

# **Air pollution-- audit Guidelines**

## **Audit of air pollution**

### **Major issues in the audit of air pollution**

- Data about sources and extent of air pollution.
- Recognition of threats to health and environment posed by air pollution.
- Existence of policy/ laws/rules for the control of air pollution.
- Existence and adherence to air quality criteria.
- Penalties for violation of air quality criteria.
- Programs /strategies to reduce air pollution.
- Compliance to programs /strategies to reduce air pollution.
- Monitoring of compliance to programs /strategies to reduce air pollution.
- Adequacy of infrastructure to control air pollution.

### **Compliance audit of issues relating to prevention of air pollution**

Compliance to environmental policies, rules and regulations relating to prevention of air pollution vary from country to country and are governed by specific legislations in vogue in that country. Compliance audit is a major part of any audit exercise and can form the first step in evaluating whether the acts/rules framed by the government relating to prevention of air pollution are being adequately implemented. The issues listed out under Theme 4 and 5 (in 4.7 below), that is, compliance to and monitoring of rules governing prevention of air pollution could form the basis for compliance audit also. In addition, certain areas listed below could also be checked during compliance audit:

- Utilisation of funds for prevention of air pollution.
- Setting up of pollution standards for different classes of industries and vehicles.
- Reduction of pollutants in the air as a result of air pollution control programs.
- Identification of major industries polluting the air and action taken against them.
- Sufficiency of equipment and trained manpower in laboratories monitoring air pollution to enable them to carry out monitoring on a sustained basis.
- Monitoring of achievement of targets set for prevention of pollution.
- Extent of fulfillment of obligations under the international accords to which the country is a signatory.

## Performance audit on air pollution

A checklist comprising of major audit themes, audit objectives and audit questions relating to control of air pollution have been listed below. Such a list would act as guidance for the audit of air pollution control issues.

Objective	Main questions
<b>Theme 1: Assessment of the levels of air pollution and its hazards</b>	
1. Whether quantum of air pollution has been accurately assessed and the risks to human health, ecosystem and environment have been studied.	1.1 Has an assessment of quantum of each kind of air pollutant (particulates, sulphur dioxide, nitrogen dioxide, carbon monoxide, hydro carbons, ozone, lead etc.) been made at the macro level by centre as well as at the micro level by the states. Have the sources contributing to air pollution like power plants, municipal waste incinerators, burning woods, oil refineries, manufacturing facilities (like synthetic, organic, agricultural, chemical, pharmaceutical, paints, aerosol, electrical appliances, refrigeration & air conditioning), landfills, commercial automobiles, privately owned automobiles, locomotives, aircrafts, marine vessels, container ships and cruise ships been identified and whether the quantum of air pollution by each source has been assessed.
	1.2 Has an identification and analysis of the expected parameters of significance for air pollution like increase in air pollution due to increase in population, seasonal changes, greater economic growth, increase in the number of private vehicles, etc., been done at central and state level.
	1.3 Has the government identified risks to environment (on air quality) as a result of air pollution.
	1.4 Has the government identified risks to human health caused by air pollution.
<b>Theme 2: Existence of rules and regulations pertaining to air pollution</b>	
2. Whether clear rules and regulations/action	2.1 Whether a separate law/rule has been enacted to control air pollution and whether these laws/rules are adequate to effectively control air pollution.

<p>plan/strategies have been enacted to control air pollution and whether clear responsibility and penalty for violation has been incorporated in the legislations already enacted.</p>	<p>2.2 Whether all sources of air pollution like from power plants, municipal waste incinerators, burning woods, oil refineries, manufacturing facilities (like synthetic, organic, agricultural, chemical, pharmaceutical, paints, aerosol, electrical appliances, refrigeration &amp; air conditioning, landfills, commercial automobiles, privately owned automobiles, locomotive, aircraft, marine vessels, container ships and cruise ships) have been taken into account while framing laws/rules for control of air pollution.</p>
	<p>2.3 Whether the government has defined acceptable levels for each kind of pollutant and do these levels vary with international standards.</p>
	<p>2.4 Whether the laws/rules incorporate responsibility and penalty for violation of air pollution control laws/rules.</p>
	<p>2.5 Has the Government made any strategy/action plan with clear timelines and commitment for reduction of quantities for air pollution.</p>
	<p>2.6 Has the Government framed policies/ strategies/ action plans for air pollution reduction and have these been communicated to all stakeholders.</p>
	<p>2.7 Has the suitable technology been adopted to minimize the environmental and health hazards caused by air pollution.</p>

**Theme 3: Allocation of responsibility for control of air pollution**

<p>3. Whether the various agencies involved in the process of control of air pollution have been clearly</p>	<p>3.1 Has a nodal body for control of air pollution been identified both at the macro and the micro levels.</p>
	<p>3.2 Has the primary agency for making policy/legislation/strategy for control of air pollution been identified at the macro as well as micro levels.</p>

<p>identified and whether clear responsibility and accountability for air pollution management has been allocated among them and whether there is a mismatch/gap/overlap among the responsibility centres.</p>	<p>3.3 Have bodies been created and entrusted responsibility for the implementation of laws/ rules on air pollution.</p>
	<p>3.4 Have bodies been created and entrusted responsibility for the monitoring of laws/ rules on air pollution.</p>
	<p>3.5 Has a regulatory agency being created for measuring air pollution, setting acceptable levels of air pollution and revising it regularly to ensure better control.</p>

#### **Theme 4: Compliance of air pollution rules and regulations**

<p>4. To ascertain the level of compliance to air pollution rules and regulations already in existence.</p>	<p>4.1 Are all the entities causing air pollution acting in accordance with the compliance criteria and procedures laid down in law.</p>
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#### **Theme 5: Monitoring**

<p>5. Whether effective monitoring was done to ensure compliance to defined acceptable levels for each kind of pollutant.</p>	<p>5.1 Whether monitoring mechanism was effective in checking non-compliance with the provisions of air pollution control laws/rules.</p>
	<p>5.2 Whether a system was in place for regular and sustained monitoring.</p>
	<p>5.3 Whether penalty was imposed, when required, on a regular basis as a result of monitoring of levels of air pollution.</p>
	<p>5.4 Whether any independent review/evaluation been carried out regarding implementation of these laws/rules.</p>

#### **Theme 6: Adequacy of funding and infrastructure**

<p>6. Whether funding and infrastructure</p>	<p>6.1 Are funds being provided at the macro level by the central government for implementation of air pollution prevention rules.</p>
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was adequate to ensure effective compliance and monitoring of air pollution control programs.

6.2 Are funds being provided at the micro level by the provincial/state governments for implementation of air pollution prevention rules.

6.3 Whether need assessment for manpower to implement and monitor air pollution prevention programs has been made and has the manpower been deployed effectively.