SAFETY AUDIT / ASSESSMENT TOOL
TRANSPORT OF GAS CYLINDERS

Doc 102.10/21

Revision of Doc 102/03 Appendix C9

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Disclaimer

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Amendments to Doc 102/03

All	Revision of Doc.102/03 Appendix C9
All	New format of Safety Audit / Assessment Tool

NOTE Technical changes from the previous edition are underlined

1 Introduction

Auditing is a proactive management tool for use by an organisation or activity as a part of its management responsibilities. It is used to proactively confirm compliance, detect potential issues and facilitate future improvement.

EIGA Doc 102, *Audit Guidelines,* provides an overview of audit and self-assessment processes, identifies different types of audits and lists the key points for ensuring success [1].[1]

Sections 8.2 and 8.4 of Doc 102 refer to EIGA's audit tools document series that can be used in verification of findings and evidence collection and in action plans and follow up to audits [1].

This publication is part of that series.

2 Scope and purpose

2.1 Scope

This publication provides a checklist focusing on a specific area of safety, health and environment, management systems and technical practices within the industrial and medical gas industry.

This checklist does not incorporate all the requirements of local or national legislation. These should be taken into consideration when planning any audit or developing audit checklists.

The tool or combination of tools used can depend upon the type of audit and the organisation, location or site characteristics.

2.2 Purpose

Each Safety Audit / Assessment tool contains a list of questions that may be used by the auditor in the format shown in 3.1. Each question has a sequential reference number, the question itself and where relevant a reference to the EIGA publication or external publication that provides guidance on that specific topic.

These question sets may then be use at different stages of the audit process, by combining them with additional information columns in a manual or automated audit system, depending on company systems.

Section 3.2 shows the format of how the question set may be used for collection of evidence and development of findings.

Section 3.3 shows the format of how the question set may be used for management of actions arising from the audit.

Forms may be adapted or combined depending on audit and action monitoring systems used by a company.

The Auditor should not ask the questions on this list in isolation but should use them in conjunction with EIGA Doc 102 and EIGA Doc 52, *Load Securing of Class 2 Receptacles* [1, 2].

[1] References are shown by bracketed numbers and are listed in order of appearance in the reference section.

3 Formats for Audit Checklists

3.1 Format for Audit / Assessment Tool Questions

Question reference	Question	Document Section Reference
Use sequential numbering system within each section, for example 1.2, 1.3. *Try to avoid multiple clustered questions under the same number but describe them as separate questions.*		*In EIGA reference document or external reference document*

3.2 Typical Format for collection of evidence and development of findings

Question reference	Question	Document Section Reference	Yes No N/A	Description of Evidence / Comments *(Ref…)*	Findings *(Ref…)*	Recommendations for improvement *(Ref Doc xxx 8.2.6*	Action Required Yes/No
Use sequential numbering system within each section, for example 1.2, 1.3. *Try to avoid multiple clustered questions under the same number but word them as separate questions.*		*In EIGA reference document or external reference document*	*Answer is yes, no or question is not applicable*				

3.3 Typical format for management of actions arising from the audit

Question reference	Findings	Action(s)	By Whom	Dates	
				Target	Complete
Use sequential numbering system within each section, for example 1.2, 1.3. *Try to avoid multiple clustered questions under the same number but word them as separate questions.*					

4 Transport of gas cylinders – Question set

1 General

2 Sub-contractors for cylinder transport

3 Driver training

4 Vehicle crane and tailgate lift

5 Securing loads

6 Maintenance of vehicle

7 Emergency measures

NOTE This questionnaire is not exhaustive and may need to be complemented / adapted in order to cover all the procedures, plant specifics and equipment on site.

	Question	Yes	No	N/A	Comment	Agreed Action	By Whom	Dates	
								Target	Compl
1.0	**General**								
1.1	Are vehicles equipped with a tachograph								
1.2	Is tachograph data checked on a regular basis								
1.3	Are charts / records kept for the regulatory /mandatory period								
1.4	Are all violations recorded on charts brought to the attention of the drivers								
1.5	Have any modifications been carried out on the vehicles								
1.5.1	Were these modifications duly authorised								
1.6	Are frequent checks carried out to verify if following items are carried on board vehicles (for example): Licences (ADR and driver's licence) Instructions In Writing Loading / delivery note Operating instructions Fire extinguisher(s)								
1.7	Is the marked according to ADR (orange-coloured plates)								
1.8	Are cylinders labelled according to regulation (for example ADR and CLP)								

	Question	Yes	No	N/A	Comment	Agreed Action	By Whom	Dates	
								Target	Compl
2.0	**Sub-contractors for cylinder transport**								
2.1	Prior to the appointment of transport contractors for the carriage of gases, are they supplied with:								
2.1.1	All appropriate manuals / operating instructions								
2.1.2	A copy of all appropriate safety rules and road safety policy								
2.2	Are the same rules applied to the loading / offloading of contractors' vehicles that are applied to company vehicles								
3.0	**Driver training**								
3.1	Have all drivers received safety training								
3.2	Have drivers attended sessions on following subjects:								
3.2.1	Gas properties								
3.2.2	International and national regulations								
3.2.3	Emergency procedures in case of accident								

	Question	Yes	No	N/A	Comment	Agreed Action	By Whom	Dates	
								Target	Compl
3.2.4	Firefighting and use of extinguishers								
3.3	Is refresher training given at regular intervals								
3.4	Have drivers been instructed to report:								
3.4.1	Any defect on truck, engine and equipment (brakes, lighting etc.)								
3.4.2	Incidents and accidents to vehicle, cylinders and personnel								
3.5	Is there evidence of drivers reporting defects, incidents and accidents								
3.6	Have drivers been given instructions to:								
3.6.1	Perform a daily check of their vehicle according to checklist, for example lighting, tyres, valves								
3.6.2	Adhere strictly to road regulations								
3.6.3	Never overload vehicle								
3.6.4	Ensure the load is properly secured, i.e. by use of chocks, restraining straps etc.								

	Question	Yes	No	N/A	Comment	Agreed Action	By Whom	Dates	
								Target	Compl
3.6.5	Avoid rough handling of cylinders, for example when unloading								
3.6.6	To check all cylinders/valves for defects and signs of improper use								
3.6.7	To label all cylinders found to be defective								
3.6.8	Use protective clothing and equipment: gloves safety shoes breathing apparatus (in the case of vehicles delivering toxic gases								
4.0	**Vehicle crane and tailgate lift**								
4.1	Are regular checks carried out on: mechanical components and structure hydraulic system electrical equipment load testing pneumatic systems wire ropes, chains and fittings								
4.2	Are drivers trained (and certified where required) on the use of cranes								
4.3	Are the instructions as to the use of the crane marked on lifting device								
4.4	Are these instructions followed (safe working load)								

	Question	Yes	No	N/A	Comment	Agreed Action	By Whom	Dates	
								Target	Compl
4.5	Are drivers aware of the weight of the various loads that have to be handled (pallets, bundles, containers etc.)								
4.6	Are instructions concerning the use of tailgate lifts and crane outriggers strictly followed								
4.7	Are warning signs attached to the crane / vehicle to forbid walking under loads								
4.8	Are drivers instructed not to operate cranes under electrical power lines								
4.9	Have drivers been instructed to report defects on: tailgate lift crane								
4.10	Are reported defects promptly remedied								
5.0	**Securing of loads**								
5.1	Are regular checks carried out on load securing items: levers, pins straps, ratchets brackets pintles or other onboard load securing methods								
5.2	Have drivers been instructed to report defects on above equipment								

	Question	Yes	No	N/A	Comment	Agreed Action	By Whom	Dates	
								Target	Compl
5.3	Is load properly secured according to instructions								
5.4.1	Is all necessary equipment for securing and safe carriage of loads available								
5.4.2	Is it checked at regular intervals								
6.0	**Maintenance of vehicle**								
6.1	Is there a planned preventative maintenance system								
6.2	Does it cover: engine chassis and bodywork transmission gear box steering mechanism electrical and lighting equipment tyres, condition and pressure wheels fire extinguishers brakes load securing equipment cranes / tailgate lifts including all electrical components								
6.3	Are inspection programmes up to date								
6.4	Have any major services been missed for any vehicle								

	Question	Yes	No	N/A	Comment	Agreed Action	By Whom	Dates	
								Target	Compl
6.5	Does detailed examination of a number of vehicles show that maintenance standards are satisfactory								
6.6	Are records retained and accurate								
7.0	**Emergency measures**								
7.1	Have drivers been made aware of properties and dangers of: gases under pressure asphyxiating gases oxidising gases flammable gases (H_2, C_2H_2 etc) toxic / corrosive gases								
7.2	Have drivers been instructed as to the measures they should take in the event of: road accident vehicle fire cylinder leak / fire tyre fire toxic and / or combustible gas leak								

5 References

[1] EIGA Doc 102, *Audit Guidelines,* www.eiga.eu.

[2] EIGA Doc 52, *Load Securing of Class 2 Receptacles*, www.eiga.eu.