

## **FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT SAFETY ELEMENT 4.1.1 - RII PERSONNEL (AW) JOB AID**

The Federal Aviation Administration (FAA) is proactively moving away from compliance-based safety surveillance programs to Systems Safety Risk Management programs to eliminate air carrier's accidents and incidents. System Safety Risk Management programs was initial implemented with all CFR Part 121 air carriers and are now being applied to CFR Part 135 air carriers.

The FAA reached the limit of its ability of utilizing compliance-based oversight programs in 1996 for CFR Part 121 air carriers. Compliance-based oversight program repeated the same surveillance activities without identifying the actual root causes that could lead to an unsafe operating practice and/or accident. It was based on only looking at meeting the minimum standards established by the rules and regulations. To react to any identified unsafe condition, new rules and regulations had to be enacted, which could expand over many years. The compliance-based oversight system was not an effective means in reducing the causal factors that lead to air carrier accidents.

System Safety Risk Management program, known as Surveillance Evaluation Program (SEP), was implemented in 2001, for CFR Part 121 air carriers to assess how an air carrier operations and maintenance organizations were operating as an integrated whole safety system. For their system to be considered safe, they have to be proactive in identifying potentially unsafe hazards and risk and mitigate it to a safe state. Safety must be built into the air carriers systems by addressing the FAA's primary seven System Elements and their associated sub-elements. Each System Element identifies questions regarding the effectiveness of that system by addressing the following topics of: Responsibility, Authority, Procedures, Control, Process Measurement, and Interfaces.

In 2004 the FAA and the Helicopter Safety Advisory Conference (HSAC) established a workgroup to assess the reasons for the increase of helicopter accidents occurring in the Gulf of Mexico and develop intervention strategies. From this workgroup four of the primary root causes of Gulf of Mexico Helicopter accidents were; "Failure of Equipment/Components", "Lack of Maintenance Supervision", "Lack of Proper Procedures – Maintenance", and "Not Following Proper Procedures – Maintenance". These root causes resulted in the development of intervention questions for each of the applicable System Safety Attributes under System Safety Element 4.1.1 Required Inspection Items (RII) Personnel Requirements.

The primary Safety Attribute questions defined within the System Safety Element will determine if an Operator's Policies and Procedures are adequately defined in having a System Safety program; the ability to identify Risk in its daily operations; and being able to mitigate that risk to prevent the future occurrences and/or accidents.

**FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT  
SAFETY ELEMENT 4.1.1 - RII PERSONNEL (AW) JOB AID**

**ELEMENT SUMMARY INFORMATION**

A “YES” response to the questions means compliance with the statement or indicates the requirements were met. A “NO” response always indicates a negative response to the question and also means the requirements were not met. The air carrier is not complying with the requirements of the Safety Attribute question or the system is weak or inadequate in the area being evaluated. An explanation should always occur with a “NO” response.

**Specific Regulator Requirements (SRR):**

- 135.411(a)(2) and (b) Applicability of Maintenance Programs
- 135.413 Responsibility For Airworthiness
- 135.427 Manual Requirements
- 135.429 Required Inspection Individual

**Other CFRs and/or FAA Guidance:**

FAA Order 8300.10, Volume 2, Chapter 70, Paragraph 5 “Evaluate FAR 135.411(a)(2) Maintenance Training Program/Record”

FAA Order 8300.10 Volume 2, Chapter 70, Paragraph 11

FAA Order 8300.10 Volume 2, Chapter 70, Paragraph 14

FAA Order 8300.10 Volume 3, Chapter 36, Paragraph 7d “Monitor Continuous Airworthiness Maintenance Program/Revision”

AC 120-16C, Paragraph 6 – as revised “Continuous Airworthiness Maintenance Programs”

**FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT****4.1.1 RII PERSONNEL (AW)****SECTION 1 – RESPONSIBILITY ATTRIBUTE**

**Objective:** To determine if there is a clearly identifiable qualified and knowledgeable individual who is accountable for the quality of the process.

*To meet the objective, the auditor will accomplish the following task:*

1. Identify the individual who is responsible for the quality of the RII Training Requirement processes.
2. Review the description in the manual that delineates the duties and responsibilities of the individual.
3. Evaluate the individual's qualifications and work experience (or resume if appropriate).
4. Review the appropriate organizational chart.
5. Discuss the RII Personnel requirements process with the individual.

*To meet the objective, the auditor will determine and record answers to the following questions:*

1. Is there a clearly identifiable individual in management who is answerable for quality of the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
2. Does the individual understand the Procedure Attributes associated with the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
3. Does the individual understand the Control Attributes associated with the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
4. Does the individual understand the Process Measurement Attributes associated with the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
5. Does the individual understand the Interface Attributes associated with the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
6. Are the duties and responsibilities for this position clearly documented in the air carrier's manual(s)?	<b>Yes</b> <b>No (explain)</b>
7. Are the qualification standards for this position clearly documented?	<b>Yes</b> <b>No (explain)</b>
8. Are the qualification standards for this position appropriate for the duties that are assigned?	<b>Yes</b> <b>No (explain)</b>
9. Does the individual meet the qualification standards?	<b>Yes</b> <b>No (explain)</b>
10. Does the individual acknowledge who has the responsibility for the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
11. Does the individual know who has authority to establish and modify the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>

**FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT****4.1.1 RII PERSONNEL (AW)****SECTION 2 – AUTHORITY ATTRIBUTE**

**Objective:** To determine if there is a clearly identifiable qualified and knowledgeable individual who has the authority to establish and modify the RII Training Requirement processes.

*To meet the objective, the auditor will accomplish the following task:*

1. Identify the individual who has the authority to establish or modify the RII Personnel requirements process.
2. Review the description in the Manual that delineates the duties and responsibilities of the individual.
3. Evaluate the individual's qualifications and work experience (or resume' if appropriate).
4. Review the appropriate organizational chart.
5. Discuss the RII Personnel requirements process with the individual.

*To meet the objective, the auditor will determine and record answers to the following questions:*

1. Is there a clearly identifiable individual who has authority to establish and modify the air carrier's policies for the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
2. Does the individual understand the Procedure Attributes associated with the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
3. Does the individual understand the Control Attributes associated with the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
4. Does the individual understand the Process Measurement Attributes associated with the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
5. Does the individual understand the Interface Attributes associated with RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
6. Is the authority of this position clearly documented in the air carrier's Manual(s)?	<b>Yes</b> <b>No (explain)</b>
7. Are the qualification standards for this position clearly documented?	<b>Yes</b> <b>No (explain)</b>
8. Are the qualification standards for this position appropriate for the duties that are assigned?	<b>Yes</b> <b>No (explain)</b>
9. Does the individual acknowledge that he/she has authority for the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
10. Does the individual know who has the responsibility for the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
11. Are the procedures for delegation of authority clearly documented for the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>

<b>FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT</b>	
<b>4.1.1 RII PERSONNEL (AW)</b>	
<b>SECTION 3 – PROCEDURES ATTRIBUTE</b>	
<b>Objective:</b> To determine if the company has documented procedures for accomplishing RII Personnel requirements process.	
<i>To meet the objective, the auditor will accomplish the following task:</i>	
1. Review the documented instructions and information related to the RII Personnel requirements process to ensure that they contain who, what, where, when, and how.	
2. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this SAI.	
3. Discuss the RII Personnel requirements process with appropriate individual to gain an understanding of the procedures.	
4. Observe the RII Personnel requirements process with appropriate individual to gain an understanding of the procedures.	
<i>To meet the objective, the auditor will determine and record answers to the following questions:</i>	
1. Do written procedures meet the specific regulatory and FAA policy requirements for a RII Personnel requirements process?	
1.1 Do written procedures provide for a method to ensure an individual is appropriately certificated, properly trained, qualified and authorized to perform RII? (SRR135.424 (a))	<b>Yes</b> <b>No (explain)</b>
1.2 Do written procedures provide for method to ensure the individual performing the RII is under the supervision and control of an inspection unit? (SRR 135.424(b)).	<b>Yes</b> <b>No (explain)</b>
1.3 Do written procedures provide for method to ensure an individual performing the RII is not the person that performed the item of maintenance? (SRR 135.424(c))	<b>Yes</b> <b>No (explain)</b>
1.4 Do written procedures provide a method to allow a helicopter pilot to perform a RII at remote locations? (SRR 135.424(d)(1-5))	<b>Yes</b> <b>No (explain)</b>
1.5 Do written procedures provide for the air carrier to provide a listing of persons with whom it arranges to provide Required Inspection, are properly trained , qualified and authorized to conduct RII? (SRR 135.424(e))	<b>Yes</b> <b>No (explain)</b>
1.6 Do written procedures provide instructions and procedures to prevent any decision of a RII inspector from being countermanded by persons other than supervisory personnel of the inspection unit or a person of management whom has responsibility for both RII functions and all other types of maintenance? (SRR 135.427(b)(8))	<b>Yes</b> <b>No (explain)</b>
1.7 Do written procedures provide for an individual that is properly trained receives written authorization reflecting responsibilities, authority and inspection limitations? (SRR 135.427(e))	<b>Yes</b> <b>No (explain)</b>

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2. Do the RII Personnel procedures identify: who, what, where, when and how?	<b>Yes</b> <b>No (explain)</b>
3. Are the procedures in compliance with the FAR(s)?	<b>Yes</b> <b>No (explain)</b>
4. Does the air carrier have the recourses to support the written procedures for the RII Personnel process?	<b>Yes</b> <b>No (explain)</b>
5. Do alternate procedures exist and do they provide an equivalent level of safety and achieve the same desired results for irregular conditions as the primary procedures?	<b>Yes</b> <b>No (explain)</b>
6. Are the procedures published in different manuals relating to the RII Personnel process consistent?	<b>Yes</b> <b>No (explain)</b>
7. Does the air carrier have a documented process in their Manual(s) to assess the impacts of changing procedures for the RII Personnel process?	<b>Yes</b> <b>No (explain)</b>
8. Were all observations related to the RII Personnel procedures satisfactory?	<b>Yes</b> <b>No (explain)</b>

**FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT****4.1.1 RII PERSONNEL (AW)****SECTION 4 – CONTROL ATTRIBUTE**

**Objective:** To determine if checks and restraints are designed into the RII Training Requirement process to ensure a desired result is achieved.

*To meet the objective, the auditor will accomplish the following task:*

1. Review the documented instructions and information related to the RII Training Requirement process.
2. Discuss the RII Personnel requirements process with appropriate individual to gain an understanding of the controls.
3. Observe the RII Personnel requirements process to gain an understanding of the controls.

*To meet the objective, the auditor will determine and record answers to the following questions:*

1. Are the following checks and restraints built into the RII Personnel process:	
1.1 Does the air carrier limit the RII authorization to the certificate ratings held by the mechanics?	<b>Yes</b> <b>No (explain)</b>
1.2 Does the air carrier require RII inspector candidates to earn at least 80% or better on the written test after training?	<b>Yes</b> <b>No (explain)</b>
1.3 Does the air carrier specify the extent of RII authorizations for each individual?	<b>Yes</b> <b>No (explain)</b>
1.4 Does the written authorization take the form of a document and/or card?	<b>Yes</b> <b>No (explain)</b>
1.5 Does the air carrier allow trained helicopter pilots to conduct RII at remote locations for mechanical interruptions?	<b>Yes</b> <b>No (explain)</b>
1.6 Does the air carrier's list of authorized individuals for conducting RII match the individual that were trained and authorized?	<b>Yes</b> <b>No (explain)</b>
2. Does the air carrier's procedures provide controls to ensure the individual performing the RII is under the direct supervision of the inspection unit?	<b>Yes</b> <b>No (explain)</b>
3. Does the air carrier procedures provide control to ensure the individual performing the RII is not person that performed the maintenance function?	<b>Yes</b> <b>No (explain)</b>
4. Does the certificate holder have a documented method for assessing the impact of any changes made to the controls in the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
5. Does the air carrier have the resources to support the checks and restraints for the RII Personnel process?	<b>Yes</b> <b>No (explain)</b>
6. Were all observations related to the control of RII Personnel process satisfactory?	<b>Yes</b> <b>No (explain)</b>

**FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT****4.1.1 RII PERSONNEL (AW)****SECTION 5 – PROCESS MEASUREMENT ATTRIBUTE**

**Objective:** To determine if operator measures and assesses the RII Personnel requirements process to identify and correct problems or potential problems.

*To meet the objective, the auditor will accomplish the following task:*

1. Review the documented instructions and information related to the RII Personnel requirements process.
2. Discuss the RII Personnel requirements process with appropriate individual to gain an understanding of the controls.
3. Observe the RII Personnel requirements process to gain an understanding of the controls.

*To meet the objective, the auditor will determine and record answers to the following questions:*

1. Does the air carrier's RII Personnel processes include the following Process Measurements?	
1.1. Does the air carrier document their Process Measurement methods and results?	<b>Yes</b> <b>No (explain)</b>
1.2. Does the air carrier audit process define the decision-making process for action plans to mitigate the identified Hazards and Risk?	<b>Yes</b> <b>No (explain)</b>
1.3. Does the air carrier take corrective action in response to failures detected during audits?	<b>Yes</b> <b>No (explain)</b>
1.4. Does the air carrier re-evaluate the corrective actions to determine the following; the original hazard, consequence, severity and likelihood have been mitigated effectively?	<b>Yes</b> <b>No (explain)</b>
1.5. Does the air carrier conduct an audit of the RII Personnel program at least biannually to ensure that it meet its intended function?	<b>Yes</b> <b>No (explain)</b>
1.6. Does the air carrier conduct at least 20% of its audits in a random, unannounced fashion?	<b>Yes</b> <b>No (explain)</b>
2. Does the air carrier have the necessary resources of personnel available to conduct the RII to support the RII Personnel process?	<b>Yes</b> <b>No (explain)</b>
3. Were all observations related to the procedures, that a RII Personnel must follow, effective in producing a safe product?	<b>Yes</b> <b>No (explain)</b>
4. Were all observations related to the control procedures for RII Personnel effective in producing a quality program?	<b>Yes</b> <b>No (explain)</b>
5. Does the air carrier retain the records of findings, corrective actions and mitigating results for future analysis for potential problems?	<b>Yes</b> <b>No (explain)</b>
6. Are the process measurement records available to the FAA?	<b>Yes</b> <b>No (explain)</b>
7. Does the Process Measurement reveal that individuals were properly authorized to conduct RII after completing the training course?	<b>Yes</b> <b>No (explain)</b>
8. Does the Process Measurement adequate evaluate the system element interfaces that are associated with RII Personnel?	<b>Yes</b> <b>No (explain)</b>
9. Does the air carrier have a documented process in their Manual(s) to assess the impacts of changing procedures for the RII Personnel requirements process?	<b>Yes</b> <b>No (explain)</b>
10. Does the company retain the records that reflect their Risk Analysis of Hazards and the how the risk was mitigated?	<b>Yes</b> <b>No (explain)</b>
11. Does the Process Measurement methods appear to be affective?	<b>Yes</b> <b>No (explain)</b>
12. Does the air carrier use their Process Measurement results to improve their programs?	<b>Yes</b> <b>No (explain)</b>



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13. Are the Process Measurement results accessible to the FAA?	<b>Yes</b> <b>No (explain)</b>
14. Does the organization that conducts the process measurement have direct access to the person(s) with the responsibility and authority for the Operational Control processes?	<b>Yes</b> <b>No (explain)</b>
15. Does the air carrier have the resources to support the Process Measurement for the Operational Control process?	<b>Yes</b> <b>No (explain)</b>
16. Were all observations unrelated to the Process Measurement satisfactory?	<b>Yes</b> <b>No (explain)</b>
17. Best practices/favorable comments:	

**FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT****4.1.1 RII PERSONNEL (AW)****SECTION 6 – INTERFACES ATTRIBUTE**

**Objective:** To determine if operator identifies and manages the interactions between the RII Personnel requirements process includes safety attributes.

*To meet the objective, the auditor will accomplish the following task:*

1. Review the documented instructions and information related to the RII Personnel requirements process.
2. Discuss the RII Personnel requirements process with appropriate individual to gain an understanding of the interfaces.
3. Observe the RII Personnel requirements process to gain an understanding of the controls.

*To meet the objective, the auditor will determine and record answers to the following questions:*

1. Are the following interfaces identified for the RII Personnel requirements process:	
1.1. Airworthiness Release or Log Book Entry (Element 1.2.1)	<b>Yes</b> <b>No (explain)</b>
1.2. Major Repairs and Alterations (Element 1.2.2)	<b>Yes</b> <b>No (explain)</b>
1.3. Maintenance Log/Recording Requirements (Element 1.2.3)	<b>Yes</b> <b>No (explain)</b>
1.4. Maintenance Program (Element 1.3.1)	<b>Yes</b> <b>No (explain)</b>
1.5. Inspection Program (Element 1.3.2)	<b>Yes</b> <b>No (explain)</b>
1.6. RII (Element 1.3.4)	<b>Yes</b> <b>No (explain)</b>
1.7. MEL/CDL/Deferred Maintenance (Element 1.3.5)	<b>Yes</b> <b>No (explain)</b>
1.8. AD Management (Element 1.3.6)	<b>Yes</b> <b>No (explain)</b>
1.9. Outsource Organization (Element 1.3.7)	<b>Yes</b> <b>No (explain)</b>
1.10. Control of Calibrated Tools and Test Equipment (Element 1.3.8)	<b>Yes</b> <b>No (explain)</b>
1.11. Engineering/Major Repairs and Alterations (Element 1.3.9)	<b>Yes</b> <b>No (explain)</b>
1.12. Parts/Material Control/SUP (Element 1.3.10)	<b>Yes</b> <b>No (explain)</b>
1.13. Continuous Analysis and Surveillance (CAS) (Element 1.3.11)	<b>Yes</b> <b>No (explain)</b>
1.14 GMM/Equivalent (1.3.14)	<b>Yes</b> <b>No (explain)</b>
1.15 Reliability Program (Element 1.3.15)	<b>Yes</b> <b>No (explain)</b>
1.16 Weight and Balance Program (Element 1.3.17)	<b>Yes</b> <b>No (explain)</b>
1.17 Lower Landing Minimums (Element 1.3.19)	<b>Yes</b> <b>No (explain)</b>
1.18 Maintenance Certificate Requirements (Element 4.1.2)	<b>Yes</b> <b>No (explain)</b>

<b>FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT</b>	
<b>4.1.1 RII PERSONNEL (AW)</b>	
<b>SECTION 6 – INTERFACES ATTRIBUTE</b>	
1.19 Maintenance Training Program (Element 4.2.2)	<b>Yes</b> <b>No (explain)</b>
1.20 RII Training Requirements (Element 4.2.2)	<b>Yes</b> <b>No (explain)</b>
1.21 Chief Inspector (Element 7.1.2)	<b>Yes</b> <b>No (explain)</b>
1.22 Other Maintenance programs approved by Operations Specifications	<b>Yes</b> <b>No (explain)</b>
2. List any additional interfaces identified.	<b>Yes</b> <b>No (explain)</b>
3. Are there procedures to ensure that interfaces occur?	<b>Yes</b> <b>No (explain)</b>
4. Are there controls to ensure that interfaces occur?	<b>Yes</b> <b>No (explain)</b>
5. Are the interfaces between the RII Personnel process and other processes treated consistently in the Manual(s)?	<b>Yes</b> <b>No (explain)</b>
6. Were all observations unrelated to the RII Personnel process satisfactory?	<b>Yes</b> <b>No (explain)</b>
7. Best practices/favorable comments:	<b>Yes</b> <b>No (explain)</b>