Useful information can be derived from external sources to supplement flight data derived internally. Other such sources include:

- Regulatory authorities;
- Investigative bodies;
- Safety organizations;
- Manufacturers;
- Other operators.

Flight information is analyzed collectively to identify hazards, system weaknesses, process breakdowns, regulatory violations and other trends or conditions that could potentially lead to accidents or serious incidents. The process includes a method of risk analysis and prioritization to enable the development and implementation of effective corrective or preventive action.

ORG 3.3.14   The Operator *should* have a program for the systematic acquisition and analysis of data from observations of flight crew performance during normal line operations. **(GM)**

Guidance

If implemented, line monitoring is considered a *proactive* hazard identification activity in an SMS.

A line-monitoring program is a completely different activity from line evaluation (or line checking) of the flight crew. Line operations monitoring cannot be accomplished in conjunction with any type of operational evaluation of the flight crew.

Under this program, flight crew performance in a normal line environment is observed from the flight deck jump seat by individuals who have been specially selected and trained. Observers, with the cooperation of the flight crew, systematically gather operational data that can be analyzed and used to make real improvements to certain areas of the operation. Observers are particularly aware of, and record, threats and errors that occur in the operating environment.

The Line Operations Safety Audit (LOSA) is a well-known and successful example of a normal line operations monitoring program.

An acceptable program would have the following characteristics:

- A planned and organized series of observations of flight crew performance during normal line flights is typically conducted a minimum of once during every four year period.
- Observations are conducted on regular and routine line flights, and the flight crew is advised and clearly understands that normal line monitoring is not an evaluating, training or checking activity. The flight crew would be expected to operate as if the observer were not there.
- There is mutual support and cooperation from both the management of the operator and flight crew members (through their professional association, if applicable).
- Participation from the flight crew is voluntary; observations are not conducted unless permission is received from the flight crew.
- Data collected from observations are confidential, de-identified and used for safety enhancement purposes only. Data from an observation are never permitted to be used for disciplinary action unless there is evidence of willful misconduct or illegal activity.
- Procedures are in place to ensure data from observations are retained in a way that ensures effective security.
- Objectives of observations are clearly defined, and collected data are always used to address specific issues that affect flight safety.

- Observers are specifically selected and trained (calibrated) to ensure a high level of consistency and standardization in the data being collected. Observers are objective, impartial and have a high level of integrity.
- There is a process in place to ensure data collected from observations are subjected to analysis from appropriately diverse subject matter experts to ensure consistency and accuracy.
- Data derived from observations are analyzed and presented in a manner that identifies potential weakness and permits the operator to develop appropriate action(s) that will enhance specific aspects of the operation.
- Results from the monitoring program, including the corrective action plan, are communicated to flight crew members.

Expanded guidance may be found in the ICAO SMM, the IATA Introduction to SMS and the IATA SMS Implementation Guide.

3.4   Quality Assurance Program

ORG 3.4.1   The Operator shall have a quality assurance program that provides for the auditing and evaluation of the management system, and of operations and maintenance functions, to ensure the organization is:

i)   Complying with applicable regulations and standards of the Operator;

ii)   Satisfying stated operational needs;

iii)   Identifying areas requiring improvement;

iv)   Identifying hazards to operations. **[SMS] (GM) ►**

Guidance

Refer to the IRM for the definition of *Quality Assurance.*

If the quality assurance program is structured for safety assurance as well, such program is considered part of the continuous improvement element of the SMS.

Information gained from quality assurance audits could be used in the management of operational risk. Additionally, the quality assurance program could be structured to serve as a safety performance monitoring and measuring activity in an SMS. In some organizations the quality assurance program may have a different name (e.g. internal evaluation program).

A robust program ensures a scope of auditing that encompasses all areas of the organization that impact operational safety or security. The incorporation of IOSA Standards and Recommended Practices would ensure appropriate operational areas are audited.

Audits are conducted of functions throughout the organization that are relevant to the safety and security of operations. Operational functions include flight operations, operational control/flight dispatch, maintenance operations, cabin operations, ground handling and cargo operations.

This provision is designed to permit flexibility in the implementation of the quality assurance program: a centralized internal audit program, individual audit programs in each operational area or any combination thereof are all acceptable as long as each of the operational areas under the scope of IOSA is audited.

An effective audit program includes:

- Audit initiation, including scope and objectives;
- Planning and preparation, including audit plan and checklist development;
- Observation and gathering of evidence;
- Analysis, findings, actions;