



# **SAFETY MANAGEMENT SYSTEM (SMS) ASSURANCE GUIDE**

**For:**

**Voluntary Implementation of Service Provider  
SMS Programs**

**Federal Aviation Administration  
Flight Standards Service - SMS Program Office**

**Revision 1**

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## Introduction

This Safety Management System (SMS) Assurance Guide has been developed for assessment of the design and performance of aviation service providers' SMS programs. The guide is intended to be used whether the assessments are being conducted by the service providers themselves, in internal audits and evaluations or by other third parties. The guide is organized in accordance with the Flight Standards SMS Framework, which shares structure and organization with the SMS Framework developed by the International Civil Aviation Organization (ICAO). The framework embodies the requirements expressed in FAA Order VS 8000.367, *Safety Management System Requirements*, Appendix B.

## Scope

This Assurance Guide is a tool to assist service providers (for example, airlines, air taxi operators, corporate flight departments, and pilot schools) in the application of the FAA, Flight Standards Service SMS Framework.

This Assurance Guide, like the SMS Framework, is not mandatory and does not constitute a regulation. Development and implementation of an SMS is voluntary.

While the Federal Aviation Administration (FAA) encourages each aviation service provider to develop and implement an SMS, these systems in no way substitute for regulatory compliance of other certificate requirements, where applicable.

## Applicability

This Assurance Guide is applicable to both certificated and non-certificated air operators that desire to develop and implement an SMS. An SMS is not currently required for U.S. certificate holders. However, the FAA views the objectives and expectations in this Assurance Guide, and therefore the SMS Framework, to be a minimum level of development for an efficient and functional SMS implemented by an aviation service provider.

This Assurance Guide describes the objectives and expectations for a product/service provider's Safety Management System (SMS) in a work process flow. Inputs from a previous process are followed by the process owner designation, procedures to be followed, outputs to the next process, controls to insure desired output and finally performance measures to insure consistent results.

This Assurance Guide, in coordination with the SMS Framework, establishes the objectives and expectations for a robust SMS; however, operators may establish additional or more stringent requirements. The Assurance Guide also provides guidance for conduct of gap analyses and subsequent assessments of SMS programs for the SMS Pilot Projects (SMSPP)

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## SMS System Expectations

The guide is further laid out in terms of design expectations and performance objectives. These expectations are based on the SMS Framework and are considered to be essential expectations of a robust SMS.

The objectives and expectations are divided into three parts:

- **Performance Objectives:** These statements represent the objective outcomes of the particular element or process under evaluation.
- **Design Expectations:** Based on the SMS Framework, these expectations represent design expectations that, if properly implemented, should provide the system outcomes identified in the performance objectives.
- **Bottom Line Assessment:** The bottom line assessments restate the performance objectives as questions. The “bottom line” of each element or process is essentially, “were the design expectations implemented in the service provider’s SMS in such a way as to result in the desired outcomes?”

## System Attributes

The six system attributes, first applied in the Air Transportation Oversight System (ATOS), form the basis for many SMS expectations. The design expectations in this guide are each tagged (at the end of each italicized reference) with one or more system attributes.

The tagged attributes may be described as:

- **(R) - Responsibility:** who is accountable for management and overall quality of the process (planning, organizing, directing, controlling) and its ultimate accomplishment.
- **(A) - Authority:** who can direct, control, or change the process and who cannot, as well as who can make key decisions such as risk acceptance. This attribute also includes the concept of empowerment.
- **(P) - Procedures:** ISO-9000-2000 defines “procedure” as a specified way to carry out an activity or a process” – procedures translate the “what” in goals and objectives into “how” in practical activities (things people do).
- **(C) - Controls:** in this context, controls are elements of the system, including; hardware, software, special procedures or procedural steps, and supervisory practices designed to keep processes on track to achieve their intended results.
- **(I) - Interfaces:** this aspect includes an examination of such things as lines of authority between departments, lines of communication between employees, consistency of procedures, and clear delineation of responsibility between organizations, work units, and employees. Interfaces are the “Inputs” and “Outputs” of a process.

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- **(PM) - Process Measures:** means of providing feedback to responsible parties that required actions are taking place, required outputs are being produced and expected outcomes are being achieved.

## Process Approach to System Assessment

The ISO 9000 quality provides a useful definition of “process;” [an] “interrelated set of activities that transform inputs into outputs.” Thus, a process is essentially, a set of things that people in the organization do to achieve a desired result. Figure 1 shows the relationship of the six attributes to a generic process. The next section will go into more detail about the application of the attributes to system design and assessment.

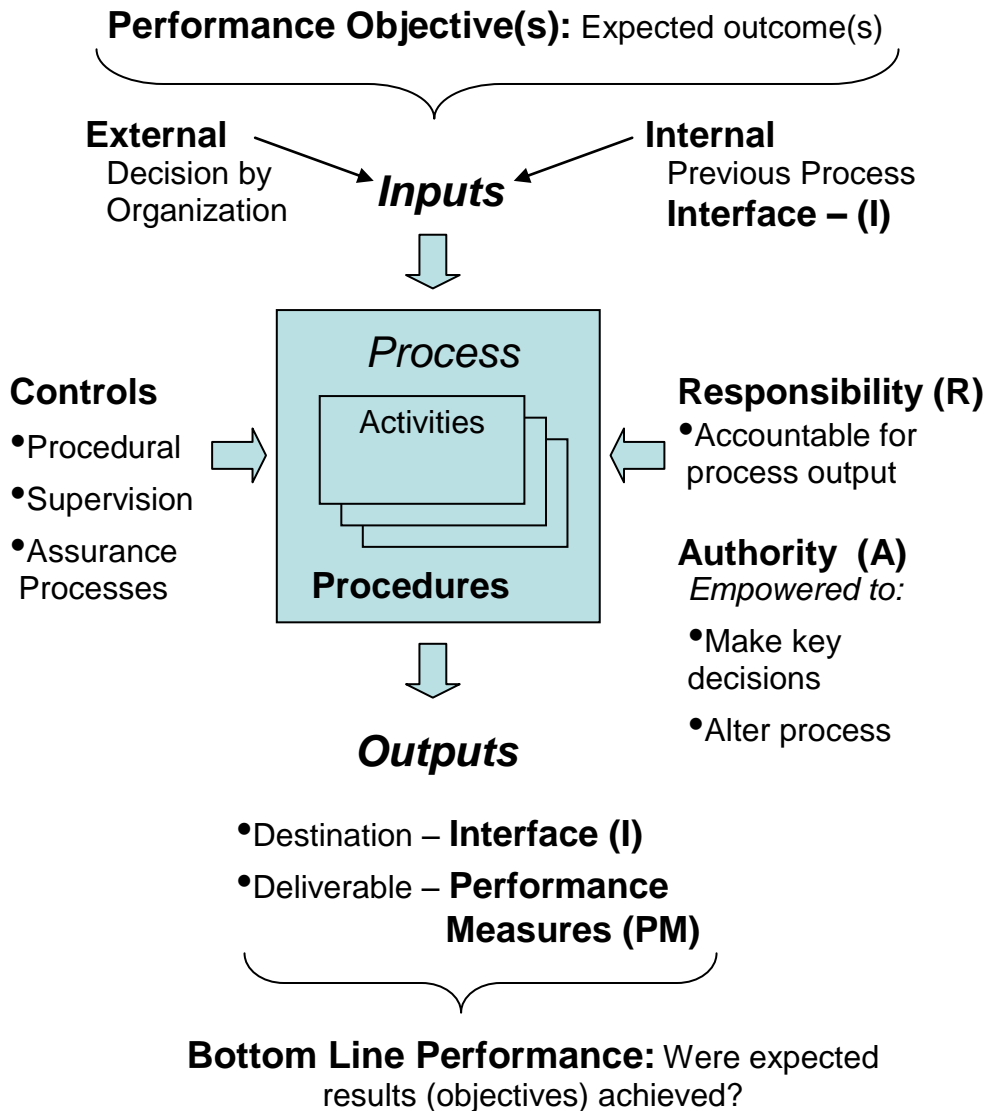


Figure 1. System Processes, Attributes, and Expectations

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## ***System Attributes applied to SMS***

The discussion below addresses the six attributes as applied to SMS processes in more detail.

### **Responsibility and Authority**

Management and individual employee accountability and, therefore, responsibility and authority are fundamental to management of safety. These concepts are integrated into the SMS Framework. Specifically, element 1.2 establishes expectations for top management, other management officials, and all employees of the organization.

Element 1.3 establishes a special requirement for a person of responsibility to oversee SMS development, implementation, and operation. It should be noted that this person does not bear the principal responsibility for safety management. The managers of the “line” operational functions, from middle management to frontline managers and supervisors, manage the operations in which risk is incurred. These managers and supervisors are, therefore, the “owners” of the SMS.

For each process, the provisions of element 1.2 which defines responsibilities for definition, and documentation of aviation safety responsibilities, applies to all components, elements, and processes. It is, therefore, expected that responsibility and authority be defined and documented for each of these areas. As discussed above, this is especially important with respect to interfaced processes that cut across organizational lines.

### **Procedures**

The design expectations that are noted with (P) as procedures derive directly from the design expectations of the SMS framework. These items are expectations that are indicators of well-designed SMS processes. The organization should specify their own procedures for these items in the context of their unique operational environment, organizational structure, and management objectives.

### **Controls**

Organizational process controls are typically defined in terms of special procedures, supervisory and management practices and processes. Many controls are inherent features of the SMS framework. Such practices as continuous monitoring, internal audits, internal evaluations, and management reviews, all parts of the safety assurance component, are identified as controls (C) within the design expectations. Additionally, other practices such as documentation, process reviews, and data tracking are identified within specific elements and processes.

### **Process Measures**

A fundamental principle of safety assurance is that fundamental processes be measured so that management can be data-driven. The general expectations for Component 1, Policy, specify that SMS outputs be measured and analyzed. These measurements and analyses are accomplished in Component 3, Safety Assurance. Outputs of each process should, therefore, be identified for assurance during Component 3 activities. For example, these outputs should be the subjects of continuous monitoring, internal audits and internal evaluation.



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## Interfaces in Safety Risk Management and Safety Assurance

Safety Risk Management (SRM) and Safety Assurance (SA) are the key functional processes of the SMS. They are also highly interactive. The flowchart below may be useful to help visualize these interactions. The interface attribute concerns the input-output relationships between the activities in the processes. This is especially important where interfaces between processes involve interactions between different departments, contractors, etc. Assessments of these relationships should pay special attention to flow of authority, responsibility and communication, as well as procedures and documentation.

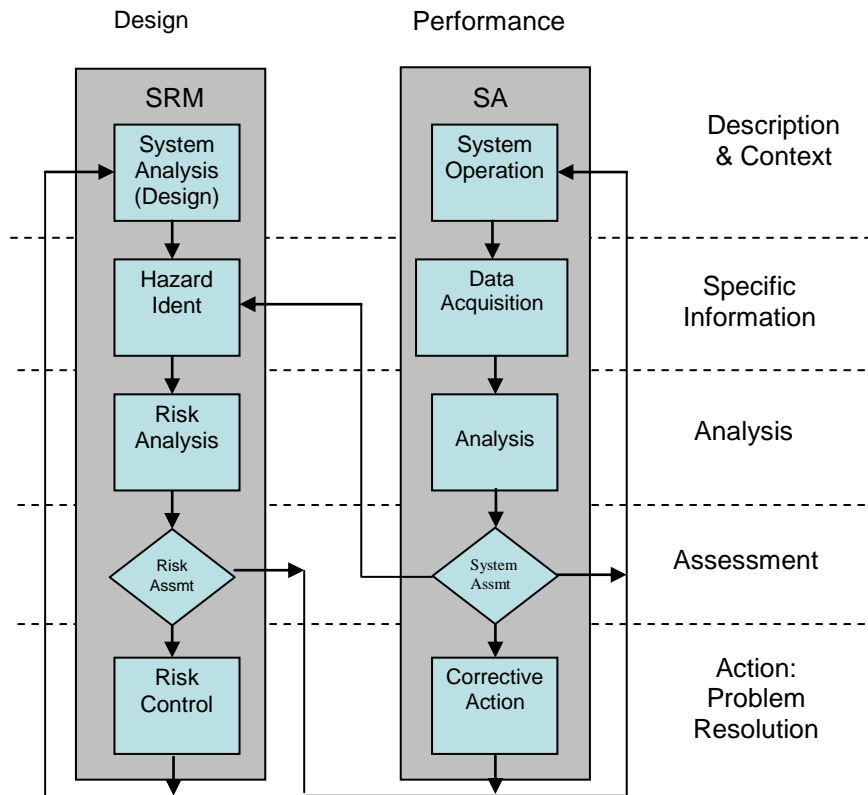


Figure 2. Safety Risk Management and Safety Assurance

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## Functional Expectations

### ***Performance-Based Orientation***

The following sections lay out the expectations for each component of the SMS. The term “function” refers to “what” is expected to be incorporated into each process rather than “how” the function is accomplished by the system including human tasks, software, hardware, procedures, etc. This makes for a more performance-based system and allows for a broad range of techniques to be used to accomplish the performance objectives. This, in turn, provides for a maximum of scalability, while preserving standardization of results across the aviation service provider communities.

### ***Components, Elements, and Processes***

Functional expectations are laid organized in terms of the four components described in ICAO and AVS documents, the twelve elements of the ICAO framework, and an additional layer, “process” that allows several of the elements to be broken down in to more topically focused areas of interest.

### ***Levels of Assessment***

Each element/process is then broken down into performance objectives, design expectations, and a bottom-line assessment, as described earlier.

### ***Process Flow and Attributes***

Finally, each design expectation section is organized to reflect a process flow, reflecting an input-activity (procedure)-output structure. Each individual design expectation is tagged with one or more of the system attributes; Responsibility/Authority (R/A), Interfaces (I), Procedures (P), Process Measures (PM), and, where applicable, Controls (C).

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## Component 1: Policy

### Component 1.0 Safety Policy and Objectives

#### ***Policy: General Expectations***

##### **Performance Objective**

A service provider will develop and implement an integrated, comprehensive, SMS for its entire organization and will incorporate a procedure to identify and maintain compliance with current safety related, regulatory, and other requirements.

<b>Design Expectations</b>
<b><i>Management Accountability</i></b>
Does the service provider's documentation clearly identify who is responsible for the organizational management processes (name, position, organization)? <i>SMS Framework: 1.2 A) (R/A)</i>
<b><i>Procedure: Scope - Air Operators</i></b>
Does the service provider have documentation to ensure that its SMS includes the complete scope and life cycle of the service provider's systems, including— (P)
Flight Operations? <i>SMS Framework: 1.0 B) 1) a) (1) Old – 4.1.A.1 (P)</i>
Operational Control (Dispatch/flight following)? <i>SMS Framework: 1.0 B) 1) a) (2) Old – 4.1.A.2 (P)</i>
Maintenance and inspection? <i>SMS Framework: 1.0 B) 1) a) (3) Old – 4.1.A.3 (P)</i>
Cabin safety? <i>SMS Framework: 1.0 B) 1) a) (4) Old – 4.1.A.4 (P)</i>
Ground handling and servicing? <i>SMS Framework: 1.0 B) 1) a) (5) Old – 4.1.A.5 (P)</i>
Cargo handling? <i>SMS Framework: 1.0 B) 1) a) (6) Old – 4.1.A.6 (P)</i>
Training? <i>SMS Framework: 1.0 B) 1) a) (7) Old – 4.1.A.7 (P)</i>
<b><i>Procedure: Scope - Separate Aviation Maintenance Service</i></b>
Parts/Materials? <i>SMS Framework: 1.0 B) 1) b) (1) Old – 4.1.B.1 (P)</i>
Resource Management? <i>SMS Framework: 1.0 B) 1) b) (2) Old – 4.1.B.2 (P)</i>
Technical Data? <i>SMS Framework: 1.0 B) 1) b) (3) Old – 4.1.B.3 (P)</i>
Maintenance and Inspection? <i>SMS Framework: 1.0 B) 1) b) (4) Old – 4.1.B.4 (P)</i>

## Component 1: Policy

<p>Quality Control? SMS Framework: 1.0 B) 1) b) (5) Old – 4.1.B.5(P)</p>
<p>Records Management? SMS Framework: 1.0 B) 1) b) (6) Old – 4.1.B.6 (P)</p>
<p>Contract Maintenance? SMS Framework: 1.0 B) 1) b) (7) Old – 4.1.B.7 (P)</p>
<p>Training? SMS Framework: 1.0 B) 1) b) (8) Old – 4.1.B.8 (P)</p>
<p><b>Procedure: Management</b></p>
<p>Does the service provider have documentation that requires the SMS processes to be—</p>
<p>Documented? SMS Framework: 1.0 B) 2) a) Old – 4.1.B.1 (P)</p>
<p>Monitored? SMS Framework: 1.0 B) 2) b) Old – 4.1.B.2 (P)</p>
<p>Measured? SMS Framework: 1.0 B) 2) c) Old – 4.1.B.3 (P)</p>
<p>Analyzed? SMS Framework: 1.0 B) 2) d) Old – 4.1.B.4 (P)</p>
<p><b>Procedure: Promotion of Positive Safety Culture</b></p>
<p>Does the service provider have documentation to promote a positive safety culture as in Component 4.0 B)? SMS Framework: 1.0 B) 4) a) Old – 4.1.D (P)</p>
<p><b>Procedure: Quality Policy</b></p>
<p>If applicable, does Top Management have documentation to ensure that the organization’s quality policy, if present, is consistent with (or not in conflict with) its SMS? SMS Framework: 1.0 B) 4) b) Old – 4.1.D (P)</p>
<p><b>Procedure: Safety Management Planning</b></p>
<p>Does the service provider have documentation to establish and maintain measurable criteria that accomplish the objectives of its safety policy? SMS Framework: 1.0 B) 4) e) Old – 4.4 (PM)</p>
<p>Does the service provider have documentation to establish and maintain a safety management plan to describe methods for achieving the safety objectives laid down in its safety policy. SMS Framework: 1.0 B) 4) f) Old – 4.5 (PM)</p>
<p><b>Procedure: Regulatory Compliance</b></p>
<p>Does the service provider have documentation to <u>identify</u> current applicable safety-related legal and regulatory requirements? SMS Framework: 1.0 B) 4) d) Old – 4.6.B (P)</p>
<p>Does the service provider have documentation to ensure the SMS <u>complies</u> with legal and regulatory requirements? SMS Framework: 1.0 B) 4) c) Old – 4.6.A (P)</p>

## Component 1: Policy

<b>Outputs and Measures</b>
Does the service provider have documentation to ensure all SMS outputs are—
Recorded? <i>SMS Framework: 1.0 B) 3) a) Old – 4.1.C.1 (I/P)</i>
Monitored? <i>SMS Framework: 1.0 B) 3) b) Old – 4.1.C.2 (I/P)</i>
Measured? <i>SMS Framework: 1.0 B) 3) c) Old – 4.1.C.3 (I/P)</i>
Analyzed? <i>SMS Framework: 1.0 B) 3) d) Old – 4.1.C.4 (I/P)</i>
Does the service provider’s documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the general policy component. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of an integrated and comprehensive SMS for its entire organization? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

### Bottom Line Assessment

Has Top Management defined the organization’s Safety Policy and conveyed the expectations and objectives of that policy to its employees?

## Component 1: Policy

### Element 1.1 Safety Policy

#### Performance Objective

Top Management will define the service provider's safety policy and convey the expectations and objectives to its employees.

<b>Design Expectations</b>
<b>Management Accountability</b>
Does top management define the service provider's safety policy? <i>SMS Framework 1.1 B) 1) Old – SMS Standard 4.2.A (P/R/A)</i>
<b>Procedure</b>
Does the service provider's safety policy include the following— (P)
A commitment to implement SMS? <i>SMS Framework 1.1 B) 2) a) Old – SMS Standard 4.2.B.1 (P)</i>
A commitment to continually improving the level of safety? <i>SMS Framework 1.1 B) 2) b) Old – SMS Standard 4.2.B.2 (P)</i>
A commitment to the management of safety risk? <i>SMS Framework 1.1 B) 3) c) Old – SMS Standard 4.2.B.3 (P)</i>
A commitment to comply with all applicable regulatory requirements? <i>SMS Framework 1.1 B) 4) d) Old – SMS Standard 4.2.B.4 (P)</i>
A commitment to encourage employees to report safety issues without reprisal, as per Process 3.1.6? <i>SMS Framework 1.1 B) 4) e) Old – SMS Standard 4.2.B.5 (P)</i>
Clear standards for acceptable behavior? <i>SMS Framework 1.1 B) 4) f) Old – SMS Standard 4.2.B.6 (P)</i>
Is the safety policy documented? <i>SMS Framework 1.1 B) 4) j) Old – SMS Standard 4.2.B.9 (P)</i>
<b>Outputs and Measures</b>
Does the Safety Policy provide guidance to management on setting safety objectives? <i>SMS Framework 1.1 B) 4) g) Old – SMS Standard 4.2.B.7 (I)</i>
Does the Safety Policy provide guidance to management on reviewing safety objectives? <i>SMS Framework 1.1 B) 4) h) Old – SMS Standard 4.2.B.8 (I)</i>
Does the service provider have documentation to ensure the safety policy is communicated, with visible management endorsement, to all employees and responsible parties? <i>SMS Framework 1.1 B) 4) j) Old – SMS Standard 4.2.B.10 (I)</i>
Does the service provider have documentation to identify and communicate management and individuals' safety performance responsibilities? <i>SMS Framework 1.1 B) 4) l) Old – SMS Standard 4.2.B.12 (I/R)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to



## Component 1: Policy

expectations (outputs) of the policy component. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the safety policy? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

### Bottom Line Assessment

Has Top Management defined the organization's Safety Policy and conveyed the expectations and objectives of that policy to its employees?

## Component 1: Policy

### ***Element 1.2 Management Commitment and Safety Accountabilities***

#### **Performance Objective**

Top Management will define, document, and communicate the roles, responsibilities, and authorities regarding safety throughout its organization.

<b>Design Expectations</b>
<b><i>Management Accountability</i></b>
Does the service provider have documentation to ensure top management has the ultimate responsibility for the SMS? <i>SMS Framework 1.2 B) 1) Old – SMS Standard 4.5.A (P/R/A)</i>
Does the service provider have documentation for top management to provide the resources essential to implementing and maintaining the SMS? <i>SMS Framework 1.2 B) 2) Old – SMS Standard 4.5.B (P)</i>
Does the service provider have documentation to define levels of management that can make safety risk acceptance decisions? <i>SMS Framework 1.2 B) 4) Old – SMS Standard 5 D) 2) (P)</i>
<b><i>Procedure/Output/Measure</i></b>
Does the service provider have documentation to ensure that aviation safety-related positions, responsibilities, and authorities are— (P/R/A)
Defined? <i>SMS Framework 1.2 B) 3) a) Old – SMS Standard 4.5.D.1 (P)</i>
Documented? <i>SMS Framework 1.2 B) 3) b) Old – SMS Standard 4.5.D.2 (P)</i>
Communicated throughout the organization? <i>SMS Framework 1.2 B) 3) c) Old – SMS Standard 4.5.D.3 (P)</i>
Does the service provider’s documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the management commitment and safety accountability element. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b><i>Controls</i></b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the management commitment and safety accountabilities element? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### **Bottom Line Assessment**

Has Top Management defined, documented, and communicated the roles, responsibilities, and authorities regarding safety throughout the organization?

## Component 1: Policy

### Element 1.3 Key Safety Personnel

#### Performance Objective

The service provider will appoint a management representative to manage, monitor and coordinate the SMS processes throughout its organization.

<b>Design Expectations</b>
<b>Management Responsibility/Procedure</b>
Does Top Management have documentation to appoint a member of management who, irrespective of other responsibilities, has the responsibilities and authority to— (P/R/A)
Ensure that SMS processes are established, implemented, and maintained? <i>SMS Framework 1.3 A) 1) Old - SMS Standard 4.5.C.1 (P)</i>
Report to top management on the performance of the SMS and the need for improvement? <i>SMS Framework 1.3 A) 2) Old - SMS Standard 4.5.C.2 (I/P)</i>
Ensure that the awareness of safety requirements is promoted throughout the organization? <i>SMS Framework 1.3 A) 3) Old - SMS Standard 4.5.C.3 (I/P)</i>
<b>Outputs and Measures</b>
Does the service provider have documentation to ensure that Key Safety Personnel positions, responsibilities, and authorities are communicated throughout the organization? <i>SMS Framework 1.2 B) 3) c) Old – SMS Standard 4.5.D.3 (P) — (I/R/A)</i>
Does the service provider’s documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the key safety personnel element. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for all safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the key safety personnel element? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### Bottom Line Assessment

Has the service provider defined, documented, and communicated the roles, responsibilities, and authorities of key safety personnel?

## Component 1: Policy

### ***Element 1.4 Emergency Preparedness and Response***

#### **Performance Objective**

The service provider will develop and implement procedures that it will follow in the event of an accident or incident to mitigate the effects of these events.

<b>Design Expectations</b>
<b><i>Management Responsibility</i></b>
Does the service provider's documentation clearly identify who is responsible for the emergency preparedness and response process and associated documentation? <i>SMS Framework 1.2 A) Old – None (R/A)</i>
<b><i>Procedure</i></b>
Does the service provider have documentation across all operational departments (1.0 B) 1) a)) of the organization for establishing procedures to—
Identify the potential for accidents and incidents? <i>SMS Framework 1.4 B) 1) Old – SMS Standard 4.8.1 (P)</i>
Coordinate and plan the organization's response to accidents and incidents? <i>SMS Framework 1.4 B) 2) Old – SMS Standard 4.8.2 (P)</i>
Execute periodic exercises of the organization's response? <i>SMS Framework 1.4 B) 3) Old – SMS Standard 4.8.3 (P)</i>
<b><i>Outputs and Measures</i></b>
Does the service provider's documentation include the identification of interfaces between the emergency response functions of operational elements of the company? <i>SMS Framework 1.5 B) 1) f) (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the emergency preparedness system. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b><i>Controls</i></b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the emergency preparedness element? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### **Bottom Line Assessment**

Has the service provider developed and implemented procedures that it will follow in the event of an accident or incident to mitigate the effects of these events?

## Component 1: Policy

### Element 1.5 SMS Documentation and Records

#### Performance Objective

The service provider will have documented safety policies; objectives, procedures, a document/record management process and a management plan that meet organizational safety expectations and objectives.

<b>Design Expectations</b>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the Documentation and Records management process? <i>SMS Framework 1.2 A) Old – None (R/A)</i>
<b>Procedure: Document Contents</b>
Does the service provider have documentation for establishing and maintaining, in paper or electronic format, the following—
Safety policies? <i>SMS Framework: 1.5 B) 1) a) Old - SMS Standard 4.9.A.1 (P)</i>
Safety objectives? <i>SMS Framework: 1.5 B) 1) b) Old - SMS Standard 4.9.A.2 (P)</i>
SMS expectations? <i>SMS Framework: 1.5 B) 1) c) Old - SMS Standard 4.9.A.3 (P)</i>
Safety-related procedures and processes? <i>SMS Framework: 1.5 B) 1) d) Old - SMS Standard 4.9.A.4 (P)</i>
Responsibilities and authorities for safety-related procedures and processes? <i>SMS Framework: 1.5 B) 1) e) Old - SMS Standard 4.9.A.5 (P)</i>
Interactions and interfaces between safety-related procedures and policies? <i>SMS Framework: 1.5 B) 1) f) Old - SMS Standard 4.9.A.6 (P)</i>
SMS outputs? <i>SMS Framework: 1.5 B) 1) g) Old - SMS Standard 4.9.A.7 (P)</i>
<b>Procedure: Document Quality</b>
Does the service provider have documentation that require all documentation be—
Legible? <i>SMS Framework: 1.5 B) 3) a) Old - SMS Standard 4.9.B.1.a (P)</i>
Dated (with the dates of revisions)? <i>SMS Framework: 1.5 B) 3) b) Old - SMS Standard 4.9.B.1.b (P)</i>
Readily identifiable? <i>SMS Framework: 1.5 B) 3) c) Old - SMS Standard 4.9.B.1.c (P)</i>
Maintained in an orderly manner? <i>SMS Framework: 1.5 B) 3) d) Old - SMS Standard 4.9.B.1.d (P)</i>
Retained for a specified period as determined by the organization? Note: Under the Voluntary Implementation and the SMS Pilot Program, the SMS records system does not require FAA approval.

## Component 1: Policy

<i>SMS Framework: 1.5 B) 3) e) Old - SMS Standard 4.9.B.1.e (P)</i>
<b>Procedure: Document Management</b>
Does the service provider have documentation to control all documents to ensure—
They are locatable? <i>SMS Framework: 1.5 B) 3) b) (1) Old - SMS Standard 4.9.B.2.a (P)</i>
They are periodically reviewed? <i>SMS Framework: 1.5 B) 3) b) (2) (a) Old - SMS Standard 4.9.B.2.b 1 (P)</i>
They are revised as necessary? <i>SMS Framework: 1.5 B) 3) b) (2) (b) Old - SMS Standard 4.9.B.2.b 2 (P)</i>
Authorized personnel approve them for adequacy? <i>SMS Framework: 1.5 B) 3) b) (2) (c) Old - SMS Standard 4.9.B.2.b 3 (P)</i>
All current versions are available at all locations where operations essential to the functioning of the SMS are performed? <i>SMS Framework: 1.5 B) 3) c) Old - SMS Standard 4.9.B.2.c (P/C)</i>
All obsolete documents are promptly removed from all locations or otherwise assured against the unintended use of such documents? <i>SMS Framework: 1.5 B) 3) d) Old - SMS Standard 4.9.B.2.d (P/C)</i>
<b>Outputs and Measures</b>
The service provider will establish and maintain a safety management plan to meet the safety objectives described in its safety policy. <i>SMS Framework: 1.5 B) 2) Old - SMS Standard 4.9.B.1 (I/P)</i>
Does the service provider have documentation to ensure SMS records are—
Identified? <i>SMS Framework 1.5 B) 4) a) (1) Old - SMS Standard 4.9.C.1.a and 4.9.C.2.b (P)</i>
Maintained? <i>SMS Framework 1.5 B) 4) a) (2) Old - SMS Standard 4.9.C.1.b (P)</i>
Disposed of? <i>SMS Framework 1.5 B) 4) a) (3) Old - SMS Standard 4.9.C.1.c (P)</i>
Legible? <i>SMS Framework 1.5 B) 4) b) (1) Old - SMS Standard 4.9.C.2.a (P)</i>
Identifiable? <i>SMS Framework 1.5 B) 4) b) (2) Old - SMS Standard 4.9.C.2.b (P)</i>
Traceable to the activity involved? <i>SMS Framework 1.5 B) 4) b) (3) Old - SMS Standard 4.9.C.2.c (P)</i>
Readily retrievable? <i>SMS Framework 1.5 B) 4) c) (1) Old - SMS Standard 4.9.C.3.a (P)</i>
Protected against damage? <i>SMS Framework 1.5 B) 4) c) (2) (A) Old - SMS Standard 4.9.C.3.b 1 (P)</i>
Protected against deterioration? <i>SMS Framework 1.5 B) 4) c) (2) (b) Old - SMS Standard 4.9.C.3.b.2 (P)</i>
Protected against loss?

## Component 1: Policy

<i>SMS Framework 1.5 B) 4) c) (2) (c) Old - SMS Standard 4.9.C.3.b.3 (P)</i>
Retained for a documented period of time? <i>SMS Framework 1.5 B) 4) d) Old - SMS Standard 4.9.C.3.4 (P)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the document and records system. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the documentation and records system? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

### Bottom Line Assessment

Has the service provider clearly defined and documented safety policies, objectives, procedures, and a documented maintenance process that may be in paper or electronic format and established, implemented, and maintained a safety management plan that meets the safety expectations and objectives.

## Component 1: Policy

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## Component 2: Safety Risk Management

### Component 2.0 Safety Risk Management

The Safety Risk Management flow diagram (below) is annotated with the Framework element/process numbers and some other notes. They will aid the user to visualize the Framework in terms of a process flow with attending interfaces and perhaps more clearly understand the Component/Element/Process expectations.

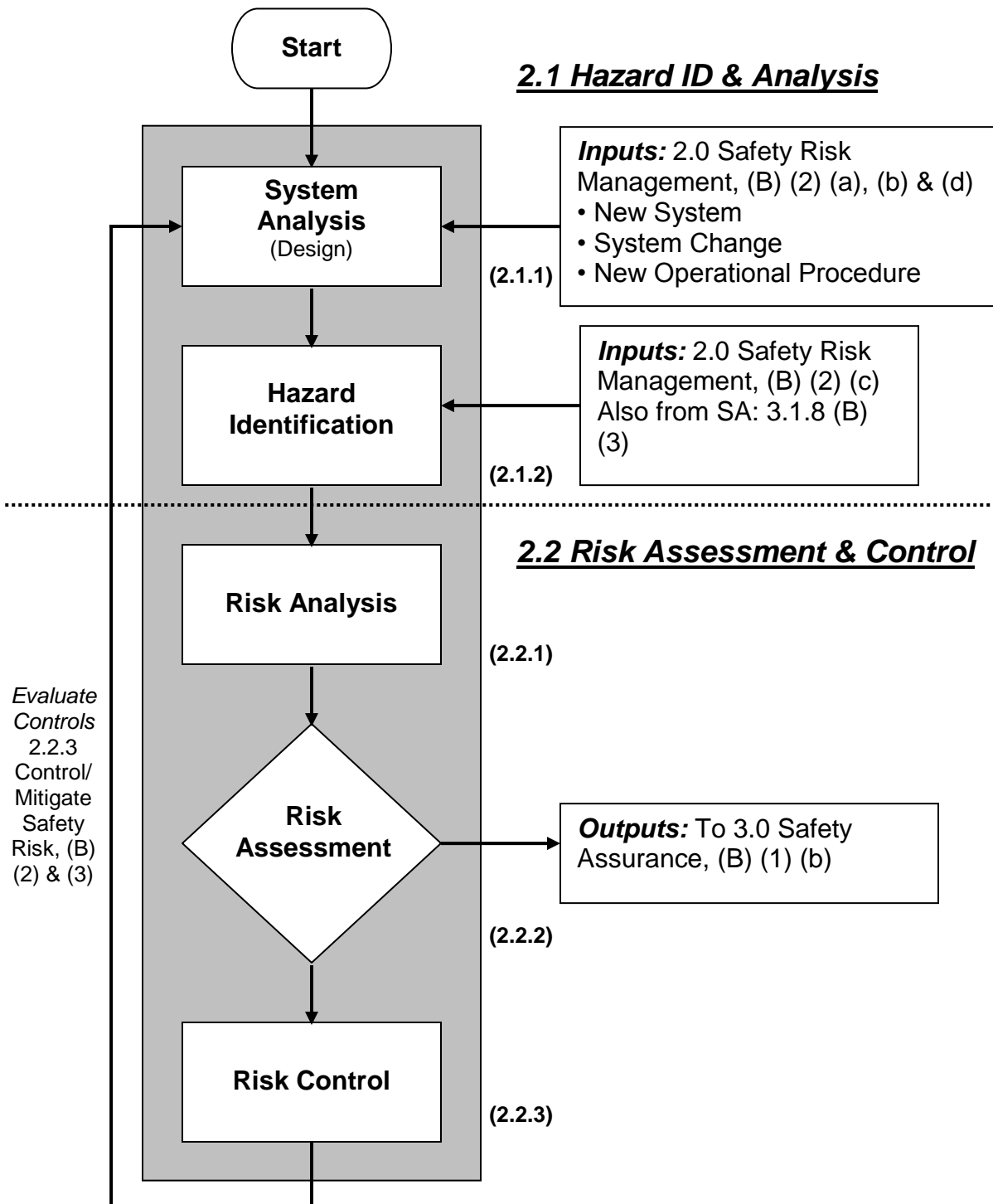


Figure 3. Safety Risk Management Flow

## Component 2: Safety Risk Management

### Safety Risk Management: General Expectations

#### Performance Objective

The service provider will develop processes to understand the critical expectations of its systems and operational environment and apply this knowledge to the identification of hazards, risk analysis and assessment for decision-making and the design of risk controls.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Safety Risk Management Component obtained from the critical expectations of its systems and operational environment? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the Safety Risk Management process? <i>SMS Framework 1.2 A) Old – None (R/A)</i>
<b>Procedure</b>
Does the service provider have SMS documentation that, at a minimum, includes the following processes—
System and task analysis. <i>SMS Framework 2.0 B) 1) a). Old - SMS Standard 5.D.</i>
Hazard Identification. <i>SMS Framework 2.0 B) 1) b). Old - SMS Standard 5.D.</i>
Safety Risk Analysis. <i>SMS Framework 2.0 B) 1) c). Old - SMS Standard 5.D.</i>
Safety Risk Assessment. <i>SMS Framework 2.0 B) 1) d). Old - SMS Standard 5.D</i>
Safety Risk Control and Mitigation <i>SMS Framework 2.0 B) 1) e). Old - SMS Standard 5.D.</i>
Does the service provider's SMS processes apply to—
Initial designs of systems, organizations, and/or products. <i>SMS Framework 2.0 B) 2) a). Old - SMS Standard 5.D.</i>
The development of operational procedures. <i>SMS Framework 2.0 B) 2) b). Old - SMS Standard 5.D.</i>
Hazards that are identified in the safety assurance functions (described in Component 3.0, B). <i>SMS Framework 2.0 B) 2) c). Old - SMS Standard 5.D.</i>
Planned changes to the operational processes. <i>SMS Framework 2.0 B) 2) d). Old - SMS Standard 5.D.</i>
Does the service provider have documentation to establish feedback loops between assurance functions described in Process 3.1.1, B to evaluate the effectiveness of safety risk controls?

## Component 2: Safety Risk Management

<i>SMS Framework 2.0 B) 3) Old - SMS Standard 5.D.</i>
Does the service provider have documentation to define acceptable and unacceptable levels of safety risk (for example, does the service provider have a safety risk matrix)? <i>SMS Framework 2.0 B) 4) a). Old - SMS Standard 5.D.</i>
Does the service provider's levels of safety risk acceptance include descriptions of the following—
Severity levels? <i>SMS Framework 2.0 B) 4) b) 1) Old - SMS Standard 5.D.1.a</i>
Likelihood levels? <i>SMS Framework 2.0 B) 4) b) 2) Old - SMS Standard 5.D.1.b</i>
Level of Management that can make safety risk acceptance decisions? <i>SMS Framework 2.0 B) 4) c) Old – SMS Standard 5.D.2. And 5.4.B (P/R/A)</i>
Does the service provider have documentation to define acceptable risk hazards that will exist in the short-term while safety risk control/mitigation plans are developed and executed? <i>SMS Framework 2.0 B) 4) d) Old - SMS Standard 5.D.3</i>
<b>Outputs and Measures</b>
Does the service provider's documentation describe the interfaces between the Safety Risk Management Component and the Safety Assurance Component (3.0)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 5.2 and 5.3 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the safety risk management component. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the safety risk management component? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

### Bottom Line Assessment

Has the service provider developed processes to understand the critical expectations of its systems and operational environment and applied this knowledge to the identification of hazards, risk decision-making, and the design of risk controls.

## Component 2: Safety Risk Management

### Element 2.1 Hazard Identification and Analysis:

#### Process 2.1.1 System and Task Analysis

##### Performance Objectives

- The service provider will analyze its systems, operations, and operational environment to gain an understanding of critical design and performance factors, processes, and activities to identify hazards; and
- The service provider will base its safety assurance function on a comprehensive system description as described in Component 3.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the System and Task Analysis process obtained from—
The initial designs of systems, organizations, and/or products? <i>SMS Framework 2.0 B) 2) a) Old – None (I)</i>
The development or modification of operational procedures? <i>SMS Framework 2.0 B) 2) b) Old – None (I)</i>
Hazards that are identified in the safety assurance functions (described in Component 3.0, B)? <i>SMS Framework 2.0 B) 2) c) Old – None (I)</i>
Planned changes to operational processes to identify hazards associated with those changes? <i>SMS Framework 2.0 B) 2) d) Old – None (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the system and task analysis process? <i>SMS Framework 1.2 A) Old – None (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation for a system and task analysis process in its safety risk management component? <i>SMS Framework 2.1.1 A) Old – 5.A.1 (P)</i>
Does the service provider have documentation for developing system and task descriptions to the level of detail necessary to—
Identify hazards? <i>SMS Framework 2.1.1 B) 1) a) Old – 5.1.A (P)</i>
Develop operational procedures? <i>SMS Framework 2.1.1 B) 1) b) Old – 5.1.A (P)</i>
Develop and implement risk controls? <i>SMS Framework 2.1.1 B) 1) c) Old – 5.1.A (P)</i>
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between the system and task analysis function and the hazard identification function?

## Component 2: Safety Risk Management

<i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 5.2 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the system and task analysis process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the system and task analysis process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

### Bottom Line Assessment

Has the service provider analyzed its systems, operations and operational environment to gain an understanding of critical design and performance factors, processes, and activities to identify hazards?

## Component 2: Safety Risk Management

### Process 2.1.2 Identify Hazards

#### Performance Objective

The service provider will identify and document hazards that are likely to cause death, serious physical harm or damage to equipment or property in sufficient detail to determine associated risk and acceptability.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Hazard Identification process obtained from the System and Task Analysis process (2.1.1), to include a new hazard identified from the Safety Assurance process (3.0) and failures of risk controls due to design deficiencies (3.1.8 (B)(3))? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the hazard identification process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5 D. (R/A)</i>
<b>Procedure</b>
Does the service provider's hazard identification process provide for identification of hazards for the <u>entire scope of the system</u> that is being evaluated as defined in the system description? <i>SMS Framework 2.1.2 B) 1) a) Old - SMS Standard 5.2.A.1, 4.1 (P)</i>
Does the service provider <u>document</u> the identified hazards? <i>SMS Framework 2.1.2 B) 1) b) Old - SMS Standard 5.2.A.2 (P)</i>
Does the service provider have a means of <u>tracking</u> this hazard information? <i>SMS Framework 2.1.2 B) 2) a) Old - SMS Standard 5.2.B.1 (P)</i>
Does the service provider <u>manage</u> this hazard information through the entire safety risk management process? <i>SMS Framework 2.1.2 B) 2) b) Old - SMS Standard 5.2.B.2 (P)</i>
<b>Outputs and Measures</b>
Does the service provider's documentation describe the interfaces between the hazard identification process and the analysis and assessment of safety risk process (2.2)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 5.2 and 5.3 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the hazard identification process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider have a control or controls in place to assure that new hazards are identified, documented, tracked, reviewed and managed? <i>SMS Framework 2.1.2 B) 2) b) Old - SMS Standard 5.2 (C)</i>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls.

## Component 2: Safety Risk Management

*SMS Framework: 1.0 B) 4) f) Old – 4.7 (PM)*

Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the hazard identification process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.

*SMS Framework 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)*

### **Bottom Line Assessment**

Has the service provider identified and documented hazards that are likely to cause death, serious physical harm or damage to equipment or property in sufficient detail to determine associated risk and acceptability?

## Component 2: Safety Risk Management

### Element 2.2 Risk Assessment and Control

#### Process 2.2.1 Analyze Safety Risk

##### Performance Objective

The service provider will determine and analyze the severity and likelihood of potential events/consequences associated with identified hazards and identify factors associated with unacceptable levels of severity or likelihood.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Safety Risk Analysis process obtained from the Hazard Identification process (2.1.2 B))? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the Safety Risk Analysis process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5 D (R/A)</i>
<b>Procedure</b>
Does the service provider have safety risk analysis documentation that includes—
Existing safety risk controls? <i>SMS Framework 2.2.1 B) 1) a) Old - SMS Standard 5.3.1 (P)</i>
Triggering mechanisms? <i>SMS Framework 2.2.1 B) 1) b) Old - SMS Standard 5.3.2 (P)</i>
Safety risk of a reasonably likely outcome from the existence of a hazard? <i>SMS Framework 2.2.1 B) 1) c) Old - SMS Standard 5.3.3 (P)</i>
Does the service provider's levels of safety risk include descriptions of the following—
Likelihood levels? <i>SMS Framework 2.2.1 B) 1) c) (1) Old - SMS Standard 5.D.1.b</i>
Severity levels? <i>SMS Framework 2.2.1 B) 1) c) (2) Old - SMS Standard 5.D.1.a</i>
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between the risk analysis functions and the risk assessment function (2.2.2)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 5.4 (I) (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the analysis of safety risk process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider have a control or controls in place to ensure that it analyzes the safety risk of the reasonably likely outcome from the existence of a hazard?



## Component 2: Safety Risk Management

<i>SMS Framework 2.2.1 B) 1) c) Old - SMS Standard 5.3.3 (C)</i>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the analysis of safety risk process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

### Bottom Line Assessment

Has the service provider determined and analyzed the severity and likelihood of potential events associated with identified hazards and identified factors associated with unacceptable levels of severity or likelihood?

## Component 2: Safety Risk Management

### Process 2.2.2 Assess Safety Risk

#### Performance Objective

The service provider will assess each identified hazard and define risk acceptance procedures and levels of management that can make safety risk acceptance decisions.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Safety Risk Assessment process obtained from the Safety Risk Analysis process in terms of estimated severity and likelihood (2.2.1 B))? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the safety risk assessment process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5 D (R/A)</i>
Does the service provider have documentation to ensure that it defines the levels of management that can make safety risk acceptance decisions? <i>SMS Framework 2.0 B) 4) Old – SMS Standard 5.D.2. And 5.4.B (P/R/A)</i>
<b>Procedure</b>
Does the service provider have documentation to ensure that it assesses each hazard for its safety risk acceptability using their safety risk acceptance process as described in the SMS Framework Component 2.0, B) 4)? <i>SMS Framework 2.2.2 B) 1) Old – SMS Standard 5.4.A (P)</i>
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between the risk assessment functions and the risk mitigation function (2.2.3)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the safety risk assessment process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the safety risk assessment process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### Bottom Line Assessment

Has the service provider assessed each identified hazard and defined acceptance procedures and levels of management that can make safety risk acceptance decisions?

## Component 2: Safety Risk Management

### Process 2.2.3 Control/Mitigate Safety Risk

#### Performance Objective

The service provider will design and implement a risk control for each identified hazard, for which there is an associated unacceptable risk. This is to ensure the potential for death, serious physical harm, or damage to equipment or property is reduced to acceptable levels. For each Risk Control, the residual or substitute risk will be analyzed before implementation.

**NOTE:** Although Process 2.2.3, is very similar to Process 3.1.9, the primary differences are:

- Process 2.2.3 is used during the design of a system, often looking to the future, or in the redesign of a non-performing system where system requirements are being met, however the system is not producing the desired results.
- Process 2.2.3 is also used where new hazards are discovered during Safety Assurance that were not taken into account during initial design.
- Process 3.1.9 is used to develop actions to bring a non-performing system back into conformance to its design requirements.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Control/Mitigation of Safety Risk process obtained from the Safety Risk Assessment process (2.2.2 B))? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the Control/Mitigation of Safety Risk process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation to ensure that it has a safety risk control/mitigation plan for each hazard with unacceptable risk? <i>SMS Framework 2.2.3 B) 1) Old - SMS Standard 5.5.A (P/C)</i>
Does the service provider have documentation to ensure that its safety risk controls are— (P)
Clearly described? <i>SMS Framework 2.2.3 B) 2) a) Old - SMS Standard 5.5.B.1 (P)</i>
Evaluated to ensure that the expectations have been met? <i>SMS Framework 2.2.3 B) 2) b) Old - SMS Standard 5.5.B.2 (P)</i>
Ready to be used in the operational environment for which they are intended? <i>SMS Framework 2.2.3 B) 2) c) Old - SMS Standard 5.5.B.3 (P)</i>
Documented? <i>SMS Framework 2.2.3 B) 2) d) Old - SMS Standard 5.5.B.4 (P)</i>
Does the service provider have documentation to ensure that substitute risk will be evaluated in the creation of safety risk controls and mitigations? <i>SMS Framework 2.2.3 B) 3) Old - SMS Standard 5.5.A (P/C)</i>
<b>Outputs and Measures</b>

## Component 2: Safety Risk Management

<p>Does the service provider's documentation include the identification of interfaces between the risk control/mitigation functions and Safety Assurance Component (3.0, specifically 3.1.1 thru 3.1.6)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i></p>
<p>Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the safety risk control process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i></p>
<p><b>Controls</b></p>
<p>Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i></p>
<p>Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the safety risk control process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i></p>

### Bottom Line Assessment

Has the service provider designed and implemented a risk control for each identified hazard with unacceptable risk to reduce the potential for death, serious physical harm, or damage to equipment or property to acceptable levels? For each risk control, the residual or substitute risk has been analyzed before implementation?

## Component 3: Safety Assurance

### Component 3: Safety Assurance

The Safety Assurance flow diagram (below) is annotated with the Framework element/process numbers and some other notes. They will aid the user to visualize the Framework in terms of a process flow with attending interfaces and perhaps more clearly understand the Component/Element/Process expectations.

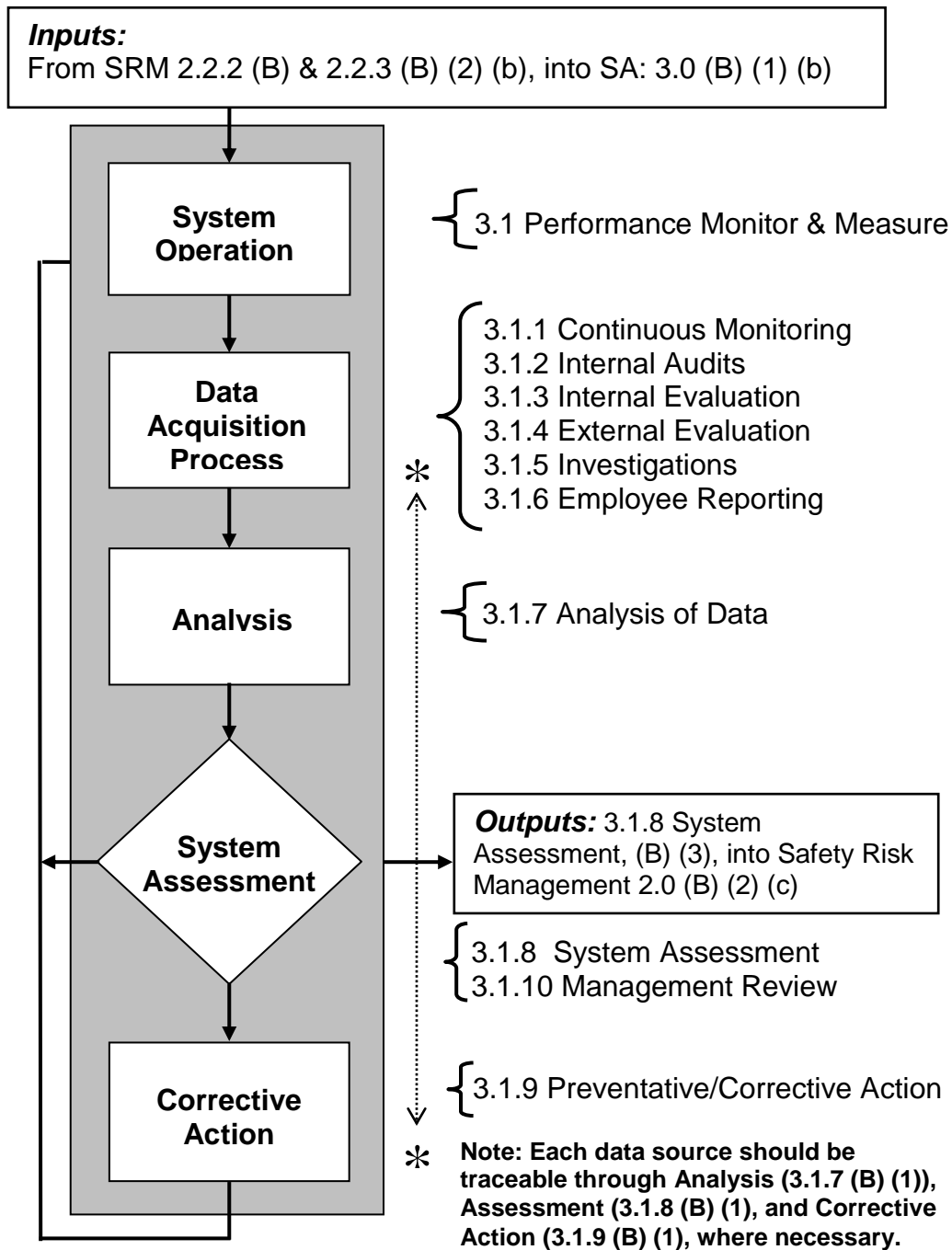


Figure 4. Safety Assurance Flow

## Component 3: Safety Assurance

### Safety Assurance: General Expectations

#### Performance Objective

The service provider will monitor, measure, and evaluate the performance of its risk controls.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Safety Assurance Component obtained from the Safety Risk Management Component (2.0)? <b>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</b>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the Safety Assurance component? SMS Framework 1.2 A) Old – (R/A)
<b>Procedure</b>
Does the service provider have documentation for monitoring their systems and operations to— (P)
Identify new hazards? SMS Framework 3.0 B) 1) a) Old - None
Measure the effectiveness of safety risk controls? SMS Framework 3.0 B) 1) b) Old - None
Ensure compliance with regulatory requirements? SMS Framework 3.0 B) 1) c) Old - None
Is the service provider's safety assurance function based upon a comprehensive system description as described in Section 2.1.1? SMS Framework 3.0 B) 1) d) Old - None
Does the service provider have documentation for collecting data necessary to demonstrate the effectiveness of its— (P)
Operational processes? SMS Framework 3.0 B) 2) a) Old - SMS Standard 6.3(1) (P)
SMS? SMS Framework 3.0 B) 2) b) Old - SMS Standard 6.3(2) (P)
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between the data acquisition functions and—
The system assessment function (2.2.2)? SMS Framework 1.5 B) 1) f) Old - SMS Standard 6.3 and 6.5 (I)
The hazard identification system (2.1.2)? SMS Framework 1.5 B) 1) f) Old - SMS Standard 6.3.5 (I)
The internal evaluation function (3.1.3)? SMS Framework 1.5 B) 1) f) Old - SMS Standard 6.3.3 (I)
The employee reporting and feedback function (3.1.6)?

### Component 3: Safety Assurance

<i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 6.3.6 (I)</i>
The internal and external audit function (3.1.2 & 3.1.4)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 6.3.2 and 6.3.4 (I)</i>
The accident and incident investigation function (3.1.5)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 4.8 and 6.3 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the safety assurance component. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the safety assurance component? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### Bottom Line Assessment

Has the service provider monitored, measured, and evaluated the performance of its risk controls.

## Component 3: Safety Assurance

### Element 3.1 Safety Performance Monitoring and Measurement:

#### Process 3.1.1 Continuous Monitoring

##### Performance Objective

The service provider will monitor operational data, including products and services received from contractors, to identify hazards, measure the effectiveness of safety risk controls, and assess system performance.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Continuous Monitoring process obtained from the Risk Control/Mitigation process (2.2.3)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the Continuous Monitoring process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation for monitoring operational data to— (P)
Assess conformity with safety risk controls? <i>SMS Framework 3.1.1 B) 1) a) Old – SMS Standard 6.3.1.A.1 (P)</i>
Measure the effectiveness of safety risk controls? <i>SMS Framework 3.1.1 B) 1) b) Old – SMS Standard 6.3.1.A.2 (P)</i>
Assess system performance? <i>SMS Framework 3.1.1 B) 1) c) Old – SMS Standard 6.3.1.A.3 (P)</i>
Identify hazards? <i>SMS Framework 3.1.1 B) 1) d) Old – SMS Standard 6.3.1.A.4 (P)</i>
Does the service provider have documentation that ensures that it monitors products and services from contractors? <i>SMS Framework 3.1.1 B) 2) Old – SMS Standard 6.3.1.B (P)</i>
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between the Continuous Monitoring functions and Analysis of Date process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the continuous monitoring process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls.



### Component 3: Safety Assurance

*SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)*

Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the continuous monitoring process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.

*SMS Framework 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)*

#### **Bottom Line Assessment**

Has the service provider monitored operational data, including products and services received from contractors, to identify hazards, measure the effectiveness of safety risk controls, and assess system performance?

## Component 3: Safety Assurance

### Process 3.1.2 Internal Audits by Operational Departments

#### Performance Objective

The service provider will perform regularly scheduled internal audits of operational department's processes, including those performed by contractors, to determine the performance and effectiveness of risk controls.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Internal Audits by Operational Departments obtained from the Risk Control/Mitigation process (2.2.3)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the internal auditing process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5 D (R/A)</i>
<b>Procedure:</b>
Does the service provider have documentation that ensures regular internal audits of safety-related functions of the service provider's internal processes are conducted by line management of each operational department? <i>SMS Framework 3.1.2 B) 1) Old – SMS Standard 6.3.2.A (P)</i>
<b>Procedure: Auditing of Contractors</b>
Does the service provider have documentation that ensures regular audits of safety-related functions of the service provider's processes, which are accomplished by subcontractors, are conducted by the line management of the appropriate operational department? <i>SMS Framework 3.1.2 B) 1) Old – SMS Standard 6.3.2.A (P)</i>
<b>Procedure: Objectives of Audits</b>
Does the service provider have documentation that ensures regular audits are conducted to— (P)
Determine conformity with safety risk controls? <i>SMS Framework 3.1.2 B) 2) a) Old – SMS Standard 6.3.2.B.1 (P)</i>
Assess performance of safety risk controls? <i>SMS Framework 3.1.2 B) 2) b) Old – SMS Standard 6.3.2.B.2 (P)</i>
<b>Procedure: Audit Planning</b>
Does the service provider have documentation that ensures planning of the audit program takes into account— (P)
Safety significance of the processes to be audited? <i>SMS Framework 3.1.2 B) 3) a) Old – SMS Standard 6.3.2.C.1 (P)</i>
Results of previous audits? <i>SMS Framework 3.1.2 B) 3) b) Old – SMS Standard 6.3.2.C.2 (P)</i>
<b>Procedure: Audit Program Management</b>
Does the service provider have documentation that ensures the organization defines - (P)

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<b>Design Expectations</b>
Audits, including— (P)
Criteria? <i>SMS Framework 3.1.2 B) 4) a) (1) Old – SMS Standard 6.3.2.D.1.a (P)</i>
Scope? <i>SMS Framework 3.1.2 B) 4) a) (2) Old – SMS Standard 6.3.2.D.1.b (P)</i>
Frequency? <i>SMS Framework 3.1.2 B) 4) a) (3) Old – SMS Standard 6.3.2.D.1.c (P)</i>
Methods? <i>SMS Framework 3.1.2 B) 4) a) (4) Old – SMS Standard 6.3.2.D.1.d (P)</i>
Processes used to select the auditors? <i>SMS Framework 3.1.2 B) 4) b) Old – SMS Standard 6.3.2.D.2 (P)</i>
A requirement that individuals shall not audit their own work? <i>SMS Framework 3.1.2 B) 4) c) Old – SMS Standard 6.3.2.D.3 (P)</i>
<b>Procedure: Documentation</b>
Documented procedures, including— (P)
Responsibilities? (P) <i>SMS Framework 3.1.2 B) 5) a) Old – SMS Standard 6.3.2.D.4.a</i>
Expectations for— (P)
Planning audits? <i>SMS Framework 3.1.2 B) 5) b) (1) Old – SMS Standard 6.3.2.D.4.b.1 (P)</i>
Conducting audits? <i>SMS Framework 3.1.2 B) 5) b) (2) Old – SMS Standard 6.3.2.D.4.b.2 (P)</i>
Reporting results? <i>SMS Framework 3.1.2 B) 5) b) (3) Old – SMS Standard 6.3.2.D.4.b.3 (P)</i>
Maintaining records? <i>SMS Framework 3.1.2 B) 5) b) (4) Old – SMS Standard 6.3.2.D.4.b.4 (P)</i>
Audits of contractors and vendors? <i>SMS Framework 3.1.2 B) 5) b) (5) Old – SMS Standard 6.3.2.D.5 (P)</i>
<b>Outputs and Measures</b>
Does the service provider’s documentation include the identification of interfaces between the internal audits of operational department’s process and Analysis of Date process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i>
Does the service provider’s documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the internal audit process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider have documentation to ensure it maintains records of Investigations in accordance with the requirements of Element 1.5? <i>SMS Framework 1.5 B) 4) Old – SMS Standard 6.5.D (P/I)</i>

### Component 3: Safety Assurance

<b>Design Expectations</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the internal audit process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### **Bottom Line Assessment**

Has the service provider collected and managed the data necessary to demonstrate the effectiveness of organizational processes and the SMS by performing regularly scheduled internal audits of operational process, including those performed by contractors, to determine the performance and effectiveness of risk controls?

## Component 3: Safety Assurance

### Process 3.1.3 Internal Evaluation

#### Performance Objective

The service provider will conduct, at planned intervals, internal evaluations of the SMS and operational processes, to determine that the SMS conforms to its requirements.

**NOTE:** To a large extent, controls are built into the design of the SMS framework. A general expectation of the policy component is that SMS outputs will be “*recorded, monitored, measured, and analyzed*” (1.0(B)(3)). The internal evaluation function of the safety assurance component calls for evaluations “*at planned intervals*” of SMS conformance to objectives and expectations (3.1.3(B)(1)).

The below table is a complete set of outputs, as a minimum expectation, for the content of internal evaluations of each process area.

Each of the outputs should also have a method of measurement specified by the service provider IAW 1.0(B)(2) “*SMS processes will be...measured...*” Measures need not be quantitative where this is not practical. All that should be expected is some method of providing objective evidence of the attainment of the expectation.

It should be noted that there is a relationship between controls and process measures. That is, the internal evaluation process is the method of controlling the processes, through the associated data collection, analysis, assessment, and corrective action processes. The individual outputs are the content of the measures.

Finally, management reviews are the means of making sure that the appropriate levels of responsibility and authority are brought into the process and that management can be accountable in a proactive, rather than an after-the-fact attributional way.

### SMS Outputs

Process	Reference	Output Expectation
<b>Component 2.0 - Safety Risk Management</b>		
2.1.1 System/Task Analysis	2.1.1(B)(1)	System Descriptions for following situations:
	2.0(B)(2)(a)	<ul style="list-style-type: none"><li>Initial designs of systems, organizational procedures, and products</li></ul>
	2.0(B)(2)(b)	<ul style="list-style-type: none"><li>Development of operational procedures</li></ul>
	2.0(B)(2)(d)	<ul style="list-style-type: none"><li>Planned Changes</li></ul>
2.1.2 Hazard Identification	2.1.2(B)(1)b	Hazards documented
	2.1.2(B)(2)(a)	Hazards tracked
2.2.1 Risk Analysis	2.2.1(B)(1)(c)	Assignment of severity and likelihood for each hazard (as documented in 2.1.2)
2.2.2 Risk Assessment	2.2.2(B)(1)	Assessment of acceptability of each hazard (as documented in 2.1.2)
2.2.3 Risk Control	2.2.3(B)(1)	Risk control/mitigation plans for each hazard with

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Process	Reference	Output Expectation
		unacceptable risk (as assessed in 2.2.2)
<b>Component 3.0 - Safety Assurance</b>		
3.1.1 Continuous Monitoring	3.1.1	Objective evidence of monitoring activities IAW company policy
3.1.2 Internal Audit	3.1.2(B)(5)(b)(1)	Plans
	3.1.2(B)(5)(b)(3) & (4)	Reports/Records
3.1.3 Internal Evaluation	3.1.3(B)(3)(d)(2)(a)	Plans
	3.1.3(B)(3)(d)(2) (c) & (d)	Reports/Records
3.1.4 External Evaluation	3.1.4	Objective evidence of audit findings of external audits (e.g. IOSA, IS-BAO, ACSF, FAA)
3.1.5 Investigations	3.1.5(B)(1)	Data collected (e.g. records, reports) for investigations of:
	3.1.5(B)(1)(a)	Incidents
	3.1.5(B)(1)(b)	Accidents
	3.1.5(B)(1)(c)	Regulatory violations (e.g. VDRP records)
3.1.6 Employee Reporting System (ERS)	3.1.6(B)(1)	Evidence of system (e.g. report file, log, database)
	3.1.6(B)(3)	Evidence of monitoring of ERS data for hazards
	3.1.6(B)(4)	Evidence of analysis of ERS data
3.1.7 Analysis of Data	3.1.7(B) 3.1.7(B)(1)	Objective evidence of analysis processes for each data type
3.1.8 System Assessment	3.1.8(B)(4)	Records of system assessments
3.1.9 Preventive/Corrective Action	3.1.9(B)(1)	Corrective action plans
	3.1.9(B)(5)	Records of disposition and status of corrective actions
3.1.10 Management Review	3.1.10(B)(1)	Objective evidence of management reviews (e.g. minutes, log)
<b>Component 4.0 - Safety Promotion</b>		
4.1.1 Competency Requirements	4.1.1(B)(1)	Documented competency requirements IAW 1.2 (B)(3) & 1.3(B)(1)
4.1.2 Training	4.1.2(B)(1)	Plans/requirements
	4.1.2(B)(3)	Records
	4.1.2(B)(4)	Reviews

## Component 3: Safety Assurance

### Process 3.1.3 Internal Evaluation - continued

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Internal Evaluation process obtained from the Risk Control/Mitigation process (2.2.3)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the internal evaluation process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5 D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation that ensures internal evaluations of operational processes and the SMS are conducted at planned intervals, to determine that the SMS conforms to objectives and expectations? <i>SMS Framework 3.1.3 B) 1) Old – SMS Standard 6.3.3.A (P)</i>
Does the service provider have documentation that ensures planning of the internal evaluation program takes into account— (P)
Safety criticality of the processes to be evaluated? <i>SMS Framework 3.1.3 B) 2) a) Old – SMS Standard 6.3.3.B.1 (P)</i>
Results of previous evaluations? <i>SMS Framework 3.1.3 B) 2) b) Old – SMS Standard 6.3.3.B.2 (P)</i>
<b>Procedure: Program Contents</b>
Does the service provider have documentation that ensures the organization defines - (P)
Evaluations, including - (P)
Criteria? <i>SMS Framework 3.1.3 B) 3) a) 1) Old – SMS Standard 6.3.3.C.1.a (P)</i>
Scope? <i>SMS Framework 3.1.3 B) 3) a) 2) Old – SMS Standard 6.3.3.C.1.b (P)</i>
Frequency? <i>SMS Framework 3.1.3 B) 3) a) 3) Old – SMS Standard 6.3.3.C.1.c (P)</i>
Methods? <i>SMS Framework 3.1.3 B) 3) a) 4) Old – SMS Standard 6.3.3.C.1.d (P)</i>
Processes used to select the evaluators? <i>SMS Framework 3.1.3 B) 3) b) Old – SMS Standard 6.3.3.C.2 (P)</i>
<b>Procedure: Documentation</b>
Documented procedures, including—
Responsibilities? <i>SMS Framework 3.1.3 B) 3) d) 1) Old – SMS Standard 6.3.3.C.4.a (P)</i>
Requirements for— (P)
Planning evaluations?

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<p><i>SMS Framework 3.1.3 B) 3) d) 2) (a) Old – SMS Standard 6.3.3.C.4.b.1 (P)</i></p>
<p>Conducting evaluations?  <i>SMS Framework 3.1.3 B) 3) d) 2) (b) Old – SMS Standard 6.3.3.C.4.b.2 (P)</i></p>
<p>Reporting results? (P)  <i>SMS Framework 3.1.3 B) B) 3) d) 2) (c) Old – SMS Standard 6.3.3.C.4.b.3</i></p>
<p>Maintaining records?  <i>SMS Framework 3.1.3 B) 3) d) 2) (d) Old – SMS Standard 6.3.3.C.4.b.4 (P)</i></p>
<p>Evaluations of contractors and vendors?  <i>SMS Framework 3.1.3 B) 3) d) 2) (e) Old – SMS Standard 6.3.3.C.5 (P)</i></p>
<p><b>Procedure: Scope</b></p>
<p>Does the service provider have documentation that ensures the evaluation program includes an evaluation of the internal audit programs conducted by line management of the operational departments described in SMS Framework 1.0 B) 1)?  <i>SMS Framework 3.1.3 B) 5) Old – SMS Standard 6.3.3.E (P)</i></p>
<p><b>Procedure: Independence of Evaluators</b></p>
<p>Does the service provider have documentation that ensures the person or organization performing evaluations of an operational department is functionally independent of the department being evaluated?  <i>SMS Framework 3.1.3 B) 6) Old – SMS Standard 6.3.3.F (P)</i></p>
<p><b>Outputs and Measures</b></p>
<p>Does the service provider’s documentation include the identification of interfaces between the Internal Evaluation process and Analysis of Date process (3.1.7)?  <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i></p>
<p>Does the service provider’s documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the internal evaluation process.  <i>See note at 3.1.3 &amp; See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PMI)</i></p>
<p><b>Controls</b></p>
<p>Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls.  <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i></p>
<p>Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the internal evaluation process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.  <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i></p>

#### Bottom Line Assessment

Has the service provider conducted, at planned intervals, internal evaluations of the SMS and operational processes, to determine that the SMS conforms to its requirements?



## Component 3: Safety Assurance

### Process 3.1.4 External Auditing of the SMS

#### Performance Objective

The service provider will include the results of audits performed by oversight organizations in its analysis of data.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the External Auditing process obtained from the Risk Control/Mitigation process (2.2.3) and from the FAA and/or other external agencies? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the external auditing process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation that ensures it includes the <u>results</u> of oversight organization audits in the analyses conducted under SMS Process 3.1.7? <i>SMS Framework 3.1.4 B) 1) Old – SMS Standard 6.3.4 (P/I)</i>
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of <u>interfaces</u> between the External Audit process, Analysis of Date process (3.1.7) and the FAA and/or other external agencies? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the external auditing process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the external auditing process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### Bottom Line Assessment

Has the service provider included the results of audits performed by oversight organizations in its Analysis of Data?

## Component 3: Safety Assurance

### Process 3.1.5 Investigation

#### Performance Objective

The service provider will establish procedures to collect data and investigate incidents, accidents and instances of potential regulatory non-compliance to identify potential new hazards or failures of risk controls.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Investigation process obtained from the Risk Control/Mitigation process (2.2.3) and as needed upon occurrence of events? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the investigation process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation that ensures it collects data on—
Incidents? <i>SMS Framework 3.1.5 B) 1) a) Old – SMS Standard 5.5.D (R/A) SMS Standard 6.3.5.A.1 (P)</i>
Accidents? <i>SMS Framework 3.1.5 B) 1) b) Old – SMS Standard 6.3.5.A.2 (P)</i>
Potential regulatory non-compliance? <i>SMS Framework 3.1.5 B) 1) c) Old – SMS Standard 6.3.5.A.3 (P)</i>
Does the service provider have documentation that ensures procedures are established to investigate— (P)
Accidents? <i>SMS Framework 3.1.5 B) 2) a) Old – SMS Standard 6.3.5.B.1 (P)</i>
Incidents? <i>SMS Framework 3.1.5 B) 2) b) Old – SMS Standard 6.3.5.B.2 (P)</i>
Instances of potential regulatory non-compliance? <i>SMS Framework 3.1.5 B) 2) c) Old – SMS Standard 6.3.5.B.3 (P)</i>
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between the Investigation process and Analysis of Date process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the investigation process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>

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<p>Does the service provider have documentation to ensure that it maintains records of Investigations in accordance with the requirements of Element 1.5? <i>SMS Framework 1.5 B) 4) Old – SMS Standard 6.5.D (P/I)</i></p>
<p>Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i></p>
<p>Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the investigation process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i></p>

#### Bottom Line Assessment

Has the service provider established procedures to collect data and investigate incidents, accidents and instances of potential regulatory non-compliance that occur to identify potential new hazards or failures of risk controls?

## Component 3: Safety Assurance

### Process 3.1.6 Employee Reporting and Feedback System

#### Performance Objective

The service provider will establish and maintain a confidential employee safety reporting and feedback system. Data obtained from this system will be monitored to identify emerging hazards and to assess performance of risk controls in the operational systems.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Employee Reporting and Feedback System as obtained from employees? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the employee reporting and feedback process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation that ensures the organization establishes and maintains a confidential employee safety reporting and feedback system as in Component 4.0 B) 1) e)? <i>SMS Framework 3.1.6 B) 1) Old – SMS Standard 6.3.6.A (P)</i>
Does the service provider have documentation that ensures employees are encouraged to use the safety reporting and feedback system without fear of reprisal and where possible, encourage submission of solutions /safety improvements? <i>SMS Framework 3.1.6 B) 2) Old – SMS Standard 6.3.6.B (P)</i>
Does the service provider have documentation that ensures data from the safety reporting and feedback system is monitored to identify emerging hazards? <i>SMS Framework 3.1.6 B) 3) Old – SMS Standard 6.3.6.C (P)</i>
Does the service provider have documentation that ensures the data collected in the safety reporting and feedback system is included in the analyses conducted under SMS Framework 3.1.7? <i>SMS Framework 3.1.6 B) 4) Old – SMS Standard 6.3.6.D. (P)</i>
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between the Employee Reporting and Feedback process and Analysis of Date process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the employee reporting and feedback process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider have documentation to ensure that it maintains records of employee reporting and feedback in accordance with the requirements of Element 1.5? <i>SMS Framework 1.5 B) 4) Old – SMS Standard 6.5.D (P/I)</i>
Does the service provider ensure procedures are followed for safety related operations and activities?

### Component 3: Safety Assurance

Documentation should establish and maintain supervisory and operational controls.

*SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)*

Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the employee reporting and feedback process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.

*SMS Framework 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)*

#### Bottom Line Assessment

Has the service provider established and maintained a confidential employee safety reporting and feedback system? Are the data obtained from this system monitored to identify emerging hazards and to assess performance of risk controls in the operational systems?

## Component 3: Safety Assurance

### Process 3.1.7 Analysis of Data

#### Performance Objective

The service provider will analyze the data described in Information Acquisition (3.1.1 thru 3.1.6), to assess the performance and effectiveness of risk controls in the organization's operational processes (1.0 B) 1) a)) and the SMS (1.1 B) 2)) and to identify root causes of deficiencies and potential new hazards.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Analysis of Data process obtained from data acquisition processes 3.1.1 thru 3.1.6? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the data analysis and system assessment process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation to ensure that it analyzes the data that it collects to demonstrate the effectiveness of— (P)
Risk controls in the organization's operational processes (1.0 B) 1) a))? <i>SMS Framework 3.1.7 B) 1) a) Old – SMS Standard 6.4.A.1 (P)</i>
The organization's SMS (1.1 B) 2))? <i>SMS Framework 3.1.7 B) 1) b) Old – SMS Standard 6.4.A.2 (P)</i>
Does the service provider have documentation to ensure it analyzes the data it collects to evaluate where improvements can be made in the organization's— (P)
Operational processes (1.0 B) 1) a))? <i>SMS Framework 3.1.7 B) 2) a) Old – SMS Standard 6.4.B.1 (P)</i>
SMS (1.1 B) 2))? <i>SMS Framework 3.1.7 B) 2) b) Old – SMS Standard 6.4.B.2 (P)</i>
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between the data analysis process and the system assessment process (3.1.8)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the data analysis process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider have documentation to ensure that it maintains records of data analysis in accordance with the requirements of Element 1.5? <i>SMS Framework 1.5 B) 4) Old – SMS Standard 6.5.D (P/I)</i>
Does the service provider ensure procedures are followed for safety related operations and activities?

### Component 3: Safety Assurance

<b>Design Expectations</b>
Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the data analysis process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### Bottom Line Assessment

Has the service provider analyzed the data described in processes 3.1.1 thru 3.1.6 to assess the performance and effectiveness of risk controls in the organization's operational processes and the SMS and to identify root causes of deficiencies and potential new hazards?

## Component 3: Safety Assurance

### Process 3.1.8 System Assessment

#### Performance Objective

The service provider will perform an assessment of the performance and effectiveness of risk controls, and conformance with SMS expectations, as stated herein.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the System Assessment process obtained from data analysis processes (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the system assessment process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation to ensure that it assesses the performance of the— (P)
Safety-related functions of operational processes (1.0 B) 1) a)) against their requirements? <i>SMS Framework 3.1.8 B) 1) a) Old – SMS Standard 6.5.A.1 (P)</i>
SMS against its objectives and expectations (1.1 B) 2))? <i>SMS Framework 3.1.8 B) 1) b) Old – SMS Standard 6.5.A.2 (P)</i>
Does the service provider have documentation to record system assessments and risk control performance that result in a finding of— (P)
Conformity or nonconformity with existing safety risk controls and/or SMS requirements, including regulatory requirements? <i>SMS Framework 3.1.8 B) 2) a) &amp; b) Old – SMS Standard 6.5.B.1 &amp; 2 (P/I)</i>
New hazards found? <i>SMS Framework 3.1.8 B) 2) c) Old – SMS Standard 6.5.B.3 (P/I)</i>
<b>Outputs and Measures</b>
Does the service provider have documentation to ensure it uses the safety risk management process (2.0) if the risk assessment and risk control performance indicates the— (P/I)
Identification of new hazards? <i>SMS Framework 3.1.8 B) 3) a) Old – SMS Standard 6.5.C.1 (P)</i>
Need for system changes? <i>SMS Framework 3.1.8 B) 3) b) Old – SMS Standard 6.5.C.2 (P)</i>
Does the service provider's documentation include the identification of interfaces between the system assessment function and— (I)
The hazard identification function (2.1.2)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.2, 6.4, and 6.5 (I)</i>
The preventive and corrective action function (3.1.9)?



### Component 3: Safety Assurance

<i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 6.4, 6.5, and 6.6 (I)</i>
<p>Does the service provider’s documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the system assessment process.</p> <p><i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i></p>
<p><b>Controls</b></p>
<p>Does the service provider have documentation to ensure that it maintains records of assessments and risk control performance in accordance with the requirements of Element 1.5?</p> <p><i>SMS Framework 3.1.8 B) 4) Old – SMS Standard 6.5.D (P/I)</i></p>
<p>Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls.</p> <p><i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i></p>
<p>Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the system assessment process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.</p> <p><i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i></p>

#### Bottom Line Assessment

Has the service provider performed an assessment of the performance and effectiveness of risk controls, and conformance with SMS requirements?

## Component 3: Safety Assurance

### Process 3.1.9 Preventive/Corrective Action

#### Performance Objective

The service provider will take corrective and preventive action to eliminate the causes of nonconformance identified during analysis to prevent recurrence.

**NOTE:** Although Process 2.2.3, is very similar to Process 3.1.9, the primary differences are:

- Process 2.2.3 is used during the design of a system, often looking to the future, or in the redesign of a non-performing system where system requirements are being met, however the system is not producing the desired results.
- Process 2.2.3 is also used where new hazards are discovered during Safety Assurance that were not taken into account during initial design.
- Process 3.1.9 is used to develop actions to bring a non-performing system back into conformance to its design requirements.

<b>Design Expectations</b>
<b>Inputs</b>
Does the service provider's documentation identify inputs (interfaces) for the Preventive/Corrective Action process obtained from System Assessments with findings of non-performing risk controls (3.1.8)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the preventive/corrective action process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation to ensure the service provider develops, prioritizes, and implements, as appropriate, the following— (P)
Corrective actions for identified nonconformities with risk controls? <i>SMS Framework 3.1.9 B) 1) a) Old – SMS Standard 6.6.A.1 (P)</i>
Preventive actions for identified potential nonconformities with risk controls? <i>SMS Framework 3.1.9 B) 1) b) Old – SMS Standard 6.6.A.2 (P)</i>
Does the service provider have documentation to ensure it considers safety lessons learned in the development of— (P)
Corrective actions? <i>SMS Framework 3.1.9 B) 2) a) Old – SMS Standard 6.6.B.1 (P)</i>
Preventive actions? <i>SMS Framework 3.1.9 B) 2) b) Old – SMS Standard 6.6.B.2 (P)</i>
Does the service provider have documentation to ensure it takes the necessary corrective and preventive action <u>based on the findings of investigations</u> ? (P) <i>SMS Framework 3.1.9 B) 3) Old – SMS Standard 6.6.C (P)</i>
Does the service provider have documentation to ensure it prioritizes and implements corrective and preventive actions <u>in a timely manner</u> ? <i>SMS Framework 3.1.9 B) 4) Old – SMS Standard 6.6.D (P)</i>

### Component 3: Safety Assurance

<b>Outputs and Measures</b>
Does the service provider have documentation to ensure it keeps records of the disposition and status of corrective and preventive actions according to established record retention policy? <i>SMS Framework 3.1.9 B) 5) Old – SMS Standard 6.6.F (P)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the preventative and corrective action process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the preventative and corrective action process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### Bottom Line Assessment

Has the service provider taken action to eliminate non-conformances identified during analysis to prevent recurrence?

## Component 3: Safety Assurance

### Process 3.1.10 Management Review

#### Performance Objective

Top Management will conduct regular reviews of the SMS including outputs of Safety Risk Management (2.0) processes, Safety Assurance (3.0) processes, and lessons learned. Management reviews will include assessing the performance and effectiveness of an organization's operational processes and the need for improvements.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Management Review process obtained from the outputs of Component 2.0 (SRM) and Component 3.0 (SA) activities including— <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
Hazards (2.1.2)
Risk severity and likelihood (2.2.1)
Risk assessments (2.2.2)
Risk control/mitigation plans (2.2.3)
Results of analysis of data (3.1.7)
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the management review process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does top management conduct regular reviews of the SMS, including the outputs of the safety risk management process, the outputs of the safety assurance process, and safety lessons learned? <i>SMS Framework 3.1.10 B) 1) a), b) &amp; c) Old - SMS Standard 6.7.A (P)</i>
Does top management include in its reviews of the SMS an assessment of the need for improvements to the service provider's operational processes and SMS? <i>SMS Framework 3.1.10 B) 2) a) &amp; b) Old - SMS Standard 6.7.B (P)</i>
<b>Outputs and Measures</b>
Does the service provider have documentation to ensure that it keeps records of the disposition and status of Management Reviews according to established record retention policy? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 6.6.F (I)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the management review process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>

### **Component 3: Safety Assurance**

Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the management review process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.

*SMS Framework 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)*

#### **Bottom Line Assessment**

Has Top Management conducted regular reviews of the SMS, including outputs of Safety Risk Management, Safety Assurance and Lessons Learned? Has management reviews included assessing the performance and effectiveness of an organization's operational processes and the need for changes?

## Component 3: Safety Assurance

### Element 3.2 Management of Change

#### Performance Objective

The service provider will identify changes within the organization which may affect established processes and services by new system design, changes to existing system designs, new operations/procedures or modified operations/procedures.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Management of Change process obtained from proposed changes to systems, processes, procedures or organizational structures? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the management of change process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure</b>
Does the service provider have documentation to ensure it does not implement any of the following until the level of safety risk of each identified hazard is determined to be acceptable for— (P)
New system designs? <i>SMS Framework 3.2 B) 1) a) Old - SMS Standard 5.E.1 (P)</i>
Changes to existing system designs? <i>SMS Framework 3.2 B) 1) b) Old - SMS Standard 5.E.2 (P)</i>
New operations or procedures? <i>SMS Framework 3.2 B) 1) c) Old - SMS Standard 5.E.3 (P)</i>
Modifications to existing operations or procedures? <i>SMS Framework 3.2 B) 1) d) Old - SMS Standard 5.E.4 (P)</i>
Does the service provider have documentation to allow it to take interim immediate action to mitigate an existing safety risk? <i>SMS Framework 3.2 B) 2) Old - SMS Standard 5.F (P)</i>
<b>Outputs and Measures</b>
Does the service provider have documentation to ensure that Management of Change procedures are interfaced with the SRM process (2.1.1)? <i>SMS Framework 3.1.9 B) 5) Old – SMS Standard 6.6.F (P)</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the management of change process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider have a control or controls in place to ensure that it does not implement new system designs, changes to existing systems, new operations or procedures, or changes to operations

### Component 3: Safety Assurance

or procedures until the level of safety risk of each identified hazard is determined to be acceptable? <i>SMS Framework 1.0 B) 4) f) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the management of change process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

#### Bottom Line Assessment

Has the service provider identified changes within the organization, which may affect established processes and services by new system design, changes to existing system designs, new operations/procedures or modified operations/procedures?

## Component 3: Safety Assurance

### Element 3.3 Continual Improvement

#### Performance Objective

The service provider will promote continual improvement of its SMS through continuous application of Safety Risk Management (Component 2.0), Safety Assurance (Component 3.0) and by using safety lessons learned and communicating them to all personnel.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Continual Improvement processes that are obtained through continuous application of Safety Risk Management (Component 2.0), Safety Assurance (Component 3.0) and the outputs of the SMS, including safety lessons learned? SMS Framework 1.5 B) 1) f) Old – SMS Standard (I)
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the continual improvement process? SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)
<b>Procedure</b>
Does the service provider continuously improve the effectiveness of the SMS and of safety risk controls through the use of the safety and quality policies, objectives, audit and evaluation results, analysis of data, corrective and preventive actions, and management reviews? SMS Framework 3.3 B) 1) Old - SMS Standard 7.5. (P)
Does the service provider have documentation to ensure it develops safety lessons learned? SMS Framework 3.3 B) 2) Old - SMS Standard 7.5.A (P)
Does the service provider have documentation to ensure that safety lessons learned are used to promote continuous improvement of safety? SMS Framework 3.3 B) 2) a) Old - SMS Standard 7.5.B (P)
Does the service provider have documentation to ensure that safety lessons learned are communicated to all personnel? SMS Framework 3.3 B) 2) b) & 4.2 Old - SMS Standard 7.5.C (P)
<b>Outputs and Measures</b>
Does the service provider have documentation to ensure that trend analysis of safety and quality policies, objectives, audit and evaluation results, analysis of data, corrective and preventive actions are interfaced with management reviews (3.1.10)? SMS Framework 3.1.10 A) Old – SMS Standard 6.6.F (I)
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the continual improvement process. See note at 3.1.3 & SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)



### **Component 3: Safety Assurance**

Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the continual improvement process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.

*SMS Framework 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)*

#### **Bottom Line Assessment**

Has the service provider continually improved the effectiveness of the SMS and of safety risk controls through the use of the safety and quality policies, objectives, audit and evaluation results, analysis of data, corrective and preventive actions?

### Component 3: Safety Assurance

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## Component 4: Safety Promotion

### Component 4: Safety Promotion

#### *Safety Promotion: General Expectations*

##### Performance Objective

Top Management will promote the growth of a positive safety culture and communicate it throughout the organization.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation include the identification of interfaces between the Top Management and organizational personnel? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)</i>
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the Safety Promotion process? <i>SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)</i>
<b>Procedure/Output/Measure</b>
Does Top Management have a procedure to promote the growth of a positive safety culture through—
Publication of Top Management's stated commitment to safety to all employees? <i>SMS Framework 4.0 B) 1) a) Old -</i>
Visible demonstration of their commitment to the SMS? <i>SMS Framework 4.0 B) 1) b) Old -</i>
Communication of the safety responsibilities for the organization's personnel? <i>SMS Framework 4.0 B) 1) c) Old -</i>
Clear and regular communication of safety policy, goals, expectations, standards, and performance to all employees of the organization? <i>SMS Framework 4.0 B) 1) d) Old -</i>
An effective employee reporting and feedback system that provides confidentiality as is necessary? <i>SMS Framework 4.0 B) 1) e) Old -</i>
Use of a safety information system that provides an accessible efficient means to retrieve information? <i>SMS Framework 4.0 B) 1) f) Old -</i>
Allocation of resources essential to implement and maintain the SMS? <i>SMS Framework 4.0 B) 1) g) Old -</i>
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the safety promotion component. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>

## Component 4: Safety Promotion

Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls.

*SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)*

Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the safety promotion component? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.

*SMS Framework 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)*

### Bottom Line Assessment

Has Top Management promoted and communicated a positive safety culture through out the organization?

## Component 4: Safety Promotion

### Element 4.1 Competencies and Training

#### Process 4.1.1 Personnel Expectations (Competence)

##### Performance Objective

The service provider will document competency requirements for those positions identified in Element 1.2 B) 3) & 1.3 and ensure those requirements are met.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation include the identification of interfaces between the Personnel Expectations functions and Key Safety Personnel, Element 1.2 B) 3) & 1.3? SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the personnel requirements process? SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)
<b>Procedure</b>
Does the service provider have documentation that identifies the competency requirements for the safety-related positions identified in SMS Framework Element 1.2 B) 3) & Element 1.3? SMS Framework 4.1.1 B) 1) Old – SMS Standard 7.3.A (P)
<b>Outputs and Measures</b>
Does the service provider have documentation to ensure that the personnel in the safety-related positions identified in SMS Framework Element 1.2 B) 3) & Element 1.3, meet the documented competency requirements of Process 4.1.1 B) 1)? SMS Framework 4.1.1 B) 2) Old – SMS Standard 7.3.B (P)
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the personnel qualification and training process. See note at 3.1.3 & SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)
<b>Controls</b>
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the personnel qualification and training process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. SMS Framework 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)

##### Bottom Line Assessment

Has the service provider documented competency requirements for those positions identified in Element 1.2 B) 3) & 1.3 and ensure those requirements are met?

## Component 4: Safety Promotion

### Process 4.1.2 Training

#### Performance Objective

The service provider will be responsible for developing, delivering, regularly evaluating and documenting training necessary to meet to meet competency requirements of 4.1.1 B) 1).

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Training process obtained through the outputs of the SMS and the documented competency expectations of Process 4.1.1 B) 1)? SMS Framework 1.5 B) 1) f) Old – None (I)
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the quality of the SMS training process? SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)
<b>Procedure</b>
Does the service provider have documentation to ensure that training necessary to meet the competency requirements of 4.1.1 B) 1), has been developed for the personnel in the safety-related positions identified in Element 1.2 B) 3) & Element 1.3. SMS Framework 4.1.2 B) 1) Old – SMS Standard 7.4.2a (P)
Does the service provider have documentation to ensure that training development has considered scope, content, and frequency of training required to meet and maintain competency for those individuals in the positions identified in Element 1.2 B) 3) & 1.3. SMS Framework 4.1.2 B) 2) Old – SMS Standard 7.4.2a (P)
Does the service provider have documentation to ensure that employees receive training commensurate with their—
Level of responsibility? SMS Framework 4.1.2 B) 3) a) Old – SMS Standard 7.4.2.a (P)
Impact on the safety of the organization's product or service? SMS Framework 4.1.2 B) 3) b) Old – SMS Standard 7.4.2.b (P)
Does the service provider have documentation to ensure that it maintains training currency by periodically—
Reviewing the training? SMS Framework 4.1.2 B) 4) a) Old – SMS Standard 7.4.3.a (P)
Updating the training? SMS Framework 4.1.2 B) 4) b) Old – SMS Standard 7.4.3.b (P)
<b>Outputs and Measures</b>
Does the service provider's documentation include the identification of interfaces between safety lessons learned and the training functions? SMS Framework 3.3 B) 2) Old - SMS Standard 7.5.A (P)
Does the service provider's documentation include the identification of interfaces between the training functions and the delivery of training deemed to be necessary to meet competency requirements (4.1.2

## Component 4: Safety Promotion

A)? SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)
Does the service provider’s documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the personnel training process. <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)</i>
<b>Controls</b>
Does the service provider’s documentation include records of required and delivered training? SMS Framework 1.5 B) 1) f) Old – SMS Standard 5.3, 5.4, and 5.5 (I)
Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls. <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)</i>
Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the personnel training process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements. <i>SMS Framework 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 4.9.B.2.b (C)</i>

### Bottom Line Assessment

Has the service provider developed and documented initial and recurrent training programs that are regularly evaluated?

## Component 4: Safety Promotion

### Element 4.2 Communication and Awareness

#### Performance Objective

Top Management will communicate the output of its SMS to its employees, and provide access to SMS outputs to its oversight organization in accordance with established agreements and disclosure programs.

<b>Design Expectations</b>
<b>Input</b>
Does the service provider's documentation identify inputs (interfaces) for the Communication and Awareness process obtained from the outputs of Safety Risk Management (2.0), Safety Assurance (3.0) including—
Hazard identification (2.1.2) SMS Framework 1.5 B) 1) f) Old – None (I)
Risk severity and likelihood (2.2.1) SMS Framework 1.5 B) 1) f) Old – None (I)
Risk assessments (2.2.2) SMS Framework 1.5 B) 1) f) Old – None (I)
Risk control/mitigation plans (2.2.3) SMS Framework 1.5 B) 1) f) Old – None (I)
Safety lessons learned? SMS Framework 3.3 B) 2) Old - SMS Standard 7.5.A (P)
Results of analysis of data (3.1.7) SMS Framework 1.5 B) 1) f) Old – None (I)
<b>Management Responsibility</b>
Does the service provider's documentation clearly identify who is responsible for the communication process? SMS Framework 1.2 A) Old – SMS Standard 5.5.D (R/A)
<b>Procedure/Output/Measure</b>
Does the service provider have documentation to ensure it communicates outputs of the SMS to its employees? SMS Framework 4.2 B) 1) Old – SMS Standard 7.2.A
Does the service provider have documentation to ensure it provides access to the outputs of the SMS to its oversight organization in accordance with established agreements and disclosure programs? SMS Framework 4.2 B) 2) Old – SMS Standard 7.2.B
Does the service provider have documentation to interoperate with other organization's SMS's to cooperatively manage issues of mutual concern? SMS Framework 4.2 B) 3) Old – SMS Standard 7.2.B
Does the service provider's documentation include methods to periodically measure performance objectives and expectations? Measures (or objective evidence) should validate conformance to expectations (outputs) of the communication and awareness process. See note at 3.1.3 & SMS Framework 1.0 B) 2) and 3); 3.1.3 B) 1) Old – SMS Standard 4.9.B.2.b (PM/I)
<b>Controls</b>
Does the service provider have a control or controls in place to evaluate and update the media for target populations? SMS Framework 1.0 B) 4) f) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)



## Component 4: Safety Promotion

Does the service provider ensure procedures are followed for safety related operations and activities? Documentation should establish and maintain supervisory and operational controls.

*SMS Framework: 1.0 B) 4) f) Old – 4.7 (C)*

Does management document their periodic review of supervisory and operational controls, to ensure the effectiveness of the communication and awareness process? Controls should be used to identify and maintain compliance with current safety related, regulatory, and other requirements.

*SMS Framework 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 4.9.B.2.b (C)*

### Bottom Line Assessment

Has Top Management communicated the output of its SMS to its employees, and provided access to SMS outputs to its oversight organization in accordance with established agreements and disclosure programs?