
LEP	Law on Environmental Permitting
LGA	Local Government Authority
MEFWA	Ministry of Environment Forests and Water Administration
NEI	National Environmental Inspectorate
NLC	National Licensing Centre
PPE	Personal Protective Equipment
REA	Regional Environmental Agency
REI	Regional Environmental Inspectorate

## Introduction

The existence of inspection systems and the effective carrying out of inspections by the National Environmental Inspectorate (NEI) is a deterrent to environmental violations since it enables authorities to identify breaches and enforce environmental laws through sanctions or other means. Inspections are an indispensable link in the regulatory chain. They also contribute effectively to a more consistent implementation and enforcement of environmental legislation across the nation.

For the NEI implementation of legislation means:

- checking and promoting the compliance of controlled installations with relevant environmental requirements set out and applied in national laws, some of which have transposed EU legislation,
- monitoring the impact of controlled installations on the environment to determine whether further inspection or enforcement action (such as issuing, modification or revocation of environmental permit) is required to ensure regulatory compliance.

For the NEI, enforcement of legislation is the application of statutory means through persuasion and sanctions to ensure compliance in a situation where it has been established that there is noncompliance with the permit requirements.

The NEI carrying out an inspection for the above scope requires all of the following:

- *Site visits* are an important part of inspection activities. In addition, data and documentation held by the industrial operator, particularly self-monitoring data and documents held under an eco-management and audit scheme, are important sources of information and should be included in the inspection activity. Environmental inspections should be planned in advance (unless responding to an incident). Regular reports should be established for each site visit.
- *Compliance monitoring* to determine if permit conditions and environmental quality standards are being achieved.
- *Assessing the activities and operations* carried out at the premises
- Inspection and consideration of *environmental audit reports and statements*.
- *Verification of any self-monitoring* carried out by or on behalf of operators of industrial activities and installations.
- *Checking the premises* by inspection of the entire site or priority sites to check things such as equipment energy efficiency, emission controls, material storage, management response, staff training and awareness.
- *Checking the relevant records* kept by the operator of the activity.

## Definitions

**Assessment** is the collection and analysis of instructions, working methods, control mechanisms and performance indicators. *See also Monitoring.*

**Best Available Technique (BAT)** is a concept introduced by the European Union's IPPC Directive and is defined as follows: "*Technique*" means both the technology and the way the installation is designed, built, maintained, operated and decommissioned. "*Available*" means techniques developed on a scale which allows them to be used in the relevant industrial sector, under economically and technically viable conditions. "*Best*" means most effective techniques for achieving a high level of protection of the environment as a whole.

**Compliance** is often defined as full implementation of environmental requirements. Compliance occurs when requirements are met and desired changes are achieved.

**Compliance monitoring** is the process of collecting and analysing information on compliance status.

**Emission** is the direct or indirect release of substances, vibrations, heat or noise from individual or diffuse sources in the installation into the air, water or land.

**Emission Limit Value (ELV)** is a figure specifying the concentration or load of a pollutant allowed to be emitted or discharged to the environment from a specific installation in a given period of time or per unit of production.

**Facility** is any operation involving process equipment or processing that constitutes a business activity. *See "installation".*

**Implementation** means compliance checking and compliance promotion. Implementation consists of the activities required to comply with legislation and may regard activities by inspectorates as well as companies.

**Incident** covers accidents (anything which happens unexpectedly, an unplanned event) and deliberate acts.

**Inspection** is a planned process by a responsible person from a designated authority intended to determine installation or facility compliance status with a set of predefined performance criteria and to detect violations.

**Inspector** is the qualified and competent person from the designated authority who collects information that may be used to determine compliance status.

**Investigation** is the process of detection activities designed to discover criminal offences for the purpose of criminal law enforcement.

**Permit** is a written decision granting authorisation to operate all or a part of an installation, subject to certain conditions which guarantee that the installation complies with the requirements.

**Installation** means a stationary technical unit where one or more activities are carried out on the same site and that could have a negative environmental impact. Several "technical units" on the same site should be considered as one installation if one of the activities is directly associated with the other or both units are served by the same activity (located on the same

site). *Existing installation* is an installation that has been legally operating at any time before the adoption of the Law No xxx dated xxx "On Environmental Permitting". Other installations are considered to be *new installations*.

**Operator** means a natural or legal person who is the responsible person or the manager of the installation and has the authority for the day to day management of the installation and the ability to ensure compliance with the permit. If two or more Operators run different parts of an installation, they should obtain separate permits. The operator may be the owner of the site.

**Inspection Authority** The NEI is the inspection authority for Class A and Class B environmental permits. The REI is the inspection authority for Class C environmental permits.

**Permitting Authority** The EFA is the permitting authority for Class A and Class B environmental permits (for the purposes of this paper, and not to be confused with the National Licensing Centre). The LGA is the permitting authority for Class C environmental permits

## Explanation of chemical symbols

<b>BOD</b>	Biochemical Oxygen Demand (BOD <sup>5</sup> is a five day, BOD <sup>7</sup> is a seven day incubation)
<b>Cd</b>	Cadmium
<b>Cl</b>	Chlorine
<b>CH<sub>4</sub></b>	Methane
<b>CO</b>	carbon monoxide
<b>CO<sub>2</sub></b>	carbon dioxide
<b>COD</b>	Chemical Oxygen Demand
<b>Cr</b>	Chromium
<b>Cu</b>	copper
<b>Fe</b>	iron
<b>Mn</b>	manganese
<b>N</b>	nitrogen
<b>NH<sub>3</sub></b>	ammonia
<b>NH<sub>4</sub></b>	ammonium
<b>N-NH<sub>3</sub></b>	ammoniacal nitrogen
<b>Ni</b>	nickel
<b>NO<sub>2</sub></b>	nitrous oxide
<b>NO<sub>x</sub></b>	all oxides of nitrogen
<b>P</b>	phosphate
<b>Pb</b>	lead
<b>pH</b>	hydrogen ion
<b>SO<sub>4</sub></b>	sulphate
<b>SO<sub>x</sub></b>	all oxides of sulphur
<b>VOC</b>	volatile organic compounds
<b>Zn</b>	zinc
<b>&gt;</b>	greater than
<b>&lt;</b>	less than

# 1. Legal and Administrative Framework

Compliance with environmental legislation in Albania is achieved by, among other things, public law enforcement, which can be divided into administrative law and criminal law.

The environmental Inspectors mainly make use of administrative law enforcement instruments. In doing this, the environmental Inspectors form part of the administrative system enforcing the environmental administrative rules.

## 1.1 The permitting framework

The system of permitting in relation to environment protection is established by the new draft Law on Environmental Permitting, and the Law No. 10081, dated 23.02.2009 "On licenses, authorisations, and permits in the Republic of Albania" which provides the basic principles of permitting applying also environmental permitting.

The permitting system envisages a streamlined application process, and ensures transparency and coordination between the authorities competent for issuing and enforcing permits conditions.

A permit specifies detailed requirements for individual installation.

The type of permit required is set by the threshold for industrial activity, production and capacity. Under the draft new Law on Environment Protection there is a three-tier system for permitting for installations and activities, namely:

- Class A Environmental Permit
- Class B Environmental Permit
- Class C Environmental Permit

Class A and B permits are issued by the Environment and Forestry Agency. Class C permit are issued by the Local Government Authority.

Institutional responsibility in permitting, inspection and application verification is defined in the draft Law on Environmental Permitting.

The permitting authority is kept separate from the inspection authority. The NEI has the responsibility for inspection, compliance checking and enforcement of environmental permit requirements. In case of non compliance NEI inform REA which can close an installation, or indeed suspend or revoke a permit.

Environmental inspectors should always keep in mind that no person can operate an installation except as authorised in a permit granted by the relevant authority.

This permit contains conditions that are based on standards and technical guidance that have been agreed by all relevant parties and, most importantly, that are enforceable under the law.

### 1.1.1 Class A and Class B environmental permits

Whether a Class A or Class B permit is issued, the permit contains conditions that pertain to the overall environmental performance of the installation. The inspector should be fully aware

of the contents of the environmental permit before he makes any site visit. The permit includes the following information:

1. Introduction: includes information on how to contact and communicate with the permitting authority, the process for appeal, and variation or surrender of the permit, in order to help the operator deal with various situations that might occur during the life of the permit. Details of any old permits, licences, or authorizations complemented or superseded by the permit will be inserted at the beginning.
2. The installation and activities: the permit conditions identify and describe all activities at the installation that are covered by the permit. The land area on which the permitted activities take place should also be defined.
3. Operating conditions: for operation of the industrial activities. These are based on BAT as described in relevant technical guidance for Class A permits only, and take into account technical characteristics, geographical location, and local environmental conditions of the installation. Conditions for operation will cover:
  - use of raw materials and water,
  - prevention and control of emissions and waste,
  - appropriate waste management, where necessary,
  - energy use and efficiency (Class A only),
  - emergency preparedness, and measures to be taken to prevent accidents and to limit their consequences (Class A only),
  - monitoring systems,
  - decommissioning and remediation, if relevant.
4. Environmental protection requirements: specify conditions for
  - protection of the soil, where necessary,
  - protection of groundwater, where necessary,
  - requiring the Operator of the installation to regularly provide the EFA and NEI with the results of emission monitoring,
  - self-monitoring emissions and discharges, methodology, frequency, evaluation procedure, and ensuring these are provided to the EFA and NEI for compliance monitoring purposes,
  - start-up of operations, leaks, malfunctions and momentary stoppages,
  - steps to be taken before operation of the installation commences, and to be taken on cessation of operation and de-commissioning
  - requiring the Operator of the installation to immediately inform the EFA and NEI of any incident or accident which could significantly affect the environment, and
  - all other requirements which would be necessary to ensure compliance with the legislation, safeguarding public health, and protection of the environment.
5. Emission limit values: conditions for ELVs for prescribed pollutants likely to be emitted from the installation will be required to address the following:
  - emissions to air,
  - discharges to surface water,
  - discharges to the municipal sewer or to a wastewater treatment plant,
  - discharges to the ground (unless they are banned under the relevant laws), and
  - noise.
6. Off-site conditions: the permit may contain conditions requiring the Operator of the industrial activity to carry out works on land not part of the installation, and not necessarily owned by the Operator. The works would be directly relevant to the operation of the installation. Permission would need to be given from the owner of the land before such works were carried out.

7. Improvement programme: when appropriate the permit may contain conditions for an improvement programme for implementation of newer technology and a timeframe to do so.
8. Records: this condition specifies what the Operator of the installation must do to make and keep information and documents, and provide access for the regulatory authority to the information and documents. Such information would include daily records of monitoring data, incidents, and instrument calibration and production capacity.
9. Reporting and notification: this condition specifies the reporting requirements for the installation, and the arrangements for notifying the regulatory authority. These should be frequent enough to allow timely response to any violation of the permit conditions, and early notification of any administrative changes.
10. Fees and payments: when the Operator of the installation is required to pay any charges for emissions, treatment or disposal or the use of resources, the requirements should be specified together with how payments will be enforced.
11. Validity, renewal and variation: the permit specifies the date of entry into force and the validity period. The permit should instruct the Operator of the installation when to apply for a renewal or for revision, and how this should be done.

### **1.1.2 Class C environmental permit conditions**

The Class C environmental permit will specify conditions for:

- emission limit values for pollutants particularly those listed in Annex 2 of the new Law on Environmental Permitting,
- protection of the soil, where necessary,
- protection of groundwater, where necessary,
- appropriate waste management, where necessary,
- requiring the Operator of the installation to regularly provide the REA and NEI with the results of emission self-monitoring,
- requiring the Operator of the installation to immediately inform the REA and NEI of any incident or accident which could significantly affect the environment, and all other requirements which would be necessary to ensure compliance with the legislation

## **1.2 Inspection framework**

The National Environment Inspectorate is a central public institution subordinated to the Minister of the Environment, exerting its jurisdiction in all the territory of the Republic of Albania through its central office and through its regional (Qark) branches: the Regional Environment Inspectorates.

The draft Law on Environmental Protection defines the functions of the National Environment Inspectorate (NEI) as follows:

- NEI is the competent authority for ensuring state control of environmental protection and the utilisation of natural resources;
- NEI is the competent authority for ensuring compliance with the conditions of any environmental permit;
- NEI is the competent authority for preparing the annual inspection plans and ensuring their implementation;

- NEI is the regulatory authority for ensuring the implementation of environmental liability principle

### 1.2.1 Verification of a permit application form

On-site verification of the answers submitted in the application form is discretionary by the EFA for Class A and B permits and discretionary for the REA for Class C permits. However, in practice, verification is strongly recommended to ensure that all questions have been correctly answered and full information provided in order to write the most applicable permit conditions

Review and Site Verification Form of an Application Form for the Class A or Class B Environmental Permit is given in Annex I.

### 1.2.2 Compliance checking and enforcement of environmental permit requirements

Implementation of the permit's requirements is the responsibility of the operator of the installation to which the permit applies, while the enforcement is the active process that Inspectors undertake to ensure that permit requirements are met.

The enforcement of the permit requirements consists of both preventive and reactive enforcement.

Preventive enforcement is the regular inspection of industrial installations.

Reactive enforcement takes place when an Operator seriously violates the requirements.

Several courses of action may be taken in response to non-compliance. These include both the imposition of criminal and administrative penalties.

### The provisions of the Albanian Administrative Law

Application of administrative law is the first tool for Inspectors which wants to control permit's holders.

Administrative law is initiated by environmental Inspectors who explain why a operator is in non-compliance.

Officials of the National Environmental Inspectorate have the following administrative law powers (draft Law on Environment Protection):

1. To enter at any reasonable time any premises on which an activity subject to an environmental permit is carried out;
2. To take measurements and photographs and make such recordings as deemed necessary for the purpose of any examination or investigation;
3. To list, examine and take samples of goods, inspect processes and emissions;
4. To inspect installations and to require to view their records (and confiscate them if necessary);
5. To take legal actions (under administrative law) against violators in situations of non-compliance;
6. To halt and correct situations that pose an immediate risk for the environment and / or public health;

The following administrative sanctions can be applied:

- Use a *Compliance Notice* to require the Operator to remedy the contravention
- Use a *Suspension Notice* to cease the effectiveness of a permit for a specific period of time
- Impose *Administrative Contravention* for the infringement of environmental thresholds specified in the permit

### **The provisions of the Albanian Criminal Law**

The criminal law is another tool that can be used by the Inspectors. The criminal law can be applied after the public prosecutor has been informed of the infringement.

The public prosecutor will decide whether to prosecute or not.

A number of environmental crimes are foreseen by Chapter IV of the Criminal Code, including:

- Article 201 "Polluting the air"
- Article 202 "Transporting toxic waste"
- Article 203 "Polluting the water"
- Article 204 "Prohibited fishing"
- Article 205 "Unlawfully cutting forests"
- Article 206 "Cutting decoration and fruit trees"
- Article 207 "Breach of quarantine for plants and animals"

## **1.3 Inspection**

Guidelines for minimum criteria for environmental inspection are provided in EU Recommendation 2001/331/EC (4 April 2001) as well as IMPEL (1999), and are included in this Handbook under chapter 2 of this handbook. The criteria cover all industrial installations and other activities whose air emissions, water discharges, waste disposal and other aspects are subject to the permitting process.

Inspections are conducted by government inspectors. The inspector's role is to gather facts about a facility collect and analyze documentation, and record observations. The inspector then organises those observations and supporting documentation into a report for review against the specific conditions set out in the environmental permit.

This section contains general information on elements of an inspection. It includes scope and content of inspection, the preparation of an on-site visit, the on-site visit inspection, other types of inspection than on-site visits and the follow-up.

Specific information for Inspectors is included in chapter 2 of this handbook.

### **1.3.1 Scope of inspection**

The existence of inspection systems and the effective carrying out of inspections is a deterrent to environmental violations since it enables authorities to identify breaches and enforce environmental laws through sanctions or other means. Inspections are an indispensable link in the regulatory chain. They also contribute effectively to a more consistent implementation and enforcement of environmental legislation across the nation.

Environmental inspection is defined as:

- checking and promoting the compliance of controlled installations with relevant environmental requirements set out and applied in national laws, some of which have transposed EU legislation,
- monitoring the impact of controlled installations on the environment to determine whether further inspection or enforcement action (such as issuing, modification or

revocation of any permit, authorisation or licence) is required to ensure regulatory compliance.

### 1.3.2 Types of inspections

Inspections may be “routine” (there is no reason to suspect that the facility is out of compliance) or “for cause” (a particular facility is targeted because there is reason to believe it is out of compliance). Inspectors may notify the facility prior to inspection or arrive unannounced.

There are many levels of inspection. At the most basic level, an inspector can simply walk through a plant. A more complex and time consuming inspection might require an inspector, or multiple inspectors, to spend time in the facility to observe operations, interview plant personnel, and take samples for analysis.

Inspection goals include:

- Establish that the operators are managing the installation in accordance with the terms and conditions of the permit
- Identifying specific environmental problems.
- Making the operator aware of any problems.
- Gathering information to determine a facility’s compliance status.
- Collecting evidence for enforcement.
- Ensuring the quality of self-reported data.
- Demonstrating the government’s commitment to compliance by creating a credible presence.
- Checking whether facilities that have been ordered to comply have done so.

Inspection activities can be divided into regular or routine inspections and inspections in response to complaints or incidents.

#### 1.3.2.1 Routine Inspections

These are the large part of the inspections carried out by an Inspectorate. These are carried out as part of a scheduled inspection program, since such inspections are essential to the integrity of an enforcement programme.

On regular routine site visits the environmental inspector should:

- examine the full range of environmental impacts in conformity with the legal requirements, environmental inspection plans, and the designated authority schedules for environmental inspection, and
- share the findings of the site inspection with the operator of the installation and activity in order to promote and reinforce knowledge in legal environmental requirements, and the environmental impacts of the activity, and
- determine the effectiveness of the permit conditions to controlling pollution and minimizing environmental impact, and assess whether changes are required in the permit.

#### 1.3.2.2 Non Routine Inspections

These should take a minor portion of the time of an Inspectorate. These are carried out:

- in response to complaints
- in the investigation of accidents, incidents and occurrences of non-compliance.

On non-routine site visits the environmental inspector should:

- ensure compliance with requirements of a permit after it has been issued and before the start of the activity, or

- ensure that an environmental inspection is carried out as soon as possible after a complaint, or
- ensure that an environmental inspection is carried out as soon as possible after notification of a situation of non-compliance, environmental accident or incident, or
- to notify EFA whether the situation requires a re-issue, renewal or modification of an existing permit.

The important criterion for investigation of accidents, incidents or situations of non-compliance is that an Environmental Inspector responds immediately.

The purpose of such an investigation is to:

- clarify the causes of the event and its impact on the environment,
- identify the consequences of the event,
- identify actions to be taken by the operator of the activity to mitigate or reverse the environmental impacts of the event,
- determine actions to be taken to prevent further accidents incidents or situations,
- determine what or who is responsible for the event,
- enable enforcement actions or sanctions to proceed to prevent further accidents, incidents or situations of non-compliance
- forward the conclusions to the authority responsible for enforcement if different from the inspecting authority,
- ensure that the operator of the activity takes appropriate follow-up actions.

Priority inspection work should be driven by a systematic approach, not by a reactive response to complaints or investigating situations of non-compliance.

### **1.3.3 Priority setting**

Priority inspection work should be driven by a systematic approach, not by a reactive response to complaints or investigating situations of non-compliance.

The polluting capability or risk caused by an installation in practice should be taken as an important criterion in setting priorities. Indeed it is a common practice to classify installations according to the degree of pollution they cause. The higher the rating is, the higher the priority shall be.

The emphasis which an Inspectorate wants to put on specific or integrated inspections are also important for priority setting. Integrated inspections are inspections in which all aspects included in the environmental permit are checked. During a specific or single medium inspection only one of the environmental aspects is checked by the Inspector. Both integrated and specific inspections shall be carried out.

The frequency of inspection of an installation, naturally, depends on the priority it is given.

### **1.3.4 Inspection planning**

The Inspector should gather information that can be used to determine compliance with permit conditions, applicable regulations and other requirements.

Based upon the information in the installation dossier, the Inspector determines the most important environmental issues that should be dealt with during the inspection. Those usually include essential environmental information and key regulations contained in the permit. The Inspector may thereafter determine the way the inspection will be executed and what its focus will be. This is usually laid down in an Inspection Plan.

In practice, an inspection plan should consist of two principal components:

1. A strategy for managing environmental inspections (an overall framework or 'blueprint' which stipulates what actions will be taken and by when), and
2. A plan for implementing the strategy (containing the details of how these actions will be undertaken and by whom).

The inspection plan should include:

- a register of permitted installations and activities within the plan area,
- a general assessment of major environmental issues within the plan area,
- a general appraisal of the state of compliance of permitted installations and activities with the legislation
- data on and from previous inspection activities, if any.

### **1.3.5 On site inspections**

The Environmental Inspector should ensure that an environmental inspection site visit incorporates the following actions:

- A pre inspection consultation with the most recent data in the site dossier
- an appropriate check is made of compliance with the relevant legal and permit requirements,
- exchange of information, coordination of site visits and actions, where site visits are carried out by more than one environmental inspecting authority, and
- findings of site visits are contained in reports or as a database, and such reports or data are exchanged between relevant authorities whether national, regional or local.

On regular routine site visits the Environmental Inspector should:

- examine the full range of environmental impacts in conformity with the legal requirements, environmental inspection plans, and the designated authority schedules for environmental inspection, and
- share the findings of the site inspection with the Operator of the installation and activity in order to promote and reinforce knowledge in legal environmental requirements, and the environmental impacts of the activity, and
- determine the effectiveness of the permit conditions to controlling pollution and minimizing environmental impact, and assess whether changes are required in the permit.

On non-routine site visits the Environmental Inspector should:

- ensure compliance with requirements of a permit after it has been issued and before the start of the activity, or
- ensure that an environmental inspection is carried out as soon as possible after a complaint, or
- ensure that an environmental inspection is carried out as soon as possible after notification of a situation of non-compliance, environmental accident or incident, or
- to notify EFA or REA whether the situation requires a re-issue, renewal or modification of an existing permit.

### **1.3.6 Desk study inspection as a prerequisite to on-site inspection**

Prior to carry out a on-site inspection a desk study should be completed. Such desk study inspection focuses on examining and evaluation of existing or required data from the installation in question, e.g. waste data returns or self-monitoring data delivered by the installation in accordance to the permit conditions.

### **1.3.7 Follow-up**

The completion of an on-site visit may be followed by the following actions:

- Informing the Environment and Forestry Agency and/or the Local Government Authority
- planning a follow-up inspection;
- updating dossiers;
- writing notices (including the Environmental Inspector Report);
- criminal or non-criminal follow-up.

#### **1.3.7.1 Environmental inspector's report**

After every site visit, the Environmental Inspector must process or store the inspection data and the findings as soon as possible. The data and findings will include:

- an evaluation of the compliance of the installation and activity with permit conditions and the appropriate legislation,
- a conclusion as to whether any further actions should follow. Such actions might include enforcement proceedings, sanctions, recommending the issuing of a new or revised permit, and follow-up inspection activities including further site visits.

An Environmental Inspector Report must be properly recorded in writing and maintained in a readily accessible database. The full report should be communicated to the Operator of the activity. Any concerns and recommendations about the activity should be given verbally by the Environmental Inspector to the Operator of the activity at the conclusion of the inspection.

Environmental Inspection Reports should be publicly available within two months of the inspection taking place.

### **1.3.8 Investigation of accidents, incidents or situations of non-compliance**

Inspections of accidents, incidents or situations of non-compliance must be carried out by the Inspectors of the National Environmental Inspectorate for Class A and B permitted activities or of the Regional Environmental Inspectorate for Class C permitted activities. The important criterion is that an environmental Inspector responds immediately to an accident, incident or situation, whether competent or otherwise in the Class of permitted activity.

The purpose of such an investigation is to:

- clarify the causes of the event and its impact on the environment,
- identify the consequences of the event,
- identify actions to be taken by the Operator of the activity to mitigate or reverse the environmental impacts of the event,
- determine actions to be taken to prevent further accidents incidents or situations,
- determine what or who is responsible for the event,
- enable enforcement actions or sanctions to proceed to prevent further accidents, incidents or situations of non-compliance
- forward the conclusions to the authority responsible for enforcement if different from the inspecting authority,
- ensure that the Operator of the activity takes appropriate follow-up actions.

### **1.3.9 Report on environmental inspection activities**

Data available from regional and local inspecting authorities should be brought together in a single annual report. The report should include:

- staffing and other resources of the inspecting authorities,
- details of the inspecting authority's role and performance in the establishment and implementation of relevant plans for inspection,

- summary details of the environmental inspections carried out, including the number of site visits made, the number and type of permitted installations and activities inspected, and the estimated length of time before all installations and activities of that type have been inspected,
- brief data on the degree of compliance with legal requirements by permitted installations and activities based on conclusions from environmental inspections,
- summary of actions taken as a result of serious complaints, accidents, incidents and situations of non-compliance, and their number,
- evaluation of the success or failure of the environmental inspection plans, with any recommendations for the future, and
- the Report should be made available to the public.

## 2 Field safety

Environmental compliance inspections can be hazardous unless proper safety precautions are strictly observed.

A safe field inspection depends on the recognition, evaluation and control of hazards. During field activities, it is not always possible to eliminate hazards. However, it is possible to reduce the risk associated with these hazards, through the use of monitoring or testing equipment, engineering controls, personal protective equipment and employee training.

Inspectors may typically encounter six hazard categories during inspections:

- Chemical
- Fire and explosion hazards
- Mechanical - falling objects, moving parts
- Physical - noise, radiation
- Radiological Hazards
- Biohazard

### **Chemical hazards**

Exposure to chemicals is the most common and significant health hazard the field personnel may encounter as there are tens of thousands of chemicals produced, stored, transported or used annually.

Industrial sites producing or using these chemicals have process machinery, transporting equipment, structures and conditions that present their own hazards.

Chemicals may be hazardous because they are toxic, flammable, combustible, explosive, corrosive, reactive, radioactive, biologically active, or some combination of these and other characteristics.

The health effects of chemical exposures may be either chronic or acute. Exposure may be direct or indirect.

Inspectors shall not depend upon their senses alone to warn of exposure, as the reactions may not be quick enough to prevent injury or even death. It is therefore needed to gather the necessary information, plan ahead and provide inspectors with the correct personal protective equipment (PPE) and caution against all hazards before entering a potentially dangerous area.

### **Fire and explosion hazards**

During the field work inspectors may be exposed to fire and explosion hazards from materials they may be using or encounter.

There are many substances that can produce a fire or explosion that are found in industrial settings.

Recognizing fire and explosion hazards requires an understanding not only of the types of materials that can catch fire or are reactive with air or water, but also of the processes by which materials burn or explode.

Combustion needs three things to take place. These three things are known as the fire triangle; and consist of combustible material (fuel), oxidizer (oxygen in atmosphere) and ignition energy (heat).

Combustible material: those posing greatest concern are dusts, vapours, and gases that can be ignited easily and burn rapidly or explosively:

- Combustible gases - acetylene, ammonia, butane, hydrogen, methane, propane, etc.

- Combustible dusts - agricultural products, wood products, chemicals, pharmaceuticals, metals, and plastics.
- Combustible liquids - liquids capable of being ignited - includes flammable liquids, flash point temperatures below 38°C - many industrial chemicals, paints, thinners, solvents, fuels - containers of these are also hazardous.

Oxidizer: is usually oxygen in air. Peroxides, perchlorates, permanganates, sulphuric acid, chlorine and fluorine may also act as oxidizers.

Ignition energy: the amount needed depends on state and concentration of the combustible material; and concentration of oxygen. Typical sources include: heated metal, sparks, flames, static electricity and sparks, and sunlight. Cigarettes are one of the most common accidental ignition sources in an industrial setting. Inspectors should only smoke in areas designated for smoking.

### **Mechanical hazards**

These include things that cut or crush you, remotely controlled vehicles, forklifts, and potential entanglements.

### **Physical hazards**

These hazards include extremely high or low temperatures, dry or humid atmospheres, poor lighting and excessive noise, and biological hazards. These cause more lost man-hours for inspectors than all the other hazards combined. They consist of micro and macro-biological sources. Microbiological sources include viruses, bacteria and parasites. Every facility is a separate environment where plant personnel bring bacteria and disease into a central location. Inspectors should be particularly cautious around food and water sources, rest rooms and washing facilities.

### **Radiological hazards**

Radiation sources may present external or internal danger. Some common sources are medical equipment, radioactive wastes from medical facilities, X-ray equipment, some electronic equipment, and even smoke detectors.

Generally the greater the radiological hazard the more likely it is to be controlled.

Highly radioactive sources will often have an obvious means of identification through hazard markers, labels or through detection equipment.

### **Bio-Hazard**

Inspectors will be required to visit sites and installations where potentially infectious healthcare waste is being sterilised using either steam or flame based technology. These facilities will have untreated waste on site and care should be taken when carrying out inspection visits and process monitoring at these sites. Suitable personal protective clothing should be worn to prevent any risks of inhalation of bio aerosols or needle stick injuries.

## **2.1 Selection of personal protective clothing and equipment**

Proper selection of PPE requires a thorough understanding of the hazards to be faced during an inspection, and accordingly inspector shall use only properly fitting personal protective equipment.

Typically a PPE list includes the following:

- *Head Protection*: essential where there are overhead hazards (platforms, scaffolding, piping)
- *Eye and Face Protection*: use whenever there is danger of flying or falling particles or chemical splashes

- *Foot Protection*: make selection based on hazard to be encountered: impact, penetration, chemicals, ankle twists and sprains, slippery surfaces, cold, heat, static electricity
- *Hearing Protection*: if conversation is difficult at a distance of 1 meter, hearing protection should be used
- *Hand Protection*: gloves should be selected based on the probability of: abrasions, bruises, lacerations, splinters, etc., chilling, freezing, or burns, chemical and biological contaminants, and electrical shock
- *Skin and Body Protection*: clothing should be selected for resistance to chemical degradation and permeation, and resistance to heat.

### 3 Carrying out the inspection

*“Inspection is not a courtesy call or making a business deal, it is to compile facts and figures and to make observations. Inspection is a clear mission.”<sup>1</sup>*

#### 3.1 Planning the inspection

Inspection planning concerns all activities related to the scheduling, organisation, timing, execution and follow-up of inspection work.

Good planning is the key to success and therefore should be done carefully.

Before undertaking an environmental site inspection good planning is essential. Key issues in inspection planning are:

- Consultation with the site dossier
- Setting of clear objectives of what accomplishments are expected from the inspection.
- Familiarity and understanding of the technical aspects, compliance history, the relevant regulations and physical site lay-out.
- Practical preparation of the site visit, including equipment and methods as well as safety aspects.

These and other issues should lead to a proper Inspection Plan.

##### 3.1.1 Frequency of inspection

The frequency of environmental inspections should be carried out according to the types of inspections being undertaken and should be related to the compliance at the site and the manner in which the site is managed and operated. A well managed facility will not require the same level or frequency of inspection visits as one which is problematic with frequent non compliance issues. An installation that has EMAS<sup>2</sup> or ISO14001 certification can usually be assumed to be a well managed facility:

###### Routine inspections

Routine inspections are carried out periodically to ascertain compliance with valid regulations, to check proper operation, to control self and independent monitoring systems and their results, and to establish further inspection activities.

Routine inspections are carried out to:

- Assess compliance with a permit of an existing installation that legally requires a permit. Compliance monitoring is the most common kind of inspection, and is undertaken regularly according to an established routine, and
- Assess an establishment without a permit, but with other specific requirements to fulfil such as “Seveso II”, upper and lower tier industrial activities.

The NEI and REI inspection authorities should set baseline frequencies for each category of installation, taking account the need to use resources efficiently and effectively. As part of the environmental inspection planning process, the inspection authorities should develop an

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<sup>1</sup> EU Network for the Implementation and Enforcement of Environmental Law - Reference Book for Environmental Inspection

<sup>2</sup> EMAS (Environmental Management System) is a tool designed to enable organisations to target, achieve and demonstrate continuous improvement in environmental performance. It is one integrated management process with a number of stages, which includes an environmental audit. There are a number of standards (e.g. the British Standard BS7750 (BS11992), the European Eco-Management and Audit Scheme for Industry (CEC, 1993) and the DoE Eco-Management and Audit Scheme for UK Local Authorities (DoE,1995)).

assessment and scoring system to determine inspection frequencies, by adjusting the baseline frequency for each installation with regard to its specific circumstances. Competent authorities should establish criteria by which each installation can be assessed based on the following criteria and using the professional judgement of the environmental Inspector:

**Table 1: Criteria for assessing the frequency of inspections**

The previous environmental performance of the Operator
Any previous prosecutions, orders or administrative fines
Specific knowledge and equipment of the inspection authority (where this is not available, compliance may need to be checked by other means. However, compliance still has to be ensured)
Use by the Operator of self-monitoring systems such as periodic emission reports, continuous measurement systems and/or remote control data-combined systems
Participation in Eco-Management and Audit Scheme (EMAS) or International Standards Organisation (ISO) 14001. The quality of the management system employed by the Operator of an industrial activity is the key factor.
Complexity of the industrial activity and installation
Age and condition of the industrial installation
The local situation taking into account the sensitivity or vulnerability of the receiving air, land and water environment, as well as the distance to residential areas, schools, hospitals, and health centres where patients are kept overnight, and environmental protection areas and the density of installations and emissions
A change of Operator which may mean the authority needs to give advice and check his knowledge and reliability

#### Non-routine inspections

Non-routine inspections are carried out in response to an event, and are:

- a single visit after the application for an environmental permit (if required by the permitting authority) to validate the application details.
- rapid response inspections concerning failures in operation of the installation such as after a spillage, pipeline fracture, or when permit conditions have been significantly infringed. The purpose of the inspection is to establish the cause, determine the effects, and recommend measures to mitigate the environmental impact,
- a rapid response inspection should be undertaken where an infringement is anticipated, thereby protecting the receiving environment without additional controls being implemented,
- in response to complaints from the public or other agencies to determine the source and cause of the complaints. The inspection may be a single visit or multiple visits according to the seriousness of the situation, and
- accidents on site involving personal injury or death

In each of the above cases, inspection is desirable. It is important to recognise that inspection may not be necessary on every occasion, and that the frequency of inspection should be left to the professional judgement of the environmental Inspector. For example, in the case of trivial complaints, inspection may not be necessary if the Inspector is well informed about the installation. Cooperation of the Operator is especially important in all inspections and site visits, and indeed, is required under the law.

#### Specific inspection campaigns

Specific inspection campaigns may be held to investigate or follow up a certain environmental issue, or when infringements or incidents of a similar nature have occurred at installations of a particular type or belonging to a particular industrial sector.

In addition, specific inspection campaigns may be held in the following circumstances:

- to investigate or follow up a certain environmental issue,
- preparation for the introduction of new regulations,

- in response to public or professional concerns, and
- to establish mass-balances, reports, plans or registers.

Such campaigns can be local, regional or national. A campaign may result in a change of enforcement practices, or permits, or national regulations, or developments of the “state-of-the-art” of process or abatement techniques.

### **3.1.2 Preparation of the inspection visit**

A key to successful on-site visits is the awareness of the Inspector about the situation, the activities and processes, the history and other aspects of the site to be visited.

Prior undertaking an environmental site inspection, the Inspectors should familiarise themselves with the following site information through consultation with the site dossier:

- the permitted operation of the site,
- type of industrial activity,
- location of the site, while a knowledge of the relevant requirements of the planning permit for the site, its layout and key components would be beneficial,
- familiarise themselves with the permit conditions for the site to be visited, and exclusions and conditions imposed on the environmental permit for the industrial activity,
- review the compliance history and recent inspection report forms. This will indicate whether or not there have been recurring problems, recent breaches of permit conditions, any remedial actions required and any current enforcement action being undertaken. Copies of recent inspection reports could be made by the Environmental Inspector to take on site, and
- any other relevant information in satisfying the overall objectives of the inspection.

On the basis of this information the Inspectors determine the most important environmental issues in the context of the installation and the inspection. Those usually include essential environmental information and key regulations contained in the permit. The Inspectors can then determine the way the inspection is executed and what its focus will be.

As an expedient for the site visit, a regular checklist can be used. In this checklist the possible points of attention are mentioned; for environmental items specific to the site, the licence can be used. The checklist is a tool to assist the inspection process.

A pre-visit checklist for the Environmental Inspector is provided in Annex I and site inspection checklist provided in Annex II.

### **3.1.3 Development of the Inspection Plan**

The key element in the preparation of the on-site visit is the compilation of the Inspection Plan. The Inspection Plan should be based on in-depth knowledge of the available dossier of the installation(s) to be inspected.

While the length and complexity of the one's own Inspection Plan vary, the main elements of a good Inspection Plan are summarised in the table below.

**Table 2: Content of an Inspection Plan**

<p><b>1. Objectives of the Inspection;</b></p> <ul style="list-style-type: none"> <li>- What is the purpose of the inspection?</li> <li>- What is to be accomplished?</li> </ul> <p><b>2. Scope and assessment topics;</b></p> <ul style="list-style-type: none"> <li>- What records, files, permits, regulations will be checked?</li> <li>- What specific facility processes will be inspected?</li> <li>- What will be milestones? What is essential/what is optional?</li> </ul> <p><b>3. Inspection activities and field techniques;</b></p> <ul style="list-style-type: none"> <li>- What procedure will be used?</li> <li>- Will the inspection require special procedures?</li> <li>- What will be the time requirements and order of inspection activities?</li> <li>- Has a Quality Assurance Plan been developed?</li> </ul> <p><b>4. Sampling planning;</b></p> <ul style="list-style-type: none"> <li>- What co-ordination with laboratories, other State or local authorities is required?</li> <li>- What information must be collected?</li> <li>- What samples will be taken and/or tests will be conducted?</li> </ul> <p><b>5. Safety plan;</b></p> <ul style="list-style-type: none"> <li>- Has a safety plan been developed?</li> </ul> <p><b>6. Administrative requirements;</b></p> <ul style="list-style-type: none"> <li>- What personnel will be required?</li> <li>- What equipment will be required?</li> <li>- What are responsibilities of each member of the team?</li> <li>- How will the reporting be organised?</li> </ul>
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### 3.1.4 Information and equipment needs

In order to carry out the environmental inspection a varied amount of documentation and equipment may need to be taken to the site by the Inspector. The planning stage of the site inspection should include a check to ensure that all the necessary equipment is available where required. A checklist from which equipment could be selected is provided below.

**Table 3: Equipment Checklist**

Authorisation (ID card) or identify card	Copies of notices sent to the installation
Copy of environmental permit for the installation	Vehicle and fuel
Pocket notebook and writing materials	Hard hat or safety helmet
Interview record forms	Overalls
Portable tape recorder (it is courteous to notify anyone that you are recording their conversation)	Ear protection and face protection
Site file information	Protective boots or other appropriate protective footwear
Maps of the site and surrounding area	High visibility jacket
Inspectorate information leaflets and information on the regulations appropriate to the site inspection	Special clothing where appropriate (inspection of a building being demolished may require protective clothing and special air filters on masks to avoid inhalation of asbestos)
Information to hand out describing the Ministry and Inspectorate as part of promoting awareness in the industrial community	Protective goggles/safety glasses
Background information on the type of industry and environmental concerns relating to that industrial sector	Protective gloves
Business Cards	Sampling equipment for soil, air emissions, noise emissions, wastewater discharges, bacteriological samples, biological samples, etc where appropriate
Inspection report forms	Cell (Mobile) telephone (although in some cases it may be required to have permission to bring a cell phone on site)
Process diagrams	Camera (preferably digital allowing photographs to be downloaded to the electronic database)
Reports and copies of letters from previous inspections	

### 3.2 On-site visit

The preparatory phase of the inspection activities is followed by the actual on site visit.

Generally, during the on-site visit, the Inspector verifies whether his observations in the field are consistent with the material he collected during the preparation.

It is important to be critical about the materials that are provided to the Inspector. Assumptions should always be verified.

A physical inspection is the most important aspect of an on-site visit. The purpose of an on site visit is to determine compliance with permit conditions.

This is achieved through an inspection of the following items:

- the plant, the processes and the emissions
- environmental equipment (including its maintenance)
- measurements, administration and log books

If necessary, samples are taken and measurements are carried out. Where samples are taken, correct sampling techniques must be used and correct containers utilised. Samples

should be taken in triplicate - and one sample given to the operator (so that he can have his own analysis conducted if he so wishes).

### **3.2.1 Announced and unannounced inspections**

Both announced and unannounced inspections have clear advantages.

Announcement will allow the Inspector to discuss specific operations with the site Operator. The advantage of an unannounced inspection is that the Operator of the installation cannot prepare for an inspection in advance so that normal operations are observed.

In most of the EU Member States, whether a routine site inspection is announced or unannounced depends on the type and size of installation, the purpose of the inspection, the occurrence of complaints or incidents, and the history of the occurrence of complaints or incidents, the history of the installation.

### **3.2.2 Execution of on-site visits**

Key items for a successful on-site visit are the respect and credibility that are created by the Inspector. To achieve this, an Inspector will need to have a prior understanding of the technical aspects of the industrial activity (but not necessarily detailed technical knowledge), and be clear and coherent about the purpose of the on-site visit and any related enforcement actions that need to be taken.

The inspection should start before the Inspector actually entering the site. Inspector should identify any of non-compliance or pollution risk for example relating to:

- wastewater discharges beyond the boundary of the site,
- visible air emissions such as smoke and dust,
- waste accumulations beyond the boundary of the site,
- the condition of the industrial site,
- noise,
- odour, and
- site security and the condition of the boundary fence.

The above list is not comprehensive. It highlights some of the pollution risks that may be evaluated when inspecting outside of the operational area of the site. There may be other risks that are perhaps site specific.

On site the Inspector should report to the office to make his/her presence known, normally to the site management, sign in and, if necessary, present his/her business card, or identification. The Inspector should ask on the availability of any technically competent staff that may be required to be on the site, or to accompany the Inspector on a site visit. During the inspection, the Operator's performance in running the site should be assessed against the permit conditions. Inspections should be systematic and objective and wherever possible the Inspector should not deviate from the intended course of action during inspection (Table 4).

Some Operators may wish to accompany the Inspector during the visit. This practice should be encouraged as it offers the opportunity to discuss the site management/ infrastructure and any other site related issues such as a non-compliance that may arise during the inspection. In certain circumstances the Inspector may need to speak to a specific member of the site staff (e.g. process engineer). However, Inspectors must be permitted to undertake their tasks without interference, provocation or unnecessary delay.

**Table 4: Course of action during on-site inspection**

1. Ask for the responsible person and write down his/her name. In most cases this person is known from previous visits or from previous correspondence with the company.
2. Explain the purpose and procedure of the inspection.
3. During the site inspection, the Inspector shall take whatever samples are necessary, and inspect and record details from any gauges and meters to determine compliance with requirements.
4. Site organisation and working practices should also be inspected to identify any non-compliance or pollution risk (e.g. storage of chemical drums in the open close to drains).
5. Any problems or faults found on site during the inspection should be reported to the Operator or delegated person prior to the Inspector leaving the site.
6. In the same way, required action, together with time scales should be reported to the Operator.
7. Where appropriate and possible, advice regarding improvements, precautionary measures and legislation should be given.
8. If required, site self-monitoring records should be checked and discussed.
9. If available the site-specific checklist should be completed and where necessary, signed by the Operator prior to departure.
10. Inform contact person/management on preliminary conclusions of the inspection.
11. Have the operator or responsible person sign and date the inspection form
12. Announce follow-up of the inspection where required.

Compliance checking

The following list illustrates the main areas of inspection:

- the operating plant
- abatement systems and the associated control and alarm systems
- control room, and emergency response and alarm testing log books
- drainage systems
- sample points and sampling equipment, both liquid and gaseous storage areas
- analytical laboratory, sample receiving logbook, and testing and calibration procedures
- compliance monitoring results log books
- abnormal incident reporting log book public complaints log book process operation procedures

Permit checking

The Inspector must establish whether the company is in possession of a current and valid permit. The Inspector must observe whether any new installation has been put into use since the last inspection, and if this has been included in a permit update or new permit. The Inspector must establish whether industrial production is according to the permit conditions by checking records.

The following questions need to be answered:

- Are the environmental conditions as set out in the environmental permit appropriate to the present industrial activity and installation?
- Do the present industrial activities comply with the permit conditions?
- Do the Operator and staff of the installation comply with the permit conditions?

Checking records held by the Operator

The Inspector must check:

- Administration records, logbooks and auditing reports, incident reports, and if these are up to date,
- Operator self-monitoring reports of air emissions, wastewater discharges, soil analyses, noise and odour and other releases, laboratory analyses results.

**3.2.3 Conducting interviews**

The interview is one of the more useful tools when conducting an inspection. The following information should be recorded in the Inspector's notebook during the inspection:

- to whom did I talk?
- what were my questions?
- what were the answers?
- were the answers satisfactory or do they require further attention?

Some key guidelines to remember when interviewing someone are outlined below:

**Table 5: Interviewing guidelines**

<ul style="list-style-type: none"> <li>• Before starting, identify who you are and why you are there</li> <li>• Be professional</li> <li>• Have a clear idea of the questions you will ask before conducting the interview</li> <li>• Avoid multiple subjects in one question. Deal with issues one by one</li> <li>• Listen attentively to replies and make brief notes or use a pocket tape-recorder. Ask permission to record the interview first.</li> <li>• Give people time to answer, and listen to what they have to say</li> <li>• Do not make promises you cannot keep, such as keeping a person's answer confidential.</li> <li>• Try to conduct interviews privately</li> <li>• Always note down the person's name, position and contact details</li> <li>• Avoid "leading" questions</li> </ul>
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How to ask a question can be more important than the question itself. Try not to give a possible answer within the question itself, but leave the person you are interviewing to provide the information. Examples of this are outlined below.

**Table 6: Examples of types of questions**

<ul style="list-style-type: none"> <li>• What kinds of raw materials do you use? (<i>Not: You use iron ore don't you?</i>)</li> <li>• Have any waste materials been buried on your property? (<i>Not: There aren't any waste drums buried in your site are they?</i>)</li> <li>• Where do you keep the technical operation records? (<i>Not: You have all the necessary records, don't you?</i>)</li> </ul>
---

The Inspector must verify statements made by the installation personnel. A statement from the operator or employee that something exists is not the same as verifying its existence by sight or measurement.

Documenting an interview for the record should be done as accurately as possible. The following are common methods used to record an interview:

- A summary of the interview written afterwards from memory, or from notes, or from a tape-recording, or from a video recording,
- A word-for-word written transcript of the interview done by the Inspector from notes, or from a tape-recording, or from a video recording. The person being interviewed can read, sign and date the transcription if required.
- A statement written, signed and dated by the person being interviewed.

### 3.2.4 Photographs and videos

The enforcement of environmental law is dependent upon the effectiveness of Inspectors as information-gatherers. Increasingly, photography has played an important role in that process. Photographs provide Inspectors not only with visual documentation contributing to more accurate inspection reports, but also with evidence for enforcement proceeding and objective descriptions of conditions found at the installation.

Photographs are some of the best physical evidence, and easiest to authenticate and therefore admit into evidence in court. The rest is simply that the Inspector has to say that any given photograph does "fairly and accurately represent" what the Inspector saw on the date in question at the site in question.

When enlarged and placed in view in the courtroom, photographs can be the best means of duplicating what occurred months or years earlier during an inspection. Clear photographs of relevant subjects provide an objective record of conditions at the time of the inspection. In this respect, photographs can be the most accurate demonstration of the Inspector's observations. Photographs can also be helpful to the field team for future inspections, informal meetings, and hearings.

Where a Polaroid-system is used, always take 2 pictures of the same subject at the same moment. A copy can then be handed to the company, and this fact recorded in the Inspector's Report along with signature and receipt for the photograph. Where a digital camera is used, make a record of the picture-file and leave this with the company. Use a camera that registers automatically date and time of the picture.

### **3.2.5 Sampling to document potential evidence of noncompliance**

Sampling and sample analysis may be necessary to document potential evidence of non-compliance from the air emissions, wastewater discharge, waste materials, or of the soil within or outside the installation.

Sample analysis is expensive, so make sure it is necessary. Sampling is necessary when:

- There is no data available
- There is insufficient data
- The data available is in doubt
- Data is needed to document an event, discharge or release
- Sampling is required by law or permit

Once the Inspector has made a determination that sampling is necessary the next consideration is to insure that the sample will be representative of the site, situation or time that he/she wants to characterize. There are two fundamental types of sampling, composite and grab. Composite samples may be described as a uniform measure taken of a specified volume, area or time. A grab sample may be described as a sample of a precise place at a precise moment in time. Usually sample exercises are thoroughly planned in advance and meticulously executed. However, it may be necessary to take spontaneous samples of opportunity. These unanticipated samples may be required because of changes in a facility's processes, permit status, or because there has been an event that requires chemical evaluation.

### **3.2.6 Desk study inspection as a pre requisite to on-site inspection**

Prior to the on-site inspection, the possibility of a supplementary desk inspection should be considered. Such desk study inspection focuses on examining and evaluation of existing or required data from the installation in question, or self-monitoring data delivered by the installation in accordance to the licence.

Desk study inspection can be useful in providing proactive support for environmental inspection by:

- o reviewing the overall environmental performance of single industrial installations and of industrial groupings,
- o examining and evaluating existing or required data from the installation,
- o reviewing self-monitoring data from the Operator of the activity in accordance with the permit conditions, and
- o identifying problems before they arise.

Desk-studies are important in giving time to the Inspector to read-up and acquaint with the background and current details of the industrial activity and industrial sector, and keeping up to speed with relevant new information (see Section 10 Useful Websites).

### 3.2.7 Follow-up to the on-site visit

Completion of the on-site visit may be followed by the following actions:

- issuing a letter to the Operator of the installation summarising the results of the inspection, listing actions that are required to be taken, and stating any agreements that were made verbally or in writing between the Inspector and the Operator (or his delegated representative at the time). In cases where non-compliance has occurred, a list of potential or anticipated punishments is included. In case of infringements, a warning letter may be issued. The inspection report may be an attachment to the letter. The next scheduled inspection visit can be mentioned although it is preferred to keep the timing of site visits discreet from the operators of installations. The letter can either be hand delivered, posted, sent by email, or faxed, but its receipt by the Operator must be assured.
- informing other inspecting bodies,
- planning a follow-up inspection and scheduling a date,
- updating dossiers and files on the industrial activity,
- writing public information notices, and
- any required legal advice on criminal or non-criminal follow-up.

### 3.2.8 Completion of the on-site visit

Completion of the site inspection with a closing meeting forms an important moment in the inspection process. The management of the company that was inspected will be curious to know the outcome of the inspection. They may even be anxious to influence the outcome or the opinion of the Inspector and the Inspector must be prepared to stand by the conclusions even under concerted effort from the operator or company management. Any attempt at influencing the decision by threat or bribery must be reported to the authorities as this is an illegal act. In order to obtain a proper completion of the on-site visit, the following guidelines might be applied.

The operator must sign and date the site inspection form.

**Table 7: Completion of the site visit**

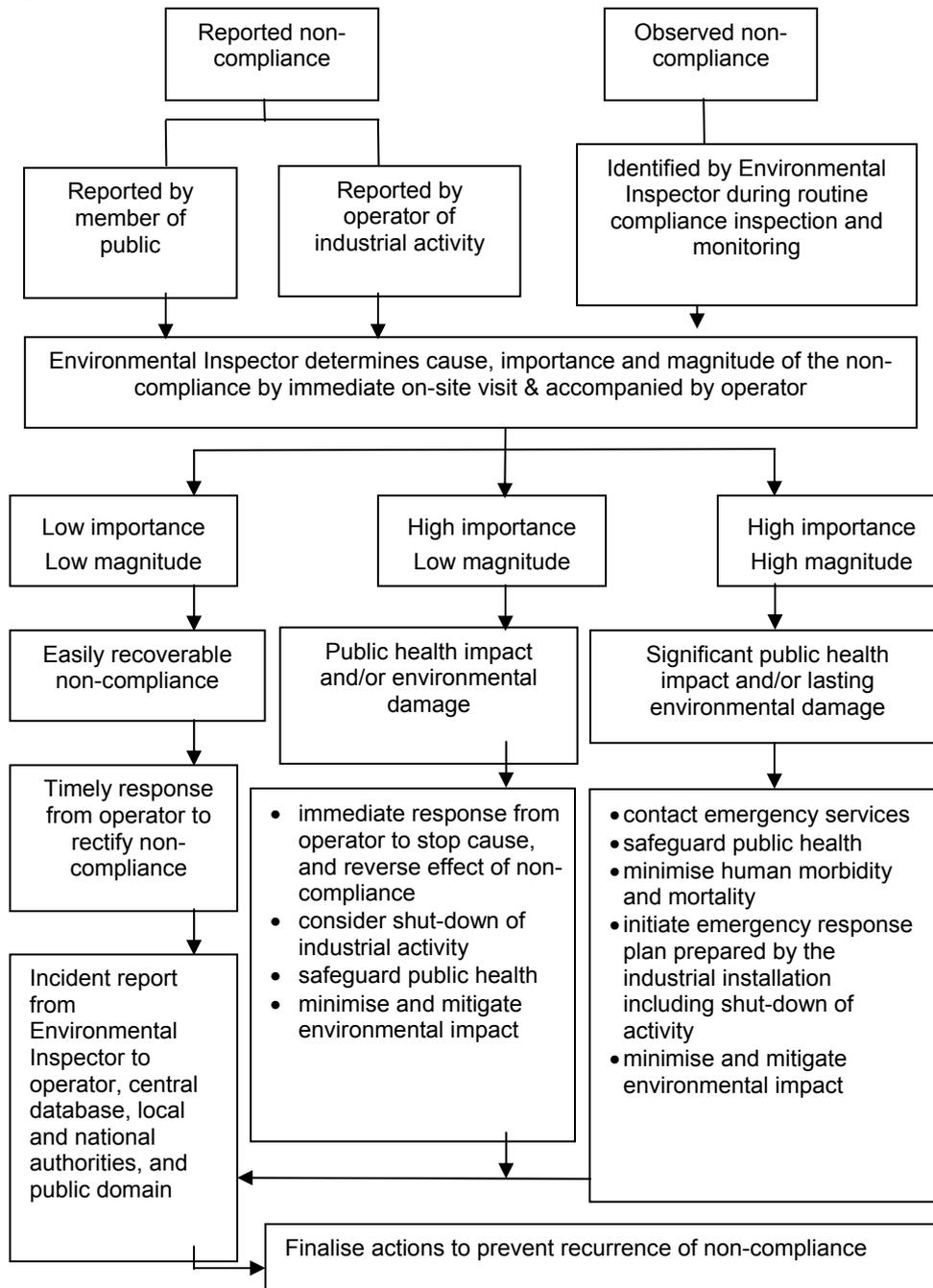
<ul style="list-style-type: none"> <li>• Organise a short meeting with the responsible persons of the company at the installation that has been inspected,</li> <li>• Make a written record of the names and titles of responsible persons and other personnel who were interviewed,</li> <li>• Review and make a written record of the documents, data and information that were handed over by the company,</li> <li>• Summarise the activities that were done by the Inspector,</li> <li>• Explain the procedures of the inspection follow-up,</li> <li>• Be friendly and open, but refuse to make any statement that might be interpreted as a formal statement by the Inspectorate or Authority. Refer to the documents and correspondence that will be provided to the company after completion of the inspection.</li> </ul>
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The results of the on-site inspection must be attached to the Environmental Inspector's Report, and both recorded in the electronic file for that industrial activity and installation. Where appropriate, an official report must be sent to the legal prosecutor's office. The report can be as simple as indicating whether a regulation in the licence has been met, to a full report including all the steps taken. The preliminary results should be discussed with the Inspectorate management, either during the inspection or at a later date. This will form the basis of further follow-up activities or for punitive enforcement actions. In a few cases, the infringements may be so serious that rectifying measures have to be taken immediately.

### 3.3 Responding to situations of non-compliance

If there is a situation of non-compliance occurring, the Inspector should identify the cause, evaluate the importance and magnitude of the non-compliance, and respond accordingly (Figure 2).

**Figure 2: Environmental Inspector response to environmental permit non-compliance**



The inspector may enter a written warning on the Site Inspection Report form if there are appropriate grounds for such action. A subsequent letter from the Inspectorate to confirm this should follow. The Inspector has the legal responsibility to demand that the owner of the installation initiates action to reverse and stop the situation of non-compliance.

**Table 8: Response from Environmental Inspector to accidental spills or incidents**

The extent and character of the incident should be determined as quickly as possible. In the case of serious or extended incidents, involvement of and coordination with fire brigades and emergency services should take place. The Inspector should be aware that issues of emergency risk and safety, and the work of the emergency services could take precedence over environmental concerns and issues.

In case of more limited or local incidents, the following procedure may be followed:

1. ask for the responsible person. In most cases this person is known from previous visits or from previous correspondence with the company,
2. explain the purpose of the inspection,
3. the Inspector should question the site contact and other site operators/staff as necessary to establish the exact details of on site-operations and potential problems which have resulted in the incident,
4. if the incident is more serious, the Inspector should be accompanied by a colleague in order that corroborated legal evidence may be collected and used in evidence,
5. all relevant areas of the activity and the neighbouring area of the site should be inspected unless the incident has resulted in conditions which are unsafe; the Inspector must follow the site safety requirements,
6. the contact person on-site should be given the opportunity to accompany the Inspector on the inspection (in some large process sites the Inspector should not enter the site unless accompanied by a site representative),
7. where appropriate, samples of discharges should be taken and if necessary should be taken as legal samples in accordance with the legal procedures for Albania for use as evidence,
8. the Inspector should write down all statements made by the contact person and if appropriate take photographs or video recordings as information or as evidence,
9. where appropriate, information and advice should be given to the site operator regarding action which may stop an ongoing incident, prevent a recurrence, or minimise damage caused. In some circumstances the Inspector may strongly recommend or insist that a certain action is taken to stop an incident and/or prevent further pollution, and
10. before leaving the site the Inspector should ensure that the operator/management is aware of any further action which is required on their part, and that the Inspector's course of further action is clear.

For a follow-up visit in response to the incident, it is important to assess the response of the company to the instructions and guidance of the Inspector given on the initial occasion.

If the situation of non-compliance is more serious with an obvious and discernible impact being caused or recently caused on the environment or on public health, then the Environmental Inspector has the legal responsibility to demand REA for "the suspension of the permit" or "the temporary cessation of the activity".

### **3.4 Environmental inspector's report**

The results of all on-site work and desk studies done by the Inspector must be written up as the Environmental Inspector's Report. Proper documentation of an inspection is a key professional aspect of the Inspector's workload.

The purpose of the inspection report is to present a factual record of an inspection, from the time when the need for the inspection is perceived through the analysis of samples and other

data collected during the inspection. The objective of an inspection report is to organise and co-ordinate all evidence gathered in an inspection in a comprehensive, useable manner.

Reports should be concise, factual and written in clear and non-jargon language. Technical information is essential, particularly where the report includes information on air emission, water discharge, BAT, energy efficiency and waste treatment. Report standardisation is essential for effective regulatory management and operation. To meet this objective, information in an inspection report must be:

- Accurate. All information must be factual and based on sound inspection practices. Enforcement personnel must be able to depend on the accuracy of all information.
- Relevant. Information in an inspection report should be pertinent to the subject of the report.
- Comprehensive. The subject of the report should be substantiated by as much factual, relevant information as is feasible. The more comprehensive the evidence, the better and easier the prosecution task.
- Co-ordinated. All information pertinent to the subject should be organised into a complete package. Documentary support (photographs, statements, sample documentation, etc.) accompanying the report should be clearly referenced so that anyone reading the report will get a complete, clear overview of the subject.
- Objective. Information should be objective and factual; the report should not draw conclusions.
- Clear and succinct. The information in the report should be presented in a clear, well organised manner.
- Neat and Legible. Adequate time should be taken to allow the preparation of a neat, legible report.

The Inspector's conclusion regarding compliance of the industrial activity and installation are critical in the decision as to whether a violation did or did not exist. It is essential that the Report includes the Inspector's conclusions regarding non-compliance. When the inspection report is sent to the company, any personal or subjective opinions must be omitted. Nevertheless, the Inspector may communicate to the company any views held on certain matters and actions observed at the installation.

If the Inspector has concluded that there has been non-compliance, this information should be mentioned in the report sent to the company. All inspection reports should be authorised for release into the public domain, including release to the operator of the industrial activity, by a manager or more senior persons as part of the QA process.

The extent and contents of the inspection report will depend on the question whether the inspection concerned an integrated or a specific inspection. Although the specific information items will vary, the following outline for an inspection report can be adapted to most situations. The Inspector may make selective use of the format presented in Table 9.

**Table 9: Content of the Environmental Inspector's Report**

<p><u>Name of Environmental Inspector, location and contact</u></p>
<p><u>General remarks</u> Name and location of industrial activity, purpose of the inspection, inspection information (date, time, name and contact of the operator or person in-charge at the time of the site visit, participants in the inspection visit and who accompanied from the installation)</p>
<p><u>Summary of findings</u> Brief summary of the inspection findings, names and designation of employees met and interviewed, who provided information or comment, summary of what was discussed and what was concluded</p>
<p><u>Background to the installation</u> Status of the installation, industrial activity, size of the organisation and production capacity at the time of inspection (verified from observation and records)</p>
<p><u>Opening meeting</u> Procedures used on arrival, positive or negative response from operator or representative, was consent for inspection given or refused and why, did the operator voice any concerns at the regulatory process</p>
<p><u>Records</u> Records, types of records reviewed, any inadequacies in record-keeping procedures, or if any required information was unavailable or incomplete, note if record-keeping requirements were being met</p>
<p><u>On-site observation</u> Statements taken during the inspection, photographs taken during the inspection, drawings, maps, charts, or other documents made or taken during the inspection</p>
<p><u>On-site samples</u> Purpose for which samples were obtained, exact location from which they were obtained, sampling techniques used, physical aspects of the sample, custody procedures used in sample handling, how samples were transported to the laboratory, results of laboratory analysis</p>
<p><u>Closing Meeting</u> Receipts for sealed replicated samples and documents given to operator of the installation (the operator has the option to have the samples analysed at a laboratory at the company's expense), procedures taken to confirm claims of confidentiality, recommendations made to operator</p>
<p><u>Attachments</u> List of attachments provided in the Report, list of all documents, analytical results, sample data and quality assurance data, photographs, and other supporting information attached to the report, copies of all documents and other evidence collected during the inspection and clearly identified.</p>

In Annex IV a checklist for the compilation of the Inspection Report is presented.

## 4 Monitoring compliance

### 1. "Why" monitor?

The main reasons why monitoring is included in permit requirements is because the collection and analysis of compliance information improves decision making through the following:

- Detecting and correcting violations.
- Supporting information strategies to promote compliance.
- Providing evidence to support enforcement actions and deter non-compliance.

However, monitoring data can often be used for many other reasons and objectives and indeed it is often more cost effective when monitoring data obtained for one purpose can serve other purposes. In all cases it is important that the objectives for undertaking the monitoring are clear for all the parties involved.

### 2. "Who" carries out the monitoring?

The responsibility for monitoring is generally divided between EFA, NEI and the operators, although NEI usually rely to a large extent on "self monitoring" by the operator. It is highly important that monitoring responsibilities are clearly assigned to all relevant parties so that they are all aware of how the work is divided and what their own duties and responsibilities are.

### 3. "What" and "How" to monitor?

The parameters to be monitored depend on the production processes, raw materials and chemicals used in the installation. There are three primary sources of compliance information discussed in this chapter:

1. Inspections.
2. Self-monitoring, record-keeping, and self-reporting by the operator.
3. Monitoring environmental conditions near the installation.

## 4.1 General principles for carrying out compliance monitoring

The production of monitoring data follows several consecutive steps that all need to be performed according to either standards or method-specific instructions to ensure good quality results and harmonisation between different laboratories and those undertaking the measurements. This data production chain consists of the following seven steps:

1. Flow measurement.
2. Sampling.
3. Storage, transport and preservation of the sample.
4. Sample treatment.
5. Sample analysis.
6. Data processing.
7. Reporting of data.

The practical value of the measurements and the monitoring data depends on the degree of confidence (i.e. reliability that can be placed on the results), and their validity when compared to other results from other plants (i.e. comparability). Therefore, it is important to ensure the appropriate reliability and comparability of the data. In order to allow a proper comparison of the data, it should be ensured that all relevant information is indicated together with the data.

Data that have been derived under different conditions should not be directly compared, and in these cases a more elaborate consideration may be necessary.

The total emissions of an installation are given not only by the normal emissions arising from the stacks and pipes, but also by taking into account diffuse, fugitive and exceptional emissions. It is therefore recommended that Class A Environmental permits specifically, but also Class B Environmental permits, where appropriate and reasonable, include provisions to properly monitor these emissions. As progress has been made in reducing channelled emissions then the relative importance of other emissions have become increasingly important, for instance more attention is now paid to the relative importance of diffuse and fugitive emissions. It is recognised that these emissions can potentially cause damage to health or the environment, and that sometimes their losses may also have economic significance for a plant. Similarly, the relative importance of exceptional emissions has also increased. These are classed as occurring under foreseeable conditions or unforeseeable conditions.

The handling of values under the limit of detection and outliers values can affect comparability and also require agreement in practice. Outliers are generally identified by expert judgement on the basis of a statistical test (such as the Dixon test) together with other considerations, such as an abnormal emission pattern from the installation.

Several approaches to monitoring a parameter are listed and briefly described below:

- direct measurements
- surrogate parameters
- mass balances
- calculations
- emission factors.

In principle, it is more straightforward, but not necessarily more accurate, to use a method involving direct measurements (specific quantitative determination of the emitted compounds at the source). However, in cases where this method is complex, costly or impractical other methods should be assessed to find the best option. Whenever direct measurements are not used the relationship between the method used and the parameter of interest should be demonstrated and well documented.

Monitoring techniques for direct measurements can be divided mainly into continuous and discontinuous techniques. Continuous monitoring techniques have the advantage that they provide a greater number of data points, however, they may have also some drawbacks, e.g. their higher costs, they are not much use for very stable processes, and the accuracy of on-line process analysers can be lower than laboratory measurements.

The use of surrogate parameters may offer several advantages, including greater cost effectiveness, reduced complexity, and a larger number of data. However, it may also lead to several disadvantages, including the need for calibration against direct measurements, they may only be valid over part of the entire emissions range and they may not be valid for legal purposes.

Mass balances consist of accounting for inputs, accumulations, outputs and the generation or destruction of the substance of interest, and account for the difference by classifying it as a release to the environment. The result of a mass balance is usually a small difference between a large input and a large output, also taking into account the uncertainties involved.

Therefore, mass balances are only applicable in practice when accurate input, output and uncertainties quantities can be determined.

The use of calculations to estimate emissions requires detailed inputs and is a more complex and more time consuming process than emission factors. On the other hand they provide a more accurate estimate given that they are based on specific conditions of the installation. In any emission estimation calculations, the emission factors need reviewing and prior approval by the authorities.

Compliance assessments generally involve a statistical comparison between the measurements, or a summary statistics estimated from the measurements, the uncertainty of the measurements and the emission limit value or equivalent requirements. Some assessments may not involve a numerical comparison, for example they may just involve a check of whether a condition is complied with. The measured value can be compared with the limit, taking account of the associated uncertainty in measurements, and determined as belonging in one of three zones:

- (a) compliant,
- (b) borderline or
- (c) non-compliant

#### Reporting of monitoring results

Reporting involves summarising and presenting monitoring results, related information and compliance findings in an effective way. Good practice is based on consideration of: the requirements and audiences for reports, responsibilities for producing reports, the categories of reports, scope of reports, good reporting practices, legal aspects of reporting and quality considerations. In carrying out the monitoring, optimisation of the monitoring costs should be undertaken whenever possible, but always without losing sight of the monitoring objectives. Cost effectiveness of the monitoring may be improved by applying some actions including:

- selecting appropriate quality performance requirements,
- optimising the number of parameters and the monitoring frequency,
- complementing routine monitoring by special studies.

### **4.1.1 Air emission monitoring**

Air emission monitoring is a comprehensive discipline. The number of substances for which there are specified limit values is large. Many of the substances can only be measured or sampled for laboratory analyses by using highly specialised equipment, although in some cases it is possible to use standardised automatic monitoring methods.

It is convenient for self monitoring and for supervising an industrial process to install automatic monitors. The automatic monitors could be for measuring temperature, flow and concentrations of pollutants like SO<sub>2</sub>, NO<sub>x</sub> (NO and NO<sub>2</sub>), CO and particulates but also for non-pollutants like O<sub>2</sub> and CO<sub>2</sub> (relevant to energy efficiency).

The inspector may rely on the emission monitoring specialist needed to perform the special emission measurements since it is most often done by laboratories with some kind of authorisation. Inspection might be limited to the emission report where all relevant parameters should be documented. The documentation should include the plant performance characteristics which should be described in the environmental permit.

The inspector should always inspect the control room of a plant to follow the process during measurements and to check the production rate and other relevant parameters. The Inspector should ensure that the process parameters have been stable before and during the

measurements are performed. Information on plant operation during a longer period in the past should be available in the recorded files with operation parameters.

It is common in most European countries that the environmental agencies have access to various portable instruments to do some initial spot measurements which could launch a broad monitoring programme in case the limit values are or could be exceeded according to the spot measurements.

The detailed descriptions are for the most common monitoring principles laid down in ISO (International Standard Organisation) or CN (European Committee for Standardization) standards. There are a number of guidelines available concerning methodology and practice concerning emission monitoring in general and with respect to the monitoring of special substances, and these are listed in Annex VI.

#### **4.1.2 Wastewater discharge monitoring**

Point source monitoring traditionally collects samples of the wastewater discharge in clean, disposable 1L plastic bottles (or other appropriate sized bottles of appropriate material) to be returned to the laboratory for chemical analysis under the following criteria:

- the person undertaking the sampling must be trained in monitoring techniques, and the risks of entering wastewater areas and water habitats,
- the person collecting samples must be made aware that wastewater can contain toxic, carcinogenic, pathogenic and other elements which are a health risk, particularly if the person is not dressed in appropriate protective clothing,
- the sampling point remains the same on each sampling occasion, and will be given a unique sample point ID recorded on file and in the electronic data ,
- the way of collecting samples must remain the same on each sampling occasion; the sample bottle must be held at least 6 cm below the surface of the wastewater before inverting and filling. Samples can also be collected by filling the bottle from wastewater spouting from a pipe. Where samples are collected through manholes or pits, an extension arm to hold the bottle can be used, but this sampling technique must remain the same on future occasions,
- it is important to vary the day, time of day, and weather conditions (dry flow, storm flow) when samples are collected on a regular basis (routine monitoring),
- before immersion, sample bottles must be correctly labelled on the outside using a waterproof marker pen noting the unique sample point ID and date of sampling,
- the sample bottle must be capped tightly and placed in a carrying container. The container must be returned to the field vehicle and kept covered from sunlight. For the correct analysis of some parameters, the samples must be kept cool,
- where the inspector may need to collect replicate samples (as in a situation of suspected non-compliance where a formal sample is passed to the operator of the industrial installation for their own analysis), such samples will be collected in an identical way immediately one after another and correctly labelled,
- on completion of the monitoring visit all samples (except formal samples given to the operator) should be returned without delay to the laboratory,
- sample bottles must be registered by the laboratory in a sample receiver book by an authorised person, and
- laboratory analysis from bottled samples will give water chemistry results at the time of sampling.

At the time of collecting the wastewater (or water) sample, the Environmental Inspector should note the prevailing conditions in a field notebook. Such conditions should include:

- day, date and time of sampling,
- unique sampling point ID,
- approximate flow velocity (cm/sec) and any outstanding features such as colour of wastewater, smell or odour, floating material including oil and grease, any substances carried in the wastewater including suspended solids, and presence of biological indicators such as dead fish, dead birds or sewage fungus.

Laboratory analysis will be either on the entire 1L sample (such as filtering for total suspended solids) or a subsample using an automatic analyser for heavy metal analysis. Chemistry analysis will be on a routine basis according to the permit conditions. Chemical analysis is costly in reagents and professional time. Listed parameters for analysis should relate to the nature of discharge from the industrial activity (for example, there is no justification analysing for BOD<sup>5</sup> downstream from a sand quarry, and equally pointless to analyse for phenols downstream from a water treatment plant).

In addition, the inspector can undertake on-site measurement using field meters previously calibrated in the laboratory and the results recorded in the notebook, including dissolved oxygen, pH, temperature, salinity, conductivity, water transparency and others.

Biological samples can be taken to determine the species richness and numbers of aquatic macro invertebrates at the sampling point as a biological indicator of water quality. For example, the presence of stonefly larvae (Plecoptera) indicates clean water, whereas red tubeworm (Oligochaeta) indicates organic pollution both weeks before and at the time of sampling.

For bacterial surface and subsurface sampling, the containers used should be bottles of dark-coloured borosilicate glass of 200 to 300 ml capacity, with wide-mouths and ground glass stoppers. The bottles should be wrapped in brown paper to reduce sunlight penetration because sunlight kills bacteria and this would influence the result. The same type of bottle may be used for subsurface sampling with the addition of an extension arm and clamp.

An accredited laboratory should be able to perform analysis for most parameters identified in Table 11. Specialised laboratories such as National Reference Laboratories should perform a wider range of analyses to include many components, for example those listed in the Pollutant Release and Transfer Register (PRTR).

**Table 11: Water and air parameters for laboratory analysis**

Category	Parameter
Physical indicators	Colour, odour, transparency, temperature, max/min temperature, conductivity, turbidity, pH, dissolved oxygen, salinity, flow velocity, depth, wind speed, prevailing wind direction, dispersion
Oxygen demand	BOD <sub>5</sub> , BOD <sub>7</sub> , COD
Water and air chemistry	Fe, Mn, Na, Mg, Ca, K, Cl, SO <sub>4</sub> , NH <sub>3</sub> , NH <sub>4</sub> , CO, CO <sub>2</sub> , NO <sub>x</sub> , SO <sub>x</sub> , total suspended solids TSS, total mineralisation
Nutrients	total phosphorus TP, total nitrogen N, organic phosphorus, ammoniacal-nitrogen N-NH <sub>3</sub> , nitrate NO <sub>3</sub> , nitrite NO <sub>2</sub>
Heavy metals	Zn, Ni, Cu, Pb, Cr, Cd
Bacteria	Total coliform, E. coli
Oil and grease	
Chlororganic compounds	PCB, phenols
Volatile organic compounds	VOC
Polycyclic aromatic hydrocarbons	PAH

## 4.2 Compliance monitoring by inspector

The inspector may be required to take samples from the air emissions, wastewater discharge, waste materials, or of the soil within or near the installation as part of carrying out on-site compliance monitoring.

Inspections offer the most relevant and reliable information provided that current international practice for methodology, frequency of sampling, sampling procedures, analytical methods, reporting, and so on are followed by inspectors.

Monitoring must incorporate quality control and statistical scrutiny of results.

Monitoring techniques will vary depending on the situation and application. Techniques may include the use of:

- on-site qualitative observation including colour, smell, odour, visual appearance, presence of black smoke in air emissions, presence of aquatic animals in water such as fish, or growth of sewage fungus in wastewater releases,
- on-site analysis using portable discontinuous reading instruments including temperature, conductivity, percentage oxygen saturation, turbidity, pH, and flow. Such meters will require periodic calibration in the laboratory to maintain accuracy and reliability. Portable meters can be complex such as the field spectrophotometer or simple such as the Secchi disk for measuring water transparency (a disk with alternating black and white quadrants attached to a rope marked in cm.),
- on-site analysis using chemical reagents to determine colour, pH, and water chemistry parameters for which a portable chemistry kit is required, or using chemical reagent dip sticks for particular chemical parameters. Dip sticks can be used only once and are expensive, but have the advantage of giving immediate information,
- on-site quantitative analysis using biological methods including core samples of rivers, kick sampling for aquatic macro-invertebrates, or fixed on-site artificial substrata samplers for coastal or freshwater habitats,
- bacteriological analysis using on-site dip sticks for a specific bacterium, or collection of water samples in specially prepared glass bottles and transported to the laboratory for plate inoculation, incubation and counting,
- fixed in-situ, on-line continuous reading instruments such as the high concentration chlorine monitor at water treatment works for drinking water supply,
- laboratory analysis of samples taken by fixed in-situ, on-line time or flow proportional samplers such as a 24 h water samplers,
- laboratory analysis of spot samples traditionally collected from water or less likely from air, and transported back to the laboratory,
- calculations based on surrogate measurements of flow-rates, raw material contaminants, temperature, pressure and the like, and
- check lists of operation and maintenance of monitoring and other relevant equipment.

Whatever measurement technique is employed, it must conform to a relevant Standard Method as published by Comité European de Normalisation (CEN), International Standards Organisation (ISO) or (where there is no international standard) an appropriate national standard of another Member State, such as those published by British Standards Institution (BSI) or Verein Deutscher Ingenieure (VDI) and, where considered necessary, should be

carried out within a qualified measurement infrastructure conforming to the European Standard 45000 series of European Standards.

### 4.3 Operator self-monitoring

Operators of industrial activities may be required to carry out monitoring themselves and report their results to the competent authorities through self-monitoring.

Monitoring requirements are set by the responsible agency EFA (for Class A and Class B permits) or LGA (for Class C permit).

These requirements should cover all relevant aspects of the ELV and take into account issues with regard to the following:

- legal and enforceable status of the monitoring requirement,
- pollutant or parameter being limited,
- location for sampling and measurements,
- timing requirements of sampling and measurements,
- feasibility of limits with regard to available measurement methods,
- general approach to the monitoring available for relevant needs,
- technical details of particular measurement methods,
- self-monitoring arrangements,
- operational conditions under which the monitoring is to be performed,
- compliance assessment procedures,
- reporting requirements,
- quality assurance and control requirements, and
- arrangements for the assessment and reporting of exceptional emissions.

Self-monitoring does not constitute self-regulation.

The competent authorities are responsible for assessing and ensuring the operator's compliance, and the role of the Inspector in this process is critical, as it the job of the Environmental Inspector to ensure that monitoring requirements specified in the permit are being complied with.

The responsibilities of operator and competent authority are not affected by who carries out the monitoring.

It is the responsibility of the operator to comply with regulations, directives, and permit conditions, and to ensure that all necessary measures have been taken to protect the environment. It is also important that the operator has a management system, and that the activity and installation is organised to prevent pollution and maintain compliance with the environmental permit and permitted conditions.

#### 4.3.1 Requirements for self-monitoring

Requirements for self-monitoring are expected to cover:

- controlled emissions of waste gases and airborne particulate to air via chimney stacks,
- controlled discharges of waste water via sewers to and from effluent treatment plants, directly to receiving waters such as the sea, lakes, rivers and streams, and to land via septic tanks,
- controlled disposals of solid waste to landfill sites,
- controlled disposals of solid and liquid wastes, including organics, to incinerators,
- industrial process raw material inputs (such as trace contaminants) and operating conditions (such as process temperature, pressure and flow-rate),

- fugitive releases to air, water and land,
- receiving environments such as ambient air, grass, soil surface and groundwater,
- use of raw materials and energy,
- noise and vibration,
- odour,
- process/plant conditions that are relevant at the time when measurements are taken or that may affect releases, such as down-time of plant or percentage of full utilisation of plant, and
- operation and maintenance of monitoring and other relevant equipment.

Self-monitoring provides additional information on which the competent authorities can judge whether an operator is complying with relevant legislation and conditions of permits. It does not change the duty of the competent authorities to assess compliance by means of inspection, and by using its own monitoring data, or by reliance on operator self-monitoring, or a combination of both. The competent authorities also continue to be responsible for enforcement. Similarly, it does not in any way diminish the duty of the operator to ensure that all necessary measures are taken to comply with relevant legislation and conditions of permits.

Self-monitoring can offer benefits to the competent authorities through:

- utilising the operator's knowledge and experience of his process in planning and carrying out a monitoring programme that can lead to improved control over releases to the environment, and
- providing a mechanism for educating the operator about the requirements for complying with relevant laws, regulations and permits, and for increasing management responsibility for compliance and the impact of process releases on the environment.

The operator must provide the necessary expertise, equipment and analytical facilities to carry out the specified measurements. These may be owned by the operator, or be outsourced by contracting the self-monitoring program from outside. The operator may also collect the required samples and have the analyses carried out by a contract laboratory. Whatever the arrangements are for carrying out self-monitoring, the costs are met by the operator. This is consistent with the polluter pays principle.

The Inspector during an on-site inspection will need to examine and evaluate the self-monitoring programme and assess if it is being conducted correctly and in compliance with the permit conditions:

**Table 10: Inspection checklist of a self-monitoring program**

<p>Does the existing self monitoring system cover all important emission aspects?</p> <p>Is the existing self monitoring system sufficient and reliable?</p> <p>Does the system ensure that the self monitoring procedures prescribed in permit are followed, and can this be seen from the data</p> <p>Are the results from the self monitoring program adequately reported to the competent authority (EFA and NEI)?</p> <p>Are the results of the self monitoring in accordance with the terms stipulated in the permit?</p> <p>Do self-monitoring reports from the installation give a clear picture of level of compliance?</p> <p>Is environmental protection taking place?</p>
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#### **4.4 Monitoring environmental conditions near the installation**

Additional information on compliance status can be gained by monitoring environmental conditions near an installation.

Ambient monitoring includes any monitoring to detect pollutant levels in the ambient air, ground, or surface waters near a facility. The main problem with ambient monitoring is that it can be difficult to demonstrate that the pollutants measured came from a particular installation.

Ambient monitoring is most useful when a source is the only significant polluter in the area or when its emissions have a characteristic composition that serves to “fingerprint” them. In these cases, ambient measurements clearly suggest potential violations at a facility and can be used to target inspections.

Otherwise, ambient data rarely can be used alone to prove a violation because of the difficulty of proving a connection to the source.

## 5 Enforcement of legislation

Enforcement is the backbone to any inspections and investigations programme. Compliance monitoring activities are only effective if backed by a credible penalty of enforcement sanctions.

Effective enforcement programs deter illegal conduct by creating negative consequences for those who violate the law. A single enforcement action can have a cascading effect on potential wrongdoers, encouraging them to change their behaviour to comply with the law.

### 5.1 The enforcement process

Enforcement comprises:

- inspection to determine the compliance status of the industrial activity in order to identify any violation of the permit conditions and relevant legal dispositions of the environmental protection legislation,
- legal action, where necessary, to compel compliance and to impose some consequence for violating the law or posing a threat to public health or environmental quality,
- discussions with the operator and employees of the installation where there has been a non-compliance to develop mutually agreeable schedules and approaches for achieving compliance, and
- promoting compliance by technical assistance, educational programs, and subsidies to encourage voluntary compliance.

#### 5.1.1 The enforcement authority

The National Environmental Inspectorate is the designed authority for implementing the environmental enforcement response policy of Albania.

To carry out effective enforcement, inspectors have been provided of the following powers:

Action	Supporting Legislation	Missing legal framework
Enter a facility.	Art. 63 Draft Law "On environment protection"	DCM "On the Organisation and Functioning of the NEI"
Take samples.	Art. 63 Draft Law "On environment protection"	DCM "On the Organisation and Functioning of the NEI"
Take documents.	Art. 63 Draft Law "On environment protection"	DCM "On the Organisation and Functioning of the NEI"
Question personnel.	Art. 63 Draft Law "On environment protection"	DCM "On the Organisation and Functioning of the NEI"
Impose a schedule for compliance.	Art. 65 Draft Law "On environment protection"	DCM "On the Organisation and Functioning of the NEI"
Permanently shut down certain parts of operations or practices.	Art. 66 Draft Law "On environment protection"	DCM "On the Organisation and Functioning of the NEI"
Temporarily shut down certain parts of operations or practices.	Art. 66 Draft Law "On environment protection"	DCM "On the Organisation and Functioning of the NEI"
Permanently shut down an entire facility.	Art. 66 Draft Law "On environment protection"	DCM "On the Organisation and Functioning of the NEI"

Temporarily shut down an entire facility.	Art. 66 Draft Law “On environment protection”	DCM “On the Organisation and Functioning of the NEI”
Propose to EFA or Relevant LGU for the denial of a permit.	Art. 12, 30 and 40 Draft Law ““On environmental permitting” protection”12, 30	DCM “On the Organisation and Functioning of the NEI”
Propose to EFA for the revoking of a permit.	Art. 51 Draft Law “On environmental permitting”	DCM “On the Organisation and Functioning of the NEI”
Require specialized training (e.g., in emergency response to spills) for facility employees.		Draft Law “on Control of Major-Accident Hazards Involving Dangerous Substances”; DCM “On the Organisation and Functioning of the NEI”
Impose a monetary penalty with specified amounts per day per violation.	Art. 51 Draft Law “On environmental permitting” and Art. 67 Draft Law “On environment protection”	
Seek criminal persecution to the Persecution Office	Criminal Code	
Seek punitive damages or fines within specified limits.	Art. 51 Draft Law “On environmental permitting” and Art. 67 Draft Law “On environment protection”	

### 5.1.2 Legal framework for enforcement

Before enforcement can become effective, a legal framework for enforcement has to be in place.

In the Albanian present legal system, the Law on Environmental Protection and the specific environmental laws provide for sanctions to be imposed against violations of those laws. When the violation constitutes a criminal action according to the Penal Code “*Penal Action Against the Environment*”, the EI is able to request penal proceedings and make representations in court. Where the violations do not form criminal action they are considered to be administrative contraventions. These are listed in the respective laws together with the values of the penalties, which can be imposed for contravention as outlined below:

#### **Law on Environmental Protection<sup>3</sup>**

Article 82 lists 15 administrative contraventions.

Article 83 specifies the penalties for each contravention, allows sequestration of means and substances, and the temporary or permanent closure of the activity.

Article 84 confirms the right of the NEI to impose the penalty, which can be appealed to the Minister of Environment, and finally appealed to the Court of the District where the contravention occurred.

#### **Law on Environmental Treatment of Polluted Waters**

Article 22 lists 6 activities which are prohibited in the Republic of Albania.

Article 23 lists 10 administrative contraventions.

Article 24 specifies the penalties for each contravention, allows the temporary or permanent closure of the activity depending on the degree of pollution caused.

<sup>3</sup> The draft law “On environment protection” prepared by INPAEL which repeals the existing law foresees 14 administrative contraventions. The appeal procedure is provided as explained in section “5.2.3 Appeals systems” below.

Article 25 allows the decision of the NEI to be appealed to the Minister of Environment and finally appealed to the Court of the District where the contravention occurred.

### ***Law on Environmental Management of Solid Wastes***

Article 32 lists 11 administrative contraventions.

Article 33 specifies the penalties for each contravention, allowing Inspectors to close the activities temporarily or permanently, depending on the degree of the pollution caused.

Article 34 allows the decision of the NEI to be appealed to the Minister of Environment, and finally appealed to the Court of the District where the contravention occurred.

### ***Law on Protection of Air from Pollution***

Article 19 lists 5 administrative contraventions, with fines and rights of confiscation or suspension for each of them. It confirms that the NEI is the authority to impose the penalties.

### ***Law on Chemical Substances and Preparations***

Article 26 sets scales of fines that can be imposed by the NEI (in some cases in collaboration with State Sanitary Inspectorate) for the administrative contraventions listed under each scale; and allows the fines to be doubled for repeated contraventions. Appeals can be addressed to the Minister of Environment, and finally to the Court of the District where the contravention occurred.

### ***Law on Protection on Trans-boundary Lakes***

Article 22 confirms the NEI and the Lake Administration as authorities to instigate penal proceedings and lists 9 administrative contraventions.

Article 23 specifies the penalties for each administrative contravention, including temporary or permanent closure of the activities, depending on the degree of the caused pollution.

### ***Law on Protection of the Marine Environment from Pollution***

Article 18 confirms that the NEI can instigate penal proceedings against the prohibited activities listed in Article 6 of this law. For administrative contraventions the NEI can immediately stop the activity and sequester equipment and impose fines depending on the degree of the pollution caused by the activity.

Article 19 specifies the penalties for each administrative contravention and allows the suspension of the prohibited activity or imposition of fines, depending on the degree of pollution caused. It confirms the NEI as the authority for imposing fines and suspending activities and for instigating penal proceedings, when appropriate.

## **5.1.3 Supporting the enforcement case**

In typical enforcement actions, targeted parties will challenge findings, and inspectors will have to defend them in administrative proceedings or court. Therefore inspectors should always be prepared to:

- Prove that a violation has occurred.
- Establish that the procedures and policies were fairly and equitably followed and that the violator is not being unduly "picked on."

- Demonstrate the underlying environmental or public health need for the requirement being violated. This need is often met when the requirement is developed. However, it may be necessary to reiterate the importance of compliance with the requirement to justify and support an enforcement case. This is particularly true when a case is in a jurisdiction where the rule of law is well developed and it is being argued in front of an independent decision-maker who is not familiar with the requirement or its environmental or public health basis.
- Demonstrate that a remedy for the violation is available (e.g., pollution control equipment, stopping a particular activity). Even though this is not usually the responsibility of the government, this information can be important to negotiations.
- Justify the proposed penalty.

## **5.2 The enforcement mechanisms**

Enforcement mechanisms (either civil or criminal) are backed by the force of law and are accompanied by procedural requirements to protect the rights of the individual.

### **5.2.1 Civil administrative enforcement**

Civil administrative orders are legal, independently enforceable orders issued directly by inspectors. The order defines the violation, provides evidence of the violation, and requires the recipient to take corrective action within a specified time period.

If the recipient violates the order, inspectors usually can take further legal action using additional orders (or a court system) to force compliance with the order directly.

The legislation sets out the offences and penalties to be applied for non-compliance. Fiscal offences and penalties are applied to the owner or operator of the installation and these can be:

- a scale of fines appropriate to the extent of non-compliance,
- reimbursement from corporate finances of the non-compliant installation and which are awarded to the competent environmental authority for undertaking actions required to minimise and reverse environmental damage caused,
- a financial bond applied to the non-compliant installation for any future situation of non-compliance and held in trust by an independent agency such as a bank. The bond will be used to pay for all or part of environmental recovery and costs in prevention and remediation, usually to the environmental regulatory authority.

Other, non-financial penalties may be imposed on the operator, and these might include:

- improvement notices,
- closure of all or part of the installation or activity,
- revocation of the environmental permit.

### **5.2.2 Criminal enforcement**

Criminal judicial response is generally considered appropriate when an operator has knowingly violated the law, or has otherwise committed a violation for which society has chosen to impose the most serious legal sanctions available.

Criminal sanctions may include imprisonment of culpable individuals in addition to monetary penalties.

Criminal cases require intensive investigation and case development. They require proof that a violation has occurred and may require proof that an individual or business (through its employees) was knowingly responsible for the violation. Compare this to a civil or administrative case where a sanction can be imposed if the government simply proves the

existence of a violation without regard to level of care or intention of the violator. Criminal cases typically provide more powerful information-gathering authority than the civil case.

When the violation constitutes a criminal action according to the Penal Code "*Penal Action Against the Environment*", the inspector is able to request penal proceedings and make representations in court. A number of environmental crimes are foreseen by Chapter IV, including:

- **Article 201** "Polluting the air" foresees that the polluting of the air through the emission of smoke, gasses and other toxic radioactive substances, when it increases the normal limit allowed, and when the act does not constitute administrative contravention, constitutes criminal contravention and is punishable by a fine or up to two years of imprisonment. The second paragraph of this article foresees that will be considered as criminal contravention the pollution of air when it has caused serious consequences to the life and health of people, and it is sentenced up to ten years of imprisonment.
- **Article 202** "Transporting toxic waste" foresees that transporting toxic and radioactive waste transit into the Albanian territory or their depositing therein is punishable by one to five years of imprisonment. The second paragraph of this article foresees that will be considered, as criminal contravention when the transporting toxic waste has caused serious consequences to the life and health of people, is punishable by five to fifteen years of imprisonment.
- **Article 203** "Polluting the water" foresees that polluting the waters of the seas, rivers, lakes or the springs of the water supply system with waste either toxic or radioactive or other substances, which break the ecological balance, is sentenced up to five years of imprisonment. The second paragraph of this article foresees that will be considered, as criminal contravention when the polluting the water has caused serious consequences to the life and health of people, is punishable by five to fifteen years of imprisonment.
- **Article 204** "Prohibited fishing" foresees that fishing undertaken at a prohibited time, place or method constitutes criminal contravention and is punishable by a fine or to up three months of imprisonment. The second paragraph of this article foresees that fishing undertaken through means of public danger like explosives, poisonous substances, etc, constitutes criminal contravention and is punishable by a fine or up to two years of imprisonment.
- **Article 205** "Unlawfully cutting forests" foresees that cutting or damaging forests without authorization or when it is undertaken at a prohibited time or place, when the act does not constitute administrative contravention, constitutes criminal contravention and is punishable by a fine or up to one year of imprisonment. (not included addendum (a) and (b) as they are not relevant to the analysis)
- **Article 206** "Cutting decoration and fruit trees" foresees that cutting decoration trees and damaging gardens and parks in the cities constitutes criminal contravention and is punishable by a fine. The second paragraph of this article foresees that cutting trees in fruit or olive plantations and vineyards, after the cutting permit has been previously refused by the competent authority, constitutes criminal contravention and is sentenced up to three months of imprisonment.
- **Article 207** "Breach of quarantine for plants and animals" foresees that the breach of rules of quarantine for plants or animals, when it has led to serious consequences which are either material or which bring serious danger to the life and health of people, constitutes criminal contravention and is punishable by a fine.

### **5.2.3 Appeals systems**

Permitting systems are flexible and give a lot of 'independence' to the permit writers, which can result in value judgements. Consequently, there is a need to ensure that there are controls on this, especially through an appeals systems which provides for who can appeal against what.

There are often several points in the enforcement process when a violator can appeal the finding that there is a violation, the remedial action required by the inspector, or the severity of the proposed sanction.

In principle any appeal mechanism is dependant on who formally issues the administrative act. So it respects the appeal procedure to the higher level of administrative structure than the structure that has issued the administrative act. In the case of the highest administrative position in that structure the appeal procedures continue in the apposite Court. The Administrative appeal procedures are stipulated by the Law "On administrative procedures" and Law "On the Administrative Court".

## 6 Reporting and data management

Much of the information required to assist a site inspection should be held on a “working site file”. It is therefore important to ensure that the files are kept up to date with the inclusion of all recent site inspection forms, and other documentation and information that is relevant to the activities of the site. It is appropriate for the Inspectorate’s staff to put all application details from the Application Form for an Environmental Permit on to a central electronic database or into hard copy files.

There is an enticement for Environmental Inspectors to keep their own notes from site visits, and even create their own condensed working site file. This is acceptable only if all information, including personal notes, are added to the working site file and the electronic database.

Information that should be placed in the working file includes:

- reference to any monitoring data arrangements,
- notes on nearby areas of environmental sensitivity (e.g. watercourses which may be vulnerable, residential areas and protected areas),
- notes of nearby activities which may affect the findings of a site inspection (e.g. industrial or agricultural processes which may give rise to their own odour emissions),
- the nature of the relationship between the operator and the Inspectorate, so that the Inspector is aware of any potential conflict situations. The Inspector may need to be accompanied by another Inspector or senior person at the Inspectorate if there have been difficulties at the site,
- notes of any permits relating to the site issued by the Inspectorate or any other authority.
- records of any complaints, and
- information of any previous history of non-compliance.

Feedback to the operator during and following an inspection is very important. Whilst carrying out an inspection the inspector should use the opportunity to raise the awareness of the site operator to the environmental consequences of their activities and performance. Such feedback should relate to the environmental permit conditions. Consequently, it is important that the Inspector is aware of conditions imposed on the industrial activity and also have a copy of the environmental permit with them during the site inspection.

### 6.1 Site inspection report form

It is important that inspector reports on the inspection to maintain consistency of data, contribute to information on the premises, and provide a record of information for his colleagues.

A written Site Inspection Report Form of the visit (examples of site inspection form is given in Annex V) should be completed by the inspector on site following each routine or specific inspection. A copy of this form must be left on site with the operator/permit holder or their representative at the time of the visit. The inspector should take this opportunity to discuss his findings with the site manager, and where necessary arrange for actions to be taken to rectify a situation. Where it is not possible to leave a copy of the report form with a site representative it must be delivered officially to the operator/permit holder as soon as possible following the on-site inspection.

Where this happens, a timescale for work to be implemented and completed should be agreed with the operator and confirmed later in writing if necessary. The Inspector should ask the operator to sign the Site Inspection Report form to acknowledge its receipt. If the operator strongly disagrees with the Inspector's findings, and hence does not sign, the operator should be given details of who to contact in the inspectorate to deal with any objections. The refusal to sign and the reasons for not signing it should themselves be recorded on the Site Inspection Report Form. The Site Inspection Report Form should be left with the operator even if it is unsigned. Significant issues arising from inspections should be reported to relevant colleagues in order that appropriate actions may be taken.

## 7 Quality control and best practice

### 7.1 Quality management

In order to operate successfully, environmental inspectorates should maintain a continuous high quality performance. Quality may be defined as:

*A body of well-defined instructions, working methods, control mechanisms and performance indicators, that result in pre-defined outputs and quality levels.*

In order to ensure and maintain high quality inspection, performance assessment and proper feedback are essential. Assessment can be seen as an important step in the cycle

#### **plan – do – check - act**

which forms the basic element in quality management systems. Assessment can be either self-assessment or assessment by others.

Obviously, quality management of the Inspectorate, or its individual departments, could be based on the methodology of ISO, or it could proceed in obtaining ISO Certification. In general and as a first step, a quality office could be set up within the Inspectorate. Its function could comprise the management and monitoring of the quality and/or the preparation and implementation of a system according to ISO.

Assessment or auditing of the inspection performance consists of three parts:

1. assessment of the quality of the inspection,
2. assessment of the consistency and quality of the inspection report, and
3. assessment of the performance of the inspection body.

### 7.2 Improvement of inspection quality

Each Environmental Inspector should strive for a continuous improvement of their inspection performance and learn from their achievements and also mistakes. By doing so an Inspector also contributes to the continuous improvement of the performance of the inspection body.

In order to find ways and means to improve the quality of inspections, regular evaluations are necessary. Evaluations can be made by reviewing the following aspects:

- feed-back on the professional performance of the Environmental Inspectors, and on the inspectorate management and organisation,
- role of the Inspector in the controlling, enforcing and advising process,
- inspection procedures followed and carried out,
- efficiency and competence of the on-site visit,
- time required to carry out and complete an inspection,

- correctness and accuracy of the inspection,
- frequency and timing of the inspections,
- report writing
- follow-up on situations of non-compliance and further visits,
- understanding and application of the environmental legislation,
- management support to the inspection process.

The above aspects must be transparent, and should be added to or removed according to consensus through open discussion by the Environmental Inspectors with the Inspectorate Management.

### **7.2.1 Inspection report**

The Environmental Inspector's Report should be included under quality control and management. In order to find out ways and means to improve the consistency and quality of the inspection report the following should be included:

- a check on the completeness of the report. In the inspection report all relevant general and specific information should be included, and
- a check on the consistency and correctness of the report and its conclusions. The reports must be compiled in such a way that the relevant information can be extracted quickly from the report by non-inspecting officials. All other Inspection Reports must therefore be structured in the same way and according to a uniform layout.

## **7.3 Performance of the Inspectorate**

There are two ways of improving the performance of the inspecting body. The first way is tracking the results back by looking for trends and changes in activities or results over time. In this way the quality of the performance of the inspecting body is monitored. The local/regional reports can be used to publish a yearly report on the authority's inspection performance. It will then be possible for the government/parliament/ public and as well for the Inspectors themselves to find out about inspecting resources (man-year and amount of money) used in previous years for inspection and permitting, number of inspection objects (facilities), numbers of inspections, enforcement actions. In that way they will be able to learn from each other.

The second way involves the setting of targets and comparing the results with the targets afterwards. In this way the quantity of the performance of the inspecting body is monitored. Depending on the situation it can be decided to monitor either the quality or quantity of the performance or both.

Annual reporting ensures consistent monitoring of results and can be used as a tool in the assessment of the performance of the inspecting body and to identify scope for further improvements. The annual report must therefore review the performance but also identify deficiencies and list required modifications.

## **ANNEX I Review and Site Verification Form for the Class A or Class B Environmental Permit**

The Environment and Forests Agency must satisfy itself that all appropriate preventative or pollution-control measures have been established before granting a permit.

The Environmental Inspector will undertake a site inspection to the premises on a working day within 30 days of registering the Application for the Class A or Class B Environmental Permit to verify answers provided in the Application Form, and to establish criteria which will be used in the Permit Conditions.

The below draft Site Verification Form will be completed by the Environmental Inspector.



## National Environmental Inspectorate

### SITE VERIFICATION FORM

#### **Name of Authorising Officer**

Write your name, position and office of work and include this below.

**Name:**

**Position:**

**Office:**

**Note:** Tick  = yes correct or  = no incorrect. A box is provided for additional comment

Registration number of Application Form =

**1. Contact** – Are the anagraphic information provided in the Application Form correct?

Applicant's name , Postal address , Telephone number , Email address

Add additional comment below.

**2. Premises – Site inspection.**

Is the name of the premises the site where all the activity will be done? .

Is the location , and address , correct and easily located .

**3. Activities** – Are the main activities undertaken at the location as described in the Application Form?

.

**4. Production volumes** – Verify production volumes of the activity given in the Application Form with production volumes described in paperwork over an extended period kept at the Owner's or Operator's Office at the premises. Production hours correct .

**5. Operating hours** – Verify actual hours of operation given in the Application Form by interviewing employees on-site at the premises. Are operating hours correct .

**6. Number of employees** – Verify numbers of fulltime  and part-time (casual)  staff employed given on the Application Form with accounting records kept at the Owner's or Operator's Office at the premises.

**7. Description of site – Site inspection.** Is the description of the site in the Application Form correct and adequate .

Can you provide any additional comment? Is the storage of materials adequate to prevent accident or leakage? Is the ground site of the premises clean?

**8. Raw materials** – Is the list of raw materials and source described in the Application Form complete and correct . Can this be verified from the Operator's records .

**9. Energy - Site inspection.** Verify the Application Form by visually inspecting the source of energy for the activity while it is working. Is the system efficient . Is storage for fuel adequate to prevent accident . Is there any emission or discharge from the provision of energy for the activity .

**10. Air Emissions – Site inspection.** Are all sources and locations of emissions to air included in the Application Form . What is the prevailing wind direction for each source? Verify the volume of discharge per day, rate of discharge per hour, and content of each air emission, for each source. Confirm the minimum discharge height above ground level given in the Application Form for each emission point.

**11. Air emission control – Site inspection.** Is any air pollution control equipment installed . Is the type and efficiency of pollution control removal equipment as described in the Application Form . Can you provide additional advice on the type and efficiency of pollution control equipment needed for each source of air emission?

**12. Wastewater discharges – Site inspection.** Are all sources and locations of wastewater discharges included in the Application Form .

Describe if each wastewater discharge is point source or diffuse? Verify the volume of discharge per day, rate of discharge per hour, and what each discharge contains, for each source. Confirm the name and type of receiving water for each outfall. Confirm any on-site treatment described in the Application Form.

**13. Wastewater discharge control – Site inspection.** Is any wastewater pollution control equipment installed . Is the type and efficiency of pollution control removal equipment as described in the Application Form .

Can you provide additional advice on the type and efficiency of pollution control equipment needed for each source of wastewater discharge?

**14. Waste generation – Site inspection.** For solid waste, are all sources, type, volume per year as described in the Application Form . For liquid waste, are all sources, type, volume per day, rate of discharge per hour as described in the Application Form . For hazardous waste, are all sources, type, active hazardous content, volume per year as described in the Application Form.

**15. Waste management - Site inspection.** For solid waste, are on-site treatment, recovery, disposal, and location of disposal site as described in the Application Form . For liquid waste, are on-site

treatment, on-site reuse, and location of any on-site lagoons as described in the Application Form . For hazardous waste, are methods of disposal and location of disposal site as described in the Application Form .

What further measures could be taken?

**16. Monitoring programs - Site inspection.** Verify if the installation undertakes self-monitoring or outsourced programs for air emissions, wastewater discharges, waste generation, noise, and site inspection as described in the Application Form by seeing the record of sample collection, location of sampling sites, analyses and results. Describe any on-site laboratory services, position and qualifications of staff, laboratory accreditation and QA/QC certificates.

**17. Environmental or public health impacts - Site inspection.** Confirm any or no off-site environmental or health impacts from air emissions, wastewater discharges or waste generation as described in the Application Form. Include any indications of impacts from diffuse or point source site run-off.

**18. Stormwater site run-off – Site inspection.** Are the measures to control stormwater site run-off as described in the Application Form . Is the site clean and well maintained .

Is storage of raw materials, fuels, products and other items good or bad? What further measure could be taken for stormwater site runoff control?

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**19. Noise - Site inspection.** Is the source, location and level of noise generation as described in the Application Form . Are measures for noise abatement as described in the Application Form . What further measures could be taken for noise control and abatement?

--

**20. Emergency Response Plan** If there is an Emergency Response Plan described in the Application Form, view this and obtain a copy from the Owner / Operator. Has the Emergency Response Plan been tested in an actual or pretend situation, and what was the result?

--

**21. Main alternatives – Site inspection.** Review and assess the alternative development options as described in the Application Form, and comment on environmental and public health impacts from these alternatives, and if a separate Application for an Integrated Permit required for these alternative options?

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**22. River basin district** Is the river basin district, and the distance from the installation to the nearest river, given in the Application Form correct .

**Further comments or notes**

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## **ANNEX II Inspection Planning checklist for the Inspector**

### **Did you check the completeness of the file on the installation?**

If so, also check:

- Permit of the installation and details of the application procedure, including Operator self monitoring programme, EMAS etc and reports from the Operator to the authority
- Up to date information about BAT / IPPC
- New regulations that are of importance to the installation
- Technical drawings of the installation
- Map of the installation site and surrounding environment
- Descriptions of eventual new processes, expansions, modifications etc. in the installation that have been subjected to recent change (this should have resulted in issuing a revised licence)
- Diagrams of the processes in the installation
- Reports, letters, notifications etc. from previous inspections
- Notices sent to the Operator (depending on the character of the on-site visit (announced versus unannounced))
- Seasonal influences that are of importance for the outcome of the visit
- Essential environmental facts
- Incidents which have taken place in the past
- Earlier infringements
- Aspects of the industrial activity operations which have not been thoroughly investigated and approved during a previous inspection
- Notifications of environmental incidents
- Research reports or environmental reports

### **Will you co-ordinate your activities with other (non environmental) Inspectors?**

If so

- Decide whether the inspection will have an integrated or a single media character
- Contact the regional and local government officers to find out which industrial installations in their area they will inspect in the near future. Ask them to send a list of those installations
- Try to find out whether some installations will be visited by Inspectors from other agencies within short notice of your visit. Try to plan the on-site visit together with them
- Contact other responsible agencies including the public prosecutor to know about complaints of the public, former prosecutions, sanctions, reports, etc.
- Arrange meetings with the above-mentioned Inspectors
- Arrange to be accompanied by a colleague (in case of a serious incident) but also to collect corroborated legal evidence (if necessary) and to question a person simultaneously

### **Which of the listed inspection tools are needed for the site visit?**

- Information to hand out, e.g. about the Inspectorate and the MEFWA.
- Information on the regulations on the items of inspection
- Background information (addresses of other Inspectors or of companies to inspect oil tanks etc.)
- Laptop computer
- Inquiry forms
- The permit of the installation and details of the application procedure
- Technical drawings of the industrial activity and the plant
- Process diagrams
- Reports and letters, etc. from previous inspections

- Notices sent to the Operator
- Equipment to take samples of the soil, air-emissions noise-emissions etc.
- Identity card
- Mobile phone (permission might be needed to take the phone during certain parts of the visit)
- Photo camera
- Personal protection equipment:
  - safety glasses
  - safety shoes/boots
  - special clothing
  - safety gloves
  - safety helmet
  - overall
  - ear protection
  - face protection

## **ANNEX III On-site visit checklist for the Inspector**

**Did you decide what approach the inspection will have (integrated versus single medium)?**

- an integrated inspection will be undertaken
- a single medium (air, water, solid wastes etc.) inspection will be undertaken
- a specific target inspection (energy, BAT, monitoring equipment, emissions and discharges, site management, storage, waste, staff environmental awareness) will be undertaken
- an IPPC Directive inspection will be undertaken

**For the single medium inspection, which of the following media are you going to inspect?**

- water
- soil
- air
- waste
- noise
- hazardous waste
- radiation

**Which of the following aspects will be included in your inspection?**

- energy
- BAT
- monitoring equipment
- emissions and discharges
- site management
- storage
- waste
- staff environmental awareness
- the administration and the log books
- IPPC Directive aspects

**Is the visit part of a planned compliance checking system?**

If yes then make sure that the visit covers compliance checking, encouragement, understanding and examination

**Is the visit a routine site inspection?**

If yes then make sure that

- the responsible person (Operator) at the installation is notified on arrival
- the purpose and the procedure of the inspection is explained to the responsible person

**Did you ensure that the permit of the installation is matched against the actual situation?**

If yes then check the following

- environmental conditions are present in the permit licence
- the conditions are being complied with
- the employees follow the conditions described in the permit
- the log books and administrative records (stated in the permit) are up to date

- any required periodic tests prescribed in the permit have been carried out, and the results were as shown below.....

**Are you taking samples and will you carry out measurements?**

If yes then which samples were taken

- soil
- air
- dust
- wastewater
- waste materials
- emissions
- noise
- other media / substances

**Are you familiar with the options that are available for immediate action?**

If yes then which of the following options were used?

- shut down (parts of) the process
- sealing of (parts of) the process or specific equipment
- other

**Did you ensure that the Operator is in compliance with the self-monitoring programme?**

- Yes
- No

**Did you co-operate with other authorities involved?**

If yes then list the other authorities:

- .....
- .....

**Is the inspection a response to a pollution incident?**

If yes then make sure that

- the visit is co-ordinated with the emergency services
- the Operator of the installation is present
- the purpose of the visit is explained
- the site contact and other site Operators / staff are questioned in order to establish the exact details of on site-operations and potential problems which might have resulted in the incident
- you are accompanied by a colleague (in case of a serious incident). This in order to collect corroborated legal evidence (if necessary) and to question a person simultaneously
- all relevant areas of the process site are inspected. This must be the case unless the Inspector must follow the site safety requirements
- the contact person is given the opportunity to accompany the Inspector on the inspection (in some large process sites etc. the Inspector should not enter the site unless accompanied by a site representative)
- appropriate samples of discharges etc. are taken (if necessary as legal samples in accordance with the legal procedures) for use as evidence
- all statements made by the contact person are written down
- appropriate photographs or video recordings are made as information or as evidence
- information and advice is given to the site Operator (if appropriate) regarding action which may stop an ongoing incident, prevent a recurrence, or remedy damage caused (In

some circumstances the Inspector may strongly recommend or insist that certain action is taken to stop an incident and / or prevent further pollution).

- the site contact/management is aware of any further action required on their part, and of further action, before leaving the site

**Which of the following information is included in your provisional conclusions?**

- the installation and new development
- appointments
- time schedules

**Which of the listed items should be available at completion of the on-site visit?**

- a summary of inspection results including a list of infringements and noncompliance items, as well as a list of positive observations / improvements
- a summary of required actions and measures, including time limits to improve the situation. (It is essential that the Operator of the installation gains insight in the legal consequences of its environmental behaviour and possible follow-up actions).
- a list with the consequences of repeated non-compliance in case of a follow-up inspection (e.g. proposed fines). It is essential that the Operator of the installation gains insight in the legal consequences of its environmental behaviour and possible follow-up actions.
- additional information on possibilities to implement cleaner technology / waste minimising techniques / precautionary activities and / or the provision of information on self-monitoring possibilities and related items?
- the official inspection report. (The report can vary from a point by point indication whether a regulation in the licence is met, to a full report including all the steps taken).

## **ANNEX IV Inspection Report checklist for the Inspector**

### **Is the following general information incorporated in the inspection report?**

- name and location of the facility
- responsible person / contact point within the facility
- date of on site visit
- number of the visit
- dates of previous inspections
- internal registration number (licence number)
- inspecting body responsible for the on site visit
- names of inspecting officials
- reason for inspection

### **Are the following general guidelines implemented during the compilation of the inspection report?**

- the inspection report is easy to read and written in a consistent manner
- the report makes clear to the reader what actions the inspected facility is expected to take
- the inspection report makes clear what enforcement action will be taken by the inspection body
- the inspection report available to the facility
- the report is written in accordance with other model reports
- the report is accurately registered within the inspection body

### **Is the following specific information incorporated in the inspection report?**

- a review of the historical context, meaning listing of persisting and new cases of non-compliance, previous fines paid by the facility, attitude (proactive, active, re-active, defensive) of the facility concerning environmental regulations
- a description of the inspected items during the on site visit the documentation used by the administrative inspection minutes of the interviews with facility personnel
- extensive description of previous non compliance issues
- other inspection observations
- the results of the analysed samples
- description of previous enforcement actions of local/regional authority
- time limits, concerning the achievement of compliance with environmental regulations, at previous infringements.
- decisions to impose sanctions (if necessary) and a description of the measures taken (fine, closing of the facility etc.)
- follow-up inspections
- non-conflictuous items which should be adjusted

## ANNEX V Site inspection report form

**National Environmental Inspectorate  
Ministry of Environment  
Tirana  
Republic of Albania**

**INSPECTION REPORT FORM \_\_\_\_\_/2010**

Date of Inspection \_\_\_/\_\_\_/\_\_\_ Time \_\_\_\_\_

Date of Report \_\_\_/\_\_\_/\_\_\_

Installation \_\_\_\_\_  
\_\_\_\_\_

Register Number \_\_\_\_\_

Site Location

Village \_\_\_\_\_

Commune \_\_\_\_\_

Municipality \_\_\_\_\_

Corporate Address:

Village \_\_\_\_\_

Commune \_\_\_\_\_

Municipality \_\_\_\_\_

Telephone/ Site Nr: \_\_\_\_\_ Fax / Site Nr: \_\_\_\_\_

Contact/Site: \_\_\_\_\_

Owner of Activity:

Name: \_\_\_\_\_

Home  
address: \_\_\_\_\_

Identity  
Card: \_\_\_\_\_

**Administrative and Fiscal Information:**

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**Legal Status:**

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**Sector of activity:**

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Official Register no of sector: \_\_\_\_\_

Daily working hours: \_\_\_\_\_

Yearly working period: \_\_\_\_\_

No. of employees: \_\_\_\_\_

**Nature of main raw materials and annual quantities processed:**

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**Brief description of process:**

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**Category and purpose of the process, main products, daily and yearly production:**

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Copy received:

Permit to discharge to municipal sewerage:

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Copy received:

Self monitoring as described in permit:

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Copy received:

Register for Solid wastes under official form:      Yes      No

Register for Solid wastes according to existing solid wastes:

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Appropriate separation of solid wastes:

Adequate storage arrangements for solid wastes:

Authorisations for waste minimisation and final disposal of solid wastes:

Authorisations for transport of solid wastes:

Energy consumption, different sources, yearly values:

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Self monitoring for releases into air      Yes      No

Copy received

Self monitoring for releases into air as officially required:

Self monitoring continuously:

Brief description of air pollution sources:

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Evidence of recent burning of solid wastes:      Yes      No

Complaints of high noise levels from outside:      Yes      No

Outside measurements for noise:      Yes      No

Public complaints      Yes      No

Nr. of complaints \_\_\_\_

Sampling:      Yes      No

Date of last inspection \_\_\_\_/\_\_\_\_/\_\_\_\_

Participation of other authorities on site visit

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Remarks:

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## ANNEX VI Useful websites

### **Implementation of the National Plan for Approximation of the Environmental Legislation in Albania**

The Project website which lists project inputs and outputs in the public domain (best accessed through Internet not through Mozilla)

[//www.inpael-eu-al.com](http://www.inpael-eu-al.com)

### **European Commission (EC)**

[//ec.europa.eu](http://ec.europa.eu)

### **NACE Codes for premises**

[//ec.europa.eu/competition/mergers/cases/index/nace\\_all.htm](http://ec.europa.eu/competition/mergers/cases/index/nace_all.htm)

### **Pollutant Release and Transfer Register**

Member States are obliged to make returns to the European Commission covering releases of key substances listed in the Pollutant Release and Transfer Register (PRTR) from installations described in Annex 1 of the Integrated Pollution Prevention and Control (IPPC) Directive. Permitted installations are required to complete a Pollution Inventory form annually:

The Pollution Inventory Form can be downloaded at:

[www.ni-environment.gov.uk/pi\\_pollution\\_inventory\\_ni\\_form\\_4.pdf](http://www.ni-environment.gov.uk/pi_pollution_inventory_ni_form_4.pdf)

Certain other Installations identified under the European Pollutant Release and Transfer Register (E-PRTR) Regulations must complete and submit a shorter version of the Pollution Inventory Form. This form is available from the link below:

[www.ni-environment.gov.uk/eprtrni\\_short\\_form-3.pdf](http://www.ni-environment.gov.uk/eprtrni_short_form-3.pdf)

Guidance to assist with filling out the application form is available at:

[www.ni-environment.gov.uk/ni\\_prtr\\_guidance\\_notes\\_2.pdf](http://www.ni-environment.gov.uk/ni_prtr_guidance_notes_2.pdf)

Defra, on behalf of the United Kingdom, have recently launched the UK PRTR site where additional information on the 2008 NACE codes and annual UK releases are available:

[www.prtr.aeat.com](http://www.prtr.aeat.com) 

### **International Network for Environmental Compliance and Enforcement (INECE)**

The International Network for Environmental Compliance and Enforcement is a global network of environmental compliance and enforcement practitioners dedicated to raising awareness of compliance and enforcement across the regulatory cycle, developing networks for enforcement cooperation, and strengthening capacity to implement and enforce environmental requirements.

[www.inece.org](http://www.inece.org)

### **Implementation and Enforcement of Environmental Law**

The European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) is an international association of the environmental authorities of the Member States, acceding and

candidate countries of the European Union and EEA countries. The Association is the continuation of the informal network, which was commonly known as the IMPEL Network.

[//ec.europa.eu/environment/impel](http://ec.europa.eu/environment/impel)

### **Organization for Economic Development (OECD)**

All OECD books and periodicals are available online at

[www.sourceoecd.org](http://www.sourceoecd.org)

### **Environment Agency U.K.**

A U.K. government agency concerned with pollution, rivers and flooding.

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

### **Department for Environment, Food and Rural Affairs U.K. (DEFRA)**

A U.K. government agency responsible for the Environmental Permitting Programme (EPP) which is a user-friendly and modern permitting and compliance system for Waste Management Licensing and Pollution Prevention and Control.

[www.defra.gov.uk](http://www.defra.gov.uk)

**BREF** are usually issued through the internet, as the documents are large (500-700 pages are not uncommon). All BREF documents are free and are available via the internet on:

<http://eippcb.jrc.es/pages/Fmembers.htm>

### **General principles of monitoring IPPC**

Integrated Pollution Prevention and Control (IPPC) Reference Document on the General Principles of Monitoring July 2003

<http://eippcb.jrc.es/pages/Fmembers.htm>.

### **Air emission control and monitoring**

One of the most comprehensive guideline is the German TA-Luft, "Technical guidance for the air pollution control". Downloads in English are available on the website:

[http://www.ecowest.co.il/databases/TALUFT\\_2002.pdf](http://www.ecowest.co.il/databases/TALUFT_2002.pdf)

The Danish guideline "Guidelines for Air Emission Regulation" contains terms and inspection rules, control and analysis methods, and requirements for energy plants. An English translation is available on the website:

[http://www2.mst.dk/common/Udgivramme/Frame.asp?http://www2.mst.dk/Udgiv/publications/2002/87-7972-035-8/html/default\\_eng.htm](http://www2.mst.dk/common/Udgivramme/Frame.asp?http://www2.mst.dk/Udgiv/publications/2002/87-7972-035-8/html/default_eng.htm)

Other relevant air pollution literature in English is available on:

<http://www.mst.dk/English/Publications/>

The Environment Agency of England and Wales has published relevant literature on "M1 Sampling requirements for stack emission monitoring" available on

<http://www.environment-agency.gov.uk/business/regulation/31831.aspx>

**World Health Organisation**

WHO is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries, and monitoring and assessing health trends. WHO has detailed reports on monitoring and environmental management in drinking water and recreational water quality among numerous other quality resources.

[www.who.int](http://www.who.int)