

Waste
management—audit
guidelines

Audit of waste

Types of audit

a) Compliance audit: The scope of audit is restricted to checking compliance of the audit entity with respect to policies/laws/ rules/regulations framed by the Parliament/state legislature. With respect to waste, compliance audit would check whether the audited entity (can be a private entity, or an agency of the government) is complying with the policies/laws/rules/regulations relating to waste (like Bio-medical Waste Management and Handling Rules, Municipal Solid waste management and Handling Rules, Hazardous Waste management rules etc.,) framed by the Ministry of Environment and Forests at the central level and Department of Environment at the state level.

b) Performance audit: The scope¹ could encompass the following:

- Audit of Government's monitoring of compliance with environmental laws: The main aim of such audit is to assess whether the government is monitoring compliance whether the entities required to follow the applicable waste rules are doing so or not.
- Audit of the performance of Government's environmental programs: The main aim of such audit is to offer an opinion on the performance of specific environmental programs/ projects/strategies already formulated and being implemented by the Government. Some of these programmes of the Ministry of Environment and Forests of the GOI are Tiger Project, Greening India programme, Elephant Project etc.
- Audit of the environmental impact of other Government programs: The main aim of such audit is to offer an opinion on the environmental impact of other programs/projects formulated and implemented by other Ministries/ departments/agencies other than the Ministry/Department of Environment. For example, audit of the impact of mining, building roads/dams, military etc., on the environment would fall under this category.
- Audit of Environmental Management Systems: The main aim of such audit is to offer an opinion on the implementation of Environmental Management Systems (EMS) of the audit entity and/or ISO 14001 Standards². The absence of an EMS can also be a source of audit comments.
- Evaluation of environmental policies and programs: The main aim of such audit is to offer an opinion on the adequacy or lack of a policy framework governing environmental issues. International best practices can be a source for such comparison. However, adaptability to local conditions should be considered before making such comparisons.

c) Financial audit: Some audit entities operate in sectors where environmental matters like waste may have material impact on their financial statements. In such entities, impact of environment related issues requires to be adequately reported upon in the financial

¹ As defined by INTOSAI

² International Standards Organisation has set specific guidelines for implementing EMS in organizations.

statements. The International Auditing Practices Committee (IPAC) had defined environmental matters in a financial audit and these as applicable to waste are:

- Initiatives to prevent/abate/remedy damage to the environment as a result of improper handling and management of waste. Such initiatives may be required by environmental laws and regulations or by contract, or they may be undertaken voluntarily.
- Consequences of violating environmental laws and regulations relating to waste.
- Consequences of environmental damage done to others or natural resources as a result of improper management and handling of waste.
- Consequences of vicarious liability³ imposed by law. An example could be the present owners being held liable for environmental damage caused by the previous owners by dumping of waste.

Based on these considerations, an audit opinion can be expressed on adequacy of compliance to the various national and adopted international financial regulations.

Audit process

Although every audit project is unique, the audit process is similar for most audit engagements and normally consists of four stages of planning for the audit, conducting field audit and audit reporting. This process is applicable for the audit of waste also.

(a) Audit planning: audit planning is vital to the success of the audit undertaken. It is essential that the auditors spend adequate time in planning, as this will result in better identification of priority areas and potential problems and proper assignment of work. For conducting successful audit assignments, the auditor needs to know what has to be achieved (audit objectives), determine what procedures to be followed (audit methodology), and assign qualified staff for the conduct of audit (resource allocation).

(b) Gathering background information for environment audit: Some of the sources available for gathering background information about the audit entity are:

- Environmental policy of the audit entity.
- Annual report of the audit entity.
- Identification of major players in the waste management process.
- Identification of the applicable rules relating to waste
- Administrative and financial delegation of powers of the audit entity.
- Commitments given by the audit entity to the government planning agencies, in performance/outcome budgets.
- Media reports.
- Reports of independent evaluation agencies like Non Government Agencies (NGOs).
- Peer review reports.

³ When one person is liable for the negligent actions of another person, even though the first person was not directly responsible for the damage.

(c) Setting audit scope: Audit scope will differ for each different kind of audit. For compliance audit, it will be restricted to checking compliance to applicable waste laws. For performance audit, the scope could be evaluation of government policy/laws/programmes/strategies for the management of all kinds of waste or any particular kind of waste. Scope of performance audit could also be audit of government's programmes which generate waste as a by-product like mining, road-building, power plants etc. Audit scope in performance audit could also encompass audit of Environmental Management System (EMS) which has been put by an agency to reduce negative impacts of its operation. EMS with specific reference to safe handling and management of waste can also be examined as an audit issue. The scope of financial audit in relation to waste could be to examine whether all costs relating to waste management issues have been assessed accurately and disclosed in the financial statements.

(d) Setting audit objectives for environment audits: For compliance audit, audit objectives are derived from the various applicable waste rules and regulations. For performance audits, audit objectives need to be identified at the very beginning and can relate to areas like:

- Existence and adequacy of environment policies / laws /strategies relating to waste.
- Adequacy of data for evaluating impact on waste on environment.
- Identifications of risks caused by waste to health and environment.
- Allocation of responsibility amongst the various stakeholders involved in management of waste control.
- Adequacy of monitoring and evaluation of waste management laws.
- Adequacy of infrastructure and funding for waste management.

For financial audit, audit objectives are derived from the respective applicable financial standards.

(e) Setting audit criteria for environment audits: Audit criteria help in assessing the performance of the entity with reference to certain laid down standards and performance benchmarks.

(i) Compliance audit: The purpose of the criteria for an audit of waste issues is to enable the auditor to establish whether the entity has conducted an activity, which has an impact on the environment, in compliance with all applicable obligations defined in the waste laws and rules. Sources of criteria could include:

- National laws – Acts of the legislature and any regulations, rules, orders etc., made under an Act and having the force of law. Those relating to waste are The Hazardous Wastes (Management, Handling and Transboundary Movement) Rules,2008, The Batteries (Management and Handling) Rules, 2001, The Municipal Solid Wastes (Management and Handling) Rules, 2000, The Recycled Plastics Manufacture and Usage Rules, 1999, The Recycled Plastics Manufacture and Usage (Amendment) Rules, 2003 ,The Bio-Medical Waste (Management and Handling) Rules, 1998 and Bio-Medical Waste (Management and Handling) (Amendment) Rules, 2003.
- International agreements – such as treaties with other jurisdictions and United Nations Conventions like Agenda 21 document of the World Commission on Sustainable Development of the United Nations Conference on Environment and Development,

held in Rio in June 1992 and United Nations Environment Programme (UNEP) guidelines.

- Binding standards (including techniques, procedures, and qualitative criteria) issued by environmental monitoring/ regulatory agencies like CPCB/SPCB.
- Contracts.

(ii) Performance audit: The purpose of the criteria for performance audit on waste management is to enable the auditor to form an opinion on whether the entity has handled and managed waste in an effective, efficient and economical manner consistent with the applicable governmental policy/law/rules. Sources of criteria could include:

- Performance indicators of effectiveness, efficiency or economy that are prescribed by laws/rules on waste management, specified in the official governmental policy for the activity or otherwise mandatory on the entity.
- Generally accepted standards issued by a recognised body like United Nations Environment Programme, Agenda 21, other UN agencies.
- Performance indicators or measures used by similar entities or other entities engaged in waste management
- Academic literature on waste management
- Outside experts working in the field of waste management.

(iii) Financial audit: The purpose of criteria for the environmental aspects of a financial audit is to enable the auditor to establish whether the reporting entity has appropriately recognised, valued and reported environmental costs, liabilities (including contingent liabilities) and assets. Sources of criteria could include:

- Mandatory standards issued by authoritative standard-setting bodies like IFCAI.
- Standards issued by some other recognised bodies like CPCB/SPCB.
- International standards issued by recognised bodies.
- Guidance issued by relevant professional bodies.
- Academic literature.

(f) Conducting field audits: The purpose of fieldwork is to accumulate sufficient, competent, relevant and useful evidence to reach a conclusion about the performance of the entity with regard to waste management and to support audit comments and recommendations. Audit evidence is sufficient when it is factual and would convince an informed person to reach the same conclusion. Evidence is competent if it consistently produces the same outcomes. It is relevant when it is directly related to the audit comments, recommendations and conclusions. Conducting field audit consists of the following steps:

- Conducting an opening meeting with the audit entity in order to explain audit objectives, criteria and methodology to be followed by audit.
- Collecting audit evidence through questionnaires, interviews, document scrutiny, photographs, direct testing of samples collected by audit etc.
- Conducting a closing meeting with the audit entity in order to share the preliminary audit findings.

(g) Post audit: The audit report communicates the results of the audit work and is thus, one of the most important parts of the audit process. If written and communicated well, the report can act as a positive change agent prompting management to take corrective action. The steps taken during post audit are:

- Preparing a draft report after analyzing the audit evidence and drawing audit conclusions against each audit objective.
- Conducting an exit conference with the audit entity to discuss the draft report.
- Audit entity's responses to the draft report.

Final report takes into account the audit entity's responses to audit conclusions and suggests recommendations.

Major compliance audit issues in management of waste

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 are being adequately complied with. The areas listed below could be checked during compliance audit:

- Contracts, if any, awarded for waste management, the usual audit checks on contracts may be performed.
- Targets in the inspection of waste management facilities as per law/rule and whether shortfalls in inspection exist.
- Gaps in requirement of manpower and men in position to implement waste laws.
- Regulations for the issuance of licenses for the various establishments, checklist of conditions to be satisfied before issue of these licenses and cases of omissions and lapses in compliance.
- Strategy for the funding of waste management programs, the sources, conditions, sanctions, releases, payments, expenditure, maintenance of accounts etc.
- Role played by the pollution control boards, local bodies, state Governments, Non Governmental Organisations (NGOs) in dealing with waste management as defined in the law/act.
- System of imposing punishments for the failures and non adherence of the rules/regulations. Imposition, collection, crediting and adequacy of penalties.
- Extent of dues for recovery, efficiency of the system of imposition and recovery of penalty.
- Inspection/checking of established infrastructure for waste management, facilities established for prevention of pollution.

Checklist for performance audit of management of waste

The following checklist can be used for the performance audit of management of either all kinds of waste or any kind of waste in particular like biomedical waste or hazardous waste. In addition, any of the themes listed in the checklist below can also be used to carry performance audit related to that particular theme.

Objective	Main question
Theme 1: Assessment of the quantum of waste and risks associated with it	
1. Whether the quantum of waste	1.1 Has an assessment of quantum of each kind of waste been

being generated in the country has been accurately assessed and whether risks to environment and health posed by waste have been identified.	made at the macro as well as micro level according to waste sources (like industries, households, hospitals etc.,) amounts and types (municipal solid waste, bio-medical waste, hazardous waste, e waste etc.,) to get an accurate picture of the waste being generated in the country and states.
	1.2 Has an identification and analysis of the expected parameters of significance for waste generation like increase in waste due to increase in population, due to greater economic growth, due to increase in demand for consumer goods, due to changes in manufacturing methods etc., and the composition of waste been done at central and state level.
	1.3 Has an assessment been made about the current capacity to handle waste and whether more capacity needs to be created based on the quantity of waste being generated.
	1.4 Has any entity/government identified the risks to environment as a result of improper management of waste and waste accumulation.
	1.5 Has the government identified risks to human health as a result of improper management of waste.
Theme 2: Recognition of waste as a cause of environmental degradation	
2. Whether waste has been adequately recognized as a cause of environmental degradation by environmental legislation and planning documents by the country's planning authorities.	2.1 Does the legislation on protection of environment recognize waste as one of the threats to the environment in the country.
	2.2 Do planning documents recognize the management of waste as a priority area for sustainable development of the country.
Theme 3: Government policies on waste minimization and waste reduction	
3. Whether policies on waste management reflect the priority of waste reduction and waste minimization in preference to waste disposal.	3.1 Has the government enacted a separate policy for waste management and does the waste policy define the hierarchy governing waste management.
	3.2 Has the government prepared an action plan for the reduction of each kind of waste.
	3.3 Has the government put in place waste prevention, reduction, reuse and recycle strategies which will reduce the waste being generated in the country.
	3.4 Has the government taken any action on consumer information and education to promote waste minimization, specifically reduction, reuse and recycling.
	3.5 Does an environment labelling program exist and has it succeeded in its objective in promoting the use of environmental friendly products.
Theme 4: Existence of legislation for disposal of all kinds of waste	
4. Whether environmental legislation dealing with disposal of	4.1 Does legislation /rules exist in the country for the disposal of all types of waste.

<p>each kind of waste source exists and whether clear responsibility and penalty for violation has been incorporated in the legislations already enacted.</p>	<p>4.2 Do all the rules/ legislation for the management of waste exist in a framework in one place for easy understanding and implementation.</p>
	<p>4.3 Whether the law/rules incorporate responsibility and penalty for violation (polluter pays principle) of waste laws.</p>
<p>Theme 5: Allocation of responsibility for the management of waste</p>	
<p>5. Whether the various agencies involved in the process have been identified and allocated clear responsibility and accountability for waste management and whether a mismatch/gap/overlap exists among the responsibility centres.</p>	<p>5.1 Has a nodal agency regarding waste management issues been identified at central and state level.</p>
	<p>5.2 Have policy making bodies for each kind of waste been created.</p>
	<p>5.3 Have bodies for implementation of waste laws and rules been created.</p>
	<p>5.4 Have bodies been created and entrusted responsibility for monitoring the implementation of laws/ rules on waste.</p>
	<p>5.5 Have regulatory bodies been set up to fix standards for emissions and effluents generated by waste.</p>
	<p>5.6 Is there a body to assess the pollution being caused by the different types of waste.</p>
<p>Theme 6: Compliance to and monitoring of rules governing waste management</p>	
<p>6. Whether compliance to laws relating to waste is taking place and whether the monitoring mechanism is effective in checking non-compliance.</p>	<p>6.1 Are the municipal authorities managing and handling solid waste in accordance with the compliance criteria and procedure laid down in law.</p>
	<p>6.2 Is municipal solid waste being collected as envisaged under law.</p>
	<p>6.3 Is segregation of municipal waste taking place as envisaged under law.</p>
	<p>6.4 Have municipal authorities established and maintained storage facilities in such a manner as they do not create unhygienic and unsanitary conditions around it.</p>
	<p>6.5 Is the transportation of municipal solid waste taking place as envisaged under the law.</p>
	<p>6.6 Is the processing of municipal solid waste done as envisaged under the law.</p>
	<p>6.7 Is the disposal of municipal solid waste being done as envisaged in the law.</p>
	<p>6.8 Is the management of biomedical waste being done in accordance with the law.</p>
	<p>6.9 Has the segregation and labelling of biomedical waste prior to storage, transportation, treatment and disposal been done as per the law.</p>
	<p>6.10 Is the disposal of plastic waste being done as per the law.</p>
	<p>6.11 Is the disposal of industrial waste being done as per the law.</p>

	6.12 Is the disposal of hazardous waste being done as per the law.
	6.13 Is the disposal of any other kind of waste for which laws have been enacted, disposed as per the laws.
	6.14 Whether monitoring mechanism was effective in checking non-compliance with the provisions of waste laws.
Theme 7: Evaluation and feedback mechanism	
7. Whether a sound system for taking effective action on the collected feedback has been evolved?	7.1 Have any evaluation studies been carried out regarding implementation of these laws.
	7.2 Have the recommendations made by independent evaluation agencies been incorporated in the Acts/rules.
Theme 8: Adequacy of funding and infrastructure	
8. Whether funding and infrastructure was adequate for the implementation of rules on waste management and whether the funds/infrastructure have been used economically, efficiently and effectively.	8.1 Are funds being provided for implementation of waste management laws/rules.
	8.2 Is the funding adequate for waste management activities.
	8.3 Whether need assessment for technically qualified manpower to implement and monitor waste management has been made and have these been deployed effectively.
	8.4 Whether facilities to monitor pollution and environmental degradation as a result of waste exists with the pollution monitoring agency.

Chapter4: Schemes/programmes of other departments

Waste management programmes are also implemented by other ministries like Ministry of Urban Development and Ministry of New and Renewable Energy Sources. Some of these are:

- Jawaharlal Nehru Urban Renewable Mission
- Waste to energy programme

We are trying to ascertain the programmes taken up for management of waste in other ministries.