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Safety Management System (SMS) Manual
Kona International Airport at Keahole (KOA)

January 2009

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Kona International Airport at Keahole

Table of Contents

Safety Management System (SMS) Manual
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Table of Contents (Cont'd.)

List of Appendices

INTRODUCTION

In February 2007 the Federal Aviation Administration (FAA) issued Advisory Circular, AC 150/5200-37, *Introduction to Safety Management Systems (SMS) for Airport Operators*, to introduce the concepts of Safety Management Systems (SMS). The FAA has also opened a rulemaking project to consider formal requirements for SMS at certified airports. In support of this rulemaking effort, the FAA has initiated a pilot program to assist selected airports in the development of an SMS specific to their situation and operations, and to share in the future their acquired experience on SMS development and implementation with other airports and the FAA.

The State of Hawaii Department of Transportation Airports Division (HDOT-A) decided to take a leadership role in the development and implementation of SMS at the Kona International Airport at Keahole (KOA) by participating in the FAA pilot program.

The FAA has specified that SMS should apply only to those areas of the airport that are subject to FARs Part 139 dealing with the airport's airside Thus, the Safety Management System described in this document addresses aviation safety on the airside area of the airport. The SMS does not include safety within any rented, leased, or other space under the control of parties other than HDOT-A. It does not include any activities within the passenger terminal building and all landside areas of the airport.

Furthermore, it does not include safety regulations and procedures relating to employee safety. These are addressed by the Hawaii Occupational Safety and Health (HIOSH) standards and HDOT-A's Employee Safety and Health Program.

The SMS Manual is a sub-set (supporting document) to the Airport Certification Manual (ACM).

Safety Management System
Kona International Airport at Keahole

i. Copyright

ii. Control of SMS Documents

The SMS Safety Officer at KOA established under the Safety Management System (SMS) at the Airport shall be responsible for controlling the preparation, verification, revision and distribution of the SMS Manual and related SMS Forms.

RECORD OF AMENDMENTS

Amendment No.	Subject	Updated By	Date
08-001	1.2 Policy, page 2	KOA ADM	October 29, 2008 (example)

1.0 SAFETY POLICY AND OBJECTIVES

1.1 The Need for Safety Management Systems (SMS)

The intent of SMS is to improve aviation safety. The elimination of aviation accidents is a desirable goal. However, no human activity or human-made system can be guaranteed to be absolutely safe. Failures and errors will occur, in spite of best efforts to avoid them. Although major air disasters are rare events, a whole range of incidents occur more frequently. Ignoring these underlying safety hazards could pave the way for an increase in the number of more serious accidents.

The air transportation industry's future viability may well be predicated on its ability to sustain the public's perceived safety while traveling. The management of safety is therefore a prerequisite for a sustainable aviation business.

The application of SMS at an airport can contribute to this effort by increasing the likelihood that airport operators, and other stakeholders, will detect and correct airside safety problems before they result in an accident or incident.

There are many clear benefits of establishing and implementing an SMS. These benefits include:

a) Prevent and Reduce Injuries to Airline Passengers and Airport Personnel

Properly planned and executed SMS anticipates and addresses safety issues before they lead to an incident or accident during airside operations that can injure passengers and employees working at the airport. An SMS also provides the management of the airport with the ability to deal effectively with aviation accidents and incidents so that valuable lessons are learned and applied to improve safety.

b) Reduce the Economic Impact of Accidents

The costs of a major accident at, or near, the airport, with injuries to people and damage to property, can threaten the financial viability of the airport. Direct costs are the obvious costs for rectifying, replacing or compensating for injuries and airport property damage. There are also other costs which may not be as obvious, may be delayed over time and may eventually be higher than direct costs.

These other costs could include:

- Loss of revenues if flights are cancelled or airlines cease operations at the airport;
- Legal and damage claims;
- Cost of replacing and compensating injured employees;
- Increased insurance claims or denial of insurance coverage;
- Clean-up of the accident site;
- Cost of internal and government investigations; and
- Loss of use of equipment.

1.2 HDOT-A Safety Policy (Mission) and Goals

The Airports Administrator for the State of Hawaii has recognized the need for, and benefits of, an effective SMS for the Kona International Airport (KOA).

It is HDOT-A policy to provide the highest reasonable standard of safety within KOA by identifying and minimizing those risks arising from airport activities which could contribute to aviation accidents and incidents. This is the **mission** of the SMS

HDOT-A and the Airports District Manager (ADM) at KOA are committed to implementing SMS at KOA to achieve the following **goals**:

- All KOA employees involved in airside operations will understand the hazards and risks in airside operations;
- All KOA personnel involved in airside operations will receive proper initial and recurrent training to do their jobs safely in order to protect themselves, other workers, passengers, cargo, aircraft and equipment;
- Proper procedures and adequate equipment and facilities will be in place for safety;
- All KOA employees will be able to report aviation safety concerns, issues, incidents and accidents without fear of negative personal consequences or reprisal;
- When safety concerns are identified, they will be analyzed and appropriate action will be taken through a safety risk management process;
- All KOA employees working airside will be updated on safety issues by their management;

- ✈ Safety information will be effectively exchanged among all key tenants at KOA; and
- ✈ Continual improvements to airside safety will be made.

The means to achieve these goals are addressed through subsequent sections dealing with SMS processes.

Furthermore, HDOT-A will continue to adopt explicit safety standards which comply with statutory obligations and meet, or exceed, FAA regulations and standards.

HDOT-A will develop a culture among all managers and staff which fosters an increasing understanding of the importance of safety in all of its activities and the resultant responsibilities of each individual. HDOT-A will provide the environment, support and training necessary to achieve this goal.

1.3 Safety Objectives

Safety objectives are measurable targets that provide direction and guidance for safety management activities. The safety objectives to be implemented for the first year of operations under SMS are as follows:

1. Safety hazards identified during airport self inspections: In the first year, KOA will collect and analyze relevant data through trend analysis (e.g., type and quantity of Foreign Object Debris (FOD) and then set objectives each succeeding year (e.g., enhanced FOD reduction program in cargo area).
2. Airside safety violations: KOA will develop and approve an enforcement program, train all Airport, tenant and contractor personnel operating on the Airport Operating Area (AOA) to ensure that they are aware of the enforcement program, and implement the enforcement program.
3. Aircraft bird strikes: KOA's wildlife control contractor will record the actual number of bird strikes as a baseline. KOA will monitor developments near or on airport lands and review and approve related development plans to limit the potential of bird strikes.
4. Incursions of vehicles, aircraft, or pedestrians on movement areas: With a reported one incursion in the past four years, the objective is to not to have any incursions.
5. Number and type of accidents and incidents on the AOA including the controlled movement area involving air carrier aircraft and/or ground vehicles: This has not been an issue at KOA but activities on the congested ramp provide the potential for accidents. KOA will remind all operators on

the ramp of hazards and safety by conducting annual safety meetings. KOA will also implement an Enforcement Plan for Airside Operations (as per Objective 2).

6. Operable time of lighting systems: As per the targets in the ACM, Section 14, KOA will collect the relevant data, store on a data base and produce quarterly and annual reports outlining to what extent the targets have been achieved.
7. Training: KOA will record the number of airside based employees who have received safety and SMS related training and maintain a record in each employee's personnel file. KOA will receive from the managers of airlines, fuelers or other firms operating on the AOA a record of any additional safety training provided by the companies to further safety on the ramp.
8. Non-punitive safety reports: The objective in the first year is to implement non-punitive reporting and determine how well it works, and then to suggest and implement possible improvements for year two.
9. Safety Risk Management: The objective in the first year is to conduct safety risk assessments of specific safety concerns and issues raised during the development of the SMS Manual. The action plans resulting from these assessments will be prioritized for action. Safety Risk Management procedures are detailed in Section 3.

The sources of the data related to these objectives include the following:

1. Trends in Airport Self Inspections	Airport Maintenance
2. Airside Safety Violations	Airport Operations Control
3. Aircraft Bird Strikes	Air Traffic Control
4. AOA Incursions	Air Traffic Control
5. Accident and Incidents on the AOA	Airport Operations Control
6. Operable Time of Lighting Systems	Airport Maintenance
7. Training	Airport Operations Control
8. Non-Punitive Reporting	The SMS Safety Officer
9. Safety Risk Management and Safety Action Plans	The SMS Safety Officer

The process for the annual update of these objectives includes the following steps:

1. The SMS Safety Officer meets with other KOA managers to review the achievements of measurable objectives and to determine which objectives are

still relevant, how they should be revised and what new objectives may be required to address new safety concerns.

2. The annual review includes the analysis of trends in self-inspections, bird strikes, incursions and accidents/incidents to determine if action is needed to reverse negative trends and make improvements. Measurable objectives for example would be to reduce incidents of wildlife on the airfield by 10%, decrease violations by 20% while maintaining diligent surveillance.

3. The setting of objectives should determine the sources of the data to be collected to measure achievement of the objectives and who will be responsible for collecting and reporting the data to the SMS Safety Officer.

4. The objectives and data collection schemes should be documented for approval by the Airports District Manager.

5. The SMS Safety Officer then monitors actual performance in meeting the approved objectives.

2.0 ORGANIZATION FOR SAFETY

2.1 Organizational Structure

Responsibility for safety at KOA includes both the Airports Division and KOA organizations. The organizational structures for safety at the Airport Division and KOA are depicted in Exhibits 2.1 and 2.2.

2.2 Safety Roles and Responsibilities

This section describes the role and responsibilities of key participants at the Airports Division and KOA for aviation safety.

2.2.1 Airports Administrator

The responsibilities of the Airports Administrator for SMS include:

- Approval of SMS safety policies and SMS plans for each State airport;
- Periodic reviews and updates of HDOT-A SMS safety policies;
- Ensuring that financial and human resources required for proper execution of SMS are available at airports in Hawaii; and
- Appointment of a SMS Safety Advisor at the Division.

2.2.2 SMS Safety Advisor

The SMS Safety Advisor is responsible for:

- Providing advice to airport SMS Safety Officers and the Divisional Engineering Branch on SMS practices particularly the hazard identification and safety risk assessment process;
- Providing advice in the data bases that should be established for State of Hawaii airports for conducting trend analysis of safety concerns, hazards, incidents and accidents;
- Providing advice to airport SMS Safety Officers on establishing and updating airport SMS including safety objectives;
- Developing SMS and related safety training material and programs that can be used by State airports;

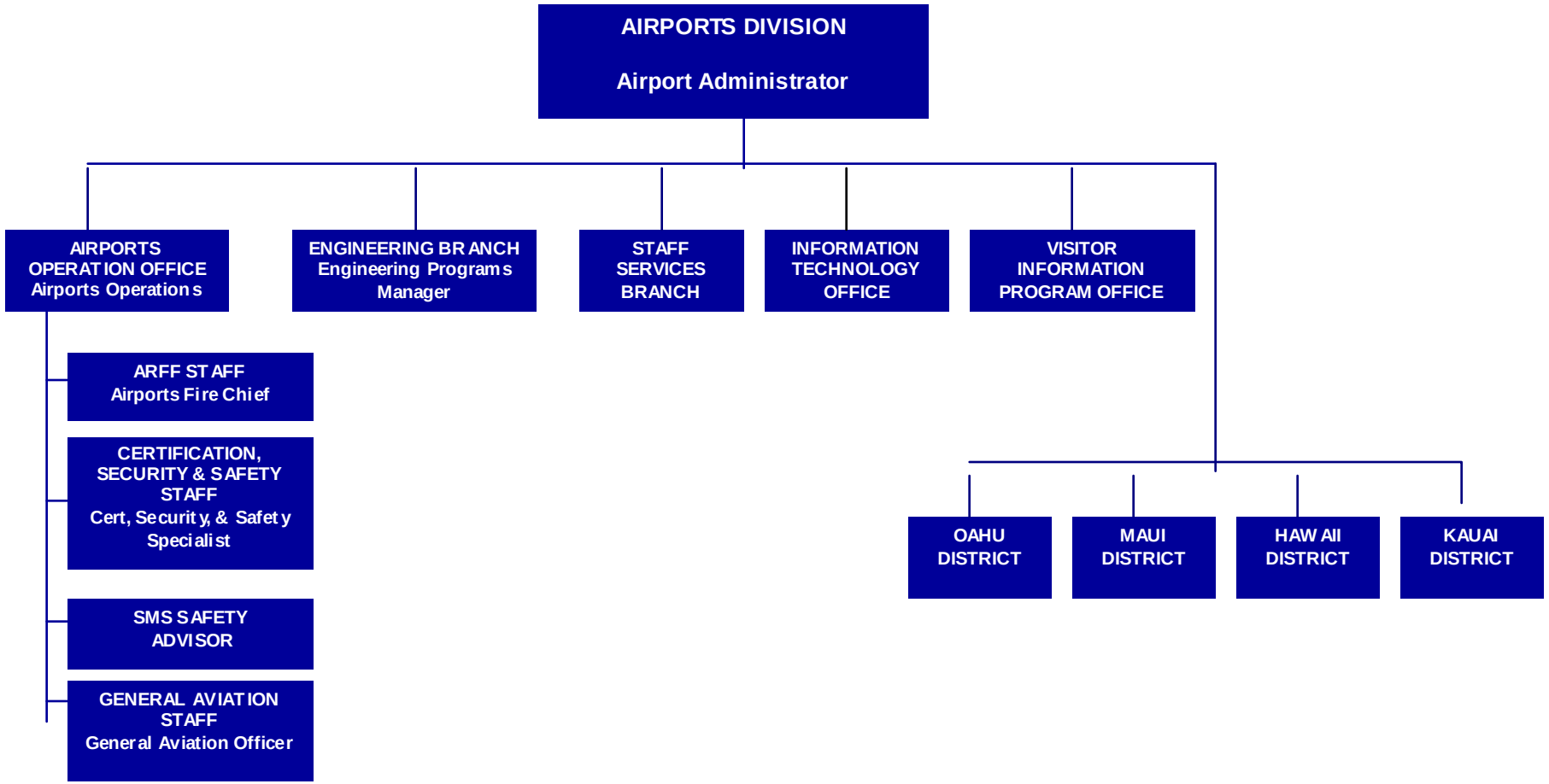

Exhibit 2.1. Division Organization Structure

- Monitoring implementation of the SMS at each airport;
- Conducting periodic audits of the safety plans and programs of tenants at HDOT-A airports;
- Developing and implementing SMS programs at smaller HDOT-A airports; and
- Collecting relevant safety information from each airport and preparing a corporate safety report annually.

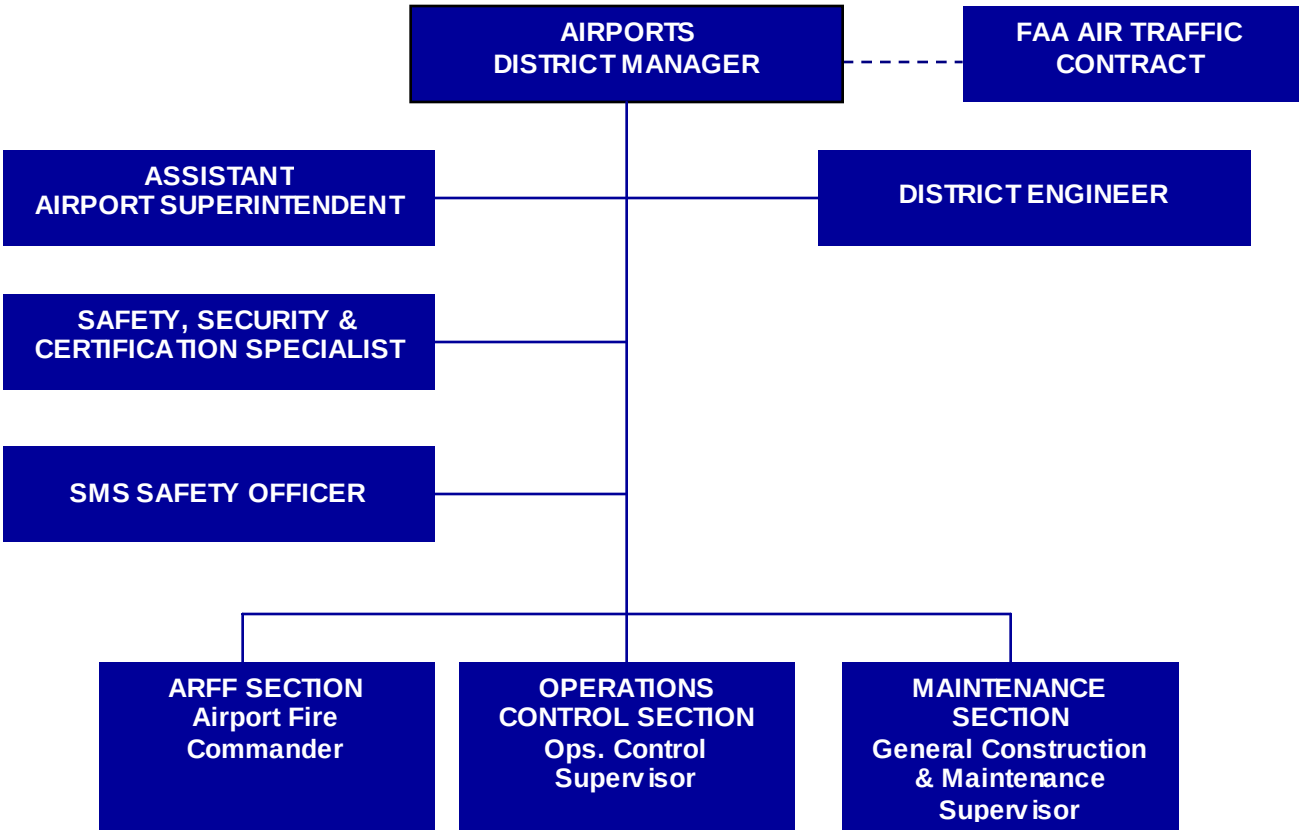

Exhibit 2.2. KOA Organization Structure for Safety

2.2.3 Engineering Branch

The Engineering Branch is responsible for conducting formal hazards identification and safety risk management assessments whenever new equipment

is being planned or installed, or when new facilities are being constructed that may have an impact on safety at FAR Part 139 airports in Hawaii.

2.2.4 Airports District Manager

The responsibilities of the Airports District Manager (ADM) for SMS at KOA include:

- Approval of safety policy and goals;
- Approval of the SMS for KOA;
- Chairing the Airport Safety Committee;
- Approving Safety Action Plans if beyond the authority of the manager responsible for taking action;
- Periodic reviews and updates of the SMS, safety policy and goals for KOA; and
- Deploying financial and human resources, within the ADM's control, for proper execution of the SMS.

2.2.5 SMS Safety Officer

This person is responsible for administering and implementing the SMS at KOA.

The role of the SMS Safety Officer in administering and implementing SMS is as follows:

- Participating in the Airport Safety Committee, as the Secretariat;
- In consultation with other KOA managers, develop and propose annual safety objectives for approval by the Airports District Manager;
- Measuring safety performance in relation to safety objectives;
- Taking the lead role in safety risk management assessments of hazards, incidents and accidents to determine action required;
- Conducting trend analysis of safety concerns, hazards, incidents and accidents and determining action required, in consultation with other airport staff;
- Ensuring appropriate action is taken in response to safety concerns, hazards, incidents and accidents;
- Keeping records of all safety related reports, incidents and accidents, and conducting trend analysis;
- Providing and coordinating safety promotion;
- Ensuring the provision of safety training for airport employees and tenants located or working in the AOA;

- Implementing a non-punitive reporting system;
- Ensuring that safety audits are conducted when required;
- Controlling the preparation, verification, revision and distribution of the SMS Manual and related SMS Forms; and
- Annual review of the safety policy and safety objectives.

2.2.6 Safety, Security and Certification Specialist

The Safety, Security and Certification Specialist is responsible for participating in FAA certification inspections and ensuring correction of deficiencies. He is also responsible for implementing the Employee Health and Safety Program at KOA and ensuring the Kona meets security regulations as set out by the Transportation Security Agency.

This person should participate in the Airport Safety Committee.

2.2.7 Airport Operations Control Section

Key duties of the Airport Operations Control Section that have an impact on aviation safety are listed below:

- Conducting inspections of the runways, taxiways, ramps and aprons to check for FOD, wildlife, obstructions and other hazardous conditions;
- Patrols of airport operational areas to monitor and control, as required, the movement of aircraft, vehicles and support personnel;
- Staffing and operating the Airport Operations Control Center;
- Assigning aircraft to gates when required (e.g., when a preferential gate is occupied as a result of delays in departures of another aircraft or early arrivals);
- Distributing Notice to Airmen (NOTAMs). These may be prepared by the District Airport Manager, the Airport Operations Supervisor or the General Construction and Maintenance Supervisor;
- Supervising contract security services who:
  - Implement the airport badging and vehicle identification program, and related driver training and testing described subsequently;
  - Conduct perimeter patrols; and
  - Provide terminal, landside and airside policing.

The role of the Airport Operations Control Section in administering and implementing the SMS would include:

- Participating in the Airport Safety Committee;
- In consultation with the SMS Safety Officer, set annual safety objectives and provide relevant performance data to the SMS Safety Officer; and
- Participating in Safety Risk Management Assessments as and when required per Section 3.

2.2.8 Maintenance Section

The Maintenance Section has important responsibilities that impact aviation directly. It is responsible for:

- Maintaining the concrete and asphalt integrity of all runways, taxiways and ramp to provide a high level of physical safety;
- Daily, weekly, monthly and random inspections of runways and taxiways, beacon and wind sock, airfield lighting, fencing and vegetation growth;
- Implementing wildlife control on the AOA if and when required;
- Maintaining runway and taxiway paint markings;
- Runway rubber removal maintenance to comply with FAA standards;
- Monitoring all runways, taxiways, and ramps for prevention of FOD accidents;
- Maintaining service roadway system to provide easy access around the airfield without interfering with air traffic;
- Installation, cleaning and replacement of signs on all AOA and access roads for safety to prevent vehicle and aircraft accidents;
- Maintaining the perimeter fence line to prevent wildlife from entering the AOA to provide for safe aircraft operations;
- Maintaining all airfield lighting for runways, taxiways, and ramps for safe aviation operations; and
- Maintaining emergency generator for airfield lighting.

For SMS, the Maintenance Section's responsibilities include:

- Participating in the Airport Safety Committee;
- In consultation with the SMS Safety Officer, set annual safety objectives and provide relevant performance data to the SMS Safety Officer;
- Participating in Safety Risk Management Assessments as and when required per Section 3.0; and
- Reporting on the status of repairs tied to work order system.

2.2.9 ARFF Section

The Aircraft Rescue and Fire Fighting (ARFF) Section is responsible for ensuring ARFF training and operations at the airport in accordance with FAA regulations. ARFF personnel are also responsible for conducting inspections of fuel farm/storage and mobile fuelers in accordance with FAR Part 139. Furthermore, they are responsible for reporting aircraft incidents when the ATC tower is not in operation.

For SMS, ARFF's responsibilities would include:

- Participating in the Airport Safety Committee;
- In consultation with the SMS Safety Officer, set annual safety objectives (e.g., fueling inspections) and provide relevant performance data to the SMS Safety Officer; and
- Participating in Safety Risk Management Assessments as and when required per Section 3.

2.2.10 District Engineer

The District Engineer is responsible for monitoring and inspecting the work of contractors and vendors and ensuring that they follow construction practices that provide safe airside operations. As part of SMS, the District Engineer will participate in the Airport Safety Committee and Safety Risk Management assessments. If appropriate, he will also participate in the annual setting of safety objectives.

2.2.11 Air Traffic Control Tower

The FAA contracted Air Traffic Control tower is responsible for air traffic control at and near the airport from 6:00 AM to 10:00 PM, as well as vehicle control on the movement areas through prescribed protocols. As part of SMS, they will report all incursions on the movement areas to the SMS Safety Officer. They also participate in the Airport Safety Committee and participate in KOA's Safety Risk Management assessments when the assessments deal with hazards or incidents on the movement areas.

2.2.12 Tenants at the Airport

Tenants at KOA such as the airlines, general aviation and FBO's have full accountability and authority for safety within their respective area of operation.

As part of their safety responsibilities, air carriers are required to have in place safety training and safety plans subject to audit by KOA.

2.3 Airport Safety Committee

2.3.1 Roles and Responsibilities

With regard to safety, the Airport Safety Committee is a body of expertise to address and provide advice on safety issues at KOA.

The specific terms of reference for the Airport Safety Committee regarding aviation safety are as follows:

1. Provide a forum to discuss aviation safety matters affecting the Airport and its users;
2. Help identify hazards and risks and advise on safety measures to improve safety, for example;
   - apron congestion
   - FOD
   - airside vehicle operations
   - noise and jet blast
3. Review safety practices and procedures and recommend any necessary changes, for example:
   a. Revised vehicle operating procedures or vehicle lanes
   b. Escorts of arriving and departing passengers
   c. Revision of training frequency and implementation of refresher training
4. Review airport safety rules (regulations);
5. Review reports on safety hazards/risks, incidents and accidents and action taken, or proposed;
6. Review audit reports and action taken or proposed;
7. Provide advice on methods to develop and promote apron safety awareness initiatives, such as poster campaigns and safety presentations/exhibitions;
8. Promote airside discipline;
9. Provide advice on safety measures to be incorporated in airport expansions or modifications; and
10. Review any runway incursions and recommend any changes to operating procedures.

The existence of the Airport Safety Committee does not substitute for the safety management arrangements made by individual organizations represented on the committee.

2.3.2 Membership of the Committee

The Airport Safety Committee (ASC) consists of senior managers representing their organizations with the capacity to make decisions and deploy resources. The following organizations are included:

- The Airports District Manager (Chairperson);
- The SMS Safety Officer (Secretary);
- The Maintenance Supervisor;
- The Safety, Security and Certification Specialist;
- The Operations Supervisor;
- The District Engineer;
- The ARFF Fire Commander;
- The Control Tower Manager;
- The station managers for the major airlines at KOA;
- A member of the general aviation (GA) tenant community (GA Council); and
- A manager from each of the fixed based operators (FBO's).

2.3.3 Airport Safety Committee Meetings

At KOA, there is an Airport Operators Committee (AOC) that meets monthly and includes many of the same members as the ASC. The members of this committee meet at least quarterly to deal solely with safety issues as described above. and the committee is then designed the ASC for that purpose. It is anticipated that the FAA will periodically review the minutes of the ASC as part of its role in ensuring effective implementation of the SMS. The ASC may meet more regularly if warranted and called for by any one member.

The Airport Safety Committee (ASC) is chaired by the Airports District Manager. The SMS Safety Officer will provide Secretariat services to the committee.

The SMS Safety Officer will prepare and distribute meeting agendas in a timely manner together with any relevant papers for members' consideration. All members may submit potential agenda items.

There will be a full distribution of minutes of meetings. Any actions arising from meetings will be annotated in the Minutes and these action items will remain in the minutes until the required action is completed. The SMS Safety Officer will monitor action items being taken and review progress made by those responsible for taking action.

The Committee may from time to time establish and nominate special Working Groups to consider and report on particular safety issues such as FOD, bird strikes and apron congestion.

2.4 Overview of Airside Safety Responsibilities

Everyone working airside has a role to play in ensuring the safety of people, aircraft, vehicles and equipment. For example, anyone working airside should report any potential hazards that they see.

A summary of key responsibilities and accountabilities for airside safety have been listed for KOA Management, ATC, the airlines, ground handlers, fixed base operators and fueling companies in Exhibit 2-3. The list is meant to provide for illustrative purposes only and may not capture all aviation activities on the AOA.

Exhibit 2.3. Key Responsibilities and Accountabilities

	Airport Infrastructure and Services	Aircraft Operations	Passenger Movements	Vehicle Operations
KOA Management, Operations & Maintenance	Provide safe infrastructure and services including: - well maintained runways, aprons, taxiways and other maneuvering areas, and equipment - fully functioning runway, taxiway and apron lighting - runway and apron markings and signage Ensure wildlife and bird control. Provide adequate apron flood lighting. Ensure provision of adequately trained and equipped Emergency Fire and Response services. Implement Safety Management System. Safe storage of hazardous materials. Sweep runways as required. Safe construction of facilities. Report to FAA on condition of movement areas. Daily inspections of FOD on runways, taxiways and aprons.	Observe that safe practices are being followed. Pickup any FOD. Provide and empty FOD bins. Provide safety vests to all HDOT-A airport airside employees. Provide noise protection to airport employees. Ensure that all airside personnel are using safety vests and ear protection.	Support airlines in passenger movements by monitoring guidance provided by airlines/ground handling firm agents	Set policies and practices on safe vehicle operations including issuing of driver and vehicle permits. Provide basic training in airside vehicle operations. Monitor vehicle operations to ensure safe practices are being followed. Establish designated vehicle lanes on the aprons and other areas of the airport Ensure airport vehicles are properly equipped and maintained Monitor vehicle movements prior to aircraft movement and taxiing.
Airport ATC	Report on conditions of the movement area and related areas to the SMS Safety Officer. Monitor hazard beacons and airside lights and report outages	Provide guidance for aircraft landing and departure. Control aircraft movement on airfield movement area.		

Exhibit 2.3. Key Responsibilities and Accountabilities (Cont'd.)

	Airport Infrastructure and Services	Aircraft Operations	Passenger Movements	Vehicle Operations
Airlines, Ground Handlers, aircraft owners & FBOs	Report any safety concerns or potential hazards to SMS Safety Officer	Servicing of the aircraft. FOD inspections on aprons. Pickup any FOD. Provide safety vests, noise protection and other safety equipment to employees. Pilot in Command has overall responsibility for safety of aircraft and passengers. Ensure that cell phones are not used within 50 feet of a refueling aircraft Enforce no smoking on apron with employees and passengers Remove garbage and grooming waste from apron as soon as possible after collection Employees are not to run on apron Provide training of marshallers Ensure that marshallers are in place at least 5 minutes before commercial aircraft arrival Marshall aircraft in and out of parking stands.	Lead passengers safely to and from aircraft by most expeditious and safe route either to the terminal or passenger bus. Monitor passenger route to aircraft and report/correct any hazards that may develop. Warning passengers not to run, to walk in designated areas, not to smoke, not to use cell phones within 50 feet of refueling operations, not to throw trash, etc. Monitor passenger movement prior to aircraft engine start and aircraft movement.	Establish and implement vehicle safety policies and practices specific to aircraft being serviced Augment basic driver training provided by the airport.
Fueling Companies	Report any safety concerns or potential hazards to airport SMS Safety Officer.	Provide training in safe fueling of aircraft. Establish and implement policies and practices for safe fueling and fuel storage. Pickup any FOD. Clean up small fuel spills. Reporting large fuel spills more than 5 gallons to KOA. Where more than one vehicle is used ensure that the operations are coordinated.		Provide properly equipped and maintained fueling vehicles, fuel storage facilities and equipment.

3.0 SAFETY RISK MANAGEMENT

3.1 Introduction

Risk is a by-product of doing business. Not all risks can be eliminated, nor are all conceivable risk elimination measures economically feasible. The risks and costs inherent in aviation require a rational process for decision-making. Daily, decisions are made in real time, weighing the probability and severity of any adverse consequences implied by the risk against the expected gain of taking the risk. This process is known as *"risk management"*. For the purposes of this manual, *risk management* can be defined as follows:

- ***Risk management****. The identification, analysis and elimination (and/or mitigation to an acceptable or tolerable level) of those hazards, as well as the subsequent risks, that threaten airport operations.*

In other words, risk management facilitates the balancing act between assessed risks and viable risk mitigation. Risk management is an integral component of safety management. It involves a logical process of objective analysis, particularly in the evaluation of the risks.

The Safety Risk Management (SRM) process is important because it can:

- Minimize the risk of an accident before any harm is done;
- Supply useful information for the development and implementation of measures to control safety and minimize the possibility of accidents;
- Determine if existing or planned safety measure are adequate; and
- Provide KOA and HDOT-A management with valuable information about potential hazards and dangers that may be under estimated or overlooked in daily operations.

3.2 Responsibilities

KOA's SMS Safety Officer will take the lead role in Safety Risk Management (SRM) analysis for operational issues at KOA. The SMS Safety Officer will enlist other KOA staff, selected tenants and ATC where appropriate to provide a wide perspective and expertise in conducting the SRM analysis. A committee should be created where warranted. This committee would be designated the Safety Risk Assessment Team.

The District Engineer will be responsible for conducting Safety Risk Management when new facilities, equipment or systems are planned or being installed. The

District Engineer will work with the Engineering Project Manager at the Division where appropriate. Additionally, the District Engineer will keep the SMS Safety Officer informed of these projects

3.3 The Safety Risk Management (SRM) Process

The SRM Process is summarized schematically in Exhibit 3.1 and described below.

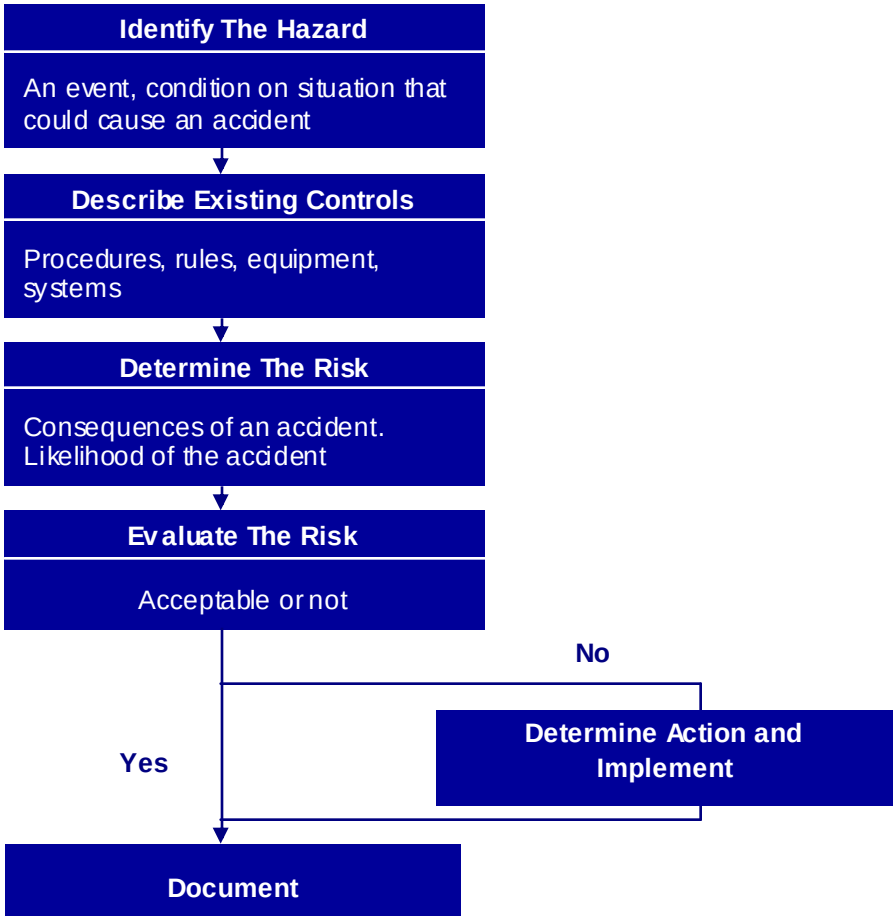

Exhibit 3.1. Safety Risk Management Process

3.3.1 Identify the Hazard

A hazard is an event, condition or situation that could result in an accident involving aircraft, equipment and people.

There are numerous ways to identify hazards. The mechanisms at KOA include the following:

1. As a result of aviation safety concerns raised by the Airport Safety Committee (ASC) that requires further analysis before action can be taken. For example, the ASC concludes that established practices, procedures, equipment or facilities are not as safe as they could be, but further analysis is deemed necessary before taking action.
2. In response to safety issues identified during safety meetings with KOA employees.
3. Trend analysis conducted by the SMS Safety Officer. More specifically a negative trend in safety significant data indicates a possible hazard. (See Section 4.4 for more detail).
4. Employee Safety Reports. The identification of hazards is the responsibility of all airport employees and organizations. (Section 4.3).
5. As the result of a significant accident or incident.

The Safety Risk Management Process will also be applied when:

1. The airport is undergoing significant change such as increases in air services or contraction in services;
2. Major changes are planned, including changes to equipment, runways and taxiways, airfield systems, key personnel, ground operations, air traffic control operations, staffing levels, etc;
3. When new equipment or systems are being installed; and
4. When new facilities are going to be constructed on the airside.

The identification of hazards needs to consider a wide range of factors that may not be immediately obvious including:

- ***Design factors***, including equipment and task design;
- ***Procedures and operating practices***, including their documentation and checklists, and their validation under actual operating conditions;
- ***Communications***, including the medium, terminology and language;
- ***Personnel factors***, such as policies for recruitment, training and remuneration;
- ***Organizational factors***, such as the compatibility of operational and safety goals, the allocation of resources, operating pressures and the corporate safety culture;
- ***Work environment factors***, such as ambient noise and vibration, temperature, and lighting; and

Exhibit 3.2. Potential Airside Hazards

Aircraft Operations and Servicing	Vehicle Operations	Actions of Individuals	Airport Infrastructure and Services	Environmental Conditions
• Jet blast and noise • Prop wash • Fuel spills • Grounding • Bonding • Spills • Improper parking • Improper marshalling • FOD • Apron • Congestion • Noise • Lack of protective pylons around aircraft • Lack of chocks when aircraft parks • Disposal of grooming waste • Taxiing too fast • Failure to respond to ATC directions	• Erratic driving • Driving too fast • Mechanical Condition • Condition of brakes, tires • Improper parking • Parking in aircraft operations areas • Blocking fuel truck when fueling • Improper grounding of equipment • Leaving vehicle unattended and engine running • Lack of hazard lights • Lack of radios or communication equipment • Lack of coordination between vehicles during aircraft servicing • Lack of reverse alarms • Lack of guidance on reversing • Failure to yield right of way to aircraft and pedestrians • Oil spills on apron and/or in passenger walkways	**Employees** • Running on ramp • Lack of safety protective equipment • Riding baggage carts • Riding in rear of pick-up trucks • Lack of training • Using equipment in an improper manner • Ignoring aircraft hazard beacons • Improper checking around aircraft during departure marshalling • Ignorance of meaning of apron markings • Smoking on ramp • Use of cell phone within 50 feet of a refueling operation • Improper guidance to passengers • Throwing trash and/or equipment on apron • Failure to use FOD bins • Under the influence of drugs or alcohol **Passengers** • Failure to follow guidance • Wandering on apron • Smoking • Use of cell phone within 50 feet of a refueling operation • Throwing trash on apron • Running on apron **Others** • Individuals on airside without authority	**Airport facilities** • Poor runway condition • Poor apron condition • Failure of one or all runway lights • Poor illumination of apron lights • Lack of FOD bins • Lack of fire extinguishers • Lack of training for staff • Poor apron marking visibility • Construction on airside **Fire Service** • Lack of training in aircraft fire fighting • Lack of appropriate equipment for fuel/aircraft fires • Lack of training in fuel facilities **Maintenance Garage** • Improper storage of hazardous materials • Improper storage of equipment and supplies • Lack of vehicle maintenance **Air Traffic Control** • Obstruction to visibility of all movement areas • Lack of visibility for taxiway entrances to runway	• Birds • Wildlife • Adverse weather • Marking of natural hazards • Confusing lights • Poor visibility

- ***Regulatory oversight factors***, including the applicability and enforceability of regulations; the certification of equipment, personnel and procedures; and the adequacy of surveillance audits.

The AOA of any airport can have numerous hazards that may bring about accidents or incidents if not properly mitigated or prevented. Exhibit 3-2 provides examples of typical potential airside hazards. This exhibit should not be considered as a complete list of potential hazards but only as examples of some of the hazards that may occur.

3.3.2 Describe Existing Controls

Once a hazard has been identified or reported, the SMS Safety Officer (or the District Engineer) and the Safety Risk Assessment Team (if one is warranted) need to describe the controls that are currently in place associated with the hazard (e.g., driver training programs, airport self-inspections, airport markings and signage) to assist in determining the risks of the hazard and action strategies to reduce the risk.

3.3.3 Determine the Risk

The next step is to determine the risks of the hazard.

A risk is the chance (great or small) that people or aircraft will be harmed or damaged by a hazard; i.e., risk that an accident will happen. Risk is measured in terms of possible consequences of the accident (the severity of the accident) and the probability that the accident could happen.

Consequences (severity of the potential accident)

In determining a risk, consequences of a potential accident are assessed. The consequences used in this rating are presented below along with a guide to their application.

RATING	EXAMPLES (one or more resulting conditions)
Minor	No, or very, limited financial loss or personal injury. Only 1 or 2 individuals involved. Very limited, or no, damage to aircraft, vehicles, facilities or equipment. Minor operational delays. First aid treatment may be required. People could be off work for several days due to injury.
Moderate	Repairs to damaged aircraft, equipment, facilities or vehicles. Operational delays. Medical treatment required in hospital or emergency clinic. Significant cost to individuals involved. Some media attention.

Major	Extensive repairs or replacement of aircraft, equipment, facilities or vehicles. Major operational delays. Extensive injuries to a number of people. Possible death of 1 or 2 individuals. Strong media attention, loss of public confidence.
Catastrophic	Aircraft destroyed. Multiple deaths, extensive injuries. High profile media attention. Severe loss of public confidence.

Risk Probability

The second consideration in risk assessment is the probability of the hazard causing an accident or injury. There essentially is no meaningful quantitative data for conducting SRM at an airport using numerical methods. Thus, a qualitative approach is required. This provides a formalized and consistent approach to assessing safety risks.

The relative rankings of the probability for use in this analysis by the Safety Risk Assessment Team are given below

RATING	EXAMPLES
Rare	Accident not expected to happen under most normal circumstances. Very unlikely.
Possible	Might or could occur at some time in the future.
Likely	Will probably occur with some certainty in the future.

3.3.4 Evaluate the Risk

There will always be risks involved in aviation operations. Some risks can be accepted, some can be eliminated, while others can be reduced to acceptable levels.

Once the probability and the consequences of a possible accident have been assessed, the next step is to evaluate the relative rating of the risk by using the following matrix.

Risk Assessment Matrix

	Potential Consequences			
Probability	**Minor**	**Moderate**	**Major**	**Catastrophic**
Rare	Low	Low	Medium	Medium
Possible	Low	Medium	High	High
Likely	Medium	Medium	High	High

The risk ratings used in the matrix are defined as follows:

High risk: A high risk is unacceptable. Management needs to take **immediate action** to mitigate or eliminate the hazard for an existing condition. For planned changes to equipment, systems, operations, etc. management, the change cannot be implemented unless the potential hazards are further mitigated to medium or low levels.

Medium risk: Management will react to mitigate or eliminate the hazard as expeditiously as possible within existing resource constraints. In the short term, the risk is tolerable.

Low risk: This level of risk is considered acceptable and no further action is required unless the risk can be reduced further, or eliminated, at little or no effort.

Factors that may be considered when evaluating risk, particularly whether a risk is acceptable are as follows:

- Managerial. Is the risk consistent with KOA's and HDOT-A's safety policy and objectives?
- Affordability. Does the risk defy cost-effective resolution?
- Legal. Does the risk conform to current FAA regulatory requirements?
- Cultural. How will the airport's employees and other stakeholders view this risk?
- Market. Will KOA's competitiveness relative to other airports be compromised?
- Political. Will there be a political price to pay for not reducing or eliminated the risk?
- Public. What will be the reaction of the media or special interest groups regarding the risk?

In undertaking the evaluation of risk, the Risk Evaluation Guide provided in Appendix 1.0 will be used. This will be completed for any formal assessment of risks and hazards as required by Section 3.2 above as well as any reported safety hazards.

3.3.5 Determine Action and Implement

If the SMS Safety Office (or the District Engineer) and the Safety Risk Assessment team have determined that the risk is acceptable then no further action is required other than documenting the previous Safety Risk Assessment steps.

If a risk is deemed high or medium, the KOA manager, under whose accountability the hazard exists, will be responsible for taking action or developing recommendations to mitigate or eliminate the hazard. The accountable KOA manager should consider a range of options depending upon the outcome of the risk evaluation. The accountable manager may want to seek advice from the Safety Assessment Team and SMS Safety Officer as appropriate. The potential solutions could include:

- An infrastructure solution including such options as rehabilitation, reconstruction or new facilities;
- Changes or modifications to equipment or maintenance programs;
- The issuance of Airport Safety Directives that could include consideration of changes to operating procedures and/or new procedures;
- Airport Safety Guidelines that could include such items as limiting exposure to the risk, increased surveillance of the hazard or activities associated with it, improved supervision, targeted safety advice etc.;
- Safety training which could include the provision of new on-site training programs and/or modifications to existing safety training programs;
- Provision of safety information and the provision of specific safety brochures, posters, etc.; and
- Restrictions on an individual's right and ability to work on the airside.

When required, the accountable KOA manager working with the SMS Safety Officer will prepare a Safety Action Plan outlining planned risk reduction measures, with specific target dates and responsibilities of key participants. If required and time allows, final approval of the plan shall be given by the Airports District Manager. The accountable KOA manager will be responsible for ensuring that the Safety Action Plan is implemented

Where the Safety Action Plan involves expenditures beyond the authority of the Airports District Manager, the recommendations will be forwarded to the Airports Administrator at the Division for consideration and action.

If a hazard and its associated risks are primarily the responsibility of a tenant, the tenant will be responsible for developing their own Safety Action Plan when requested by the SMS Safety Officer or the Airports District Manager.

The SMS Safety Officer will monitor implementation and provide regular (at least quarterly) written updates on the status of Safety Action Plans to the Airports District Manager and the Airport Safety Committee.

3.3.6 Document the Safety Risk Assessment

The application of the Safety Risk Management assessment will be documented by the SMS Safety Officer or the District Engineer. Any resulting Safety Action Plans will be documented by the accountable KOA manager. The documentation will be stored and maintained by the SMS Safety Officer in hard copy and electronic copy if computer software is used.

4. SAFETY ASSURANCE

4.1 Introduction

SMS Safety Assurance augments existing KOA practices and procedures to ensure airport safety including:

- The airport self-inspection program;
- The wildlife hazard management plan;
- Storage and handling of fuel;
- The Airport Certification Manual (ACM);
- The Airport Emergency Plan (AEP) included in the ACM;
- Airport condition reporting including the issuance of NOTAMS;
- Accident and incident reporting, as part of pedestrian and ground vehicle control programs; and
- Construction safety plans.

4.2 Employee Reporting System

This section of the SMS addresses non-punitive employee reporting, systematic safety reviews, safety oversight and auditing.

To further enhance airport safety by identifying safety hazards, all employees of KOA working on the AOA are encouraged to report any accidents, incidents, potential hazards or safety concerns that they observe or are involved in. Examples include: a driver not stopping for passengers, airside personnel potentially exposed to jet blast, FOD receptacles not emptied, vehicles left unattended on the apron, confusing signs, poor lighting, etc.

KOA employees are encouraged to prepare a written Employee Safety Report using the form provided in Appendix 2.0. The form is available from the SMS Safety Officer. The employee should submit the Employee Safety Report to the SMS Safety Officer. An employee may also make a verbal report to the SMS Safety Officer who will assist in preparing the written Safety Report. If the employee wishes his or her name to be confidential for any reason, then this should be indicated on the Employee Safety Report.

The SMS Safety Officer will investigate the concern or hazard and provide a response to the initiator of the report. If necessary, a Safety Risk Management Assessment will be conducted.

4.3 Non-Punitive Reporting Policy

The purpose of any investigation of an accident, incident or safety hazard is to establish the facts and cause, and, where necessary, take measures to prevent further occurrences. HDOT-A believes that free and full reporting of incidents and accidents is a primary aim and that every effort will be made to avoid action that may inhibit reporting.

HDOT-A Management will not take any disciplinary action against an employee reporting a safety incident or accident even if a reported incident or accident indicates an unintentional mistake by the employee.

This reporting policy does not apply to criminal acts, deliberate violations of safety regulations and safe operating procedures, or gross negligence.

If requested by the employee, the Employee Safety Report will be treated in confidence. In this case, HDOT-A and its employees will not disclose the name of the person submitting a safety report unless required to do so by law. The SMS Safety Officer will de-identify the Employee Safety Report before initiating any investigation or action. All personnel and organizational names are removed from the report. Dates, times and related information which could be used to infer an identity are either generalized or eliminated.

4.4 Trend Analysis

Trend analysis is an important mechanism to determine changes in safety over a given period of time. Trend analysis is conducted to determine if conditions or situations are getting better, getting worse or staying the same. The SMS Safety Officer is responsible for analyzing and interpreting safety performance data. The key data that is monitored is described in Section 1.3, Safety Objectives, and includes:

- Safety deficiencies identified during Airport Self-Inspections by type of hazard and location (e.g., pavement, lighting, markings, signage);
- FOD by type and location on the AOA;
- Airside safety violations (by class of violation);
- Number and type of accidents and incidents on the Airport Operating Area (AOA) involving air carrier aircraft, ground vehicles, passengers and workers on the AOA. Causes should also be tracked;
- Number of bird strikes;
- Reports of wildlife on the AOA by type and location;
- Operable time of lighting systems;

- Number of aborted landings/takeoffs per year due to airfield hazards;
- Number of airside based employees who have received safety and SMS related training (initial and refresher training); and
- Number of safety hazards reported through non-punitive safety reports.

The sources of these data and responsibilities for data collection were outlined in Section 1.3.

In order to monitor and analyse trends, the SMS Safety Officer will set-up a data base to record the data described above on a monthly basis. The SMS Safety Officer will then use this data to determine trends through graphing the data over time.

4.5 Airfield Accidents and Incidents – Mandatory Reporting

The SMS Safety Officer on behalf of HDOT-A is responsible for ensuring that a Mandatory Safety Report is prepared for accidents and incidents on the AOA. The SMS Safety Officer should prepare the report with the input of those that witnessed or observed the incident or accident.

The Airport's Mandatory Safety Reporting does not eliminate any regulatory requirements for reporting that have been imposed by the FAA and the State of Hawaii on third party operators at the airport such as an airline or the air traffic control tower.

4.6 Accident Investigation

All accidents and incidents on the AOA require investigation. On behalf of HDOT-A, the SMS Safety Officer will undertake an investigation of all accidents or occurrences using the Accident and Incident Report Form contained in Appendix 3.0. The SMS Safety Officer will enlist whatever technical expertise that is required within KOA. If necessary, the Police Department will participate in the investigation.

4.7 Systematic Reviews

Systematic review allow for assessing adherence to KOA's safety policy and achievement of safety objectives. Systematic reviews are the responsibility of the SMS Safety Officer in consultation and coordination with the other KOA departments. Systematic reviews include the following activities:

- On-going trend analysis of accidents, incidents, self-inspection reports, NOTAMs, condition reports through information provided by the Maintenance Department, Employee Safety Reports, and investigation of accidents and incidents;
- Periodic assessments of the achievement of safety objectives; and
- Review of the proceedings of the Airport Safety Committee, safety risk assessments and safety audits.

Based on the lessons learned from these reviews (either individual or collective), the outputs of the systematic reviews could include a wide range of recommendations such as new Safety Risk Management Assessments, revisions to SMS safety policies and objectives, SMS practices and responsibilities, revisions to operational or maintenance practices, systems, facilities or equipment.

Although the SMS Safety Officer is required to make an annual review of the SMS safety policy and objectives, recommendations based on systematic reviews can be made whenever considered appropriate.

4.8 Safety Oversight

Safety oversight is the responsibility of the Airports District Manager. Safety oversight includes periodic reviews of how well the SMS is working, whether safety policies and objectives are still relevant, negative trends in safety indicators, etc.

4.9 Safety Audits

The Airports District Manager will determine if and when safety audits are required in response to unresolved safety issues.

There are two types of safety audits that could be undertaken at the Airport.

The first type of safety audit is an internal audit of KOA AOA activities and includes the safety functions undertaken by:

- Airport Operations;
- Maintenance;
- Contractors; and
- ARFF.

The other safety audits are external audits of the functions that are undertaken by the KOA tenants such as the airlines, FBO's or contractors.

The above audits may be undertaken by KOA or HDOT-A, by a specialist external auditor appointed by HDOT-A or by another airport operator retained by HDOT-A.

Tenants may also undertake independent safety audits of their operations at the Airport. The SMS Safety Officer should arrange with each of these organizations so that KOA is provided with copies of the audits and the relevant safety plans.

4.10 Record Keeping

The following records will be kept by the SMS Safety Officer for at least three years:

1. The original SMS Manual and subsequent revisions;
2. Annual reviews of the SMS policy and safety objectives conducted by the SMS Safety Officer;
3. Data collected and analyzed in support of the safety objective identified in Section 1.3;
4. Employee Safety Reports;
5. Completed Safety Risk Management Assessments and associated Safety Action Plans noting completion of action items;
6. Completed Accident and Incident Analysis Forms;
7. Minutes of the Meetings of the Airport Safety Committee;
8. Minutes of Safety Meetings;
9. Safety audit reports;
10. Safety Bulletins;
11. Description of Training Programs, who attended and when; and
12. Description of promotional activities.

All mandatory incident and accident reports will be kept for at least 10 years unless there is a legal action outstanding, or anticipated, regarding an incident or accident, and then they will be kept until the legal action is disposed of.

5.0 SAFETY PROMOTION - COMMUNICATIONS

5.1 Safety Communication Policy

HDOT-A is committed to ensuring that all KOA personnel working airside at the Airport are informed about the safety polices and objectives, how well the airport is meeting safety objectives, results of accident and incident investigations, new safety practices, and other matters dealing with safety.

Safety Communication will be achieved through a number of mechanisms described below.

5.2 The Airport Safety Committee

As previously described in detail, the Airport Safety Committee (ASC) provides an essential partnership between Airport Management and airside tenants to share safety information and provide advice regarding safety in AOA operations. This committee meets at least quarterly and minutes of the meeting will be distributed to all participants.

The minutes of the meetings will also be summarized and communicated to airside personnel through Safety Management Bulletins.

5.3 SMS Policies

The SMS Safety Policy and the Employee Non-Punitive Reporting Policy will be displayed in poster formats in prominent and highly visible areas within KOA facilities. The policies will also be posted on the KOA website.

5.4 SMS Manual

The SMS Manual is available for review by all KOA employees working on the AOA in the SMS Safety Officer's office and posted on the KOA website. The SMS Manual will be provided to all new employees during orientation. All airport airside employees must read the document and complete a test to ensure that they have understood the key elements of the manual.

5.5 Safety Management Bulletins and Posters

The SMS Safety Officer will issue brief periodic Safety Bulletins. The topics of these Safety Bulletins will include, for example:

- Announcement of the new, or revised, SMS Manual and its highlights and where copies can be obtained or reviewed;
- Summaries of the minutes of Airport Safety Committee meetings, particularly action items;
- Results of incident and accident investigations emphasizing lessons learned and action to be taken to reduce potential hazards;
- Announcement of new work practices and procedures; and
- New safety rules that must be followed.

The SMS Safety Officer will issue the Safety Bulletins to each airside tenant and to each KOA employee working on the AOA.

The SMS Safety Officer will, as appropriate, prepare and display safety posters dealing with such topics as:

- Voluntary and mandatory reporting;
- Safety rules that must not be violated; and
- Safety goals and indicators.

5.6 AOA Employee Recognition

In order to promote a safety culture at the Airport, KOA will institute a recognition program for employees of KOA, FBOs and airlines to honor an individual working on the AOA that makes a significant contribution to safety at the Airport. The award may be based on identifying and correcting a significant airside hazard, working over the course of the year in a safe and efficient manner, providing safety leadership to other airside employees, etc.

To be considered for this award, employees may be nominated by their peers or Airport Management. The employee's direct superior will endorse the nomination and forward to the SMS Safety Officer.

The award will be presented at the annual safety meeting of the New Year.

5.7 Safety Meetings

At the beginning of each year, the SMS Safety Officer will hold an annual safety meeting with all KOA AOA staff. The purpose of this meeting is to:

- Report on safety performance in meeting safety objectives;
- Summarize the initiatives and action taken, or planned, to address safety concerns and potential hazards;
- Report on lessons learned and action taken as a result of any incidents and accidents; and
- Discuss in an open forum the safety concerns that any of the participants might have.

The SMS Safety Officer will provide Minutes of the Annual Safety Meeting to the Airport Safety Committee for distribution to their AOA employees.

In addition to the annual safety meeting, the SMS Safety Officer may from time to time throughout the year conduct appropriate safety meetings to discuss safety issues at KOA as required.

5.8 Ramp Safety Campaign

KOA will establish a ramp safety campaign highlighted by Ramp Safety Week where the Airport and the tenants highlight a ramp safety issue and promote reduction of the hazard as well as cultural changes with ramp personnel.

To augment this one week targeted safety campaign, the Airport will also sponsor several safety awareness days during the year highlighting specific airside hazards such as FOD, fuel spills, etc.

6.0 SAFETY PROMOTION – TRAINING

6.1 Training Policy

HDOT-A is committed through training to provide all of its employees working on the AOA with the skills and competencies to recognize and minimize aviation safety.

KOA already has a number of training programs required by CFR Part 139 including: driver training, inspection techniques and ARFF training.

6.2 SMS Training

As part of the training of new KOA employees working on the AOA, the SMS Safety Officer will provide an SMS training program. The curriculum includes:

- The need for SMS;
- HDOT-A safety policies and objectives;
- Organization for safety – role and responsibilities;
- Safety risk management – including human and organizational factors;
- Safety assurance; and
- Safety promotion.

Re-current SMS training will be provided and tested during the annual re-application for the AOA identification badge.

The SMS Safety Officer will record that a SMS training session has been given to an employee. This record will be kept by the SMS Safety Officer and placed in the employee's personnel file.

6.3 Specialized Airside Tenant Safety Training

Each airside tenant at the Airport will provide specialized training in operational procedures and safety procedures applicable to their function at the airport. Examples include: fueling procedures, aircraft chocking, aircraft push-back, aircraft power back, escorting of arriving and departing passengers, movement and parking of aircraft service vehicles upon aircraft arrival and departure, aircraft marshalling, etc.

Each airside operator will submit a record of the training to their employees to the SMS Safety Officer annually.

The Airport recognizes that many of the airside operators already provide this training and keep records of their training.

APPENDIX 1.0

RISK EVALUATION GUIDE

DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
RISK EVALUATION GUIDE

Potential Hazard - a description of the hazard that has the potential to damage aircraft, vehicles, equipment & systems; and to cause injury & death	**Existing Controls** – a description of existing systems, procedures, equipment, training, etc. in place to control the hazard

Potential Outcomes & Accident – a description of the possible direct & intermediate results of the hazard and the possible accident: conditions that could lead to the accident	**Consequences of the Accident Happening** • Minor • Moderate • Major • Catastrophic	**Likelihood of the Accident Happening** • Rare • Possible • Likely	**Evaluation of the Risk** • Low • Moderate • High

Date Prepared:
Prepared By:
Signature:
Date:

APPENDIX 2.0

DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
EMPLOYEE SAFETY REPORT

Employee Safety Report

Name: _____

Organization Position: _____

Do you want your report to be treated as confidential? Yes ____: No_____

[Name and position to be removed by the SMS Safety Officer if requested by the employee]

PART A
TO BE COMPLETED BY THE PERSON IDENTIFYING THE HAZARD

Please fully describe the Hazard, Incident or Accident
.

Date of occurrence: _____ Time: _____

Location: _____

Description:_____
_____
_____
_____
_____
_____
_____
_____
_____

In your opinion, how often does this hazard exist or take place

Not Frequently				Very Frequently
1	2	3	4	5

PART B
TO BE COMPLETED BY THE SMS SAFETY OFFICER UPON INVESTIGATION OF THE HAZARD

The report has been de-identified and entered into the company database

Signature: _____ Date: _____

Name_____

Based on investigation of the hazard:

Describe the hazard(s):

How frequently does the hazard exist or occur?

What are the possible sources of the hazard?

What are the possible consequences (accidents) that could result from the hazard(s)?

Minor Moderate Major Catastrophic

Why?

What is the likelihood of the accident that could result from the hazard(s)?

Rare Possible Likely

Why?

What action is required to ELIMINATE or CONTROL the hazard and PREVENT injuries or damage?

_____
_____
_____
_____
_____

Resources Required: _____
_____

Responsibility for action:

_____

Referred to _____ for further action.

Signature: _____ Date: _____

Appropriate Feedback given to staff.

Signed Date

APPENDIX 3.0

DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
ACCIDENT AND INCIDENT REPORT FORM

ACCIDENT AND INCIDENT REPORT

To be completed by the SMS Safety Officer for all accident and incidents and safety violations which could endanger people, aircraft, vehicles, or equipment?

Name of person that completed this report:_____

Organization and Position:_____

Telephone number:_____

Date of Accident/Incident/Safety Violation:_____

Time:_____

Location:_____

Date of Report: Report Number: _____

Airport Police Report Number (where applicable)_____

Names of Witnesses

Witness 1
Name:_____

Address:_____

Telephone:_____

Witness 2
Name:_____

Address:_____

Telephone:_____

Witness 3
Name:_____

Address:_____

Telephone:_____

Details

Details of the accident/incident/safety violation: (Include details of people involved, aircraft, vehicles, and equipment. Include details of what took place that contributed to the accident /incident)

_____

_____

_____

_____

_____

_____

_____

_____

Details of any injuries:

_____

_____

_____

Details of any damage to aircraft/vehicles/equipment/facilities:

_____

_____

_____

_____

KONA INTERNATIONAL AIRPORT - ACCIDENT/INCIDENT ANALYSIS

SECT. 1 OPERATIONAL ACTIVITY AND RESULT

RESULT OF ACCIDENT

( ) AIRCRAFT DAMAGE
( ) VEHICLE DAMAGE
( ) EQUIPMENT DAMAGE
( ) PERSONNEL INJURY
( ) OTHER _____

IMPACT OF ACCIDENT ON OPERATIONS

( ) AIRCRAFT ARRIVAL DELAY
( ) AIRCRAFT SERVICING
( ) AIRCRAFT TURNROUND
( ) AIRCRAFT DEPARTURE DELAY
( ) VEHICLE OUT OF SERVICE
( ) AIRCRAFT DELAY
( ) EQUIPMENT OUT OF SERVICE
( ) OTHER _____

SECT. 2 CONTRIBUTING FACTORS CHECKLIST

Instructions on completing this section:
1 Mark each contributing factor.
2 For each factor not contributing, mark 'N/A'
3 Provide brief narrative for each contributing factor

A. INFORMATION

Provide copies of all relevant work cards; procedures; maintenance manuals; operation orders; instructions etc and append to this report. Determine through interviews with those involved and/or witnesses whether the information was:
( ) Not understandable
( ) Unavailable/inaccessible
( ) Incorrect
( ) Conflicting with other directions or information
( ) Other

Specify exactly what information was inadequate or led to the incident

B. EQUIPMENT/TOOLS/PARTS

Provide a list of equipment/tools in use at the time of the accident. Determine through interviews with those involved and/or witnesses whether the equipment/tools/parts were:
( ) Unsafe
( ) Inappropriate to task
( ) Inaccessible
( ) Could not be used in intended environment
( ) Unreliable
( ) No instructions for use
( ) Mis-calibrated
( ) Too complicated
( ) Unavailable
( ) Incorrectly labeled
( ) Other (explain)

Specify exactly what equipment, tool, or part, failed, was inadequate or led to the incident

C. AIRCRAFT/EQUIPMENT/VEHICLE DESIGN

Determine through interviews with those involved and/or witnesses whether the aircraft/equipment/vehicle was:
( ) Too Complex
( ) Not accessible
( ) Not user friendly
( ) Was a confusing variation between models/variants
( ) Other (explain)

D. MAINTENANCE ERROR

Determine through interviews with those involved and/or witnesses what procedures were followed and compare to written maintenance instructions. Highlight any areas where tasks carried out deviated from written maintenance procedures

E. JOB/TASK/ACTIVITY

Determine through interviews with those involved and/or witnesses the actual job/task/activity underway at the time of the accident. Highlight any distractions that may have been present.

F. QUALIFICATIONS/SKILLS

Determine from interviews with those involved and /or witnesses the qualifications of the individual(s) involved in the accident. Check KOA/Concessionaire/Contractor training records for the individual involved

G. FACTORS AFFECTING INDIVIDUAL PERFORMANCE

Determine if any of the following factors were involved in the accident

Aircraft ground equipment

( ) Improper installation
( ) Equipment not installed
( ) Wrong part installed
( ) Wrong orientation
( ) Improper location
( ) Repetitive or monotonous task
( ) Complacency
( ) Complex or confusing task
( ) Inadequate planning/prioritization
( ) New task or task change
( ) Different from similar tasks
( ) Boredom
( ) Other (explain)

Individual Qualifications

( ) Proficiency/experience level and years of experience
( ) Task knowledge
( ) Process knowledge
( ) System Knowledge
( ) Other (explain)

Individual Human Factors

( ) Physical health (including sight/hearing)
( ) Peer pressure
( ) Fatigue
( ) Body size/strength
( ) Time constraints
( ) Significant life changes
( ) Alcohol/drugs/medication
( ) Other
Explain in point form how these factors may have lead to the incident:_____

H. ENVIRONMENT AND FACILITIES

Determine if any of the following were present during the time leading up to the accident or at the time of the accident:
( ) High noise levels
( ) Vibration
( ) Distractions/interruptions (e.g. cell phone use) ( ) Cleanliness
( ) Hazardous/toxic substances
( ) Power sources
( ) Inadequate ventilation
( ) Dark
( ) Unsafe work area
( ) Hot
( ) Cold
( ) Humidity
( ) Rain
( ) Wind
( ) Fog
( ) Low visibility
( ) Inadequate lighting
( ) Other

Explain in point form how these factors may have lead to the incident:_____

I. ORGANIZATIONAL ISSUES

Determine from interviews with those involved in the accident and their supervisor(s) the following:

( ) Amount of supervisory support provided
( ) Company policy re activities underway during the accident
(( ) Morale Issues within the company
( ) Other
Explain in point form how these factors may have lead to the incident:_____

J. SUPERVISION

Determine from discussion with individual involved/witnesses/ and the involved employee's immediate supervisor:
( ) How planning/organization of tasks was undertaken
( ) How tasks were prioritized
( ) How delegation/assignment of task was undertaken
( ) What supervisors expectations were, and if these were realistic
( ) the amount of supervision provided
( ) Other

Explain point form how these factors may have lead to the incident:_____

K COMMUNICATION

Determine from interviews with those involved in the accident and their company's supervisory chain of command whether the following types of communications were adequate:

( ) Between departments
( ) Between shift and supervisor
( ) Between people
( ) Between supervisor and manager
( ) Between shifts
( ) Other
Explain in point form how these factors may have lead to the accident:_____

L. ANY OTHER FACTORS

Provide a description of any other factor not listed above that may have lead to the accident

SECT. 3 RECOMMENDED CORRECTIVE ACTIONS

A. CURRENT PROCEDURES /OR POLICIES:

Are there any current procedures and/or policies in KOA intended to prevent the accident, but didn't?

B. RECOMMENDED CORRECTIVE ACTIONS

List recommended corrective actions:
( ) New or modified operational instructions. Specify:
( ) New or modified company regulations. Specify:
( ) New or modified inspection schedules. Specify:
( ) New or modified engineering/maintenance/training manuals. Specify:
( ) New or modified inter-company communications procedures. Specify:
( ) Any other changes or proposed new instruction/regulation or policy document. Specify:

C. OTHER CORRECTIVE ACTIONS SUGGESTED

Signature:_____ Date:_____