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**MAHB** Major Accident Hazards Bureau  
Security Technology Assessment Unit

SEVESO COMMON **INSPECTION** SERIES CRITERIA

## Internal Auditing Procedures

*This publication of the European community on Common Inspection Criteria is intended to share knowledge about technical measures and enforcement practices related to major hazard control and implementation of the Seveso II Directive. The criteria were developed by Seveso inspectors to aid in dissemination of good enforcement and risk management practices for the control of major industrial hazards in Europe and elsewhere.*

*This particular issue highlights a number of issues that are critical for successfully reducing risk through effective internal procedures. Note that this document is not intended as a technical standard nor as a summary or replacement of any existing standards on the matter.*

### Definition

Internal auditing can be defined as a process of independent, systematic examination to assess the extent of conformance with defined standards and recognised good practice and to thereby identify opportunities for improvement.

For a major hazards operator a process safety audit checks that what the business does in reality matches up to:

- what it says it does in terms of policies and procedures
- what it should do to ensure that major accident risks are reduced to as low as reasonably practicable.

The task of audit is an integral element to process safety management systems and mandated by the Seveso directive for major hazard establishments.

### Inspection of internal auditing

It should be noted that the term 'auditing' involves fundamental assessment of the validity and reliability of the safety management system itself. It should not be confused with some operator's use of the term "auditing" to refer to activities such as safety



Fig. 1 Internal audit procedures play an important role in the safety management system

tours, physical conditions inspections and behaviour observation carried out by line managers as part of their active performance monitoring activities. The relationship of audit in both monitoring and system review activities is illustrated in Figure 2 on the next page.

It is expected that the description of the operator's arrangements for audit will contain the following;

- the resources and personnel required for each audit, bearing in mind the need for expertise, operational independence and technical support;
- the audit plan indicating how it has been prioritised;

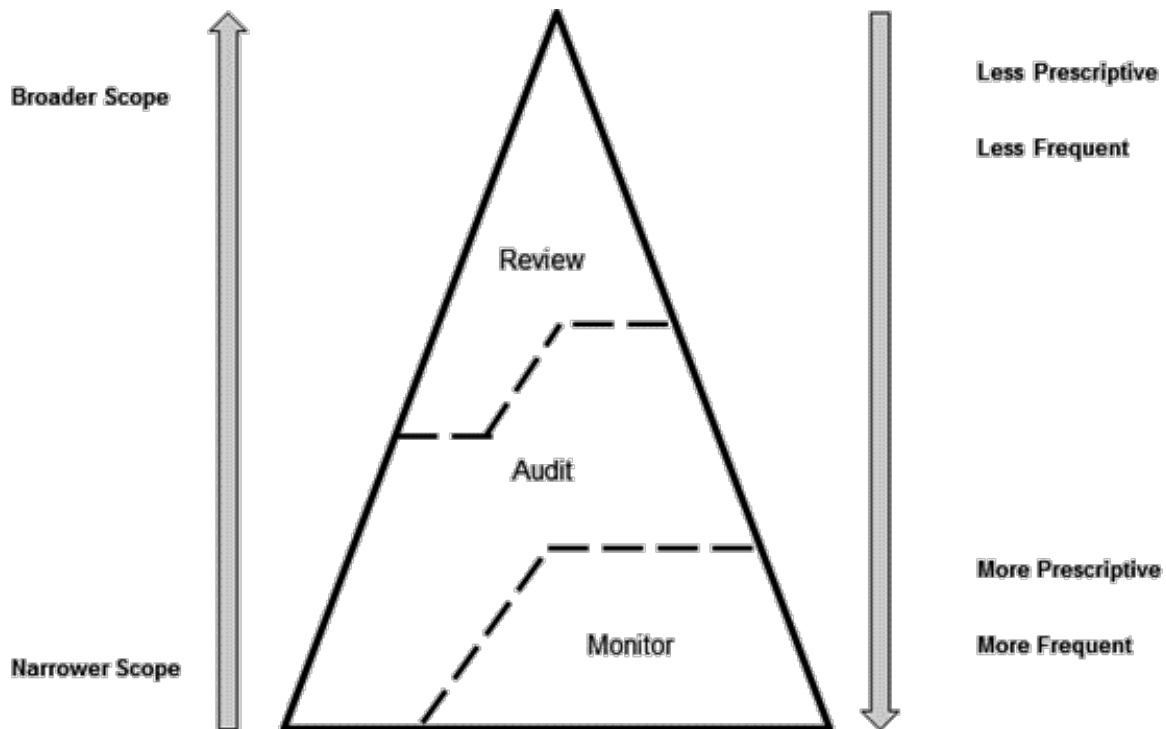


Fig. 2 Hierarchy of Review, Audit and Monitoring Activities

- the audit protocols to be adopted (which might include the use of questionnaires, checklists, open and structured interviews as well as checking documents and measurements and observations);
- the procedures for reporting the audit findings; and
- the procedures for following up the recommendations shown to be necessary by audits.

Auditing is of little value unless the entire business is prepared to act on the recommendations from the audit itself and track through and validate close out of these actions. Inspectors should be cautious of audits which convey only good news or are biased towards compliance as opposed to improvement actions. Demonstrable evidence of the review and improvement of the audit process is also essential for audits to remain effective.

## Audit planning

The ingredients of a robust audit programme are:

- senior management commitment;
- employee engagement and participation;
- an audit team competent in terms of auditing skills (interviewing, report writing, presenting) and specialist process safety skills (knowledge of internal standards, external regulatory requirements and awareness of best practice); and
- an audit team which brings together expertise and objective unbiased opinion.

Audit teams can be composed of internal staff auditors, independent of the site or section under audit, including those individuals who are either co-opted from other sites or else are group based. Several organisations elect to supplement their audit teams with external auditors in order to bring a fresh perspective to its internal auditing. In this case competence as with internal staff auditors will need to be assessed and monitored.

As far as scheduling audits, the audit frequency should be risk-based and can be a function of several factors including:

- the nature of the inherent hazards present on a site,

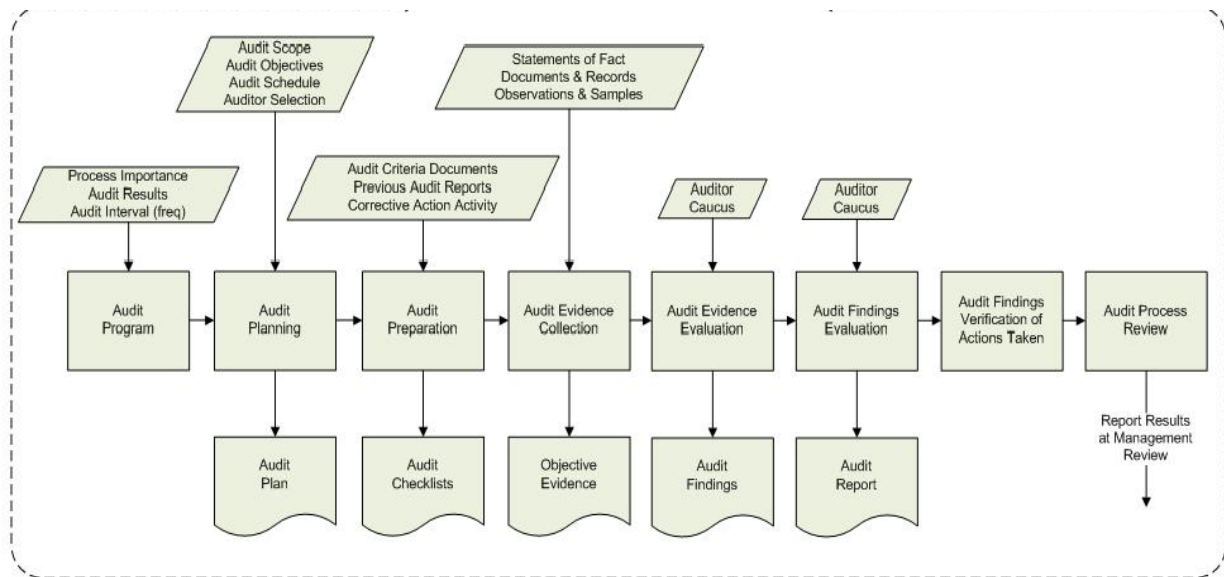


Fig. - @ h Source: www.bizmanuals.com)

- the most recent audit results achieved,
- incident track record, and
- degree of external regulatory scrutiny.

Aside from routine scheduled audits the business may organise internal audits as a result of:

- an incident of actual/potential serious consequence,
- a request from local management (often as a result of newly installed managers who wish to establish a baseline audit of their operations), and
- a follow up to an earlier routine audit (if the results of that audit merit a special audit visit).

## Audit Procedures

There are two components to the conduct of an audit. The first is assessment which is a process to develop an opinion on the strengths and weaknesses of process safety activities. This task will require the auditors to have an understanding of acceptable practice as it applies to the operation under audit.

The second component is verification, which is a process to determine adherence to specific internal standards. This task relies on the audit team having intimate knowledge of the internal standards related to process safety which will necessarily be compliant with local legislation.

As far as verification the following should be in place:

- an audit plan which indicates which elements of the safety management system are audited and the time, location and individual(s) who are conducting the audit;
- audit planning which covers all elements of the safety management system (including management of change, inspection and maintenance programs, permit to work system, management of operational instructions, training programs, internal emergency planning, investigation of accidents and incidents);
- instructions on how to audit for each element (what kind of questions, what kind of documents should be checked);
- auditors who are competent in the application of the auditing instructions;
- an audit report, clearly indicating the following details: time, place, people involved, the procedure or system that was audited for each audit and which clearly indicates major findings;
- management evaluation of audit findings which are considered shortcomings (at least by the manager responsible for the audited division of department);
- corrective action plan to address shortcomings with execution and due dates;

## Contact

This bulletin is a product of the EU Technical Working Group on Seveso Inspections. For more information related to this bulletin or other products and activities of the Technical Working Group, please contact:

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- an individual assigned to follow up on corrective actions; and
- a report made periodically on progress and implementation of the audit programme.

## Post Audit

As the internal auditing programme matures it is expected that the programme is subject to regular review and improvement based on:

- debriefing of auditing teams,
- feedback from audited sites, and
- bench marking of audit processes with peer companies.

Ultimately the audit outcomes should correlate with process safety performance. A worsening process safety performance indicates that there may be problems with the auditing process.

## References

- 1 EPSC (European Process Safety Centre) Process Safety Auditing Report 32 [www.epsc.org](http://www.epsc.org) (freely available on request)
- 2 Department of Infrastructure, Planning and Natural Resources Major Industrial Hazards Advisory Safety Assurance Paper No. 1

## Seveso Inspection Series Volume 6

### *Assessment of Safety Management Systems of Major Hazard Sites*

*There are still widespread questions among many Seveso inspectors as to when the assessment of the safety management system can determine that adequate steps have been taken. This document shares the knowledge and experience of a cross-section of Seveso inspectors across Europe to aid other inspectors in benchmarking good practice on inspection and control of SMS demonstrations. The Seveso Inspections Series is intended to be a set of publications reflecting conclusions and key points from technical exchanges, research and analyses on topics relevant to the effective implementation of the inspection requirements of the Seveso Directive.*

