



Safety Assessment Report Workshop

Presented to
The International System Safety Society Tennessee
Valley Chapter
22 October 2014

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Safety Assessment Report Workshop



Agenda

- ✓ Safety Assessment Report
 - Description/Purpose
 - Preparation instructions
- ✓ References
- ✓ Template
- ✓ Exercises – Prepare sections for an example system
 - Source document, contents, introduction, system description, system operations, system safety engineering, conclusions and recommendations, references.
- ✓ Audit protocol tool
- ✓ Workshop conclusion



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Safety Assessment Report

✓ Description/Purpose

- The Safety Assessment Report (SAR) is a comprehensive evaluation of the safety risks being assumed prior to test or operation of the system or at contract completion.
- It identifies all safety features of the system, design, and procedural hazards that may be present in the system being acquired and specific procedural controls and precautions that should be followed.



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Safety Assessment Report

✓ Preparation instructions

Source document page – The applicable issue of the documents cited, including their approval dates and dates of any applicable amendments and revisions, shall be reflected in the contract.

Contents – The SAR shall contain the following sections; Introduction, System description, System operations, System safety engineering, Conclusions and recommendations, and References.



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Preparation instructions continued

Introduction – State in a narrative form, the purpose of the safety assessment report.

System description – This section may be developed by referencing other program documentation such as technical manuals, system program plan, system specifications, health hazard assessment report, system safety hazard analysis report, etc. It shall include:

- ✓The purpose and intended use of the system
- ✓A brief historical summary of the system development
- ✓A brief description of the system and its components. Include name, type, model number, and general physical characteristics of the overall system and its major subsystems and components. Software and its roles shall be included in the description.
- ✓As applicable, a description of any other system(s) which will be tested or operated in combination with this system.
- ✓As applicable, either photos, charts, flow/functional diagrams, sketches, or schematics to support the system description, test or operation.



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Preparation instructions continued

System operations – This section may be developed by referencing other program documentation such as operating manuals, test plans, and maintenance manuals. It shall include:

- ✓ A description or reference of the procedures for operating, testing and maintaining the system. Discuss the safety design features and controls incorporated into the system as they relate to the operating procedures.
- ✓ A description of any special safety procedures needed to assure safe operations, test and maintenance including emergency procedures.
- ✓ A description of anticipated operating environments, and any specific skills required for safe operation, test, maintenance, transportation and disposal.
- ✓ A description of any special facility requirements or personal equipment to support the system.



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Preparation instructions continued

System safety engineering – This section may be developed by referencing other program documentation such as health hazard assessment report, system safety hazard analysis report, functional hazard assessment, preliminary hazard assessment, risk assessments, etc. It shall include:

- ✓ A summary of, or reference to, the safety criteria and methodology used to classify and rank hazardous conditions.
- ✓ A description of, or reference to, the analyses and tests performed to identify hazardous conditions inherent in the system.
- ✓ A list of all hazards by subsystem or major component level that have been identified and considered from the inception of the program in an appendix to the SAR. Include; a discussion of the hazards and the actions that have been taken to eliminate or control these items, a discussion of the effects of these controls on the probability of occurrence and severity level of the potential mishaps, a discussion of the residual risks that remain after the controls are applied or for which no controls could be applied.
- ✓ A discussion of or reference to the results of tests conducted to validate safety criteria requirements and analyses.



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Preparation instructions continued

Conclusions and recommendations – This section may be developed by referencing other program documentation. It shall include:

- ✓ A short assessment of the results of the safety program efforts.
- ✓ A list of all significant hazards along with specific safety recommendations or precautions required to ensure the safety of personnel and property. The list of hazards will be categorized as to whether or not they may be expected under normal or abnormal operating conditions.
- ✓ For all hazardous materials generated or used by the system; materiel identification as to type, quantity, and potential hazards, Safety precautions and procedures necessary during use, storage, transportation and disposal, A copy of the Material Safety Data Sheet (MSDS) (Note: Now SDS under the GHS) (OSHA Form 20 or DD Form 1813) as required.
- ✓ A statement that the system does not contain or generate hazardous materials (i.e., explosive, toxic, radioactive, carcinogenic, etc.).
- ✓ A statement signed by the contractor system safety manager and the program manager stating that all identified hazards have been eliminated or controlled and that the system is ready to test, operate, or proceed to the next acquisition phase. In addition, include recommendations applicable to the safe interface of this system with other system(s).



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Preparation instructions continued

References – This section contains a list of all pertinent references such as test reports, risk assessments, hazard assessments, preliminary operating manuals and maintenance manuals.

References related to Safety Assessment Reports (SARs):

- Health Hazard Assessment Report
- System Safety Hazard Analysis Report
- Data Item Description DI-SAFT-80102B
- MIL-STD-882E (Task 301)



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SAR Template

- Provides a skeleton that will reduce the opportunity for missing a required SAR element
- Speeds the SAR development process



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Exercises:

Prepare the following sections:

- ✓ Source document
- ✓ Contents
- ✓ *Introduction*
- ✓ *System description*
- ✓ *System operations*
- ✓ *System safety engineering*
- ✓ *Conclusions and recommendations*
- ✓ References



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Audit protocol tool

- Used to check that the elements of the safety assessment report have been completed
- Provides for documentation that the report has been checked, when and by whom



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Workshop Conclusion

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