



Seattle-Tacoma International Airport

SMS Training and Orientation

Prepared For: Federal Aviation Administration
Office of Airports
Airport Safety and Operations Division

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Date: 11/25/2009

Revision History

Date	Version	Description
10/7/09	v.0.1	Initial draft for review by SEA Airport Training Office Manager, Jamie Major
10/9/09	v.0.2	Draft updated after review by SEA Airport Training Office Manager, Jamie Major. Version 0.2 scheduled delivered to Keri Spencer, FAA on 10/9/09.
10/29/09	v.1.0	Version 1 for Sea-Tac review and approval
11/25/09	v.1.0	Final

Prepared in Support of Statement of Work Section C – Safety Assurance, Task 2:**Develop a personnel training and record keeping program that meets the requirements developed under the airport's SMS Program.**

Part 139 prescribes requirements for personnel training and record keeping. However, an airport's SMS training and record keeping requirements will far surpass those items currently required under Part 139. Under this task, the airport will develop record keeping processes with abilities to alert or query data for recurrent or refresher training or record keeping elements under the airport's SMS; and develop a tracking system that can integrate into any of the airport's related tracking or training programs currently in use.

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1 Introduction

As part of the FAA-sponsored Safety Management System (SMS) follow-on pilot study conducted at Seattle-Tacoma International Airport (SEA or SeaTac) and as required under Safety Assurance, Task 2, the team presents the following requirements and recommendations for personnel training and record keeping designed to meet the airport's SMS program needs. The reader will note that the scope of this document is broader than the training record keeping program required in the pilot study statement of work. The team determined that, in order to fully address a personnel training and record keeping program, detailed consideration into the types, completion requirements, and audiences for all relevant and recommended SMS program training and orientation was necessary.

This document, therefore, represents a comprehensive approach to SMS training and orientation at SeaTac and includes an overview of relevant features and functionality of SeaTac's Learning Management System (LMS), differences between employee and tenant-focused SMS learning offerings, and details for recommended SMS training/orientation, tracking, and reporting for both SeaTac employees and tenants.

The following assumptions have been made in the development of this document and in the training, orientation, and reporting recommendations:

1. Dedicated Safety Manager and Safety Specialist(s) resources will be allocated to develop and support SeaTac's SMS.
2. The Safety Manager and the Airport Training Office will develop (or be involved in/manage the development of training) and the Safety Manager will thereby be exempt from the training requirements.
3. The Safety Manager will have an SMS background and prior education in SMS. If not, specific in-depth SMS foundations training will be required.
4. The initial scope of SeaTac's SMS will include the Movement Area, Non-Movement Area (Ramp) and Bagwell. The initial implementation and training as represented in this document do not include deployment of SMS to Terminal or Landside, but do reflect the possibility of extension into these areas in the future.

1.1 *SeaTac Learning Management System*

The Port of Seattle implemented a new, enterprise-wide Learning Management System in September, 2008. The Port of Seattle has purchased licenses for each of its approximately 1500 employees and every employee at SeaTac has the ability to access LMS using specific credentials and is a licensed user of the system. Airport Operations is currently utilizing LMS to administer and track employee training required by CFR Part 139, National Incident Management System (NIMS), and for ID/Access and badges. Using LMS, the Airport Operations Training Office can:

1. Assign required courses to individuals and groups (both manually and via an automated process).
2. Allow users to self-enroll in training courses (required and optional).
3. Track required-by dates, completion dates, and overdue training.

4. Deliver online training and automatically record course completion.
5. Notify personnel and supervisors of required training and completion deadlines.
6. Retain and display full learning history (or transcripts) for any employee on demand.

In the greater SEA community, there are roughly 18,000 workers employed by airlines, fixed base operators (FBO), ground service providers (GSP), concessionaires, etc. Due to the large number of airport workers and the high attrition rate among such workers, it is not feasible (either now or in the future) for the Port of Seattle to purchase named user licenses, database storage, or additional server/bandwidth capacity for airport worker (tenant) training to be tracked directly within the Learning Management System. Tracking and reporting on SMS training and orientation at SEA, therefore, will be divided into 2 discrete categories:

1. Employee Training
2. Tenant Orientation

Employee training will leverage the full functionality and capabilities of the Learning Management System, including the development, integration, and delivery of online courses. These courses will be available directly within LMS and will be delivered through the LMS web-based user interface.

Because of the licensing constraints described above, tenant orientation will be managed and reported upon outside of the LMS and will be provided through computer-based training (CBT), installed and delivered on dedicated workstations housed in the Airport Training Office. Tenant reporting will leverage and extend an existing solution that was deployed in March, 2009 that joins data from the SeaTac training database, delivered by American Association of Airport Executives (AAAE) with the ID/Access security application to produce reports enabling the Airport Operations Training Office to track and schedule required retraining courses for active badge holders at SeaTac.

It is important to note SeaTac's differentiation between SMS employee training and tenant orientation. SeaTac Airport Operations is heavily invested both in SMS and in the professional and personal growth of its employees and is committed to providing in-depth training that will enhance the Safety Management System implementation as well as increase the safety of its employees and operations. While SeaTac is committed to providing detailed information and education on the airport SMS program to its tenants, the focus will be to orient airport workers on their interaction with the airport SMS and on SeaTac's expectations for their participation and contributions towards SEA's safety culture. SeaTac fully expects that its tenants will provide detailed and specific job safety and internal safety program/SMS training to their respective employees.

2 SeaTac Employee SMS Training

2.1 Safety Management System Training Courses

The following employee training courses will be created within LMS in support of the SMS program. Appendix C details required configuration parameters to add and maintain the courses within LMS. For implementation, it will be necessary to weigh the impact of training to production for each audience and to plan and schedule training sessions accordingly.

Please note that it is assumed that the Safety Manager will be developing and delivering the training courses (in conjunction with the Airport Operations Training Office), is presumed exempt from any initial and recurrent training requirements and is therefore not included in the audiences listed below.

2.1.1 SMS Introduction

<p>Purpose:</p>	<p>To introduce SeaTac airport employees to the four elements of SMS. To provide airport employees with information regarding SeaTac's safety policy, the scope and implementation of SMS. To educate airport employees of their role(s) and responsibilities within the airport's SMS framework and SeaTac's safety culture.</p>
<p>Key Topics:</p>	<ol style="list-style-type: none"> 1. Introduction to SMS <ol style="list-style-type: none"> a. Purpose b. Elements c. Scope/application at SeaTac (i.e. airside, ramp, bagwell) 2. SeaTac's Safety Policy 3. New Roles and Responsibilities within SMS <ol style="list-style-type: none"> a. Safety Manager b. Safety Specialist c. Safety committee(s) d. Executive and leadership 4. Tenant Role in Safety Management at SeaTac 5. Employee Role in Safety Management at SeaTac <ol style="list-style-type: none"> a. Human factors and situational awareness b. Participating in SeaTac's safety culture c. Preventing FOD d. Identifying and reporting hazards 6. Hazard Reporting <ol style="list-style-type: none"> a. SeaTac non-punitive policy b. What is a safety hazard? <ol style="list-style-type: none"> i. What does "safe" mean? ii. What is a hazard? iii. How can I spot a safety hazard? c. Submitting a hazard report <ol style="list-style-type: none"> i. Online reporting portal ii. Phone iii. Drop box iv. Safety committees v. Company supervisory chain d. Following up on a hazard report

Audience:	Airfield Operations Airfield Security ID Badge Communications & Dispatch Operations Planning Police Fire Department Aviation Maintenance (Airfield personnel) Environmental Programs Risk Management Port Construction Services Engineering
Delivery Method:	In-person
Estimated Duration:	60 minutes
Trainer/Provider:	Safety Manager
Frequency/Recurrence:	Initial No recurrence or refresher
Prerequisites:	None
Implementation:	<ol style="list-style-type: none"> 1. Initially to employees who work on, near, or are involved with Airside operations. 2. SMS Introduction training may be offered in phases. The recommended order of training is: <ol style="list-style-type: none"> a. Airport Senior Management Team b. Airport Duty Manager c. Airport Operations Specialist d. Airport Maintenance Liaison e. Airport Communications and Dispatch f. All others 3. Can be extended to Terminal and Landside personnel as the SMS scope is expanded into these areas

Table 1 - SMS Introduction Course

2.1.2 SMS Safety Risk Management

Purpose:	To provide the Safety Management team with detailed information regarding the process, tools, roles and responsibilities of the airport's Safety Risk Management program.
Key Topics:	<ol style="list-style-type: none"> 1. Safety Risk Management Process Overview <ol style="list-style-type: none"> a. Operational SRM vs. safety case b. Process flow c. Introduction to non-punitive policy 2. Identify Hazards <ol style="list-style-type: none"> a. Identifying hazards b. Reporting hazards <ol style="list-style-type: none"> i. Internal reporting ii. Tenant reporting c. Categorizing hazards d. Determining worst credible scenario 3. Analyze Initial Risk <ol style="list-style-type: none"> a. Introduction to risk matrix b. Determining likelihood and probability c. Utilizing the hierarchy of controls d. Classifying initial risk e. Prioritizing risks 4. Performing root cause analysis 5. Assess Risk <ol style="list-style-type: none"> a. Applying risk thresholds b. Determining risk treatment 6. Treat Risk <ol style="list-style-type: none"> a. Creating a corrective action plan (CAP) b. CAP review and approval process c. Classifying residual and acceptable risk d. Implementing and monitoring corrective actions
Audience:	Airport Duty Managers Airport Operations Specialists Communications and Dispatch Maintenance Liaison Maintenance Lead Personnel (as identified by Maintenance Liaison) Risk Management Liaison Health & Safety Liaison Environmental Liaison Construction Liaison
Delivery Method:	In-person
Estimated Duration:	4 hours
Trainer/Provider:	Safety Manager
Frequency/Recurrence:	Initial training Annual refresher (1 hour in-person case study review), required 1 calendar year from initial training
Prerequisites:	<ol style="list-style-type: none"> 1. SMS Introduction

Table 2 - SMS Safety Risk Management Course

2.1.3 SMS Investigation Techniques

Purpose:	To provide Airport Duty Managers and other appropriate airport operations personnel with a consistent approach and skill set for conducting accident and incident investigations and root cause analysis
Key Topics:	<ol style="list-style-type: none"> 1. Investigation Approach <ol style="list-style-type: none"> a. Role of investigator b. Investigations process 2. Investigative Techniques <ol style="list-style-type: none"> a. Useful investigation tools (Tricks of the trade) <ul style="list-style-type: none"> • Photography overview b. Other useful equipment c. Conducting Interviews d. Documenting the site e. Gathering evidence (what, how to gather, how to document) <ol style="list-style-type: none"> a. Preventing scene and evidence contamination 3. When to Consider External Support? <ol style="list-style-type: none"> a. Forensics b. Design c. Other d. Generating contracts / response times / scopes of external support (containment, forensics, health & safety)
Audience:	Safety Specialist Airport Duty Managers Airport Operations Specialists Communications and Dispatch Risk Management Liaison
Delivery Method:	In-person
Estimated Duration:	3 hours
Trainer/Provider:	Safety Manager Case Forensics, Inc.
Frequency/Recurrence:	Initial No required recurrence, scheduled refreshers as needed
Prerequisites:	<ol style="list-style-type: none"> 1 SMS Introduction 2 SMS Safety Risk Management

Table 3 - SMS Investigation Techniques Course

2.1.4 SMS Safety Assurance

Purpose:	To provide the Safety Management Team with information on the purpose of the Safety Assurance SMS element, its components, and specific processes and procedures necessary to implement and perform Safety Assurance functions.
Key Topics:	<ol style="list-style-type: none"> 1. Introduction to Safety Assurance <ol style="list-style-type: none"> a. Quality control vs. quality assurance b. Quality assurance program overview <ol style="list-style-type: none"> i. Tenant-compliance and audit programs c. Quality control program overview 2. Ramp Inspections <ol style="list-style-type: none"> a. Conducting safety inspections b. Conducting FOD inspections 3. Enforcement Strategies <ol style="list-style-type: none"> a. FOD prevention b. Role of citations in Safety Assurance c. Role of education in Safety Assurance 4. Inspections Tracking and Reporting 5. Leading by Example <ol style="list-style-type: none"> a. Promoting a positive safety culture at SeaTac
Audience	Safety Specialist Airport Duty Managers Airport Operations Specialists Risk Management Liaison
Delivery Method:	In-person
Estimated Duration:	2 hours
Trainer/Provider:	Safety Manager
Frequency/Recurrence:	Initial training Annual refresher (30 min online), required 1 calendar year from initial training
Prerequisites:	<ol style="list-style-type: none"> 1. SMS Introduction 2. SMS Safety Risk Management Process 3. Investigation Techniques and Root Cause Analysis (where applicable)

Table 4 - SMS Safety Assurance Course

2.2 Employee SMS Training Tracking and Reporting

2.2.1 Learning Management System Administration

The Safety Manager will be provided with administrator access to the Learning Management System through the LMS Administrator role. This set of security permissions will allow the Safety Manager to perform the following functions within LMS:

- Run reports (see Section 2.2.4)
- Schedule SMS course offerings
- Record course completions (see Section 2.2.3)
- Create curriculum (see Section 2.2.2)
- Automatically assign courses and curricula to SeaTac employees

The Safety Specialist will also be provided with administrator access to LMS and will be granted the Registrar role. This set of security permissions will allow the Safety Specialist to perform the following functions within LMS:

- Run reports (see Section 2.2.4)
- Schedule SMS course offerings
- Record course completions (see Section 2.2.3)

2.2.2 Curricula

LMS provides the ability to establish and manage learning requirements using a curriculum. A curriculum is a grouping of one or more courses for the purpose of assigning and tracking as a single entity. Curricula provide the ability to quickly and easily assign refresher and recurring training, track required course completion, and monitor completion dates and overdue training for large groups of people. Assigning and tracking at the curriculum level (rather than at the course level) will reduce the level of effort necessary to configure, maintain, and administer SMS courses within the Learning Management System, thereby minimizing the administrative burden to the Safety Manager to the largest extent possible.

In order to fulfill the SMS training requirements, all courses included within a curriculum must be completed by the required date. If a single course is not completed, the curriculum for an individual employee will remain incomplete and will appear overdue on reports and automated notifications. The following curricula will be configured within LMS for the purposes of tracking and reporting on employee SMS training:

SMS Training and Orientation

Curricula	Included Courses	Assigned To	Assignment Criteria	Completion Requirement
SMS – Introduction	1. SMS Introduction	<ul style="list-style-type: none"> • Airfield Operations • Airfield Security • ID Badge • Communications & Dispatch • Operations Planning • Police • Fire Department • Aviation Maintenance • Environmental Programs • Risk Management • Port Construction Services • Engineering • Health & Safety 	<p>Automatically assigned based upon Organization Code (department).</p> <p>Curriculum may either be assigned to all Organizations simultaneously or staggered based upon desired training/completion schedules.</p>	<p>Initial Completion: 30 days from initial assignment</p>
SMS – Risk Management	1. SMS Introduction 2. SMS Safety Risk Management	<ul style="list-style-type: none"> • Communications & Dispatch • Maintenance Liaison • Maintenance Leads • Risk Management Liaison • Health & Safety Liaison • Environmental Liaison • Construction Liaison 	<p>Communications & Dispatch may be automatically assigned based upon Organization Code.</p> <p>Remaining assignments will be manual, based upon allocation of individual liaison resources from each department.</p> <p><i>*Note that, because the liaisons are included in the department-wide SMS Introduction curricula assignments above, it may be necessary to manually remove the SMS Introduction curriculum when adding the SMS Risk Management curriculum.</i></p>	<p>Initial Completion: 60 days from initial assignment</p> <p>Refresher Completion: 1-calendar year from initial completion*</p> <p><i>*Note that the Investigation Techniques course does not require refresher training. The curriculum requirement will be set based upon the 1-year requirement for the SMS Safety Risk Management course.</i></p>
SMS – Risk Management and Assurance	1. SMS Safety Risk Management 2. Investigation Techniques 3. SMS Safety Assurance	<ul style="list-style-type: none"> • Safety Specialist • Airport Duty Managers • Airport Operations Specialists • Risk Management Liaison 	<p>Safety Specialists, Airport Duty Managers and Airport Operations Specialists may be automatically assigned based upon Job Code.</p> <p>Risk Management assignments will be manual, based upon allocation of individual liaison resources from that department.</p>	<p>Initial Completion: 60 days from initial assignment</p> <p>Refresher Completion: 1-calendar year from initial completion*</p> <p><i>*Note that the Investigation Techniques course does not require refresher training. The curriculum requirement will be set based upon the 1-year requirement for the SMS Safety Risk Management course.</i></p>

Table 5 - Recommended SMS Training Curricula

2.2.3 Recording

Completion of in-person training courses will be recorded by the instructor (assumed to primarily be the Safety Manager). For courses in which the instructor is a consultant, is not the Safety Manager, or does not otherwise have administrative access to LMS, the course completion status will be recorded manually on a printed roster, provided to the Safety Manager, and recorded in LMS by the Safety Manager or Safety Specialist.

Online training will be configured within LMS to automatically record completion status. Each online course will include an assessment (quiz). Automatic course completion status updates will be predicated upon an 80% score on the assessment.

2.2.4 Reporting

The Safety Manager and Safety Specialist will have permissions to run reports for employee SMS training completion within LMS. The following LMS reports will be utilized to track employee training completion:

Report Title	Information Provided
Curriculum Status	<p>Displays the status of one or more curricula (completed, not completed or both. For incomplete curriculum, the report provides the number of days remaining until required completion.</p> <p>The report can be filtered to produce data based on completion status, individual employee, or for one or more specific curricula (or a combination thereof).</p>
Curriculum Item Status	<p>Displays the status (completed, not completed) of specific courses within a curriculum and the required date and completion date for each course.</p> <p>The report can be filtered to produce data for one or more specific curriculum.</p>
Item Status	<p>Displays the status, and completion date for specific courses.</p> <p>The report can be filtered to produce data for specific courses, employees, or completion status (or a combination thereof).</p>
Learning History	<p>The learning history report is a transcript of an employee's full training history. The learning history will provide the course, completion date, status, grade (if applicable) for both SMS and non-SMS courses.</p>

Table 6 - SMS Personnel Training Tracking Reports

At a minimum, the Safety Manager will run the Curriculum Status and the Curriculum Item Status reports quarterly to determine if any SMS initial or recurring training requirements are incomplete. In addition to reports, the Safety Manager will receive automated notifications for complete and incomplete curriculum for individual employees, based upon required completion dates.

Curriculum Status

User

User: js4 User Name: Lewis, Jennifer R

Curricula

Curriculum	Completed	Assignment Date	Days Remaining
SAFEOFFICECUR1 (Safety Training for Office Employees)	Yes	1/12/2009	
HRD5 (Preventing Workplace Harassment 2008-09 Refresher)	Yes	11/5/2008	
HRD4 (Workplace Responsibility Policy Review)	Yes	1/20/2009	
CURGLOBAL1 (Global Learner Tutorial Curriculum)	Yes	9/17/2008	
CUR_TEST101 (This is the title of the curriculum.)	Yes	7/18/2008	
POLICE2 (ACCESS for IT Professionals)	No	8/21/2009	
HRD6 (Employee Version, Preventing Workplace Harassment)	No	9/1/2009	

9/30/2009 02:48 PM America/Seattle

Figure 1 - Sample Curriculum Status Report

Curriculum Item Status

User

User: js4 User Name: Lewis, Jennifer R

Curricula

Curriculum	Completed	Assignment Date	Days Remaining
POLICE2 (ACCESS for IT Professionals)	No	8/21/2009	

Items

Item ID	Title	Completion Date	Completion Status	Required Date
CRSE TECH178 (Rev 12/8/2008 12:36 PM America/Seattle)	ACCESS Policy for IT Professionals (WSP's Database)			9/5/2009

Figure 2 - Sample Curriculum Item Status Report

In addition to reports generated by the Safety Manager, the LMS user interface will inform employees directly if they have overdue training requirements. Email notifications will also be configured to notify individual employees when:

- Training is assigned.
- Training is scheduled.
- Training is overdue.

Similar notifications will also be configured for the individual's supervisor/manager. The supervisor/manager will additionally have the ability to view all assigned, scheduled, completed, and overdue training for his or her direct reports.

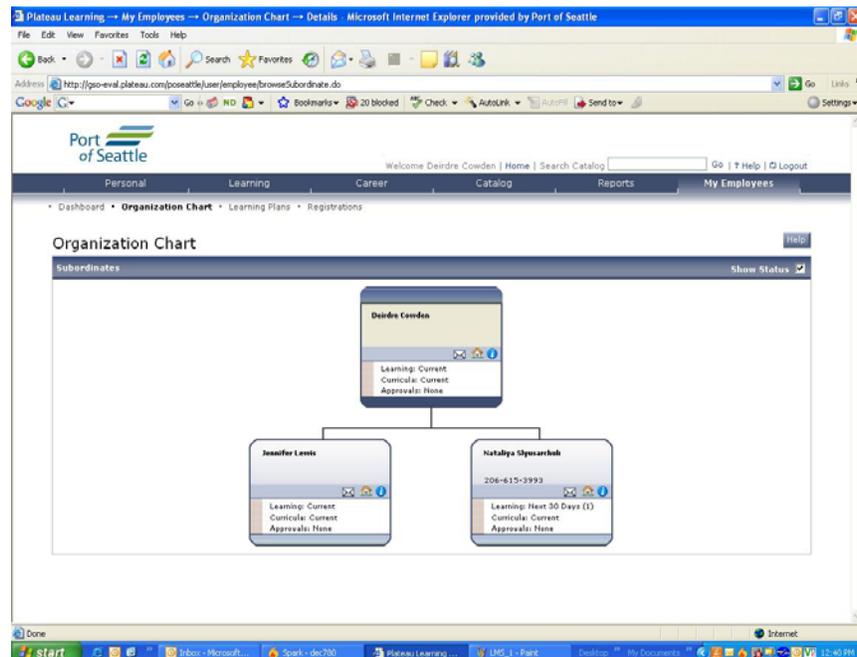


Figure 3 - Sample Supervisor Interface to View Course Completion Status

3 SeaTac Airport Tenant SMS Orientation

3.1 Safety Management System Orientation Course

For the initial SMS deployment, applicants for Airport Operations Area (AOA) and/or Airport Movement Area (AMA) badges will be required to take the SMS Orientation course. At SeaTac, AMA training has a required 1 year recurrence and AOA training has a required 2 year recurrence. For ease of reporting and tracking, the SMS Orientation course will adopt the same 2 year recurrence requirement as AOA training. The course will be offered as a CBT module and built into the existing AOA CBT which has been developed and delivered by AAAE. For the initial implementation, the projected number of annual trainees is approximately 4,500.

Upon expansion of SMS into Landside and Terminal, the SMS Orientation course will be required for all SIDA badge holders, will be offered alongside SIDA training, and will continue to have a 2 year recurrence requirement (mirroring the existing requirement for SIDA). At SeaTac, the SIDA population has historically experienced the most difficulty in passing required assessments and, in general, takes the longest amount of time to complete training successfully. This is due, in part, to a high percentage of SIDA applicants for whom English is a second language and who have a relatively lower educational level than other populations. Upon the extension of the SMS Orientation course to the entire SIDA population, SeaTac will examine the possibility of creating a second, SIDA-specific module more tailored to the specific educational needs of this demographic. Upon extension of SMS to this population, the projected number of annual trainees is approximately 15,000.

For implementation, it will be necessary to consider production and staffing impacts to the Airport Training Office. Currently, the Airport Training Office is open 40 hours per week, is staffed with 1.5 full-time equivalent (FTE) staff, and is operating at 90% capacity. With the additional training hours required for the SMS Orientation course, it may be necessary to extend operating hours and may also be necessary to allocate additional FTE.

3.1.1 SMS Orientation

Purpose:	To provide all SeaTac tenant employees and contractors with an overview of Safety Management Systems at Seattle Tacoma International Airport. To convey the importance of individual responsibility and contribution to the overall safety culture. To instruct tenants on how to identify, report, and follow up on hazards within the SMS.
Key Topics:	<ol style="list-style-type: none"> 2. Introduction to SMS <ol style="list-style-type: none"> a. Purpose b. Elements c. Scope/Application at SeaTac (i.e. airside, ramp, bagwell) 3. SeaTac's Safety Policy <ol style="list-style-type: none"> a. Policy overview b. SeaTac safety team c. Safety committees 4. Tenant Role in Safety Management at SeaTac <ol style="list-style-type: none"> a. Human factors and situational awareness b. Participation in and creation of a safety culture c. FOD prevention d. Identifying and reporting hazards 5. Hazard Reporting <ol style="list-style-type: none"> a. SeaTac non-punitive policy b. What is a safety hazard? <ol style="list-style-type: none"> i. What does "safe" mean? ii. What is a hazard? iii. How can I spot a safety hazard? c. How to submit a hazard report <ol style="list-style-type: none"> i. Online reporting portal ii. Phone iii. Drop Box iv. Safety Committees v. Company Supervisory Chain d. How to follow up on a hazard report
Audience:	Airport workers with Airport Operations Area (AOA) and Airport Movement Area (AMA) badges
Delivery Method:	Computer-based training
Estimated Duration:	30 minutes
Trainer/Provider:	TBD
Frequency/Recurrence:	Initial for badge approval Recurrent annually with badge renewal (taken in conjunction with recurrent SIDA)
Prerequisites:	None
Implementation:	<ol style="list-style-type: none"> 1. Implement initially to AOA and AMA badge applicants 2. If created as a separate module, SMS Orientation could be added to SIDA badge applicant training if/when SMS is expanded to include Landside and Terminal

Table 7 - SMS Orientation Course

3.2 Tenant SMS Orientation Tracking and Reporting

Reporting for tenant SMS Orientation will require an extension of a custom reporting solution that was implemented to track recurrent requirements for tenant badge-related training. Badge, course completion, course recurrence, new reporting and user interface requirements for tenant SMS Orientation will need to be considered for expansion of the existing reporting and ID Badge system in order to ensure that tenant completion is adequately tracked. Please note that if there is a delay between the SMS Orientation course readiness and the readiness of an extended custom reporting solution, the SMS Orientation course may be delivered to SeaTac tenants in advance and completion assumed based upon AOA completion status.

As with employee SMS training, the Safety Manager and Safety Specialist will have the ability to produce reports for tenant SMS Orientation. The following are existing reports that, at a minimum, will be utilized to track SMS Orientation upon implementation:

Report Title	Information Provided
Recurrent Training Status Report	<p>Displays recurrent training history for active ID/badge holders including company, employee name, job title, badge number/type, badge expiration data, training type, training history, and retraining due date (based upon training type).</p> <p>The report can be filtered to produce data based on company, badge type, retraining due date, and prior training dates.</p>
Student Training Transcript	<p>Displays training transcript report for ID/badge holders including employee name, company, course(s) information, completion status, completion date,</p> <p>The report can be filtered to produce data based on employee number and training date range.</p>

Table 8 - SMS Airport Tenant Orientation Tracking Reports

Appendix A: Summary of SMS Training/Orientation Courses

Course	Audience	Topics	Estimated Duration	Frequency/Recurrence	Delivery Method
SMS Introduction	Airfield Operations (28, 5) Airfield Security (5, 2) ID Badge (2, 1) Communications & Dispatch (12, 0) Operations Planning (5, 1) Police (10, 2) Fire Department (10, 2) Aviation Maintenance - Airfield personnel (25, 5) Environmental Programs (5, 1) Risk Management (3, 1) Port Construction Services (3, 1) Engineering (4, 1) Health & Safety (3, 1)	<ol style="list-style-type: none"> 1. Introduction to SMS 2. SeaTac's Safety Policy 3. SMS Roles & Responsibilities 4. Tenant Role in SMS 5. Employee Role in SMS 6. Hazard Reporting 	60 minutes	Initial No refresher or recurrence	In-person
SMS Safety Risk Management	Operations Senior Managers (5, 5) Safety Specialists (3, 0) Airport Duty Managers (12, 0) Airport Operations Specialists (8, 0) Communications and Dispatch (12, 1) Maintenance Liaison (2, 1) Maintenance Lead (2, 1) Risk Management Liaison (2, 1) Health & Safety Liaison (1, 0) Environmental Liaison (1, 0) Construction Liaison (1, 0)	<ol style="list-style-type: none"> 1. Safety Risk Management Process Overview 2. Identify Hazards 3. Analyze Initial Risk 4. Assess Risk 5. Treat Risk 	4 hours 1 hours	Initial Annual refresher	In-person In-person (case study)
Investigation Techniques	Safety Specialists (3, 0) Airport Duty Managers (12, 0) Airport Operations Specialists (8, 0) Communications and Dispatch (12, 1) Risk Management Liaison (2, 1)	<ol style="list-style-type: none"> 1. Investigation Approach 2. Investigative Techniques 3. External Support 	3 hours	Initial No refresher or recurrence	In-person
SMS Safety Assurance	Safety Specialists (3, 0) Airport Duty Managers (12, 0) Airport Operations Specialists (8, 0) Risk Management Liaison (2, 1)	<ol style="list-style-type: none"> 1. Introduction to Safety Assurance 2. Ramp Inspections 3. Enforcement Strategies 4. Inspections Tracking & Reporting 5. Leading by Example 	2 hours 30 minutes	Initial Annual refresher	In-person Online

SMS Training and Orientation

SMS Orientation	SeaTac Tenants – approximate total 18,000. AOA & AMA Tenant Badge Holders (approximately 7,500) Annual Orientation for Tenants – 4,500	<ol style="list-style-type: none"> 1. Introduction to SMS 2. SeaTac's Safety Policy 3. Tenant Role in SMS 4. Hazard Reporting 	30 minutes	Initial Annual recurrence (taken with SIDA)	CBT
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Note: within the Audience column number of total staff to be trained and number of management staff within the totals are in parenthesis following each group. For example, the SMS Introduction course includes the Airfield Operations group (28, 5) and indicates that a total of 28 staff will be trained and, of these, 5 are management.

Appendix B: Summary of SMS Training and Orientation Reports

Report Title	Report Description	Employee or Tenant	Report Filters	Reporting Frequency
Curriculum Status	Displays the status (complete, incomplete) of one or more curricula. For incomplete curriculum, the report provides the number of days remaining until the required completion date.	Employee	Completion Status Employee Curriculum	Quarterly and as needed
Curriculum Item Status	Displays the status (complete, incomplete) of specific courses within a curriculum and the required date and completion date for each course.	Employee	Curriculum	Quarterly and as needed
Item Status	Displays the status and completion date for a specific course.	Employee	Completion Status Employee Course	As needed
Learning History	Displays an employee's full training history.	Employee	Employee	As needed
Recurrent Training Status	Displays recurrent training history for active ID/badge holders including company, employee name, badge type, training date, training type, training history and retraining due date.	Tenant	Company Badge Type Retraining Due Date Prior Training Date(s)	Quarterly
Student Training Transcript	Displays training transcript report for ID/badge holders including employee name, company, courses, completion status and completion date.	Tenant	Employee Number Training Date(s)	As needed

Appendix C: Initial LMS Configuration Parameters

The following tables contain recommended configuration parameters necessary to add employee SMS training courses into SeaTac's Learning Management System. These parameters are preliminary only and may be subject to change during SMS training program implementation. Please note that, because these parameters are specific to LMS, the tenant-specific SMS Orientation course that will reside externally to LMS is not included.

Initial Item Summary	
Contact Email:	TBD – Safety Manager
Item Type: *	CRSE (Course)
Item ID: *	SMS100
Title:	SMS Introduction
Description:	Introduces SeaTac airport employees to the four elements of SMS and provides airport employees with information regarding SeaTac's safety policy, the scope and implementation of SMS. Educates airport employees about their role and responsibilities within the airport's SMS framework and within SeaTac's safety culture.
Domain ID: * <i>Department Information</i>	Aviation
Total Hours:	1 hour (60 minutes)
Subject Area:	<input checked="" type="checkbox"/> SAFETY Optional Safety Management System subcategory (new)
Item Summary Data	
Source:	Internal
Delivery Method:	ILT (Instructor-Led)
Assignment Type:	REQ (required)
Safety Related?	Yes
Auto Fill Registration? <i>Yes = if a seat becomes available, the LMS will automatically fill it for you.</i>	Yes
Enable User Requests? <i>Yes = allows a user to send you a message through the LMS.</i>	Yes
Enable Users to Waitlist?	Yes
Default Retraining Assignments <i>(Is this a recurring training? If no, skip this section.)</i>	
Retraining Number:	NA

Initial Basis: <ul style="list-style-type: none"> • <i>Calendar-based recurring training is the exact number of days between initial and the next recurring training, i.e. 365 days before training is overdue</i> • <i>Event-based training references the last successful completion of the item.</i> 	NA
Initial Period:	NA
Item Delivery Data	
Minimum Registration:	10
Maximum Registration:	20
Online Settings	
Item is Online (available to Users)?	No
Mark item as complete when all objects are complete?	NA
Expiration Date:	NA
Online Completion Status:	NA
Online Failure Status:	NA
Curriculum	
Will this item be assigned to individuals as a training requirement?	Yes
Included in Curricula:	SMS-Introduction SMS-Risk Management SMS-Risk Management and Safety Assurance

Table 9 - SMS Introduction Course Configuration Parameters

Initial Item Summary	
Contact Email:	TBD – Safety Manager
Item Type: *	CRSE (Course)
Item ID: *	SMS200
Title:	SMS Safety Risk Management
Description:	Provides the Safety Management team with detailed information regarding the process, tools, roles and responsibilities of the airport's Safety Risk Management program.
Domain ID: * <i>Department Information</i>	Aviation
Total Hours:	4 hours
Subject Area:	<input checked="" type="checkbox"/> SAFETY Optional Safety Management System subcategory (new)
Item Summary Data	
Source:	Internal
Delivery Method:	ILT (Instructor-Led)
Assignment Type:	REQ (required)
Safety Related?	Yes
Auto Fill Registration? <i>Yes = if a seat becomes available, the LMS will automatically fill it for you.</i>	Yes
Enable User Requests? <i>Yes = allows a user to send you a message through the LMS.</i>	Yes
Enable Users to Waitlist?	Yes
Default Retraining Assignments <i>(Is this a recurring training? If no, skip this section.)</i>	
Retraining Number:	NA
Initial Basis: <ul style="list-style-type: none"> <i>Calendar-based recurring training is the exact number of days between initial and the next recurring training, i.e. 365 days before training is overdue</i> <i>Event-based training references the last successful completion of the item.</i> 	NA
Initial Period:	NA
Item Delivery Data	

Minimum Registration:	5
Maximum Registration:	15
Online Settings	
Item is Online (available to Users)?	No
Mark item as complete when all objects are complete?	NA
Expiration Date:	NA
Online Completion Status:	NA
Online Failure Status:	NA
Curriculum	
Will this item be assigned to individuals as a training requirement?	Yes
Included in Curricula:	SMS-Risk Management SMS-Risk Management and Safety Assurance

Table 10 - SMS Safety Risk Management Initial Training Course Configuration Parameters

Initial Item Summary	
Contact Email:	TBD – Safety Manager
Item Type: *	CRSE (Course)
Item ID: *	SMS210
Title:	SMS Safety Risk Management Refresher
Description:	Provides refresher training on the Safety Risk Management process, using a case study from the previous year.
Domain ID: * <i>Department Information</i>	Aviation
Total Hours:	1 hour
Subject Area:	<input checked="" type="checkbox"/> SAFETY Optional Safety Management System subcategory (new)
Item Summary Data	
Source:	Internal
Delivery Method:	ILT (Instructor-Led)
Assignment Type:	REQ (required)
Safety Related?	Yes

Auto Fill Registration? <i>Yes = if a seat becomes available, the LMS will automatically fill it for you.</i>	Yes
Enable User Requests? <i>Yes = allows a user to send you a message through the LMS.</i>	Yes
Enable Users to Waitlist?	Yes
Default Retraining Assignments (Is this a recurring training? If no, skip this section.)	
Retraining Number:	12
Initial Basis: <ul style="list-style-type: none"> <i>Calendar-based recurring training is the exact number of days between initial and the next recurring training, i.e. 365 days before training is overdue</i> <i>Event-based training references the last successful completion of the item.</i> 	Event-based, from completion of SMS200 – SMS Safety Risk Management Initial Training
Initial Period:	Months
Item Delivery Data	
Minimum Registration:	5
Maximum Registration:	15
Online Settings	
Item is Online (available to Users)?	No
Mark item as complete when all objects are complete?	NA
Expiration Date:	NA
Online Completion Status:	NA
Online Failure Status:	NA
Curriculum	
Will this item be assigned to individuals as a training requirement?	Yes
Included in Curricula:	SMS-Risk Management SMS-Risk Management and Safety Assurance

Table 11 - SMS Safety Risk Management Refresher Training Course Configuration Parameters

Initial Item Summary	
Contact Email:	TBD – Safety Manager
Item Type: *	CRSE (Course)
Item ID: *	SMS250
Title:	SMS Investigation Techniques
Description:	Provides Safety Management team with a consistent approach and skill set for conducting accident and incident investigations and root cause analysis.
Domain ID: * <i>Department Information</i>	Aviation
Total Hours:	3 hours
Subject Area:	<input checked="" type="checkbox"/> SAFETY Optional Safety Management System subcategory (new)
Item Summary Data	
Source:	Other (Case Forensics, Inc)
Delivery Method:	ILT (Instructor-Led)
Assignment Type:	REQ (required)
Safety Related?	Yes
Auto Fill Registration? <i>Yes = if a seat becomes available, the LMS will automatically fill it for you.</i>	Yes
Enable User Requests? <i>Yes = allows a user to send you a message through the LMS.</i>	Yes
Enable Users to Waitlist?	Yes
Default Retraining Assignments <i>(Is this a recurring training? If no, skip this section.)</i>	
Retraining Number:	NA
Initial Basis: <ul style="list-style-type: none"> <i>Calendar-based recurring training is the exact number of days between initial and the next recurring training, i.e. 365 days before training is overdue</i> <i>Event-based training references the last successful completion of the item.</i> 	NA
Initial Period:	NA
Item Delivery Data	

Minimum Registration:	5
Maximum Registration:	20
Online Settings	
Item is Online (available to Users)?	No
Mark item as complete when all objects are complete?	NA
Expiration Date:	NA
Online Completion Status:	NA
Online Failure Status:	NA
Curriculum	
Will this item be assigned to individuals as a training requirement?	Yes
Included in Curricula:	SMS-Risk Management and Safety Assurance

Table 12 - SMS Investigations Techniques Course Configuration Parameters

Initial Item Summary	
Contact Email:	TBD – Safety Manager
Item Type: *	CRSE (Course)
Item ID: *	SMS300
Title:	SMS Safety Assurance
Description:	Provides Safety Management team with information on the purpose of the Safety Assurance SMS element, its components, and specific processes and procedures necessary to implement and perform Safety Assurance functions.
Domain ID: * <i>Department Information</i>	Aviation
Total Hours:	2 hours
Subject Area:	<input checked="" type="checkbox"/> SAFETY Optional Safety Management System subcategory (new)
Item Summary Data	
Source:	Internal
Delivery Method:	ILT (Instructor-Led)
Assignment Type:	REQ (required)
Safety Related?	Yes

Auto Fill Registration? <i>Yes = if a seat becomes available, the LMS will automatically fill it for you.</i>	Yes
Enable User Requests? <i>Yes = allows a user to send you a message through the LMS.</i>	Yes
Enable Users to Waitlist? <i>Would you like to activate a waitlist for this Item?</i>	Yes
Default Retraining Assignments (Is this a recurring training? If no, skip this section.)	
Retraining Number:	NA
Initial Basis: <ul style="list-style-type: none"> <i>Calendar-based recurring training is the exact number of days between initial and the next recurring training, i.e. 365 days before training is overdue</i> <i>Event-based training references the last successful completion of the item.</i> 	NA
Initial Period:	NA
Item Delivery Data	
Minimum Registration:	5
Maximum Registration:	15
Online Settings	
Item is Online (available to Users)?	No
Mark item as complete when all objects are complete?	NA
Expiration Date:	NA
Online Completion Status:	NA
Online Failure Status:	NA
Curriculum	
Will this item be assigned to individuals as a training requirement?	Yes
Included in Curricula:	SMS-Risk Management and Safety Assurance

Table 13 - SMS Safety Assurance Initial Training Course Configuration Parameters

Initial Item Summary	
Contact Email:	TBD – Safety Manager
Item Type: *	CRSE (Course)
Item ID: *	SMS310
Title:	SMS Safety Assurance Refresher
Description:	Provides Safety Management team with a brief refresher on Safety Assurance processes and procedures.
Domain ID: * <i>Department Information</i>	Aviation
Total Hours:	30 minutes
Subject Area:	<input checked="" type="checkbox"/> SAFETY Optional Safety Management System subcategory (new)
Item Summary Data	
Source:	Internal
Delivery Method:	ONLINE (Online Training/Exam)
Assignment Type:	REQ (required)
Safety Related?	Yes
Auto Fill Registration? <i>Yes = if a seat becomes available, the LMS will automatically fill it for you.</i>	Yes
Enable User Requests? <i>Yes = allows a user to send you a message through the LMS.</i>	Yes
Enable Users to Waitlist? <i>Would you like to activate a waitlist for this Item?</i>	Yes
Default Retraining Assignments <i>(Is this a recurring training? If no, skip this section.)</i>	
Retraining Number:	12
Initial Basis: <ul style="list-style-type: none"> <i>Calendar-based recurring training is the exact number of days between initial and the next recurring training, i.e. 365 days before training is overdue</i> <i>Event-based training references the last successful completion of the item.</i> 	Event-based, from completion of SMS300 – SMS Safety Assurance Initial Training
Initial Period:	Months
Item Delivery Data	

Minimum Registration:	NA
Maximum Registration:	NA
Online Settings	
Item is Online (available to Users)?	Yes
Mark item as complete when all objects are complete?	Yes
Expiration Date:	TBD
Online Completion Status:	Complete
Online Failure Status:	Incomplete
Curriculum	
Will this item be assigned to individuals as a training requirement?	Yes
Included in Curricula:	SMS-Risk Management and Safety Assurance

Table 14 - SMS Safety Assurance Refresher Training Course Configuration Parameters