## GUIDELINES FOR THE CONDUCT OF REMOTE OVERSIGHT ACTIVITIES

### 1.0 BACKGROUND

The emergence of adverse conditions and circumstances which may impede the conduct of on-site safety and security oversight activities highlights the importance of developing mechanisms for the conduct of remote oversight. The conditions and circumstances may include pandemics such as COVID-19 global pandemic, civil unrest, natural disasters such as floods. Under the foregoing circumstances, there is need to ensure continuous compliance with regulatory requirements by all regulated aviation service providers, aviation operators, personnel and such other stakeholders. While the prevailing conditions that impede on site oversight activities may be temporary in nature, the guidance in this order is intended to set the basis for remote oversight regardless of the ensuing situation. The need to establish a consistent, structured, reliable and timely regulated entity evaluation mechanism is critical for the successful implementation of effective remote oversight.

In determining applicability of remote oversight on a particular entity consideration should be given to effective Safety Management System (SMS) implementation, good compliance record/history and a sound safety culture in the performance of aviation activities.

### 2.0 PURPOSE

The purpose of this Order is to provide guidance to CAA Inspectors on how to conduct aviation safety and security oversight activities under conditions and circumstances that impede on-site oversight activities. It provides a systematic approach for remote oversight processes involving inspection, surveillance and auditing. The order also examines the challenges of remote oversight and offers strategies for overcoming them in each part of the oversight process such as planning, document review, inspection, interviews, opening and closing meetings.

### 3.0 REFERENCES

  (a) Applicable Civil Aviation Act;
  (b) Applicable Civil Aviation Regulations;
  (c) Inspection, Surveillance and Audit Manual;

(d) Inspector's Handbook

(e) Remote Auditing for COVID-19 and Beyond by Roy Litzenberg, CPEA, and Carrie F. Ramirez, CIA, CHMM, CDGP.

## 4.0 CONSIDERATIONS FOR REMOTE AUDITING

Remote oversight is one of the tools within the safety oversight tool kit. Remote oversight serves as a mitigation or contingency measure under adverse conditions and circumstances. The components of remote oversight are comparable to the on-site oversight activities but do not replace the actual on-site inspections, surveillance and auditing of regulated entities for instance the qualification of Flight Simulator Training Devices (FSTDs) that requires physical inspection and in contrast the oversight of online courses for distance learning can easily be carried out since the inspectors can join the lesson being delivered and assess its adequacy and mode of delivery. The focus, execution and challenges of these remote oversight activities differ and should be considered on case by case basis.

It is emphasized that inspectors at all times in the execution of their oversight functions comply with the relevant provisions of the applicable Civil Aviation Act, requirements of the applicable Civil Aviation Regulations and the guidelines provided in the Inspection Surveillance and Audit Manual (ISAM) and Inspector Handbook, as appropriate.

The remote oversight mechanisms may not be a one-size fit for all operators given the unique set-up and location of the different operators. The mechanisms for remote oversight such as Information Technology, may be lacking or inadequate or there may be no capacity to use the technology like webex, zoom or microsoft teams. There could be prevailing proprietary rights and legal implications on personal rights and privacy especially with regard to photography and video.

Based on the prevailing circumstances both inspectors and the operators are called upon to be flexible in the use of the remote oversight mechanisms as appropriate. Enforcement actions need to be followed as guided by the enforcement procedures.

## 5.0 PLANNING

Inspection, Surveillance, Audit planning and scoping is critical in safety and security oversight. Prior to conducting remote oversight activities, it is important to coordinate and plan with the regulated entity. The planning includes mutually agreeing on the scope and schedule and inspectors must explain the remote audit approach to the regulated entity. This should include an explanation of anticipated similarities and differences between face-to face oversight that stakeholders are accustomed to and remote oversight. Examples of the types of information that should be covered include how and when Information will be shared, what technology will be used (everything from cameras to drones to telepresence support), what authorizations need to be obtained in advance to collect video and

still photography, and what confidential or restricted areas need to be considered or avoided.

It is also important to discuss from the onset the limitations of remote oversight and explain that future onsite oversight activities may be required based on the findings of the remote oversight or once the physical site visit becomes possible. Based on the additional content and explanation, experience indicates that inspectors should allocate about twice as much time for a remote inspection, surveillance or audit planning meeting, compared to what is needed for the physical ones.

The following steps are key for effective planning of the remote oversight:

(a) The Responsible Manager will constitute the oversight team and nominate a Team Leader;

(b) The team will define the objective and scope of the remote oversight activities to be carried out;

(c) Initiation of communication with the regulated entity for the remote oversight activities. The communication will include details of objective, scope and dates and proposed mode of communication for the remote oversight exercise such as teleconference, emails, video and photography; and

(d) After confirmation of the remote oversight activities with the regulated entity and identification of the focal person, the relevant documents including the following as appropriate will be provided:

i. Workplan;
ii. Previous reports and CAP feedback;
iii. Checklists; and
iv. Media link.

## 6.0 REMOTE OVERSIGHT EXECUTION

### 6.1 Opening Meeting
The opening meeting for a remote inspection, surveillance or audit is much the same as the closing meeting for an in-person audit. All participants of the remote oversight activity should have access and connect to the media link at the specified time. During the opening meeting the Team Leader will:

(a) Confirm the objective, scope and methodology of the audit, inspection or surveillance;
(b) Confirm the mission workplan; and
(c) Ensure registration of participants.

Use of video teleconferencing, as well as a PowerPoint or other visual guides, is also helpful for this meeting. Intermediate meetings may be convened either

by the Inspectors or regulated entities during the course of the remote oversight for clarification of outstanding issues.

## 6.2 Document review

Remote document reviews are in many ways analogous to reviewing documents at the facility, with a couple of major caveats. It may take significantly more time for the operator to prepare and upload documents to a file sharing platform (SharePoint, shared drives, etc.) than it would to provide access to a file drawer or binder onsite. Depending on the documentation method (paper records, database storage system, etc.) the operator will need to take the time to convert these records into a reviewable format (such as PDF) and upload the files.

Inspectors should be open to receive and review information in whatever format is most easily obtained so that the burden to the facility is minimized. Where possible, consideration should be given to the accessibility of the digital file system used by the operator for records storage. Often, direct access can be granted on a temporary basis, solely for the duration of the inspection, surveillance or audit.

Careful consideration should be given to building effective strategies for reviewing data remotely. For example, depending on the number of records to be reviewed, sampling may be the best option. Whether reviewing all or part of the available data, the strategy should be discussed with the operators to ensure they provide the correct information to support the sampling strategy.

Unlike on-site records reviews, remote reviews do not typically allow for contemporaneous questions. When reviewing records remotely, the inspector should take notes and write down questions to be asked during the remote interviews. However, one way to incorporate synchronous questioning during remote reviews is to set up a video teleconference between the inspector and the operator. This allows for documents to be shared and reviewed, and for questions and answers to be given in real time.

## 6.3 Facilities Inspection

The remote facilities inspection is perhaps the most challenging aspect of the remote oversight. Experiences from various users of remote oversight have provided various technology solutions to accomplish an adequate facilities inspection. One approach is to use photography, videography, live two-way communication technology, including livestreaming. Although the idea of a live walk-through was compelling, the following limitations were encountered:

(a) Most facilities may not have facility-wide Wi-Fi. Even those facilities that have facility-wide Wi-Fi installed may not have good coverage of remote areas of the site (such as hangars, aprons, and storage areas);

(b) Covered facilities also happened to be in remote locations or were within old buildings constructed like hangers where cellular service is limited, or the signal strength may be poor, degrading the quality of live video feed;

(c) There may be little value in remote observations traveling from point to point as the video feed provided tunnel vision, and peripheral observations are not possible; and

(d) Ambient noise and (conversely) the noise-cancelling properties of the technology may prevent remote personnel from hearing interview responses.

An alternative to live, two-way communication are video and still digital photographs taken using company cellular phones. The advantage of this approach is that these devices are readily available and compatible with most company computer storage solutions (e.g., SharePoint). Additionally, signal strength at the point of collection does not negatively impact video and photograph quality on such devices. As mentioned in the planning section above, use of digital devices often requires pre-planning and special permissions (such as in sensitive areas or in environments where an explosion hazard exists).

During the document review, inspectors should compile a list of areas of concern that they want to capture with video and still photographs. Examples of areas of focus for an air operator may include:

(a) Active facility access points;
(b) Secure and restricted areas;
(c) Videos of vehicle and personnel screening; and
(d) Videos of CCTV monitoring stations including use of cameras.

The photos and videos are reviewed by the operator and compiled into an album, which is then reviewed by inspectors. Inspectors take notes and prepare questions to be asked during the remote interviews.

## 6.4 Remote interviews

Remote interviews are conducted in much the same way as in-person interview and can be conducted by scheduling video calls with key personnel using any number of readily available technologies or applications whose licenses have been duly purchased to guarantee cyber security. Plan on interviews of 30- to 90-minutes with the operator. Shorter, 15-minute interviews can be conducted with designated personnel who have safety or security responsibilities, and short (10-minute) interviews can be conducted with selected general employees who have responsibilities ancillary to the focus of the inspection, surveillance or audit. These help the inspector gain knowledge of the general culture.

Video calls are preferred over voice-only calls because non-verbal cues are an important part of communication and are often lost without video. Preparing for remote interviews takes additional time for the inspector. The inspector should prepare a list of questions and points regarding what additional information is needed, based on information from the document review.

When more than one inspector is participating in an interview, care must be taken to avoid talking over either the interviewee or other inspectors. Keep in mind that many people may not be comfortable chatting by video, especially auditees who do not regularly do so. While this is unavoidable, try to set a comfortable tone and be aware that the video alone may change body language or perception.

### 6.5 Closing meeting

The closing meeting for a remote inspection, surveillance or audit is much the same as the closing meeting for an in-person audit. It is suggested to schedule the closing meeting one to two days following the remote interviews. This allows the inspectors to review their own notes and findings, as well as have a remote inspector meeting to compile preliminary draft inspection, surveillance or audit results.

The audit closing meeting is an opportunity to present these preliminary draft results to the stakeholder audience, resolve any questions or concerns, and discuss the path forward to inspection, surveillance or audit result finalization and continuous improvement.

## 7.0 FOLLOW-UP

As a follow up of the remote auditing exercise the following shall be carried out as appropriate:

(a) Preparation and transmittal of audit, inspection or surveillance report and non-compliance form as appropriate;
(b) Review and acceptance/reject submitted corrective action plan for implementation by the regulated entity; and
(c) Scheduling of subsequent oversight activities.

## 8.0 TOOLS FOR REMOTE OVERSIGHT

The following tools are necessary to support remote oversight activities:

(a) Computers;
(b) Cameras;
(c) Telephones;
(d) Internet; and
(e) Software applications.

## 8.1 Software applications

Among the other software applications, the Mobile Inspection application is designed to enable Partner States carry-out electronically and paperless oversight activities.

The Mobile Inspection application is a multi-platform solution that allows several users to carry out simultaneous oversight inspection, surveillance and auditing utilizing computer and devices such as iPad, surface tablet or other portable device.

A web-based master database and administrative module captures data from the field where formal reports and notifications can be automatically generated.

The Mobile Inspection application is designed to provide users with standardized and intuitively interactive checklists that maximizes benefits in time management and quality assurance. Applicable checklists are developed and availed in the system while allowing ease of recording findings, upload of evidence as well as sharing the associated corrective action plans. Findings are enhanced with the use of the ability to gather graphical data through the utilization of device cameras, thus lessening the need for inspectors to utilize stand-alone cameras to capture evidence of findings.

### 8.1.1  Key features of the Application

Electronic Communication between Inspector and regulated entity can be done via the portal.

Appropriate workflows for all oversight activities should be developed by the users for customization within the application. System Administrators have the capability of designing workflows for the inspection, surveillance and auditing processes. This will allow such activities  to be viewed and tracked within the portal. The workflow will allow the user to view and track the 'Planned' and 'In Progress' oversight activities on a calendar/schedule within the portal.

Records of previous oversight activities including referenced regulations, completed checklists,  generated findings, evidence, corrective action plans are centralised in a relational database.  This can be used in the planning of future oversight activities, analysing trends and risks.

The Mobile Inspection application allows inspectors to carry out electronic inspections, surveillance and auditing reducing the inspection cycle by 80%. The following functionalities are available even when working offline:

(a) Find and visualise existing checklists, standards and guidelines
(b) Visualise and check assigned audits
(c) Create a new audit from scratch
(d) Check assigned personnel
(e) Start, pause, resume and finish an audit
(f)  Collaborate with others in an audit
(g) Raise findings, even acceding to a pre-described findings database to speed up the finding taking process

(h) Attach photos, documents, and all kind of digital evidences to findings or items in the audit

(i) Electronically sign off on the audit using a stylus or finger

## 9.0 COMPLEMENTARY REMOTE OVERSIGHT ACTIVITIES

### 9.1 Quality and safety management

Remote oversight can be enhanced by strengthening the quality management systems and safety management systems of the regulated entities.

The inspectors need to device a rapport with the personnel responsible for quality and safety management and guide them as appropriate to establish robust quality and safety management systems. This will provide a platform for the free exchange of safety critical information, feedback and trend analysis. The Authority should develop programmes aimed at equipping the personnel with the knowledge and skills appropriate to support remote oversight activities.

### 9.2 Contractual oversight arrangements

The Authority may enter into contractual arrangements or agreements to complement the remote oversight activities in line with the statutory oversight obligations and responsibilities. The Authority may also make arrangements not in consistent with the provisions of the Chicago convention and any such arrangements shall be forth with registered with ICAO. Such arrangements may include the implementation of Article 83 *bis* of the Chicago Convention as appropriate see *ICAO Doc 10059 - Manual on the implementation of Article 83 bis of the Convention on International Civil Aviation* and *Circular 295 - Guidance on the Implementation of Article 83 bis of the Convention on International Civil Aviation*. For reference purposes, Aeronautical agreements are kept in ICAO's Database of Aeronautical Agreements and Arrangements see *http://cfapp.icao.int/dagmar/main.cfm*. The Authority will at all times evaluate the adequacy of such arrangements.

## 10.0 MERITS AND DEMERITS OF REMOTE OVERSIGHT

The following is a summary of advantages and limitations for remote inspections, surveillance and audits.

### 10.1 Advantages of remote oversight

A short list of positives for implementing remote inspections, surveillance and audits includes:

(a) Restoration of a much-needed sense of normalcy;

(b) Reduced travel costs. For an audit program with multiple annual audits, remote audits can provide significant savings;

(c) An expanded pool of available inspectors;

(d) Expanded coverage. Remote audits allow for more coverage when competing priorities of volume and time limitations occur;

(e) Expanded use of specialists. Subject Matter Experts can connect remotely for selected interviews or parts of inspection, surveillance or audit planning, and they need not be present for a full inspection, surveillance or audit;

(f) Improved document reviews. Remote reviews of plans and documentation, at the inspector's own pace, contribute to a higher quality review and a deeper dive into the documentation;

(g) Improved use of available technology strengthens documentation and reporting. Operators' use of technology to capture video and photographic information contributes to improving their understanding and use of available technology. This contributes to better documentation of facility conditions, improved ability to report incidents and conditions to remote corporate personnel, and increased opportunities for future remote training tools;

(h) The oversight burden to operators is mitigated. Time required to gather and digitize documentation, video, and images can be spread over several weeks, instead of concentrated into an inspection, surveillance or audit period that takes personnel from their daily activities;

(i) Improved organization and confirmation of required documentation. Because facility personnel have to review and assemble the required documents, remote auditing provides an opportunity to organize and confirm that all documentation required for a regulatory inspection is readily available.

## 10.2 Limitations of remote audit

Some limitations of the remote inspection, surveillance and audit approaches include:

(a) First-hand observations cannot be replaced. There is nothing like seeing processes first-hand, observing body language, or even noticing a smell that should not be there. Remote oversight also has limits under certain conditions, such as where operations are secure, highly restricted, or in sensitive environments. You cannot walk through a clean room with a video device, nor could you take it into dark rooms;

(b) Remote oversight makes it hard to build rapport with operators. Opportunities to provide hints, tips, and observations for improvement are lost. It is hard to identify best practices or describe things that others may benefit from, outside of the documentation process. Good inspectors do this, and these are often the most useful things that auditees get from the exercise;

(c) The lack of in-person interaction opens other opportunities for fraud. The opportunity to present doctored documents and to omit relevant information is increased. This may call for additional planning, some additional/different inspection, surveillance or audit procedures, or a follow-up once the barriers to a traditional audit lift.

(d) Technology glitches. The internet connectivity may be poor and people may not hear or even forget to turn on their mics. Some organization firewalls have size limits for video and photo files and might require facility personnel to seek out IT help when uploading them.

However, all these hurdles can be overcome with time and experience.

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**Civil Aviation Authority**