



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

**For:**

**Safety Management System (SMS) Pilot Project  
Participants and Voluntary Implementation of  
Organization SMS Programs**

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

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## 1. Introduction

Flight Standards Service (AFS) developed this Safety Management System (SMS) Assurance Guide to assess the design and performance of aviation organizations' SMS programs. The guide is intended to be used whether the organizations themselves conduct the assessments – in internal audits and evaluations – or whether other third parties (FAA, DOD, Industry Associations, Consultant Auditors, etc) conduct the assessments. The guide is organized like the Flight Standards SMS Framework, which shares structure and organization with the SMS Framework developed by the International Civil Aviation Organization (ICAO). The SMS Framework and this SMS Assurance Guide embody the requirements expressed in FAA Order VS 8000.367, *Safety Management System Requirements*, Appendix B.

### A. Scope

This Assurance Guide is a tool to assist organizations (for example, aviation service providers, air carriers, airlines, maintenance repair organizations, air taxi operators, corporate flight departments, repair stations, and pilot schools) in applying the Flight Standards SMS Framework.

This Assurance Guide, like the SMS Framework, is not mandatory and is not a regulation. Aviation organizations develop and implement SMS voluntarily.

While the Federal Aviation Administration (FAA) encourages each aviation organization to develop and implement an SMS, these systems are not substitutes for compliance with federal regulations and all other certificate requirements.

### B. Applicability

This Assurance Guide applies to both certificated and non-certificated aviation organizations that want to develop and implement an SMS. The U.S. does not currently require its certificate holders to have an SMS. However, the FAA views the objectives and expectations in the Flight Standards SMS Framework, and therefore this Assurance Guide, as the minimum set of criteria for an aviation organization to develop and implement an efficient and functional SMS.

This Assurance Guide, along with the SMS Framework, establishes the objectives and expectations for a robust SMS; however, operators may establish more requirements, or stricter requirements. The Assurance Guide will also help organizations compare their current processes and procedures with their potential or needed processes and procedures in accordance with a SMS (this is called a Gap Analysis) and will help aviation organizations perform subsequent assessments of SMS programs for the SMS Pilot Projects (SMSPP).

## 2. SMS System Expectations

This SMS Assurance Guide includes performance objectives, design expectations and bottom line assessments for each SMS Framework element or process: These expectations are based on the SMS Framework and are considered to be essential expectations of a robust SMS.

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- **Performance Objectives** represent the objective outcomes needed for the particular SMS Framework element or process under evaluation. In other words, *at a minimum, what should the aviation organization expect this element or process be able to do?*
- **Design Expectations** represent organizational structure and characteristics that, if properly implemented, should provide the system outcomes identified in the performance objectives. In other words, *what might the organization do to get this element or process to perform the way it should?*
- **Bottom Line Assessments** restate the performance objectives as questions. The “bottom line” of each element or process is essentially, *were the design expectations in the aviation organization’s SMS implemented, and did they result in the desired outcomes?*

### A. 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, 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 examining such things as lines of authority between departments, lines of communication between employees, consistency of procedures, and clearly delineating lines of responsibility between organizations, work units, and employees. Interfaces are the “Inputs” and “Outputs” of a process.
- **(PM) - Process Measures:** are ways to provide feedback to responsible parties that required actions are taking place, required outputs are being produced, and expected outcomes are being achieved.

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## B. Process Approach to System Assessment

The ISO 9000-2000 *Quality Management System* 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 discussed above to a generic work flow process. The next section will go into more detail about the application of the attributes to system design and assessment.

This Assurance Guide describes the objectives and expectations for an organization’s Safety Management System (SMS) in the same form as the work process flow diagram (shown below in Figure 1). That is, 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.

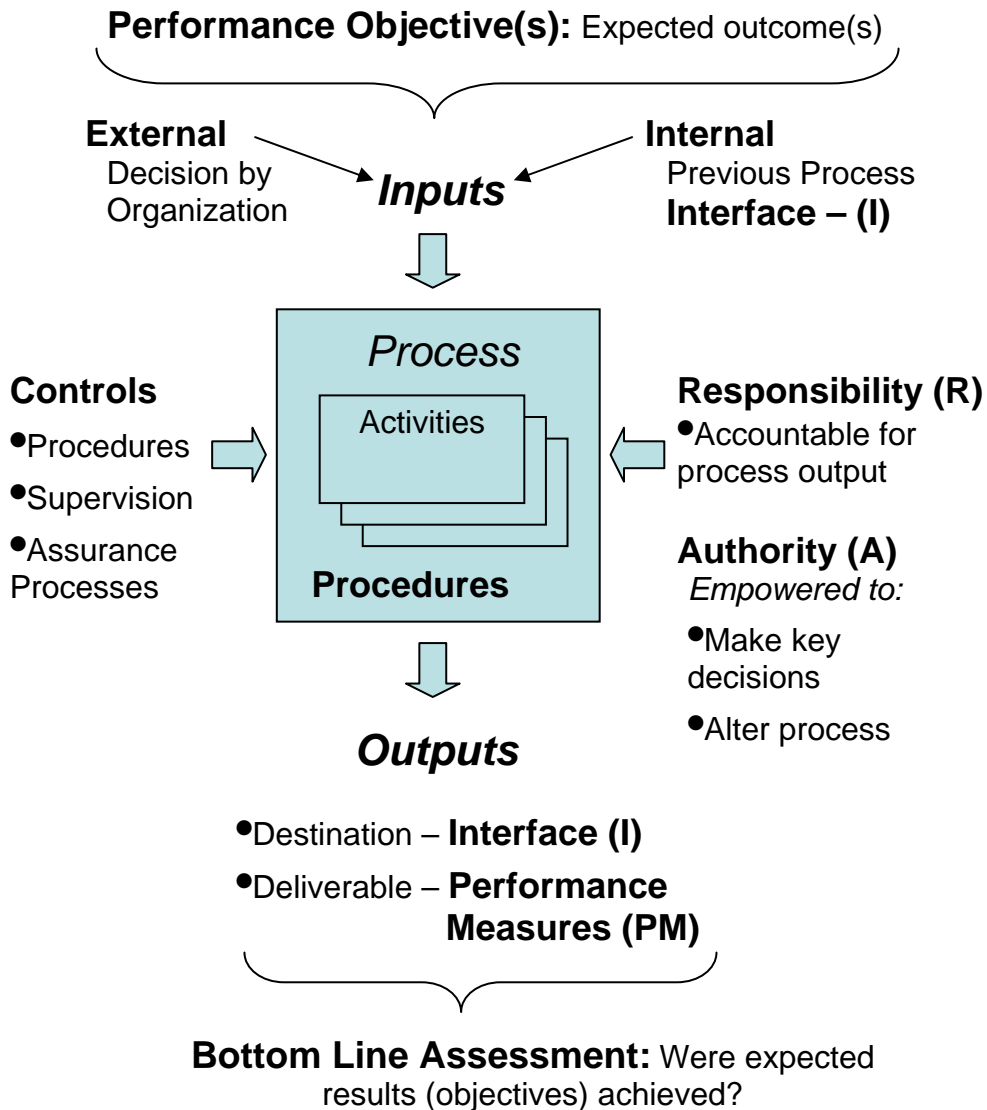


Figure 1 - Work Flow Process Diagram

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## **C. System Attributes Applied to SMS**

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

### **1) 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 Flight Standards SMS Framework. Specifically, element 1.2 establishes expectations for top management, other management officials, and all employees of the organization.

SMS Framework Element 1.3 establishes an expectation for a person of responsibility to oversee an aviation organization's SMS development, implementation, and operation. Note 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 SMS Framework Element 1.2 which defines responsibilities for definition and documentation of aviation safety responsibilities, applies to all components, elements, and processes. Therefore, it is expected that responsibility and authority be defined and documented for each of these areas. As discussed above, this is especially important with interfaced processes that cut across organizational lines. These responsibility and authority attributes are marked with (R/A).

### **2) Procedures**

The design expectations that are noted with (P) as procedures, derive directly from the design expectations of the Flight Standards SMS Framework. These expectations 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.

### **3) 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 Flight Standards 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.

### **4) Process Measures**

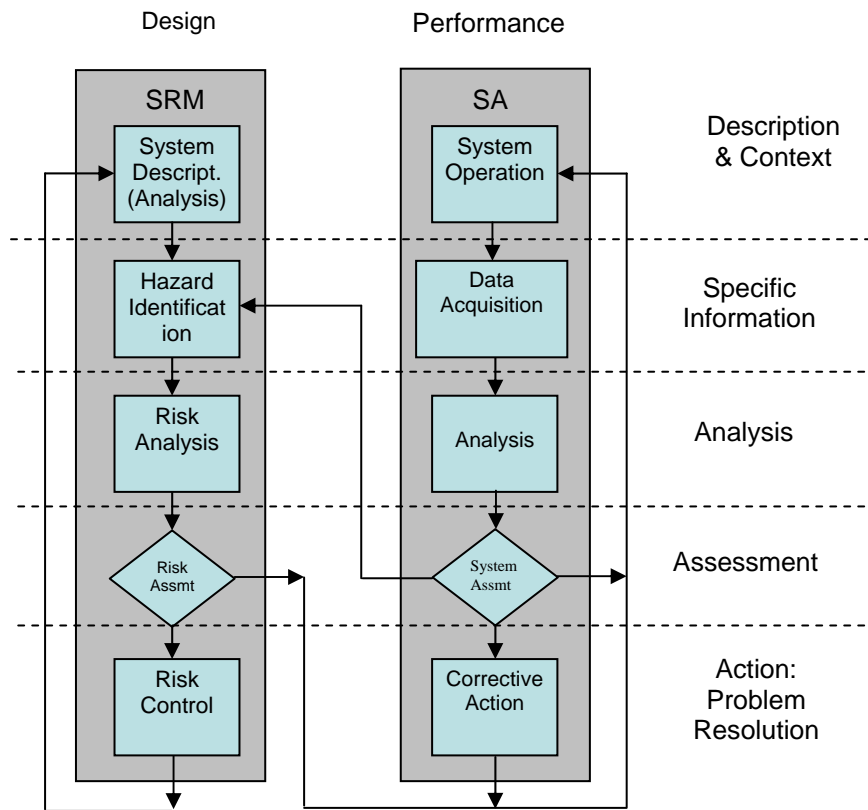
A basic principle of safety assurance is that fundamental processes be measured so that management decisions can be data-driven. The general expectations for Component 1, Policy, specify that SMS outputs be measured and analyzed. These measurements and analyses are accomplished in Component 3, Safety Assurance. Outputs of each process

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should, therefore, be identified for assurance during Component 3 activities. For example, these outputs should be subject to continuous monitoring, internal audits, and internal evaluation. Performance measure attributes are annotated with (PM).

## D. 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 very interactive. The flowchart at Figure 2 below may be useful to help visualize these interactions. The interface attribute concerns the input-output relationships between the activities in the processes. As noted previously, 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**

See narrative text for each box below

### SAFETY RISK MANAGEMENT (SRM)

**System design (analysis)** – The first step in SRM is system description and task analysis. Here, the analysis need only to be as extensive as needed to understand

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the processes in enough detail to develop procedures, design appropriate training curricula, to identify hazards, and to measure performance.

**Hazard identification** – Next, we look at the processes and play “what if?” What could go wrong with our processes, under typical or abnormal operational conditions that could be considered hazardous?

**Risk analysis** – Based on the analysis in the hazard identification step, we determine the injury and damage potential of the events related to the hazards in terms of likelihood of occurrence of the events and severity of resulting consequences.

**Risk assessment** – Risk assessment is a decision step based on combined severity and likelihood. Is the risk acceptable? Where potential severity is low or if likelihood is low or well controlled with existing controls, we may be done...

**Risk control** – ...ready for operation. If not, we'll need to design risk controls. Most often, these entail either new processes or equipment, or changes to existing ones. We then look at the system with the proposed control in place to see if the level of risk is now acceptable. We'll stay in this design loop until it is or until we determine that the proposed operation, change, etc. can't be mitigated to allow operations within acceptable levels of risk.

If we're successful, we're done with SRM and ready for operation. It's essential here to note that we need to update any related system documentation to reflect the risk control.

### SAFETY ASSURANCE (SA)

**System operation** – Monitoring and management of these risk controls will be one of the most important steps in safety assurance.

**Data acquisition** – Next, we'll need to collect a variety of data to test the controls. These data range from continuous monitoring (e.g. dispatch procedures), to periodic auditing, to employee reporting systems that fill in the gaps. It also includes investigations to learn from our failures.

**Analysis** – As in SRM, we will need to analyze the data in terms of performance objectives and to determine root causes of any shortfalls. We'll also be on the lookout for any new conditions that haven't seen before and unexpected results of system performance.

**System assessment** – The assessment process is one in which we'll make decisions. If the assessment results are satisfactory, we continue in the checking,

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analyzing, and assessment loop where we continuously affirm that we're getting what we want.

**Corrective action** – If we don't get what we want, we'll need to correct the system. This needn't entail the same level of detail that we used in initial design. Many times, the corrective action needed is straightforward.

Sometimes, though, everyone is doing everything that we expected but it just isn't working to control the level of risk (possibly the conditions have changed so that the original control no longer is appropriate). This can be because of changes in contracts, changes to airports, new equipment, changing demographics of employee hiring pools or a variety of new conditions. At any rate, we've identified a new and/or an uncontrolled hazard so we need to return to the SRM process to re-design the system aspects (e.g. new procedures, training, etc.) or develop new controls.

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## 3. Functional Expectations

### ***A. Performance-Based Orientation***

The following sections contain the expectations for each component of the SMS. The term “function” refers to “what” is expected to be incorporated into each process (e.g., human tasks, software, hardware, procedures, etc.) rather than “how” the function is accomplished by the system. 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, maximizes scalability while preserving standardization of results across the aviation organization communities.

### ***B. Components, Elements, and Processes***

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

### ***C. Levels of Assessment***

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

### ***D. Process Flow and Attributes***

Each design expectation section is organized to model a process flow, reflecting an ‘input-activity-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).

**NOTE 1: Throughout this document, the term “organization” will be used to indicate both certificated and non-certificated aviation organizations, aviation service providers, air carriers, airlines, maintenance repair organizations, air taxi operators, corporate flight departments, repair stations, and pilot schools.**

**NOTE 2: To ensure organizational conformity with the performance objectives and design expectations outlined in this assurance guide, documentation or “objective evidence” of processes will be recorded for validation by the oversight organization (CMT, CMO, FSDO, or CHDO) and/or the SMS Transition Assistance Team (STAT). Objective evidence may take the form of physical or electronic documents, manuals, training material, records, correspondence (email, memo, etc.), organizational charts, meeting minutes, and/or interviews/observations conducted by the oversight organization/STAT. Documentation of all SMS processes is a policy expectation of the SMS Framework, Component 1.0, B) 2) (a).**

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## Component 1.0 Safety Policy and Objectives

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

#### **Performance Objective**

An organization 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 organization identify who is responsible for the quality of the organizational management processes (name, position, organization)? <i>SMS Framework: 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure: Scope - Air Operators</i></b>
Does the organization’s SMS include the complete scope and life cycle of the organization’s systems, including -
Flight operations? <i>SMS Framework: 1.0 B) 1) a) (1) Old – SMS Standard 4.1 A) 1 (P)</i>
Operational control (Dispatch/flight following)? <i>SMS Framework: 1.0 B) 1) a) (2) Old – SMS Standard 4.1 A) 2 (P)</i>
Maintenance and inspection? <i>SMS Framework: 1.0 B) 1) a) (3) Old – SMS Standard 4.1 A) 3 (P)</i>
Cabin safety? <i>SMS Framework: 1.0 B) 1) a) (4) Old – SMS Standard 4.1 A) 4 (P)</i>
Ground handling and servicing? <i>SMS Framework: 1.0 B) 1) a) (5) Old – SMS Standard 4.1 A) 5 (P)</i>
Cargo handling? <i>SMS Framework: 1.0 B) 1) a) (6) Old – SMS Standard 4.1 A) 6 (P)</i>
Training? <i>SMS Framework: 1.0 B) 1) a) (7) Old – SMS Standard 4.1 A) 7 (P)</i>
<b><i>Procedure: Scope - Separate Aviation Maintenance Service Organizations</i></b>
Does the organization’s SMS include the complete scope and life cycle of the organization’s systems, including -
Parts/materials? <i>SMS Framework: 1.0 B) 1) b) (1) Old – None (P)</i>

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Resource management? <i>SMS Framework: 1.0 B) 1) b) (2) Old – None (P)</i>
Technical data? <i>SMS Framework: 1.0 B) 1) b) (3) Old – None (P)</i>
Maintenance and inspection? <i>SMS Framework: 1.0 B) 1) b) (4) Old – None (P)</i>
Quality control? <i>SMS Framework: 1.0 B) 1) b) (5) Old – None (P)</i>
Records management? <i>SMS Framework: 1.0 B) 1) b) (6) Old – None (P)</i>
Contract maintenance? <i>SMS Framework: 1.0 B) 1) b) (7) Old – None (P)</i>
Training? <i>SMS Framework: 1.0 B) 1) b) (8) Old – None (P)</i>
<b><i>Procedure: Management</i></b>
Does the organization require the SMS processes to be -
Documented? <i>SMS Framework: 1.0 B) 2) a) Old – SMS Standard 4.1 B) 1 (P)</i>
Monitored? <i>SMS Framework: 1.0 B) 2) b) Old – SMS Standard 4. B) 2 (P)</i>
Measured? <i>SMS Framework: 1.0 B) 2) c) Old – SMS Standard 4.1 B) 3 (P)</i>
Analyzed? <i>SMS Framework: 1.0 B) 2) d) Old – SMS Standard 4.1 B) 4 (P)</i>
<b><i>Procedure: Promotion of Positive Safety Culture</i></b>
Does the organization promote a positive safety culture as in Component 4.0 B? <i>SMS Framework: 1.0 B) 4) a) Old – SMS Standard 4.1.D (P)</i>
<b><i>Procedure: Quality Policy</i></b>
Does top management ensure that the organization’s quality policy, if present, is consistent with (or not in conflict with) it’s SMS? <i>SMS Framework: 1.0 B) 4) b) Old – SMS Standard 4.3 (P)</i>
<b><i>Procedure: Safety Management Planning</i></b>
Does the organization establish and maintain measurable criteria that accomplish the objectives of its safety policy? <i>SMS Framework: 1.0 B) 4) e) Old – SMS Standard 4.7 A (PM)</i>
Does the organization establish and maintain a safety management plan to describe methods

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<p>for achieving the safety objectives laid down in its safety policy?  <i>SMS Framework: 1.0 B) 4) g) Old – SMS Standard 4.7 B (PM)</i></p>
<p><b><i>Procedure: Regulatory Compliance</i></b></p>
<p>Does the organization identify current FAA policy, legal, regulatory and statutory requirements applicable to the SMS?  <i>SMS Framework: 1.0 B) 4) d) Old – SMS Standard 4.6.B (P)</i></p>
<p>Does the organization ensure the SMS complies with legal and regulatory requirements?  <i>SMS Framework: 1.0 B) 4) c) Old – SMS Standard 4.6.A (P)</i></p>
<p><b><i>Outputs and Measures</i></b></p>
<p>Does the organization ensure all SMS outputs are -</p>
<p>Recorded?  <i>SMS Framework: 1.0 B) 3) a) Old – SMS Standard 4.1.C)1 (I/P)</i></p>
<p>Monitored?  <i>SMS Framework: 1.0 B) 3) b) Old – SMS Standard 4.1.C)2 (I/P)</i></p>
<p>Measured?  <i>SMS Framework: 1.0 B) 3) c) Old – SMS Standard 4.1.C)3 (I/P)</i></p>
<p>Analyzed?  <i>SMS Framework: 1.0 B) 3) d) Old – SMS Standard 4.1.C)4 (I/P)</i></p>
<p>Does the organization periodically measure performance objectives and design expectations of the general policy component?  <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i></p>

### Bottom Line Assessment

Has the organization developed and implemented an integrated, comprehensive SMS for its entire organization and incorporated a procedure to identify and maintain compliance with current safety-related, regulatory, and other requirements?

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### Element 1.1 Safety Policy

#### Performance Objective

Top management will define the organization’s safety policy and convey its expectations and objectives to its employees.

<b>Design Expectations</b>
<b>Management Accountability</b>
Does top management define the organization’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 organization’s safety policy include the following -
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 managing safety risk? <i>SMS Framework 1.1 B) 2) 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) 2) d) Old – SMS Standard 4.2 B) 4 (P)</i>
A commitment to encourage employees to report safety issues without reprisal, as per SMS Framework Process 3.1.6? <i>SMS Framework 1.1 B) 2) e) Old – SMS Standard 4.2 B) 5 (P)</i>
Clear standards for acceptable behavior? <i>SMS Framework 1.1 B) 2) f) Old – SMS Standard 4.2 B) 6 (P)</i>
Is the safety policy documented? <i>SMS Framework 1.1 B) 2) 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) 2) 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) 2) h) Old – SMS Standard 4.2 B) 8 (I)</i>
Does the organization ensure the safety policy is communicated, with visible management endorsement, to all employees and responsible parties? <i>SMS Framework 1.1 B) 2) j) Old – SMS Standard 4.2 B) 10 (I)</i>
Does the organization identify and communicate management and individuals’ safety performance responsibilities?

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*SMS Framework 1.1 B) 2) l) Old – SMS Standard 4.2 B) 12 (I/R)*

Does the organization have methods to periodically measure performance objectives and design expectations of the safety policy component?

*See note at 3.1.3 & SMS Framework 1.0 B) 2) c) and 3) c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) & C); 6.3.2 A) and 6.3.3 (PM/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?

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### Element 1.2 Management Commitment and Safety Accountabilities

#### Performance Objective

The organization will define, document, and communicate the safety roles, responsibilities, and authorities throughout its organization.

<b>Design Expectations</b>
<b><i>Management Accountability</i></b>
Does the organization ensure top management has the ultimate responsibility for the SMS? <i>SMS Framework 1.2 B) 1) Old – SMS Standard 4.5.A (R/A)</i>
Does the organization’s top management provide the resources needed to implement and maintain the SMS? <i>SMS Framework 1.2 B) 2) Old – SMS Standard 4.5.B (P/R/A)</i>
Does the organization 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/R/A)</i>
<b><i>Procedure/Output/Measure</i></b>
Does the organization ensure that aviation safety-related positions, responsibilities, and authorities are -
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 organization periodically measure performance objectives and design expectations of the management commitment and safety accountability element? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) c) and 3) c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) &amp; C); 6.3.2 A) and 6.3.3 (PMT)</i>

#### Bottom Line Assessment

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

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### Element 1.3 Key Safety Personnel

#### Performance Objective

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

<b>Design Expectations</b>
<b><i>Management Responsibility/Procedure</i></b>
Did top management appoint a member of management who, irrespective of other responsibilities, will be responsible and authorized to -
Ensure that SMS processes are established, implemented, and maintained? <i>SMS Framework 1.3 B) 1) a) Old - SMS Standard 4.5 C) 1 (P)</i>
Report to top management on the performance of the SMS and what needs to be improved? <i>SMS Framework 1.3 B) 1) b) Old - SMS Standard 4.5 C) 2 (I/P)</i>
Ensure the organization communicates its safety requirements throughout the organization? <i>SMS Framework 1.3 B) 1) c) Old - SMS Standard 4.5 C) 3 (I/P)</i>
<b><i>Outputs and Measures</i></b>
Does the organization 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 organization periodically measure performance objectives and design expectations of the key safety personnel element? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) c) and 3) c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) &amp; C); 6.3.2 A) and 6.3.3 (PM/I)</i>

#### Bottom Line Assessment

Has the organization appointed a management representative to manage, monitor and coordinate the SMS processes throughout its organization?

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

#### **Performance Objective**

The organization 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 organization identify who is responsible for the quality of the emergency preparedness and response process and associated documentation? <i>SMS Framework 1.2 B) 3) Old – None (R/A)</i>
<b><i>Procedure</i></b>
Does the organization, across all operational departments (1.0 B) 1) a)) of the organization, establish procedures to -
Identify hazards which have 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 emergency response procedures? <i>SMS Framework 1.4 B) 3) Old – SMS Standard 4.8 3) (P)</i>
<b><i>Outputs and Measures</i></b>
Does the organization identify interfaces between the emergency response functions of different operational elements of the company? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A) 6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the emergency preparedness and response system? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) c) and 3) c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) &amp; C); 6.3.2 A) and 6.3.3 (PM/I)</i>

#### **Bottom Line Assessment**

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

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## Component 1: Safety Policy – Revision 2

### Element 1.5 SMS Documentation and Records

#### Performance Objective

The organization 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 organization clearly identify who is responsible for the quality of the documentation and records management process? <i>SMS Framework 1.2 B) 3) Old – None (R/A)</i>
<b>Procedure: Document Contents</b>
Does the organization establish and maintain, 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 organization require all documentation be -
Legible? <i>SMS Framework: 1.5 B) 3) a) 1) Old - SMS Standard 4.9.B.1.a (P)</i>
Dated (with the dates of revisions)? <i>SMS Framework: 1.5 B) 3) a) 2) Old - SMS Standard 4.9.B.1.b (P)</i>
Readily identifiable? <i>SMS Framework: 1.5 B) 3) a) 3) Old - SMS Standard 4.9.B.1.c (P)</i>
Maintained in an orderly manner?

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<i>SMS Framework: 1.5 B) 3) a) 4) 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. <i>SMS Framework: 1.5 B) 3) a) 5) Old - SMS Standard 4.9.B.1.e (P)</i>
<b><i>Procedure: Document Management</i></b>
Does the organization 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 needed? <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 essential SMS operations are performed? <i>SMS Framework: 1.5 B) 3) c) Old - SMS Standard 4.9.B.2.c (P/C)</i>
Obsolete documents are either removed as soon as possible, or that they are not used accidentally? <i>SMS Framework: 1.5 B) 3) d) Old - SMS Standard 4.9.B.2.d (P/C)</i>
<b><i>Outputs and Measures</i></b>
Has the organization established and maintained a safety management plan to meet the safety objectives described in its safety policy? <i>SMS Framework: 1.0 B) 4) g) Old - SMS Standard 4.4 (I/P)</i>
Does the organization 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>
Easy to identify? <i>SMS Framework 1.5 B) 4) b) (2) Old - SMS Standard 4.9.C.2.b (P)</i>
Traceable to the activity involved?

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<p><i>SMS Framework 1.5 B) 4) b) (3) Old - SMS Standard 4.9.C.2.c (P)</i></p>
<p>Easy to find? <i>SMS Framework 1.5 B) 4) c) (1) Old - SMS Standard 4.9.C.3.a (P)</i></p>
<p>Protected against damage? <i>SMS Framework 1.5 B) 4) c) (2) (A) Old - SMS Standard 4.9.C.3.b 1 (P)</i></p>
<p>Protected against deterioration? <i>SMS Framework 1.5 B) 4) c) (2) (b) Old - SMS Standard 4.9.C.3.b.2 (P)</i></p>
<p>Protected against loss? <i>SMS Framework 1.5 B) 4) c) (2) (c) Old - SMS Standard 4.9.C.3.b.3 (P)</i></p>
<p>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></p>
<p>Does the organization periodically measure performance objectives and design expectations of the document and records system? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) c) and 3) c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) &amp; C); 6.3.2 A) and 6.3.3 (PM/I)</i></p>

### Bottom Line Assessment

Has the organization clearly defined and documented (in paper or electronic format) safety policies, objectives, procedures, and a document/record maintenance process and established, implemented, and maintained a safety management plan that meets the safety expectations and objectives?

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## Component 2.0 Safety Risk Management

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

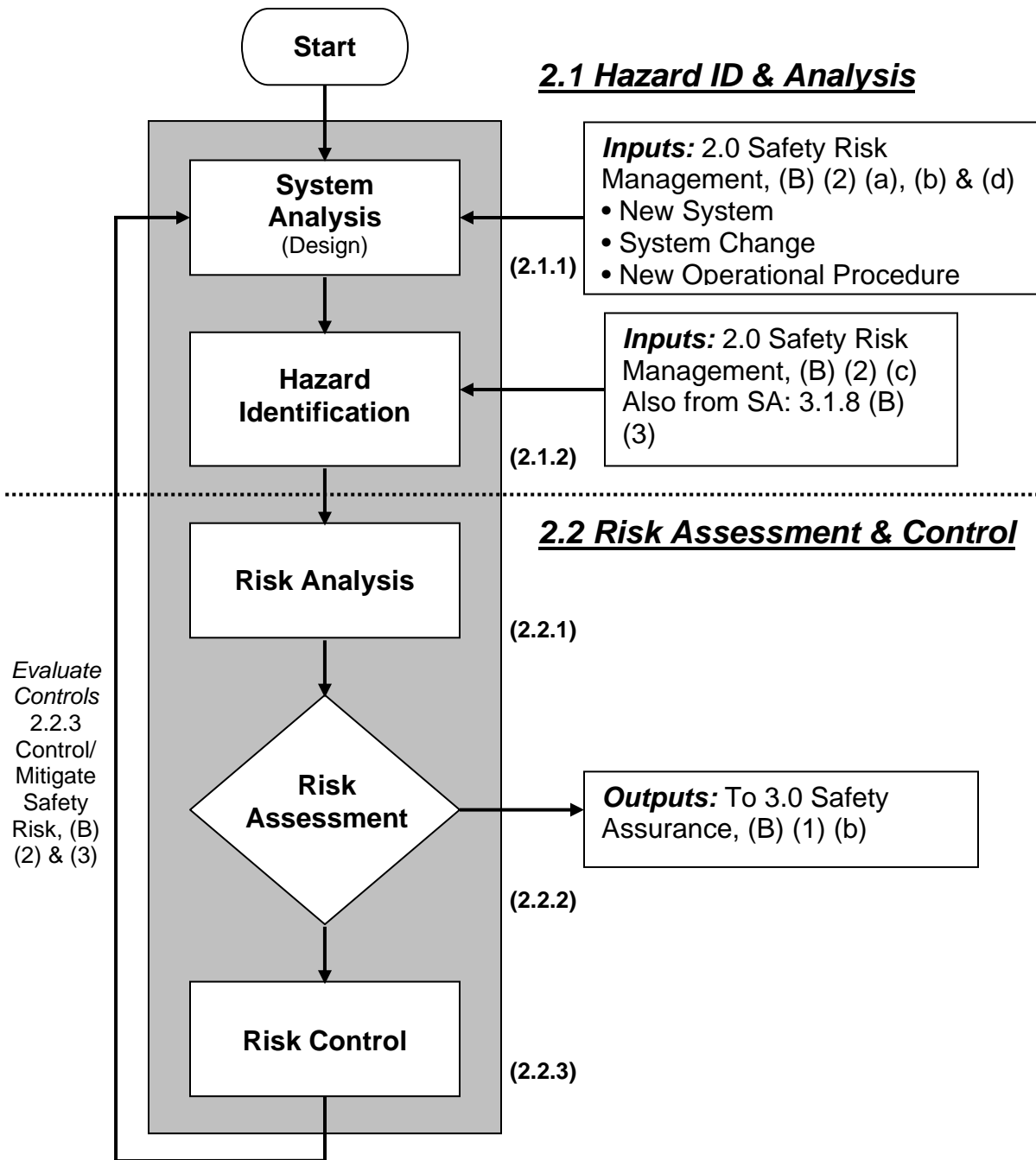


Figure 3 - Safety Risk Management Flow

## Component 2: Safety Risk Management – Revision 2

### Component 2.0 Safety Risk Management: General Expectations

#### Performance Objective

The organization will develop processes to understand the critical characteristics of its systems and operational environment and apply this knowledge to identify hazards, analyze and assess risk and design risk controls.

<b>Design Expectations</b>
<b>Input</b>
Does the organization 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 4.9 A) 6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the Safety Risk Management process? <i>SMS Framework 1.2 B) 3) Old – None (R/A)</i>
<b>Procedure</b>
Does the organization’s SMS, at a minimum, includes the following processes -
System and task analysis? <i>SMS Framework 2.0 B) 1) a). Old - SMS Standard 5.A.1 (P)</i>
Hazard Identification? <i>SMS Framework 2.0 B) 1) b). Old - SMS Standard 5.A.2 (P)</i>
Safety Risk Analysis? <i>SMS Framework 2.0 B) 1) c). Old - SMS Standard 5.A.3 (P)</i>
Safety Risk Assessment? <i>SMS Framework 2.0 B) 1) d). Old - SMS Standard 5.A.4 (P)</i>
Safety Risk Control and Mitigation? <i>SMS Framework 2.0 B) 1) e). Old - SMS Standard 5.A.5 (P)</i>
Does the organization’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.B.1 (P)</i>
The development of operational procedures? <i>SMS Framework 2.0 B) 2) b). Old - SMS Standard 5.B.2 (P)</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.B.3 (P)</i>
Planned changes to operational processes? <i>SMS Framework 2.0 B) 2) d). Old - SMS Standard 5.B.4 (P)</i>

## Component 2: Safety Risk Management – Revision 2

<p>Does the organization establish feedback loops between assurance functions described in the SMS Framework, Process 3.1.1 B) to evaluate the effectiveness of safety risk controls? <i>SMS Framework 2.0 B) 3) Old - SMS Standard 5.C (P)</i></p>
<p>Does the organization define acceptable and unacceptable levels of safety risk (for example, does the organization have a safety risk matrix)? <i>SMS Framework 2.0 B) 4) a). Old - SMS Standard 5.D (P)</i></p>
<p>Does the organization’s safety risk acceptance process include descriptions of the following -</p>
<p>Severity levels? <i>SMS Framework 2.0 B) 4) b) 1) Old - SMS Standard 5.D.1.a (P)</i></p>
<p>Likelihood levels? <i>SMS Framework 2.0 B) 4) b) 2) Old - SMS Standard 5.D.1.b (P)</i></p>
<p>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></p>
<p>Does the organization define acceptable risk for hazards that will exist in the short-term while safety risk control/mitigation plans are developed and carried out? <i>SMS Framework 2.0 B) 4) d) Old - SMS Standard 5.D.3 (P)</i></p>
<p><b><i>Outputs and Measures</i></b></p>
<p>Does the organization 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 4.9 A (6) (I)</i></p>
<p>Does the organization periodically measure performance objectives and design expectations of the safety risk management component? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) c) and 3) c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) &amp; C); 6.3.2 A) and 6.3.3 (PM/I)</i></p>
<p><b><i>Controls</i></b></p>
<p>Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – SMS Standard 4.7 B (C)</i></p>
<p>Does management periodically review supervisory and operational controls to ensure the effectiveness of the safety risk management component? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i></p>

### Bottom Line Assessment

Has the organization developed processes to understand the critical characteristics of its systems and operational environment and applied this knowledge to the identification of hazards, risk analysis and risk assessment, and the design of risk controls?

## Component 2: Safety Risk Management – Revision 2

### ***Element 2.1 Hazard Identification and Analysis:***

#### **Process 2.1.1 System and Task Analysis**

##### **Performance Objectives**

The organization will analyze its systems, operations, and operational environment to gain an understanding of critical design and performance factors, processes, and activities to identify hazards.

<b>Design Expectations</b>
<b><i>Input</i></b>
Does the organization identify inputs (interfaces) for the System and Task Analysis process obtained from SMS Framework Component 2.0 B) 2)? <i>SMS Framework 2.0 B) 2) Old – None (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the system and task analysis process? <i>SMS Framework 1.2 B) 3) Old – None (R/A)</i>
<b><i>Procedure</i></b>
Does the organization develop 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 – None (P)</i>
Develop and implement risk controls? <i>SMS Framework 2.1.1 B) 1) c) Old – None (P)</i>
<b><i>Outputs and Measures</i></b>
Does the organization identify interfaces between the system and task analysis function and the hazard identification function? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the system and task analysis process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b><i>Controls</i></b>
Does the organization ensure procedures are followed for safety-related operations and activities?

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

Does management periodically review supervisory and operational controls to ensure the effectiveness of the system and task analysis process?

*SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) & B) Old – SMS Standard 6.3.3 A) and 6.7 (C)*

### **Bottom Line Assessment**

Has the organization 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 – Revision 2

### Process 2.1.2 Identify Hazards

#### Performance Objective

The organization will identify and document the hazards in its operations that are likely to cause death, serious physical harm, or damage to equipment or property in sufficient detail to determine associated level of risk and risk acceptability.

<b>Design Expectations</b>
<b><i>Input</i></b>
Does the organization 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), failures of risk controls due to design deficiencies (3.1.8 (B)(3)), and/or from any other source? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the hazard identification process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure</i></b>
Does the organization identify hazards for the entire scope of each system, as defined in the system description? <b>Note:</b> While it is recognized that identification of every conceivable hazard is impractical, operators are expected to exercise due diligence in identifying and controlling significant and reasonably foreseeable hazards related to their operations. <i>SMS Framework 2.1.2 B) 1) a) Old - SMS Standard 5.2.A.1, 4.1 (P)</i>
Does the organization document the identified hazards? <i>SMS Framework 2.1.2 B) 1) b) Old - SMS Standard 5.2.A.2 (P)</i>
Does the organization have a means of tracking this hazard information? <i>SMS Framework 2.1.2 B) 2) a) Old - SMS Standard 5.2.B.1 (P)</i>
Does the organization manage 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><i>Outputs and Measures</i></b>
Does the organization describe the interfaces between the hazard identification process and the analysis of safety risk process (2.2.1)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the hazard identification process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>

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<i>Controls</i>
Does the organization have a control or controls in place to assure that new hazards are identified, documented, tracked, and managed? <i>SMS Framework 1.0 B) 4) f), 2.1.2 B) 1) and 2) Old - SMS Standard 5.2 (C)</i>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) and 2.1.2 B) Old – SMS Standard 4.7 B (PM)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the hazard identification process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### **Bottom Line Assessment**

Has the organization identified and document the hazards in its operations that are likely to cause death, serious physical harm, or damage to equipment or property in sufficient detail to determine associated level of risk and risk acceptability?

## Component 2: Safety Risk Management – Revision 2

### Element 2.2 Risk Assessment and Control

#### Process 2.2.1 Analyze Safety Risk

##### Performance Objective

The organization will determine and analyze the factors related to the severity and likelihood of potential events associated with identified hazards and will identify factors-associated with unacceptable levels of severity or likelihood.

<b>Design Expectations</b>
<b>Input</b>
Does the organization 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 4.9 A (6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the safety risk analysis process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Does the organization’s safety risk analysis functions include -
Analysis of 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 organization’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 organization identify 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 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the analysis of safety risk process?

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<i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b>Controls</b>
Does the organization have a control or controls in place to analyze the safety risk of the reasonably likely outcomes from the existence of a hazard? <i>SMS Framework 1.0 B) 4) f) and 2.2.1 B) 1) c) Old - SMS Standard 5.3.3 (C)</i>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B) (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the analysis of safety risk process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### Bottom Line Assessment

Has the organization determined and analyzed the factors related to 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 – Revision 2

### Process 2.2.2 Assess Safety Risk

#### Performance Objective

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

<b>Design Expectations</b>
<b><i>Input</i></b>
Does the organization 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 4.9 A (6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the safety risk assessment process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
Does the organization define the levels of management that can make safety risk acceptance decisions? <i>SMS Framework 1.2 B) 4) and 2.0 B) 4) c) Old – SMS Standard 5.D.2. and 5.4.B (P/R/A)</i>
<b><i>Procedure</i></b>
Does the organization analyze 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) Old – SMS Standard 5.4.A (P)</i>
<b><i>Outputs and Measures</i></b>
Does the organization identify interfaces between the risk assessment functions and the risk mitigation functions (2.2.3)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the safety risk assessment process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b><i>Controls</i></b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – SMS Standard 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the safety risk assessment process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

## **Component 2: Safety Risk Management – Revision 2**

### **Bottom Line Assessment**

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

## Component 2: Safety Risk Management – Revision 2

### Process 2.2.3 Control/Mitigate Safety Risk

#### Performance Objective

The organization will design and implement a risk control for each identified hazard for which there is an unacceptable risk, to reduce to acceptable levels the potential for death, serious physical harm, or damage to equipment or property. The residual or substitute risk will be analyzed before implementing any risk control.

**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 when new hazards are discovered during the safety assurance process 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><i>Input</i></b>
Does the organization 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 4.9 A (6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the control/mitigation of safety risk process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Does the organization have 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>
Are the organization’s safety risk controls -
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 their intended operational environment? <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>

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<p>Does the organization ensure that substitute risk will be evaluated when creating safety risk controls and mitigations? <i>SMS Framework 2.2.3 B) 3) Old - SMS Standard 5.5 C) (P/C)</i></p>
<p><b><i>Outputs and Measures</i></b></p>
<p>Does the organization identify 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 4.9 A (6) (I)</i></p>
<p>Does the organization periodically measure performance objectives and design expectations of the safety risk control process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PMT)</i></p>
<p><b><i>Controls</i></b></p>
<p>Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – SMS Standard 4.7 B (C)</i></p>
<p>Does management periodically review supervisory and operational controls to ensure the effectiveness of the safety risk control process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i></p>

### **Bottom Line Assessment**

Has the organization designed and implemented a risk control for each identified hazard for which there is unacceptable risk, to reduce to acceptable levels the potential for death, serious physical harm, or damage to equipment or property? Has the residual or substitute risk been analyzed before implementing any risk control?

## Component 3: Safety Assurance – Revision 2

### Component 3: Safety Assurance

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

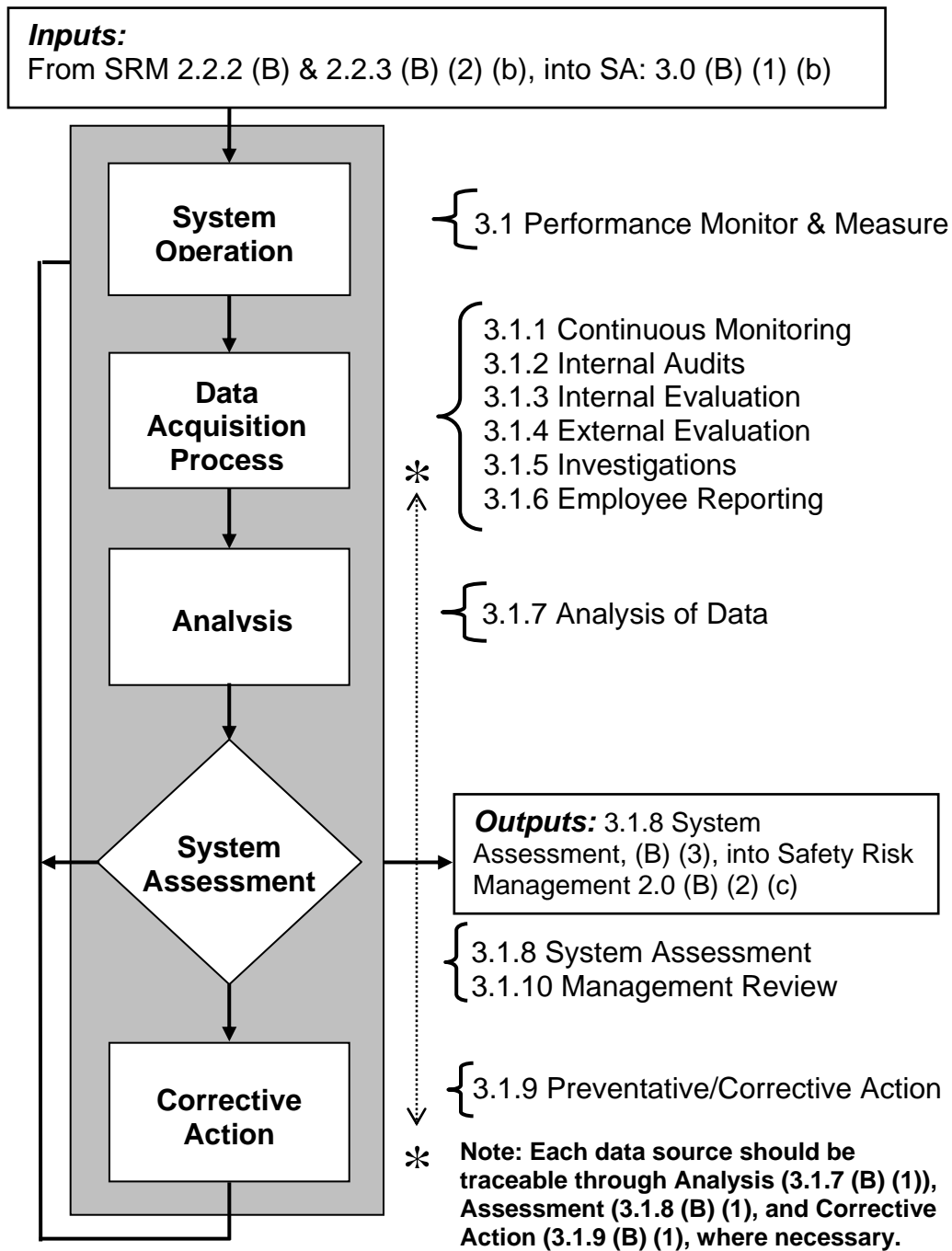


Figure 4 - Safety Assurance Flow

## Component 3: Safety Assurance – Revision 2

### Component 3.0 Safety Assurance: General Expectations

#### Performance Objective

The organization will monitor, measure, and evaluate the performance and effectiveness of its risk controls.

<b>Design Expectations</b>
<b>Input</b>
Does the organization identify inputs (interfaces) for the Safety Assurance Component obtained from the Safety Risk Management Component (2.0)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the Safety Assurance component? <i>SMS Framework 1.2 B) 3) Old – None (R/A)</i>
<b>Procedure</b>
Does the organization monitor their systems and operations to -
Identify new hazards? <i>SMS Framework 3.0 B) 1) a) Old Standard 6.1.1 (P)</i>
Measure the effectiveness of safety risk controls? <i>SMS Framework 3.0 B) 1) b) Old Standard 6.1.2 (P)</i>
Ensure compliance with regulatory requirements? <i>SMS Framework 3.0 B) 1) c) Old Standard 6.1.3 (P)</i>
Is the organization’s safety assurance function based upon a comprehensive system description as described in Section 2.1.1? <i>SMS Framework 3.0 B) 1) d) Old Standard 6.2 (P)</i>
Does the organization collect the data necessary to demonstrate the effectiveness of its -
Operational processes? <i>SMS Framework 3.0 B) 2) a) Old - SMS Standard 6.3(1) (P)</i>
SMS? <i>SMS Framework 3.0 B) 2) b) Old - SMS Standard 6.3(2) (P)</i>
<b>Outputs and Measures</b>
Does the organization identify interfaces between the data acquisition functions and -
The system assessment function (2.2.2)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 4.9 A) 6) (I)</i>
The hazard identification system (2.1.2)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 4.9 A) 6) (I)</i>
The internal evaluation function (3.1.3)?

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<i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 4.9 A) 6) (I)</i>
The employee reporting and feedback function (3.1.6)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 4.9 A) 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 4.9 A) 6) (I)</i>
The accident and incident investigation function (3.1.5)? <i>SMS Framework 1.5 B) 1) f) Old - SMS Standard 4.9 A) 6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the safety assurance component? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b>Controls</b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – SMS Standard 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the safety assurance component? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### Bottom Line Assessment

Has the organization monitored, measured, and evaluated the performance of its risk controls?

## Component 3: Safety Assurance – Revision 2

### Element 3.1 Safety Performance Monitoring and Measurement

#### Process 3.1.1 Continuous Monitoring

##### Performance Objective

The organization 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 organization identify inputs (interfaces) for the Continuous Monitoring process obtained from the Risk Assessment process (2.2.2) or Risk Control/Mitigation process (2.2.3)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the Continuous Monitoring process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Does the organization monitor operational data to -
Determine whether it conforms to 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 organization monitor 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 organization identify interfaces between the continuous monitoring functions and analysis of data process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the continuous monitoring process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>

## Component 3: Safety Assurance – Revision 2

<b><i>Controls</i></b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – SMS Standard 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the continuous monitoring process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### **Bottom Line Assessment**

Has the organization 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 – Revision 2

### Process 3.1.2 Internal Audits by Operational Departments

#### Performance Objective

The organization will perform regularly scheduled internal audits of its operational processes, including those performed by contractors, to determine the performance and effectiveness of risk controls.

<b>Design Expectations</b>
<b><i>Input</i></b>
Does the organization 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 4.9 A (6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the internal auditing process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure:</i></b>
Does the organization’s line management ensure regular audits are conducted of their safety-related departmental functions? <i>SMS Framework 3.1.2 B) 1) Old – SMS Standard 6.3.2.A (P)</i>
<b><i>Procedure: Auditing of Contractors</i></b>
Does the organization’s line management ensure regular audits are conducted of their safety-related departmental functions which are performed by subcontractors? <i>SMS Framework 3.1.2 B) 1) Old – SMS Standard 6.3.2.A (P)</i>
<b><i>Procedure: Objectives of Audits</i></b>
Does the organization conduct regular audits to -
Determine conformity to safety risk controls? <i>SMS Framework 3.1.2 B) 2) a) Old – SMS Standard 6.3.2.B.1 (P)</i>
Assess safety risk controls’ performance? <i>SMS Framework 3.1.2 B) 2) b) Old – SMS Standard 6.3.2.B.2 (P)</i>
<b><i>Procedure: Audit Planning</i></b>
Does the organization’s audit program planning takes into account -
Safety criticality 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><i>Procedure: Audit Program Management</i></b>

## Component 3: Safety Assurance – Revision 2

Does the organization define -
Audits, including -
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>
How they will select the auditors? <i>SMS Framework 3.1.2 B) 4) b) Old – SMS Standard 6.3.2.D.2 (P)</i>
How they will ensure that auditors do 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><i>Procedure: Documentation</i></b>
Does the organization define -
Internal audit responsibilities? (P) <i>SMS Framework 3.1.2 B) 5) a) Old – SMS Standard 6.3.2.D.4.a</i>
Expectations for -
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><i>Outputs and Measures</i></b>
Does the organization identify interfaces between the internal audits of operational department’s processes and the analysis of data process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the internal audit process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3;</i>

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6.3.2 A & 6.3.3 (PM/I)
<b>Controls</b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – SMS Standard 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the internal audit process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### Bottom Line Assessment

Has the organization performed regularly scheduled internal audits of its operational processes, including those performed by contractors, to determine the performance and effectiveness of risk controls?

### Component 3: Safety Assurance – Revision 2

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## Component 3: Safety Assurance – Revision 2

### Process 3.1.3 Internal Evaluation

#### Performance Objective

The organization will conduct internal evaluations of the SMS and operational processes at planned intervals to determine that the SMS conforms to its objectives and expectations.

**NOTE:** To a large extent, controls are built into the design of the Flight Standards 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)).

Each of the outputs should also have a method of measurement specified by the organization in accordance with 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.

Note 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 way, rather than an after-the-fact attribution.

Table 1 below is a complete set of outputs, as a minimum expectation, for the content of internal evaluations of each process area.

**Table 1 - SMS Outputs**

Process	Reference	Output Expectation
<b>Component 1.0 - Safety Policy and Objectives</b>		
<i>This table does not apply to the first component</i>		
<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	2.1.2(B)(1)b	Hazards documented

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Process	Reference	Output Expectation
Identification		
	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 risk acceptability for 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 an 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 in accordance with 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 external audit findings (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)	<ul style="list-style-type: none"> <li>• Incidents</li> </ul>
	3.1.5(B)(1)(b)	<ul style="list-style-type: none"> <li>• Accidents</li> </ul>
	3.1.5(B)(1)(c)	<ul style="list-style-type: none"> <li>• Potential regulatory violations (e.g., VDRP records)</li> </ul>
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)

## Component 3: Safety Assurance – Revision 2

Process	Reference	Output Expectation
<b>Component 4.0 - Safety Promotion</b>		
4.1.1 Competency Requirements	4.1.1(B)(1)	Documented competency requirements in accordance with 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

### Process 3.1.3 Internal Evaluation - continued

<b>Design Expectations</b>
<b>Input</b>
Does the organization identify inputs (interfaces) for the Internal Evaluation process obtained from the Risk Assessment process (2.2.2) or Risk Control/Mitigation process (2.2.3)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the internal evaluation process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Does the organization ensure 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 organization’s planning of the internal evaluation program take into account -
Safety criticality of the processes being 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 organization define -
Evaluations, including -
Criteria? <i>SMS Framework 3.1.3 B) 3) a) 1) Old – SMS Standard 6.3.3.C.1.a (P)</i>
Scope?

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<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><i>Procedure: Documentation</i></b>
Does the organization define —
Evaluation responsibilities? <i>SMS Framework 3.1.3 B) 3) c) 1) Old – SMS Standard 6.3.3.C.4.a (P)</i>
Requirements for -
Planning evaluations? <i>SMS Framework 3.1.3 B) 3) c) 2) (a) Old – SMS Standard 6.3.3.C.4.b.1 (P)</i>
Conducting evaluations? <i>SMS Framework 3.1.3 B) 3) c) 2) (b) Old – SMS Standard 6.3.3.C.4.b.2 (P)</i>
Reporting results? (P) <i>SMS Framework 3.1.3 B) 3) c) 2) (c) Old – SMS Standard 6.3.3.C.4.b.3</i>
Maintaining records? <i>SMS Framework 3.1.3 B) 3) c) 2) (d) Old – SMS Standard 6.3.3.C.4.b.4 (P)</i>
Evaluating contractors and vendors? <i>SMS Framework 3.1.3 B) 3) c) 2) (e) Old – SMS Standard 6.3.3.C.5 (P)</i>
<b><i>Procedure: Scope</i></b>
Does the organization’s evaluation program include an evaluation of the internal audit programs conducted by or in behalf of line management of the operational departments described in SMS Framework 1.0 B) 1)? <i>SMS Framework 3.1.3 B) 4) Old – SMS Standard 6.3.3.E (P)</i>
<b><i>Procedure: Independence of Evaluators</i></b>
Does the organization ensure the person or organization performing evaluations of operational processes are independent of the process being evaluated? <i>SMS Framework 3.1.3 B) 5) Old – SMS Standard 6.3.3.F (P)</i>
<b><i>Outputs and Measures</i></b>
Does the organization identify interfaces between the internal evaluation process and analysis of data process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the internal evaluation process?

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<i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b>Controls</b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B) (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the internal evaluation process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### Bottom Line Assessment

Has the organization conducted internal evaluations of the SMS and operational processes at planned intervals to determine that the SMS conforms to its objectives and expectations?

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## Component 3: Safety Assurance – Revision 2

### Process 3.1.4 External Auditing of the SMS

#### Performance Objective

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

<b>Design Expectations</b>
<b><i>Input</i></b>
Does the organization 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 4.9 A (6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the external auditing process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure</i></b>
Does the organization ensure it includes the results of oversight organization audits in the analyses conducted under SMS Process 3.1.7? <i>SMS Framework 3.1.4 B) Old – SMS Standard 6.3.4 A) (P/I)</i>
<b><i>Outputs and Measures</i></b>
Does the organization identify interfaces between the external audit process, analysis of data process (3.1.7) and the FAA and/or other external agencies? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the external auditing process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b><i>Controls</i></b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the external auditing process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7) and 6.7 (C)</i>

#### Bottom Line Assessment

Has the organization included the results of audits performed by oversight organizations in its analysis of data?

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## Component 3: Safety Assurance – Revision 2

### Process 3.1.5 Investigation

#### Performance Objective

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

<b>Design Expectations</b>
<b><i>Input</i></b>
Does the organization 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 4.9 A (6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the investigation process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure</i></b>
Does the organization ensure it collects data on -
Incidents? <i>SMS Framework 3.1.5 B) 1) a) Old – 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 None (P)</i>
Does the organization ensure that procedures are established to investigate -
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><i>Outputs and Measures</i></b>
Does the organization identify interfaces between the investigation process and analysis of data process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the investigation process?

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<i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b>Controls</b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B) (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the investigation process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7) and 6.7 (C)</i>

### **Bottom Line Assessment**

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

## Component 3: Safety Assurance – Revision 2

### Process 3.1.6 Employee Reporting and Feedback System

#### Performance Objective

The organization 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 organization 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 4.9 A (6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the employee reporting and feedback process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Has the organization established and maintained 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 organization ensure employees are encouraged to use the safety reporting and feedback system without fear of punishment and to encourage submission of solutions /safety improvements where possible? <i>SMS Framework 3.1.6 B) 2) Old – SMS Standard 6.3.6.B (P)</i>
Does the organization ensure 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 organization ensure the data collected in the employee 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 organization identify interfaces between the Employee Reporting and Feedback process and Analysis of Data process (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the employee reporting and feedback process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>

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<i>Controls</i>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7B) (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the employee reporting and feedback process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### **Bottom Line Assessment**

Has the organization 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 – Revision 2

### Process 3.1.7 Analysis of Data

#### Performance Objective

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

<b>Design Expectations</b>
<b>Input</b>
Does the organization 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 4.9 A (6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the data analysis process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Does the organization analyze the data that it collects to demonstrate the effectiveness of -
Risk controls in the organization's operational processes (SMS Framework 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 (SMS Framework 1.1 B) 2))? <i>SMS Framework 3.1.7 B) 1) b) Old – SMS Standard 6.4.A.2 (P)</i>
Does the organization ensure it analyzes the data it collects to evaluate where improvements can be made in the organization's -
Operational processes (SMS Framework 1.0 B) 1) a))? <i>SMS Framework 3.1.7 B) 2) a) Old – SMS Standard 6.4.B.1 (P)</i>
SMS (SMS Framework 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 organization identify interfaces between the data analysis process and the system assessment process (SMS Framework 3.1.8)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the data analysis process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>

## Component 3: Safety Assurance – Revision 2

<b>Design Expectations</b>
<b><i>Controls</i></b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the data analysis process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### **Bottom Line Assessment**

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

## Component 3: Safety Assurance – Revision 2

### Process 3.1.8 System Assessment

#### Performance Objective

The organization will assess risk controls' performance and effectiveness, and conformance with SMS expectations as stated herein, and the objectives of the safety policy.

<b>Design Expectations</b>
<b><i>Input</i></b>
Does the organization 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 4.9 A 6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the system assessment process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure</i></b>
Does the organization assess the performance of the -
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 organization record system assessments and risk control performance reports that result in a finding of -
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>
New hazards found? <i>SMS Framework 3.1.8 B) 2) c) Old – SMS Standard 6.5.B.3 (P)</i>
<b><i>Outputs and Measures</i></b>
Does the organization use the safety risk management process (2.0) if risk assessment and risk control performance indicates -
That new hazards have been found? <i>SMS Framework 3.1.8 B) 3) a) Old – SMS Standard 6.5.C.1 (I)</i>
That the system needs to be changed? <i>SMS Framework 3.1.8 B) 3) b) Old – SMS Standard 6.5.C.2 (I)</i>

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Does the organization identify interfaces between the system assessment function and -
<p>The hazard identification function (2.1.2)?  <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A) 6) (I)</i></p>
<p>The preventive and corrective action function (3.1.9)?  <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A) 6) (I)</i></p>
<p>Does the organization periodically measure performance objectives and design expectations of the system assessment process?  <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i></p>
<p>Does the organization maintain records of assessments and risk control performance in accordance with the requirements of SMS Framework Element 1.5?  <i>SMS Framework 3.1.8 B) 4) Old – SMS Standard 6.5.D (P/I)</i></p>
<p><b>Controls</b></p>
<p>Does the organization ensure procedures are followed for safety-related operations and activities?  <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i></p>
<p>Does management periodically review supervisory and operational controls to ensure the effectiveness of the system assessment process?  <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i></p>

### Bottom Line Assessment

Has the organization assessed risk controls' performance and effectiveness, conformance with SMS requirements, and the objectives of the safety policy?

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### Process 3.1.9 Preventive/Corrective Action

#### Performance Objective

The organization 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, but 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><i>Inputs</i></b>
Does the organization 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 4.9 A 6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the preventive/corrective action process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure</i></b>
Does the organization develop, prioritize, and implement, as appropriate, the following -
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 organization consider safety lessons learned in the development of -
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 organization take necessary corrective and preventive action based on the findings of investigations? <i>SMS Framework 3.1.9 B) 3) Old – SMS Standard 6.6.C (P)</i>
Does the organization prioritize and implement corrective and preventive actions in a timely

## Component 3: Safety Assurance – Revision 2

manner? <i>SMS Framework 3.1.9 B) 4) Old – SMS Standard 6.6.D (P)</i>
<b><i>Outputs and Measures</i></b>
Does the organization keep 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 (PM/I)</i>
Does the organization periodically measure performance objectives and design expectations of the preventative and corrective action process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b><i>Controls</i></b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the preventative and corrective action process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### **Bottom Line Assessment**

Has the organization taken action to eliminate the causes of non-conformances, identified during analysis, to prevent recurrence?

## Component 3: Safety Assurance – Revision 2

### 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), safety assurance (3.0), and lessons learned. Management will assess the performance and effectiveness of an organization’s operational processes and whether any processes need improvement.

<b>Design Expectations</b>
<b><i>Input</i></b>
Does the organization 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 4.9 A 6) (I)</i>
Hazards (Process 2.1.2)?
Risk analysis (severity and likelihood) (Process 2.2.1)?
Risk assessments (Process 2.2.2)?
Risk control/mitigation plans (Process 2.2.3)?
Results of analysis of data (Process 3.1.7)?
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the management review process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure</i></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 organization’s operational processes and SMS? <i>SMS Framework 3.1.10 B) 2) a) &amp; b) Old – SMS Standard 6.7.B 1) &amp; 2) (P)</i>
<b><i>Outputs and Measures</i></b>
Does the organization keep records of the disposition and status of management reviews according to the organization’s record retention policy? <i>SMS Framework 1.5 B) 3) a) 5) Old – SMS Standard 6.6.F (I)</i>
Does the organization periodically measure performance objectives and design expectations of the management review process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3;</i>

## Component 3: Safety Assurance – Revision 2

6.3.2 A & 6.3.3 (PM/I)
<b>Controls</b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B) (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the management review process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### Bottom Line Assessment

Has top management conducted regular reviews of the SMS, including outputs of safety risk management (2.0), safety assurance (3.0), and lessons learned? Has management reviews included assessing the performance and effectiveness of an organization's operational processes and the need for improvements?

## Component 3: Safety Assurance – Revision 2

### Element 3.2 Management of Change

#### Performance Objective

The organization's management will assess risk for changes within the organization that may affect established processes and services by new system designs, changes to existing system designs, new operations/procedures or modified operations/procedures.

<b>Design Expectations</b>
<b>Input</b>
Does the organization 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 4.9 A 6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the management of change process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Does the organization 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 -
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 organization allow it's personnel 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 organization ensure that management of change procedures are interfaced with the SRM process (2.1.1)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the management of change process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3;</i>

## Component 3: Safety Assurance – Revision 2

6.3.2 A & 6.3.3 (PM/I)
<b>Controls</b>
Does the organization 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 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 3.2 B) 1) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the management of change process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### Bottom Line Assessment

Has the organization's management assessed risk for changes within the organization that may affect established processes and services by new system designs, changes to existing system designs, new operations/procedures or modified operations/procedures?

## Component 3: Safety Assurance – Revision 2

### Element 3.3 Continual Improvement

#### Performance Objective

The organization will promote continual improvement of its SMS through recurring 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 organization 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? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A 6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the continual improvement process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Does the organization 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? <i>SMS Framework 3.3 B) 1) Old - SMS Standard 6.8 (P)</i>
Does the organization develop safety lessons learned and - ? <i>SMS Framework 3.3 B) 2) Old - SMS Standard 7.5.A (P)</i>
Use safety lessons learned to promote continuous improvement of safety? <i>SMS Framework 3.3 B) 2) a) Old - SMS Standard 7.5.B (P)</i>
Ensure that safety lessons learned are communicated to all personnel? <i>SMS Framework 3.3 B) 2) b) &amp; 4.2 Old - SMS Standard 7.5.C (P)</i>
<b>Outputs and Measures</b>
Does the organization ensure that trend analysis of safety and quality policies, objectives, audit and evaluation results, analysis of data, and corrective and preventive actions are interfaced with management reviews (3.1.10)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A (6) (I)</i>
Does the organization periodically measure performance objectives and design expectations of the continual improvement process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>

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<i>Controls</i>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the continual improvement process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### Bottom Line Assessment

Has the organization promoted continual improvement of its SMS through recurring 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?

## Component 4: Safety Promotion – Revision 2

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## Component 4: Safety Promotion – Revision 2

### 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><i>Input</i></b>
Does the organization identify interfaces between the top management and organizational personnel? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A 6) (I)</i>
<b><i>Management Responsibility</i></b>
Does the organization clearly identify who is responsible for the quality of the safety promotion process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b><i>Procedure/Output/Measure</i></b>
Does top management 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 - SMS Standard 7.1 1)</i>
Visible demonstration of their commitment to the SMS? <i>SMS Framework 4.0 B) 1) b) Old - SMS Standard 7.1 2)</i>
Communication of the safety responsibilities for the organization’s personnel? <i>SMS Framework 4.0 B) 1) c) Old - SMS Standard 7.1 3)</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 - SMS Standard 7.1 4)</i>
An effective employee reporting and feedback system that provides confidentiality as is necessary? <i>SMS Framework 4.0 B) 1) e) Old - SMS Standard 7.1 5)</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 - SMS Standard 7.1 6)</i>
Allocation of resources essential to implement and maintain the SMS? <i>SMS Framework 4.0 B) 1) g) Old - SMS Standard 7.1 7)</i>
Does the organization periodically measure performance objectives and design expectations of the safety promotion component?

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<i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>
<b>Controls</b>
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i>
Does management periodically review supervisory and operational controls to ensure the effectiveness of the safety promotion component? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>

### Bottom Line Assessment

Has top management promoted the growth of a positive safety culture and communicate it throughout the organization.

## Component 4: Safety Promotion – Revision 2

### Element 4.1 Competencies and Training

#### Process 4.1.1 Personnel Expectations (Competence)

##### Performance Objective

The organization will document competency requirements for those positions identified in SMS Framework Element 1.2 B) 3) and 1.3 and ensure those requirements are met.

<b>Design Expectations</b>	This page intentionally left blank.	
<b>Input</b>		
Does the organization identify interface functions and key safety personnel, SMS Framework Element 1.2 B) 3) & 1.3? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A 6) (I)</i>		
<b>Management Responsibility</b>		
Does the organization clearly identify who is responsible for the quality of the personnel requirements process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>		
<b>Procedure</b>		
Does the organization identify the competency requirements for safety-related positions identified in SMS Framework Element 1.2 B) 3) & Element 1.3? <i>SMS Framework 4.1.1 B) 1) Old – SMS Standard 7.3.A (P)</i>		
<b>Outputs and Measures</b>		
Does the organization 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)? <i>SMS Framework 4.1.1 B) 2) Old – SMS Standard 7.3.B (P)</i>		
Does the organization periodically measure performance objectives and design expectations of the personnel qualification and training process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i>		
<b>Controls</b>		
Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i>		
Does management periodically review supervisory and operational controls to ensure the effectiveness of the personnel qualification and training process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i>		

## **Component 4: Safety Promotion – Revision 2**

### **Bottom Line Assessment**

Has the organization documented competency requirements for those positions identified in SMS Framework Element 1.2 B) 3) and 1.3 and ensured those requirements were met?

## Component 4: Safety Promotion – Revision 2

### Process 4.1.2 Training

#### Performance Objective

The organization will develop, document, deliver and regularly evaluate training necessary to meet to meet competency expectations of 4.1.1 B) 1).

<b>Design Expectations</b>
<b>Input</b>
Does the organization 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)? <i>SMS Framework 1.5 B) 1) f) Old – 4.9 A 6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the SMS training process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure</b>
Does the organization’s training meet the competency expectations of 4.1.1 B) 1) for the personnel in the safety-related positions identified in SMS Framework Element 1.2 B) 3) & Element 1.3? <i>SMS Framework 4.1.2 B) 1) Old – SMS Standard 7.4 (P)</i>
Does the organization consider scope, content, and frequency of training required to meet and maintain competency for those individuals in the positions identified in SMS Framework Element 1.2 B) 3) and 1.3. <i>SMS Framework 4.1.2 B) 2) Old – SMS Standard None (P)</i>
Does the organization’s employees receive training commensurate with their -
Level of responsibility? <i>SMS Framework 4.1.2 B) 3) a) Old – SMS Standard 7.4.2.a (P)</i>
Impact on the safety of the organization’s products or services? <i>SMS Framework 4.1.2 B) 3) b) Old – SMS Standard 7.4.2.b (P)</i>
Does the organization maintain training currency by periodically -
Reviewing the training? <i>SMS Framework 4.1.2 B) 4) a) Old – SMS Standard 7.4.3.a (P)</i>
Updating the training? <i>SMS Framework 4.1.2 B) 4) b) Old – SMS Standard 7.4.3.b (P)</i>
<b>Outputs and Measures</b>
Does the organization identify interfaces between safety lessons learned and the training

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<p>functions?  <i>SMS Framework 3.3 B) 2) Old - SMS Standard 4.9 A) 6) (P)</i></p>
<p>Does the organization identify interfaces between the training functions and the delivery of training deemed to be necessary to meet competency requirements of (4.1.1 B) 1)?  <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A) 6) (I)</i></p>
<p>Does the organization periodically measure performance objectives and design expectations of the personnel training process?  <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PM/I)</i></p>
<p>Does the organization maintain records of required and delivered training?  <i>SMS Framework 1.5 B) 4) Old – SMS Standard 4.9 C) (I)</i></p>
<p><b>Controls</b></p>
<p>Does the organization ensure procedures are followed for safety-related operations and activities?  <i>SMS Framework: 1.0 B) 4) f) Old – 4.7 B (C)</i></p>
<p>Does management periodically review supervisory and operational controls to ensure the effectiveness of the personnel training process?  <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i></p>

### Bottom Line Assessment

Has the organization developed, documented, delivered and regularly evaluated training necessary to meet to meet competency expectations of 4.1.1 B) 1).

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### Element 4.2 Communication and Awareness

#### Performance Objective

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

<b>Design Expectations</b>
<b>Input</b>
Does the organization identify inputs (interfaces) for the Communication and Awareness process obtained from the outputs of Safety Risk Management (2.0) and Safety Assurance (3.0) including -
Hazard identification (2.1.2)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A 6) (I)</i>
Risk severity and likelihood (2.2.1)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A 6) (I)</i>
Risk assessments (2.2.2)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A 6) (I)</i>
Risk control/mitigation plans (2.2.3)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A 6) (I)</i>
Safety lessons learned? <i>SMS Framework 3.3 B) 2) Old - SMS Standard 7.5.A (I)</i>
Results of analysis of data (3.1.7)? <i>SMS Framework 1.5 B) 1) f) Old – SMS Standard 4.9 A 6) (I)</i>
<b>Management Responsibility</b>
Does the organization clearly identify who is responsible for the quality of the communication process? <i>SMS Framework 1.2 B) 3) Old – SMS Standard None (R/A)</i>
<b>Procedure/Output/Measure</b>
Does the organization ensure it communicates outputs of the SMS to its employees? <i>SMS Framework 4.2 B) 1) Old – SMS Standard 7.2.A (P/PM/I)</i>
Does the organization ensure it provides its oversight organization access to the outputs of the SMS in accordance with established agreements and disclosure programs? <i>SMS Framework 4.2 B) 2) Old – SMS Standard 7.2.B (P/PM/I)</i>
Does the organization interoperate with other organization’s SMSs to cooperatively manage issues of mutual concern? <i>SMS Framework 4.2 B) 3) Old – SMS Standard None (P/PM/I)</i>

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<p>Does the organization periodically measure performance objectives and design expectations of the communication and awareness process? <i>See note at 3.1.3 &amp; SMS Framework 1.0 B) 2) (c) and 3) (c); 3.1.3 B) 1) Old – SMS Standard 4.1 B) 3 &amp; C) 3; 6.3.2 A &amp; 6.3.3 (PMI)</i></p>
<p><b>Controls</b></p>
<p>Does the organization have a control or controls in place to evaluate and update safety-related media for target populations? <i>SMS Framework 1.0 B) 4)f) and 3.1.10 B) 2) and 4.1.2 B) 4) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i></p>
<p>Does the organization ensure procedures are followed for safety-related operations and activities? <i>SMS Framework: 1.0 B) 4)f) Old – 4.7 B (C)</i></p>
<p>Does management periodically review supervisory and operational controls to ensure the effectiveness of the communication and awareness process? <i>SMS Framework 1.1 B) 2) k), 3.1.3 B) 1) and 3.1.10 A) &amp; B) Old – SMS Standard 6.3.3 A) and 6.7 (C)</i></p>

### Bottom Line Assessment

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