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مقررات ارائه دهندگان خدمات اطلاعات ترافیک هوایی در فرودگاههای کنترل نشده

ویرایش دوم – شهریور ماه ۱۴۰۰
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اصلاحیه ها

اصلاحیه های این سند، بر روی سایت سازمان منتشر می شوند. دارندگان این سند موظف هستند، اصلاحیه ها را در این سند اعمال نموده و سوابق آن را در جدول زیر ثبت نمایند.

سوابق اصلاحیه ها

ویرایش	بازنگری	تاریخ	موضوع اصلاحات
۰۱	مهر ماه ۱۳۹۷	انتشار اولیه	نسخه اولیه
۰۲	تیر ماه ۱۴۰۰	ویرایش دوم	با توجه به انتشار مقررات خدمت ناوبری هوایی CAO IRI ATM/ANS این سند یک بازنگری اساسی شد و ویرایش ۲ منتشر گردید

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۱- کلیات

این سند الزامات فنی و روش اجابت مورد قبول ارائه سرویس در فرودگاه های کنترل نشده (دارای فضای G) می باشد که مطابق با بند مقررات CAO IRI ATM/ANS.OR.A.015 تهیه و تدوین گردیده است. بر این اساس AFIS (AFIS Aerodrome Flight Information Service) که شامل Flight Information Service (FIS) و سرویس هشدار (Alerting service) توسط واحد ارائه دهنده اطلاعات ترافیک هوایی (AFIS Unit) با استفاده از پرسنلی تحت عنوان AFIS Officer (AFISO) و امکانات لازم ارائه می گردد.

نکته: اطلاعات و حوزه فعالیت های این فرودگاه ها در نشریه اطلاعات هوانوردی (AIP) ذکر شده است.

این سند در دو فصل مجزا تدوین شده است:

- فصل یک، الزامات فنی و روش اجابت مورد قبول (AMC) بند مقررات فوق است.

- فصل دو، الزامات فنی (TR) در خصوص نحوه ارائه سرویس می باشد.

۱-۱- هدف

هدف از تدوین این سند تشریح الزامات اعطای مجوز و نحوه ارائه AFIS در فرودگاه های کنترل نشده است. (دارای فضای G)

۱-۲- حدود و حوزه اثر

۱-۲-۱- این شیوه نامه ناظر بر فرودگاه هایی است که از نظر سازمان ارائه خدمات کنترل ترافیک هوایی با توجه به حجم و پیچیدگی ترافیک الزامی نمیباشد. سازمان عدم ضرورت ارائه AFIS را در طول ۲۴ ساعت شبانه روز یا در برخی از دوره های زمانی در طول ۲۴ ساعت در یک فرودگاه با توجه به شرایط ترافیکی، کتباً و با قید شاخص های عملیاتی اعلام می نماید.

۱-۲-۲- فرودگاه ها و یا اشخاص حقوقی مشمول این سند می توانند برای ارائه AFIS در محدوده (Flight Information Region (FIR از سازمان درخواست مجوز نمایند.

۱-۳- مسئولیت اجرا

مسئولیت اجرای این سند بعهده دفتر نظارت بر عملیات هوانوردی می باشد.

۴-۱- انتشار، کنترل و توزیع سند

کنترل، انتشار و توزیع این شیوه نامه برعهده دفتر ارزیابی عملکرد و تضمین کیفیت بوده و از طریق "سامانه قوانین و مقررات" موجود در سایت سازمان به صورت طبقه بندی شده در اختیار کاربران درون سازمان قرار میگیرد.

۱-۵- تعاریف

برای تعاریف متن انگلیسی به فصل ۱ تعاریف (CHAPTER 1. DEFINITIONS) مراجعه نمائید.

سازمان : سازمان هواپیمایی کشوری

فرودگاه : فرودگاه مشمول این شیوه نامه

TR: Technical Requirement

LOC: Letter of Coordination

۱-۶- اسناد وابسته

مقررات خدمات نوبری هوایی CAO IRI ATM/ANS

مقررات فرودگاهی CAO IRI ADR

۲- روش اجابت ارائه AFIS در فرودگاه های کنترل نشده

۲-۱- ارائه دهندگان AFIS

۲-۱-۱- متقاضیان ارائه خدمات AFIS باید نظامنامه عملیاتی مطابق با ATM/ANS.OR.B.035 ، مشتمل بر ساختار سازمانی ، فرآیندها و دستورالعمل های عملیاتی ، رویکرد تأمین و آموزش منابع انسانی ، تجهیزات و ابزارهای مورد نیاز و طرح های اضطراری را تهیه و به تأیید سازمان برسانند.

۲-۱-۲- ارائه دهندگان AFIS باید ۹۰ روز قبل از تصمیم بر قطع ارائه سرویس و یا کاهش آن ، سازمان را مطلع سازند.

۲-۱-۳- ارائه دهندگان AFIS ملزم به تعیین مقام ذیصلاح و تعریف وظایف و حوزه مسئولیت های اشخاص زیر می باشند:

- مدیر پاسخ گو

- مدیر واحد مربوطه (head of AFIS)

- مدیر ایمنی

- مدیر پایش انطباق

- مدیر حراست

- مدیر آموزش

- پرسنل کافی

نکته: همه افراد بالا به جز پرسنل باید در قالب نظام نامه به سازمان معرفی شوند.

۴-۱-۲- ارائه دهندگان AFIS باید الزامات تسهیلاتی مطابق با ATM/ANS.OR.B.025 فراهم نماید تا از مناسب بودن دما، رطوبت، صدا، نور و سایر تجهیزات و امکانات لازم در محیط کار پرسنل (AFISO) به گونه ای که تأثیر منفی بر عملکرد آن ها نداشته باشد، اطمینان حاصل کنند و همچنین واحد ارائه خدمات ترافیک هوایی حتی الامکان باید در بهترین شرایط دید نسبت به ناحیه ارائه سرویس قرار داشته باشد.

۵-۱-۲- ارائه دهندگان AFIS باید فرآیندی را برای الزامات گزارش دهی اجباری رویداد ها مطابق با سند CAO.IRI.SRR فراهم و از اجرای ان اطمینان حاصل نمایند.

۲-۱-۶- ارائه دهندگان AFIS باید یک سیستم نگهداری سوابق مشتمل بر یک تاریخچه دقیق از فعالیت های ارائه دهنده خدمات به منظور بازسازی وقایع در تحقیق سوانح و رویدادها و یا آنالیز های سیستم مدیریت ایمنی مطابق با قوانین و الزامات پارت ATM/ANS.OR.B.030 در مواقع لزوم ارائه نمایند.

۲-۱-۶-۱- ارائه دهندگان AFIS باید اطلاعات زیر را برای مدت ۳۰ روز ذخیره و نگهداری نمایند:

- ارتباطات تلفنی و مکالمات انجام گرفته

- ارتباطات رادیویی با ترافیک ها و مکالمات انجام گرفته

- اطلاعات مربوط به دستگاه های نظارتی

- طرح پروازی پر شده هر هواپیما

- استریپ ها

۲-۱-۶-۲- ارائه دهندگان AFIS باید اطلاعات زیر را برای مدت ۵ سال ذخیره و نگهداری نمایند:

- LogBook ها و Position Log ها

- فهرست وظایف کارکنان

- بازرسی های انجام شده توسط سازمان

- نظارت های داخلی انجام شده و اقدامات اصلاحی به کار گرفته شده.

۳-۱-۲- موارد آموزشی ارائه شده به کارکنان باید تا زمانی که آن شخص مشغول به کار است ثبت و نگهداری شود.

۲-۱-۶-۴ ارائه دهندگان AFIS باید گزارشات که حداقل مشتمل بر موارد زیر است را ذخیره و نگهداری نمایند:

- سوانح و حوادث ، و عدم مطابقت با قوانین و مقررات
- بازرسی های فرودگاه و باند ، جزئیات کارهای در حال انجام در فرودگاه و دیگر اطلاعات ضروری
- تغییر وضعیت دستگاه های ناوبری و سرویس در حال ارائه
- اطلاعات هواشناسی مهم گزارش شده

۲-۱-۶-۵ ارائه دهندگان AFIS باید گزارشات موقعیت عملیاتی را که حداقل مشتمل بر موارد زیر است ، ذخیره و نگهداری نمایند:

- مدت زمانی که AFIS ارائه شده است
- خدماتی که در آن موقعیت ارائه شده است
- هویت فردی به همراه امضای آن اشخاص که خدمات را ارائه میداده اند.

۷-۱-۲- ارائه دهندگان AFIS ملزم به اجرای الزامات ذکر شده در نظام نامه های فرودگاه می باشد.

۲-۱-۸- ارائه دهندگان AFIS در فرودگاههای مشمول این دستورالعمل ملزم به اجرای موافقت نامه های موجود با واحدهای مراقبت پرواز مرتبط؛ واحدهای داخلی فرودگاه اعم از نجات و آتش نشانی، مدیریت پرون، الکترونیک، هواشناسی و ... می باشند.

۱-۱-۸-۲ یک نسخه کپی از موافقت نامه های ذکر شده در بالا باید در AFIS Unit فراهم شده باشد همچنین به صورت سالانه تمام موافقت نامه ها توسط سازمان بررسی و تأیید می شوند.

۲-۱-۹- ارائه دهندگان AFIS اطمینان حاصل نماید تجهیزات ارتباطی برای ارتباط با واحد های مورد نیاز فراهم باشد

- هر واحد ATS که ممکن است نیاز به هماهنگی با آن واحد وجود داشته باشد.

- واحد ارائه دهنده سرویس ناوبری هوایی

- سازمان هواشناسی
- اپراتورهای هواپیما ها
- واحد نظامی ایران
- واحد جستجو و نجات
- واحد آتش نشانی فرودگاه
- سامانه AFTN

۱-۹-۲- ارائه دهندگان AFIS باید اطمینان حاصل کنند که تمام مکالمات مابین AFISO و هواپیما ها و وسایل نقلیه در محدوده تعیین شده فرودگاه ، مطابق با AFIS TR می باشد.

۲-۱-۱۰- ارائه دهندگان AFIS باید الزامات برنامه شیفت را مطابق ATS.OR.320 تدوین نمایند.

۲-۱-۱۱- ارائه دهندگان AFIS باید رویه تغییر شیفت و تحویل موقعیت کاری را مطابق این شیوه نامه تدوین نمایند.

۲-۱-۱۲- ارائه دهندگان AFIS ملزم به انعقاد توافق نامه سطح خدمات (SLA) با مدیریت اطلاعات هوانوردی جهت تغییرات و بروزرسانی اطلاعات ذکر شده در AIP مربوط به ارائه سرویس AFIS می باشند.

نکته ۱: یک کپی از نسخه SLA باید به سازمان ارائه شود.

نکته ۲: SLA مذکور با SLA فرودگاه متفاوت می باشند.

نکته ۳: تغییرات AIP مربوط به سرویس AFIS بایستی با هماهنگی فرودگاه و سازمان باشد.

۲-۱-۱۳- ارائه دهندگان AFIS برای ارتباط و هماهنگی با واحد مدیریت اطلاعات هوانوردی ملزم به رعایت قوانین مطابق با بند ATS.OR.125 می باشند.

۲-۱-۱۴- ارائه دهندگان AFIS باید سیستم مدیریت ایمنی را مطابق با بند ATS.OR.200 اجراء نمایند. همچنین سیستم مدیریت ایمنی ارائه دهنده AFIS باید با سیستم مدیریت ایمنی فرودگاه تعامل داشته باشد.

۲-۱-۱۵- ارائه دهندگان AFIS باید یک سیستم انطباق با مقررات مطابق با بند (4)(a) ATM/ANS.AR.B.001 تهیه کرده و آن را اجراء نمایند.

۲-۱-۱۶-ارائه دهندگان AFIS باید اطمینان حاصل کنند که AFISO ها دارای سطح زبان انگلیسی ۴ ایکایو و سطح ۳ چک پزشکی ایکایو هستند.

۲-۱-۱۷-ارائه دهنده AFIS ملزم است نسبت به ابلاغ نظامنامه عملیاتی، بروزرسانی و حصول اطمینان از اشراف تمام پرسنل ارائه دهنده این خدمات اقدام نماید. سرفصل های نظامنامه عملیات ارائه دهندگان AFIS حداقل باید مشتمل بر موارد ذیل و مطابق با سند ATM/ANS باشد:

۲-۱-۱۷-۱- تشریح ساختار سازمانی و نام، صلاحیت ها و تجربه و مسئولیت های افراد کلیدی در ساختار سازمانی.

۲-۱-۱۷-۲- شرح وظایف و مسئولیت ها و اختیارات مدیران و کارکنان در ساختار سازمانی.

۲-۱-۱۷-۳- روش چگونگی تعیین و تأمین پرسنل عملیاتی مورد نیاز، شامل تعداد سرپرستان و پرسنل شیفت مورد نیاز

۲-۱-۱۷-۴- محدوده وظایف و خدماتی که توسط ارائه دهنده خدمات قابل ارائه می باشد.

۵-۱-۱۷-۲- ساعت عملیاتی برای هریک از واحدهای تحت نظارت (زیرمجموعه)

۲-۱-۱۷-۶- تشریح ساختار فضایی هوایی که AFIS در آن ارائه می گردد به همراه نقشه های هوانوردی مربوطه

۲-۱-۱۷-۷- نقشه های محوطه مانور فرودگاه، شامل باندها، تاکسی وی ها و اپرون ها

۲-۱-۱۷-۸- تشریح هماهنگی های مورد نیاز جهت حصول اطمینان از دریافت و مداومت اطلاعات مورد نیاز برای هر سرویس:

- شامل اطلاعاتی که از منابع داخلی و خارجی از سازمان ارائه دهنده دریافت می شود.

- تبیین نوع اطلاعات مورد نیاز، منابع مورد تهیه، روش ارتباطی، دریافت و انتشار آن را مشخص نمایند.

۲-۱-۱۷-۹- تشریح الزامات سامانه مدیریت اسناد مورد نیاز نگهداری سوابق که شامل شناسایی، جمع آوری، ذخیره سازی، امنیت، نگهداری و به روز رسانی، سطوح دسترسی و روش های امحاء مستندات.

۲-۱-۱۷-۱۰- کپی توافق نامه ها به واحدهای دیگر جهت انجام فعالیت ارائه AFIS

۱-۲-۱۷-۱۱- تشریح روش اطلاع رسانی به پرسنل عملیاتی از اصلاحات صورت گرفته در نظام نامه ها، دستورالعمل ها و استانداردها و همچنین شامل از آخرین تغییرات صورت گرفته در شیفت های عملیاتی گذشته.

۱-۲-۱۷-۱۲- تشریح برنامه آموزشی پرسنل شامل آموزش های مقدماتی، جاری و بازآموزی

۱-۲-۱۷-۱۳- جزئیات سیستم مدیریت ایمنی

۱-۲-۱۷-۱۴- سامانه مدیریت اسناد مورد نیاز

۱-۲-۱۷-۱۵- جزئیات سیستم انطباق با مقررات

۱-۲-۱۷-۱۶- حداقل صلاحیت لازم برای نیروی انسانی متناسب با مسئولیت های محوله و شیوه ارزیابی احراز آن

۱-۲-۱۷-۱۷- تجهیزات موجود در AFIS Unit

۱-۲-۱۷-۱۸- تشریح رویه ی اطلاع رسانی در مورد تجهیزات و سرویس در حال ارائه فرودگاه

۱-۲-۱۷-۱۹- تشریح اقدامات مورد نیاز بعد از بروز یک سانحه یا حادثه

۱-۲-۱۷-۲۰- تشریح طرح واکنش به شرایط اضطراری (Contingency Plan)

۱-۲-۱۸- ارائه دهندگان AFIS ملزم به تدوین و اجرای طرح اضطراری (Contingency Plan) مطابق با بند ATM/ANS.OR.A.070 بوده و باید هماهنگ با نظام نامه ها و طرح های اضطراری فرودگاه باشد.

۲-۲- فرودگاه

۱-۲-۲-۱- فرودگاه ها باید در رابطه با طرح واکنش به شرایط اضطراری (Contingency Plan) با ارائه دهنده AFIS هماهنگ باشد.

۲-۲-۲- فرودگاه ملزم خواهد بود برای ارائه AFIS از شرکت های دارای مجوز از سازمان استفاده نماید.

۲-۲-۳- فرودگاه ملزم خواهند بود امکانات مندرج در پیوست شماره ۱ را در واحدهای ارائه دهنده AFIS تأمین نمایند.

۲-۲-۴- فرودگاه باید حداقل ۹۰ روز قبل از تغییر ارائه دهنده AFIS، سازمان را مطلع ساخته و ارائه دهنده AFIS جدید را برای اخذ مجوز از سازمان معرفی نماید.

۲-۲-۵- فرودگاه باید شرایط مناسب از لحاظ دما، رطوبت، صدا، نور و سایر تجهیزات و امکانات لازم در محیط کار پرسنل (AFISO) مانند امکانات تهیه غذا و سرویس بهداشتی و غیره به گونه ای فراهم نماید که تأثیر منفی بر عملکرد آن ها نداشته باشد و همچنین موقعیت AFISU باید حتی الامکان در بهترین شرایط دید نسبت به مناطق پروازی باشد.

۲-۲-۶- فرودگاه های مشمول این شیوه نامه باید شماره تلفن های ضروری و راه های ارتباط با واحد های مورد نیاز زیر را فراهم نمایند:

- هر واحد ATS که ممکن است نیاز به هماهنگی با آن واحد وجود داشته باشد.

- سازمان هواشناسی

- دفاتر عملیات شرکت های بهره بردار هوایی

- واحد های نظامی

- واحد نجات و آتش نشانی فرودگاه

- سامانه AFTN

- تلفن اضطراری

۲-۳- شرکت فرودگاه ها و ناوبری هوایی ایران

۲-۳-۱- شرکت فرودگاه ها و ناوبری هوایی ایران ملزم خواهد بود نسبت به تنظیم و امضای موافقت نامه های تبادل ترافیک هوایی (LOC) و هماهنگی جستجو و نجات با بهره برداران فرودگاه ها اقدام نماید.

۲-۴- سازمان

۲-۴-۱- سازمان علاوه بر بررسی وضعیت حجم و پیچیدگی ترافیک هوایی، باید عواملی نظیر شرایط اقلیمی، تجهیزات ارتباطی - ناوبری، منابع انسانی لازم را مبنای تعیین طبقه بندی فضای فرودگاه قرار دهد.

۲-۴-۲- سازمان باید ارائه دهندگان AFIS را به صورت دوره ای حداقل هر ۳ سال یک بار و در صورت ارائه گزارش عدم رعایت الزامات مورد ممیزی قرار دهد.

AFISO -۵-۲

AFISO-۱-۵-۲ باید مقررات ذکر شده در TR را جهت ارائه سرویس رعایت نماید. همچنین AFISO باید قوانین ذکر شده در ATM/ANS.OR.A.015 را رعایت کند.

۳- روش اجابت مورد قبول گواهی نامه AFISO

نکته: شرایط دریافت گواهی نامه AFISO علاوه بر موارد زیر باید مطابق با فصل دو (TR) بند 2.2 باشد.

۳-۱- شرایط دریافت گواهی نامه AFISO:

۳-۱-۱- برای دریافت گواهی نامه AFISO موارد زیر باید محقق شود:

أ. موفقیت در آزمون کتبی

ب. -دارا بودن تجربه کاری لازم

ت. -دارا بودن مهارت کاری مورد نیاز

ث. -صلاحیت پزشکی

۳-۱-۲- شرایط عمومی دریافت گواهی نامه AFISO:

أ. داوطلب باید دارای ملیت ایرانی باشد.

ب. حداقل سن داوطلب باید ۲۱ سال تمام باشد.

ت. داوطلب باید دوره آموزشی رشته مراقبت پرواز را در مرکز مورد تأیید سازمان هواپیمایی کشوری با موفقیت گذرانده باشد.

نکته: سیلابس و موارد آزمون دوره آموزشی در پیوست شماره ۲ موجود می باشد.

ث. داوطلب باید الزامات مربوط به معاینات پزشکی سطح ۳ یکایو و همچنین زبان انگلیسی سطح ۴ یکایو را فراهم نماید.

۳-۱-۳- طرح و برنامه آموزشی:

-هر متقاضی دریافت گواهینامه AFISO باید حداقل پس از گذشت یک ماه از شروع بکار خود در AFIS UNIT مربوطه و پس از گذراندن دوره (۰۵۲) و دریافت مدرک مربوطه، بعنوان OJT مطابق با بند (۳-۲) فوق در واحد عملیاتی مشغول بکار شده و سپس با تایید معلم آموزشی منتخب مربوطه و همچنین معرفی توسط مسئول آن AFIS UNIT در آزمونی که توسط سازمان و یا ATO مورد تایید سازمان انجام میشود شرکت نموده و پس از موفقیت در آزمون و دریافت گواهی نامه مربوطه مجاز به حضور و فعالیت در موقعیت کاری بعنوان AFISO می باشد.

نکته: مواد آزمون در پیوست شماره ۳ موجود می باشد.

۳-۱-۳-۱- متقاضی دریافت گواهی نامه AFISO باید حداقل ۷۰ درصد از نمره آزمون های کتبی و شفاهی را کسب کند و در صورت عدم کسب حداقل نمره ، در آزمون مردود می شود.

۳-۱-۳-۲- در صورتی که متقاضی دریافت گواهی نامه AFISO در آزمون های مربوطه نمره ی E را کسب نماید ، حق شرکت در آزمون بعدی را نخواهد داشت.

۳-۳-۱-۳- در صورتی که متقاضی دریافت گواهی نامه AFISO سه مرتبه در آزمون ها مردود شود ، ملزم به گذراندن مجدد دوره های آموزشی می باشند.

۳-۱-۳-۴- در صورت قبولی در بخشی از آزمون ها، صرفاً آزمون های مردود شده باید دوباره انجام شوند. اگر متقاضی دوباره در آزمون مردود شود باید همه موارد مجدداً مورد ارزیابی قرار گیرند.

۳-۱-۳-۵- ارائه دهنده AFIS ملزم است ۳۰ روز قبل از برگزاری ارزیابی ها، متقاضیان دریافت گواهی نامه را به سازمان معرفی نمایند.

۳-۲- کارآموزی

۳-۲-۱- کارآموزی (ON JOB TRAINING) باید مورد تائید معلم آموزشی منتخب در AFIS UNIT بطوریکه حداقل زمان ۴۰ ساعت تحت نظر Instructor انجام گردیده باشد.

تبصره ۱: معلم آموزشی منتخب باید مورد تایید دفتر نظارت بر عملیات هوانوردی باشد.

تبصره ۲: افرادی که از پایان اعتبار گواهی نامه کنترل ترافیک هوایی آنان بیش از ۳ سال نگذشته باشد، صرفاً ملزم به گذراندن حداقل ۲۰ ساعت OJT را میباشند.

تبصره ۳: ساعت کارآموزی OJT جهت کسب کارآموزی لازم در هر واحد در فرم مربوطه L3 ثبت خواهد شد و توسط معلم آموزشی و تائید مسئول مراقبت پرواز واحد مربوطه تائید میگردد.

تبصره ۴: گذراندن حداکثر ۳۰٪ ساعت کارآموزی (OJT) فوق الذکر در سیمولاتورهای (Simulator) مورد تائید دفتر گواهینامه های پرسنل هوانوردی قابل قبول خواهد بود.

تبصره ۵: مدت زمان OJT نباید از روزانه ۲ ساعت حضور در موقعیت کاری ، با شرط وجود ترافیک ، فراتر رود.

۳-۳- شرایط تمدید گواهی نامه پرسنل ارائه دهنده AFIS

۳-۳-۱- هر AFISO برای معتبر نگاه داشتن گواهی نامه خود باید مطابق با ضوابط تعیین شده در شیوه نامه ارائه دهنده AFIS عمل نموده و ارائه دهنده AFIS موظف است فرم تکمیل شده را به دفتر نظارت بر عملیات هوانوردی ارسال دارد.

۳-۳-۲- هر AFISO جهت احراز اعتبار گواهی نامه باید تحت موارد زیر مورد ارزیابی قرار بگیرد:

ا. ارزیابی در هنگام ورود به یک واحد جدید

ب. ارزیابی دوره ای هر دو سال یک بار

ت. ارزیابی در صورتی که گواهی نامه باطل شده باشد.

نکته: اجرای ارزیابی و آزمون های ذکر شده ممکن است توسط سازمان به ارائه دهنده AFIS دارای مجوز ATO واگذار شود.

نکته: مواد آزمون این ارزیابی مطابق با پیوست شماره ۳ می باشد.

۳-۳-۳- هر AFISO به منظور معتبر نگاه داشتن گواهی نامه خود باید هر سال یک بار توسط معلم آموزشی منتخب (DESIGNEE) دفتر گواهینامه های پرسنل هوانوردی، مورد ارزیابی قرار گیرد. این ارزیابی مطابق با مواد مندرج در فرم (L2) و بصورت عملی خواهد بود که پس از تکمیل، فرم مربوطه از طریق ارائه دهنده AFIS به دفتر گواهینامه های پرسنل هوانوردی ارسال خواهد گردید.

۳-۳-۴- هر AFISO بمنظور معتبر نگهداشتن گواهی نامه مربوطه باید حداقل ۱۲ ساعت در طول ۴ ماه گذشته کار عملی در واحد مربوطه داشته باشد. ثبت کار عملی در فرم (L3) انجام می پذیرد و پس از تأیید مسئولین ذیربط از طریق ارائه دهنده AFIS به دفتر گواهینامه های پرسنل هوانوردی ارسال خواهد شد. تبصره ۶: در صورتیکه عدم اشتغال در واحدهای مراقبت پرواز بیش از ۴ ماه و کمتر از یکسال بطول انجامد، به منظور تمدید اعتبار گواهی نامه، ارایه ۴ ساعت کار عملی به ازای هر ماه دوری از کار در واحد مربوطه تحت نظر AFISO دارای گواهی نامه معتبر آن واحد و ارائه فرم های (L2 و L3) با تأیید مسئولین ذیربط به دفتر گواهینامه های پرسنل هوانوردی الزامی می باشد.

تبصره ۷: در صورتیکه عدم اشتغال در واحدهای مراقبت پرواز مربوطه بیش از دو سال به طول انجامد، مورد از سوی دفتر گواهی نامه های پرسنل هوانوردی بررسی و تصمیم گیری به عمل خواهد آمد.

تبصره ۸: فرم های L1, L2, L3 ضمیمه این شیوه نامه می باشد.

۳-۳-۵- گواهی نامه AFISO تا تاریخ مندرج در گواهی نامه معتبر باقی می ماند مگر به نحوی سازمان مبادرت به تعلیق نماید.

۴- روش اجابت صلاحیت پزشکی

۴-۱- شرایط احراز و اعتبار گواهی سلامت پرسنل ارائه دهنده AFIS

۴-۱-۱- متقاضی گواهی نامه AFISO، باید دارای گواهینامه معتبر ارزیابی پزشکی مطابق با الزامات پزشکی سطح ۳ ایکایو باشد.

۴-۱-۲- پرسنل ارائه دهنده AFIS باید قبل از اتمام دوره اعتبار این گواهی نامه، برای تمدید آن مطابق با دستورالعمل ارائه شده در آن نظام نامه اقدام نمایند و در صورتی که AFISO نتواند گواهی پزشکی خود را تمدید کند، باید از ارائه سرویس AFIS منع شود.

۴-۱-۳- ارائه دهنده AFIS باید ۲ ماه قبل از زمان اتمام دوره اعتبار گواهی پرسنل خود، آن ها را از اتمام آن مطلع کنند و پرسنل یک هفته قبل از اتمام مهلت اعتبار، برای تمدید آن اقدام کنند.

۴-۱-۴- ارائه دهنده AFIS که دارای گواهی سلامت هستند در صورتی که از وجود بیماری پزشکی و یا هرگونه عمل جراحی که اعتبار گواهی پزشکی پرسنل را باطل میکند مطلع شوند، باید از ادامه فعالیت وی خودداری کنند و همچنین خود شخص ملزم به خود اظهاری است.

۵- مراحل دریافت مجوز

۵-۱- متقاضی ارائه دهنده AFIS ملزم به طی مراحل زیر برای دریافت مجوز فعالیت میباشد:

۵-۱-۱- ارائه درخواست به دفتر نظارت بر فرودگاهها، مؤسسات و شرکتهای هواپیمایی جهت صدور موافقت اصولی مطابق با "شیوه نامه نحوه فعالیت ارائه دهندگان خدمات هوانوردی CAD3040 در سامانه قوانین و مقررات سازمان هواپیمایی کشوری".

۵-۱-۲- ارائه درخواست به دفتر نظارت بر فرودگاه ها، مؤسسات و شرکت های هواپیمایی جهت صدور مجوز بهره برداری مطابق با "شیوه نامه نحوه فعالیت ارائه دهندگان خدمات هوانوردی CAD3040 در سامانه قوانین و مقررات سازمان هواپیمایی کشوری".

۵-۱-۳- ارائه نظامنامه های عملیاتی و لیست پرسنل به دفتر نظارت بر عملیات هوانوردی

۵-۱-۴- تأمین منابع انسانی، تدوین فرآیندهای عملیاتی و تجهیزات مورد نیاز جهت صدور مجوز ارائه خدمات

پیوست ۱- تجهیزات و امکانات مورد نیاز

موضوع	عنوان / نوع	تعداد / توضیحات
Signaling lamp	دستگاه	۱
دوربین دو چشمی	دستگاه	۱
بادنما (سمت و سرعت سنج)	سیستم دیجیتال با دو سنسور ابتدا و انتهای باند	۱
نشان دهنده سمت و سرعت باد در کنسول برج	نشانگر سیستم دیجیتال	۱
نشان دهنده مقدار QNH (در صورت وجود تجهیزات)		۱
نشان دهنده دما بیرون (در صورت وجود تجهیزات)		۱
نشان دهنده دید عمودی و ارتفاع ابر و فاصله RVR (در صورت وجود تجهیزات)		۱
Crash alarm	سیستم	۱
AD Beacon		۱
ساعت (local)	دستگاه	۱
ساعت (UTC)	دستگاه	به تعداد موقعیت کاری
استریپ و هولدر و فرم خام طرح پرواز	تعداد	به تعداد مورد نیاز
دفتر LOG	جلد	متناسب با نیاز
نقشه های هوانوردی شامل grid map, aerodrome, visibility chart و نقشه توپوگرافی منطقه با مقیاس ۱:۲۵۰۰۰۰	نسخه	هر کدام یک عدد
نقشه VFR Chart (در صورت وجود)		۱
تجهیزات ارتباط مخابراتی دوطرفه با هواپیما	دستگاه	Main/Standby
تجهیزات ارتباطی با سایر واحدهای مراقبت پرواز	سیستم	Microwave/ تلفن اضطراری / تلفن / AFTN
رکورد ضبط مکالمات و اطلاعات	سیستم	۱
برق اضطراری تجهیزات مستقر در واحد ارائه دهنده AFIS	سیستم	۱
امکانات رفاهی از قبیل تهیه غذا و سرویس بهداشتی و غیره		

پیوست ۲- سیلابس دوره آموزشی

۱. مقررات هوایی (AIR LAW)
۲. آشنایی با تجهیزات ارائه AFIS
۳. اطلاعات عمومی در مورد اصول پرواز، اصول کارکرد موتور و سیستم های هواپیما، کارآئی هواپیما (GENERAL KNOWLEDGE IN PRINCIPLES OF POWER PLANTS,SYSTEM AND AIRCRAFT PERFORMANCE)
۴. کارایی و محدودیت های انسانی (HUMAN PERFORMANCE AND LIMITATION)
۵. اصول رادیو تلفنی (RADIOTELEPHONY)
۶. هواشناسی (METEORLOGY)
۷. ناوبری (NAVIGATION)
۸. دستورالعملهای عملیاتی (TECHNICAL REQUIREMENT)
۹. عوامل انسانی (HUMAN FACTOR)
۱۰. انجام کار عملی ارائه AFIS و آشنایی با شرایط اضطراری در سیمیلاتور

پیوست ۳- موارد آزمون گواهی نامه

۱. مقررات هوایی (AIR LAW)
۲. آشنایی با نقشه فرودگاه (AERODROME LAYOUT)
۳. ساختار فضائی (AIRSPACE STRUCTURE)
۴. سیستم های ناوبری هوایی (AIR NAVIGATION FACILITIES)
۵. آشنایی با تجهیزات ارائه AFIS (AFIS UNIT EQUIPMENT)
۶. خصوصیات ترافیک هوایی (CHARACTERISTICS OF AIR TRAFFIC)
۷. دستورالعملهای اضطراری و جستجو و نجات (EMERGENCY AND SAR PLANS)
۸. عوامل انسانی (HUMAN FACTOR)
۹. اطلاعات عمومی در مورد اصول پرواز، اصول کارکرد موتور و سیستم های هواپیما، کارآئی هواپیما (GENERAL KNOWLEDGE IN PRINCIPLES OF POWER PLANTS, SYSTEM AND AIRCRAFT PERFORMANCE)
۱۰. کارایی و محدودیت های انسانی (HUMAN PERFORMANCE AND LIMITATION)
۱۱. اصول رادیو تلفنی (RADIOTELEPHONY)
۱۲. هواشناسی (METEORLOGY)
۱۳. ناوبری (NAVIGATION)
۱۴. دستورالعملهای عملیاتی (TECHNICAL REQUIREMENT)
۱۵. آزمون مهارت عملی ارائه AFIS (SKILL TEST) و آشنایی با شرایط اضطراری در سیمپلاتور

نکته: موارد عنوان شده در پیوست شماره ۳ باید مرتبط با فرودگاه ارائه سرویس باشد.



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ISLAMIC REPUBLIC OF IRAN
CIVIL AVIATION ORGANIZATION
PERSONAL LICENCING DEPARTMENT

ATC SKILL TEST

APPLICATION'S NAME:				
LOCATION:		UNIT:		
DATE:		TIME:		
SECTION I – AERODROME / APPROACH / AREA PROCEDURES			S	U
1	SEPARATION STANDARD AND APPLICATION			
2	RECOGNITION OF AIRCRAFT CAPABILITIES AND PERFORMANCE			
3	AWARENESS AND ANALYSIS OF TRAFFIC SITUATION			
4	PLANING SEQUENCING AND EXPDITION OF TRAFFIC FLOW			
5	KNOWLEDGE OF LOCAL PROCEDURE			
6	ADJUSTING TRAFFIC TO CHANGING CONDITIONS IN CASE OF COMMUNICATION FAILURE AND SO ON			
7	CO-ORDINATION WITH OTHER UNITS/ SECTORS			
8	COMPOSITION OF CLEARANCE IN REPECT OF CONTENTS.CLARITY AND EXPEDITION			
9	AREA KNOWLEDGE			
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SECTION II- RADAR PROCEDURES		S	U
11	EQUIPMENT OPERATION AND ALIGNMENT		
12	CONTROL CAPACITY		
13	AREA KNOWLEDGE , INCLUDING FADE AREA		
14	AVOIDING ACTION		
15	RADIOTELEPHONY SKILL AND ENGLISH SPEECH		
COMMENTS:			

NAME OF APPLICANT:	SIG:
THE ABOVE APPLICANT HAS DEMONSTRATED SATISFACTORY ☐ UNSATISFACTORY ☐	
THE REQUIRED LEVEL OF COMPETENCE AT THE OPERATING POSITION FOR WHICH THE RATING IS BEING SOUGHT	
CAO DESIGNATOR AND LICENCE NO:	SIG:

L2



ISLAMIC REPUBLIC OF IRAN
CIVIL AVIATION ORGANIZATION
PERSONAL LICENSING DEPARTMENT

ATC PROFICIENCY TEST

APPLICATION'S NAME:			
LOCATION:		UNIT:	
DATE:		TIME:	
SECTION I – AERODROME / APPROACH / AREA PROCEDURES		S	U
1	SEPARATION STANDARD AND APPLICATION		
2	RECOGNITION OF AIRCRAFT CAPABILITIES AND PERFORMANCE		
3	AWARENESS AND ANALYSIS OF TRAFFIC SITUATION		
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6	RADAR ASSISTANCE TO AIRCRAFT IN EMERGENCY, INCLUDING ANY UNLAWFUL INTERFERENCE		
7	CO-ORDINATION WITH OTHER SECTORS / UNITS		
8	CONDUCT OF SURVEILLANCE RADAR APPROACHES AND CO-ORDINATION WITH TOWER		
9	CONTROL CAPACITY		

COMMENTS:

NAME OF APPLICANT:

SIG:

THE ABOVE APPLICANT HAS DEMONSTRATED ☐ SATISFACTORY ☐ UNSATISFACTORY ☐

THE REQUIRED LEVEL OF COMPETENCE AT THE OPERATING POSITION FOR WHICH THE RATING IS BEING SOUGHT

CAO DESIGNATOR AND LICENCE NO:

SIG:



ISLAMIC REPUBLIC OF IRAN
CIVIL AVIATION ORGANIZATION
PERSONNEL LICENCING DEPARTMENT
ATCO LOG TIME

NAME OF ATCO :					
LOCATION :			UNIT :		
DATE	TIME IN HOURS AND MINUTES				
	DUTY	ASSIST	OJT	SIGNATURE	REMARKS

DATE	TIME IN HOURS AND MINUTES				
	DUTY	ASSIST	OJT	SIGNATURE	REMARKS
TOTAL					
ATS SPVR NAME AND LICENCE NO :				SIG :	
NAME AND SIGNATURE OF AUTHORITY :					

CHAPTER 1. DEFINITIONS

Aerodrome. A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Note. The term “aerodrome” where used in the provisions relating to flight plans and ATS messages is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

Aerodrome flight information service (AFIS). Flight information service for aerodrome traffic provided by a designated air traffic services provider.

AFIS aerodrome. An aerodrome where AFIS is being provided within an AFIS area.

AFIS area. The airspace associated with an AFIS aerodrome, with defined lateral and vertical limits.

AFIS officer (AFISO). A person properly trained, competent and duly authorized to provide aerodrome flight information service and, if necessary, licensed.

AFIS unit. A unit established to provide flight information service and alerting service for aerodrome traffic at AFIS aerodromes.

Aerodrome elevation. The elevation of the highest point of the landing area.

Aerodrome traffic. All traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.

Note. An aircraft is in the vicinity of an aerodrome when it is in, entering or leaving an aerodrome traffic circuit.

Aerodrome traffic circuit. The specified path to be flown by aircraft operating in the vicinity of an aerodrome.

Aeronautical fixed service (AFS). A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

Aeronautical ground light. Any light specially provided as an aid to air navigation, other than a light displayed on an aircraft.

Aeronautical mobile service (RR S1.32). A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies.

Aircraft proximity. A situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised. An aircraft proximity is classified as follows:

Risk of collision. The risk classification of an aircraft proximity in which serious risk of collision has existed.

Safety not assured. The risk classification of an aircraft proximity in which the safety of the aircraft may have been compromised.

No risk of collision. The risk classification of an aircraft proximity in which no risk of collision has existed.

Risk not determined. The risk classification of an aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

Air-ground communication. Two-way communication between aircraft and stations or locations on the surface of the earth.

AIRPROX. The code word used in an air traffic incident report to designate aircraft proximity.

Air-taxiing. Movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h (20 kt).

Note. The actual height may vary, and some helicopters may require air-taxiing above 8 m (25 ft) AGL to reduce ground effect turbulence or provide clearance for cargo slingloads.

Air traffic. All aircraft in flight or operating on the manoeuvring area of an aerodrome.

Air traffic control clearance. Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

Note 1. For convenience, the term “air traffic control clearance” is frequently abbreviated to “clearance” when used in appropriate contexts.

Note 2. The abbreviated term “clearance” may be prefixed by the words “taxi”, “take-off”, “departure”, “en-route”, “approach” or “landing” to indicate the particular portion of flight to which the air traffic control clearance relates.

Air traffic control unit. A generic term meaning variously, area control centre, approach control unit or aerodrome control tower.

Air traffic flow management (ATFM). A service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilized to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate ATS providers.

Air traffic service (ATS). A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

Air traffic services reporting office. A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

Note. An air traffic services reporting office may be established as a separate unit or combined with an existing unit, such as another air traffic services unit, or a unit of the aeronautical information service.

Air traffic services unit. A generic term meaning variously, air traffic control unit, flight information service unit, or air traffic services reporting office.

Alerting service. A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

Alert phase. A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

Altitude. The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL).

Approach control service. Air traffic control service for arriving or departing controlled flights.

Approach control unit. A unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.

Appropriate authority.

a) Regarding flight over the high seas: The relevant authority of the State of Registry.

b) Regarding flight other than over the high seas: The relevant authority of the State having sovereignty over the territory being overflown.

Appropriate ATS authority. The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned.

Apron. A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

Area control centre (ACC). A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

ATIS. The symbol used to designate automatic terminal information service.

ATS surveillance service. A term used to indicate a service provided directly by means of an ATS surveillance system.

ATS surveillance system. A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

Note. A comparable ground-based system is one that has been demonstrated, by comparative assessment or other methodology, to have a level of safety and performance equal to or better than monopulse SSR.

Automatic terminal information service (ATIS). The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof:

Data link-automatic terminal information service (D-ATIS). The provision of ATIS via data link.

Voice-automatic terminal information service (Voice-ATIS). The provision of ATIS by means of continuous and repetitive voice broadcasts.

Base turn. A turn executed by the aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal.

Note. Base turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure.

Ceiling. The height above the ground or water of the base of the lowest layer of cloud below 6 000 m (20 000 ft) covering more than half the sky.

Controlled airspace. An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

Note. Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E as described in Annex 11, 2.6.

Controlled flight. Any flight which is subject to an air traffic control clearance.

Note. When the word “message” is used as a suffix to this term, it denotes the content and format of the current flight plan data sent from one unit to another.

Distress phase. A situation wherein there is reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger or require immediate assistance.

Elevation. The vertical distance of a point or a level, on or affixed to the surface of the earth, measured from mean sea level.

Emergency phase. A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

Estimated time of arrival (ETA). For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome. For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

Final approach. That part of an instrument approach procedure which commences at the specified final approach fix or point, or where such a fix or point is not specified,

- a) at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified; or
 - b) at the point of interception of the last track specified in the approach procedure; and
- ends at a point in the vicinity of an aerodrome from which:
- 1) a landing can be made; or
 - 2) a missed approach procedure is initiated.

Flight information centre (FIC). A unit established to provide flight information service and alerting service.

Flight information region (FIR). An airspace of defined dimensions within which flight information service and alerting service are provided.

Flight information service. A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

Flight level. A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals.

Note 1. A pressure type altimeter calibrated in accordance with the Standard Atmosphere:

- a) when set to a QNH altimeter setting, will indicate altitude;
- b) when set to QFE altimeter setting, will indicate height above the QFE reference datum;
- c) when set to a pressure of 1 013.2 hPa, may be used to indicate flight levels.

Note 2. The terms “height” and “altitude”, used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

Flight plan. Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

Note. Specifications for flight plans are contained in Annex 2. A Model Flight Plan Form is contained in Appendix 2 to the PANS-ATM (Doc 4444).

Forecast. A statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace.

Glide path. A descent profile determined for vertical guidance during a final approach.

Ground visibility. The visibility at an aerodrome, as reported by an accredited observer or by automatic systems.

Height. The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.

Holding fix. A geographical location that serves as a reference for a holding procedure.

Holding procedure. A predetermined manoeuvre which keeps an aircraft within a specified airspace while awaiting further clearance.

Hot spot. A location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

IFR. The symbol used to designate the instrument flight rules.

IFR flight. A flight conducted in accordance with the instrument flight rules.

IMC. The symbol used to designate instrument meteorological conditions.

INCERFA. The code word used to designate an uncertainty phase.

Incident. An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

Note. The type of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies can be found at <http://www.icao.int/anb/aig>.

Instrument approach operations. An approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

- a) a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; and
- b) a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.

Note. Lateral and vertical navigation guidance refers to the guidance provided either by:

- a) a ground-based radio navigation aid; or
- b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

Instrument approach procedure (IAP). A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument approach procedures are classified as follows:

Non-precision approach (NPA) procedure. An instrument approach procedure designed for 2D instrument approach operations Type A.

Note. Non-precision approach procedures may be flown using a continuous descent final approach (CDFA) technique. CDFAs with advisory VNAV guidance calculated by on-board equipment (see PANS-OPS (Doc 8168), Volume I, Part I, Section 4, Chapter 1, paragraph 1.8.1) are considered 3D instrument approach operations. CDFAs with manual calculation of the required rate of descent are considered 2D instrument approach operations. For more information on CDFAs, refer to PANS-OPS (Doc 8168), Volume I, Part I, Section 4, Chapter 1, paragraphs 1.7 and 1.8.

Approach procedure with vertical guidance (APV). A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A.

Precision approach (PA) procedure. An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS Cat I) designed for 3D instrument approach operations Type A or B.

Note. Refer to Annex 6 for instrument approach operation types.

Instrument meteorological conditions (IMC). Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

Note 1. The specified minima for visual meteorological conditions are contained in Chapter 3 of Annex 2.

Note 2. In a control zone, a VFR flight may proceed under instrument meteorological conditions if and as authorized by air traffic control.

Landing area. That part of a movement area intended for the landing or take-off of aircraft.

Level. A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

Location indicator. A four-letter code group formulated in accordance with rules prescribed by ICAO and assigned to the location of an aeronautical fixed station.

Manoeuvring area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

Minimum fuel. The term used to describe a situation in which an aircraft's fuel supply has reached a state where the flight is committed to land at a specific aerodrome and no additional delay can be accepted.

Missed approach procedure. The procedure to be followed if the approach cannot be continued.

Movement area. That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).

NOTAM. A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

Pilot-in-command. The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

Procedure turn. A manoeuvre in which a turn is made away from a designated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the designated track.

Note 1. Procedure turns are designated "left" or "right" according to the direction of the initial turn.

Note 2. Procedure turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure.

Rescue coordination centre. A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

Runway. A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

Runway-holding position. A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower.

Note. In radiotelephony phraseologies, the expression "holding point" is used to designate the runway-holding position.

Runway incursion. Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.

Runway visual range (RVR). The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

Safety management system (SMS). A systematic approach to managing safety, including the necessary organizational structures, accountability, responsibilities, policies and procedures.

Slush. Water-saturated snow which with a heel-and-toe slap-down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

Note. Combinations of ice, snow and/or standing water may, especially when rain, rain and snow, or snow is falling, produce substances with specific gravities in excess of 0.8. These substances, due to their high water/ice content, will have a transparent rather than a cloudy appearance and, at the higher specific gravities, will be readily distinguishable from slush.

Snow (on the ground).

- a) *Dry snow.* Snow which can be blown if loose or, if compacted by hand, will fall apart upon release; specific gravity: up to but not including 0.35.
- b) *Wet snow.* Snow which, if compacted by hand, will stick together and tend to or form a snowball; specific gravity: 0.35 up to but not including 0.5.
- c) *Compacted snow.* Snow which has been compressed into a solid mass that resists further compression and will hold together or break up into lumps if picked up; specific gravity: 0.5 and over.

Taxiing. Movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing.

Taxiway. A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

- a) *Aircraft stand taxilane.* A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.
- b) *Apron taxiway.* A portion of a taxiway system located on an apron and intended to provide a through taxi route across the apron.
- c) *Rapid exit taxiway.* A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

Threshold. The beginning of that portion of the runway usable for landing.

Touchdown. The point where the nominal glide path intercepts the runway.

Note. "Touchdown" as defined above is only a datum and is not necessarily the actual point at which the aircraft will touch the runway.

Traffic information. Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

Transition altitude. The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

Transition layer. The airspace between the transition altitude and the transition level.

Transition level. The lowest flight level available for use above the transition altitude.

Uncertainty phase. A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

VFR. The symbol used to designate the visual flight rules.

VFR flight. A flight conducted in accordance with the visual flight rules.

Visibility. Visibility for aeronautical purposes is the greater of:

- a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;

- b) the greatest distance at which lights in the vicinity of 1 000 candelas can be seen and identified against an unlit background.

Note 1. The two distances have different values in air of a given extinction coefficient, and the latter b) varies with the background illumination. The former a) is represented by the meteorological optical range (MOR).

Note 2. The definition applies to the observations of visibility in local routine and special reports, to the observations of prevailing and minimum visibility reported in METAR and SPECI and to the observations of ground visibility.

Visual meteorological conditions. Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

Note. The specified minima are contained in Annex 2, Chapter 3.

VMC. The symbol used to designate visual meteorological conditions.

CHAPTER 2. GENERAL

2.1 APPLICATION

2.1.1 Aerodrome flight information service (AFIS) is the term used to describe the provision of advice and information useful for the safe and efficient conduct of aerodrome traffic, at those aerodromes where the appropriate authority determines that the provision of aerodrome control service is either not justified, or is not justified on a 24-hour basis.

2.1.2 In determining whether aerodrome control service or AFIS should be provided at a given aerodrome, the appropriate authorities are expected to give due consideration to the type(s) of air traffic involved, the density and complexity of air traffic, the topographical and meteorological conditions, and such other factors as may be pertinent to safety and efficiency, including the language or languages to be used in air-ground communications.

Note. At locations where the appropriate authority has determined that AFIS should be provided, Annex 11, Chapter 4 outlines conditions in which aircraft should be delivered the service.

2.1.3 The appropriate ATS authority determines AFIS hours of operation and airspace classification, which is normally class G, and specifies the lateral and vertical limits of such airspace.

2.1.4 AFIS should be provided by a unit located at the aerodrome and identified as an "AFIS unit". An AFIS unit will provide flight information service and alerting service to aerodrome traffic.

2.1.5 When AFIS is provided from a tower, the location should ensure the best possible view of the aerodrome, the surrounding area and, in particular, the manoeuvring area. AFIS could also be provided from a room in a comparable location, facing the aerodrome, with large unobstructed windows and allowing visibility of at least the approach ends of the runway. AFIS services that are delivered remotely should be capable of providing the level of information necessary for the conduct of safe and efficient aircraft operation at or around the aerodrome.

2.1.6 To the extent possible, the minimum equipment in the AFIS unit should be the same as that required for an aerodrome control tower at an aerodrome with light traffic density or as determined necessary by the appropriate ATS authority.

2.1.7 The AFIS unit is not an air traffic control unit. Except for cases when relaying clearances from air traffic control (ATC), AFISOs only provide advice and information to pilots. It is therefore the responsibility of pilots using the service provided by this unit to maintain proper separation in conformity with the rules of the air.

2.1.8 Pilots operating within an AFIS area must, on the basis of the information received from the AFIS unit and combined with their own knowledge and observations, decide on the course of action to be taken to ensure separation from other aircraft, ground vehicles and obstacles. As such, pilots are expected to conduct their flight in accordance with Annex 2 Section 3.2.5.

2.2 QUALIFICATIONS AND TRAINING OF AFIS PERSONNEL

2.2.1 Guidance for knowledge, qualifications and training of AFIS personnel are found in Appendix _C.

2.3 SAFETY MANAGEMENT SYSTEM (SMS)

2.3.1 AFIS SMS should be conducted in accordance with ICAO Annex 19 , Safety Management.

CHAPTER 3. PROCEDURES FOR AFIS

3.1 GENERAL

3.1.1 AFIS units should provide information to aircraft within its area of responsibility to achieve a safe, orderly and expeditious flow of aerodrome traffic on and in the vicinity of an aerodrome, assisting pilots in avoiding collisions where applicable and assisting with situational awareness regarding:

- a) aircraft flying within the vicinity of designated area of responsibility of the AFIS unit, including aerodrome traffic circuits;
- b) aircraft operating on the manoeuvring area;
- c) aircraft landing and taking off;
- d) aircraft and vehicles operating on the manoeuvring area;
- e) aircraft on the manoeuvring area and obstructions in these areas.

3.1.2 AFISOs should maintain a continuous watch on all flight operations on and in the vicinity of an aerodrome as well as vehicles and personnel on the manoeuvring area by visual observation, and where applicable, by using an ATS surveillance system. (see Appendix A).

3.2 SELECTION OF RUNWAY

3.2.1 The term “runway-in-use” should be used to indicate the runway or runways that, at a particular time, are considered by the AFIS unit to be the most suitable for use by the types of aircraft expected to land or take off at the aerodrome.

Note. Separate or multiple runways may be designated for arriving aircraft and departing aircraft.

3.2.2 Normally, an aircraft will land and take off into wind unless safety, the runway configuration, meteorological conditions and available instrument approach procedures or air traffic conditions determine that a different direction is preferable.

In selecting the runway, the primary consideration is normally wind speed and direction; however, the unit providing AFIS should take into consideration:

- calm wind runway and aircraft direction of flight
- aerodrome traffic circuits
- runway lengths
- approach and landing aids available
- ground traffic
- cross wind component
- noise abatement procedures

3.2.3 A pilot-in-command can refuse a runway-in-use suggested by an AFISO. In such circumstances, AFISOs should provide detailed information on other local traffic that is utilizing the runway-in-use to assist the pilot in ensuring that safe operations are maintained when using an alternative runway.

3.2.4 RUNWAY CHANGES

3.2.4.1 Should a change of runway be necessary, tower controller shall:

- a) inform approach controller at least 5 minutes in advance to let the approach controller to decide the last landing and/or departing aircraft prior to the runway change. This must be planned as to be as close as practicable to the agreed time.

- b) inform the following:
 - 1. aircraft under his control;
 - 2. aerodrome fire service;
 - 3. contractors working on the aerodrome who will be affected by the change through the Marshall;
 - 4. other agencies according to local instructions that incorporated into LATCI.

Note. Pilot of aircraft which has passed the IAF is responsible to decide which runway is suitable for landing. in any case controller shall be advised about the decision which is made.

3.3 INITIAL CALL TO AFIS

3.3.1 For aircraft being provided with aerodrome flight information service, the initial call by the pilot should contain:

- a) designation of the ground station being called;
- b) call sign, type of aircraft and, for aircraft in the heavy wake turbulence category, use the word “HEAVY or SUPER” as applicable;
Note. See also paragraph 5.2.7.
- c) position;
- d) level, if applicable;
- e) intentions; and
- f) additional elements, as required by the appropriate ATS authority.

3.4 INFORMATION RELATED TO THE OPERATION OF AIRCRAFT – GENERAL

3.4.1 TRAFFIC INFORMATION TO AIRCRAFT

3.4.1.1 The following information should be provided as appropriate:

- a) direction of flight of aircraft concerned
- b) type and wake turbulence category (if known and required) of aircraft concerned;
- c) level of aircraft concerned, including eventual changes;
- d) position of the aircraft concerned in terms of:
 - 1) the 12-hour clock as well as distance from the conflicting traffic; or
 - 2) actual or estimated position of the aircraft concerned*Note. the position of the aircraft may be included in conjunction with the direction of flight, if preferred.*
- e) any other information considered relevant (e.g. approaching, crossing the AFIS area, estimated take-off or landing time).

3.4.2 LOCAL TRAFFIC INFORMATION

3.4.2.1 Information regarding local traffic should be issued in a timely manner, either directly or through the unit providing approach control service when, in the judgement of the AFIS unit, such information is necessary in the interests of safety, or when requested by aircraft.

3.4.2.2 Local traffic should be described so as to be easily identified by the pilot.

3.4.3 RUNWAY STATUS INFORMATION

3.4.3.1 AFISOs should provide information to departing and arriving aircraft on aerodrome traffic or obstructions known to be on the runway or closer to the runway than a distance specified by the appropriate authority.

3.4.4 UNCERTAINTY OF POSITION ON THE MANOEUVRING AREA

3.4.4.1 Except as provided for in 3.4.4.2, a pilot in doubt as to the position of the aircraft with respect to the manoeuvring area should immediately:

- a) stop the aircraft; and
- b) simultaneously notify the AFIS unit of the circumstances (including last known position).

3.4.4.2 In those situations where a pilot is in doubt as to the position of the aircraft with respect to the manoeuvring area, but recognizes that the aircraft is on a runway, the pilot should immediately:

- a) notify the AFIS unit of the circumstances (including the last known position);
- b) if able to locate a nearby suitable taxiway, vacate the runway as expeditiously as possible, and then stop the aircraft.

3.4.4.3 A vehicle driver in doubt as to the position of the vehicle with respect to the manoeuvring area should immediately:

- a) notify the AFIS unit of the circumstances (including the last known position);
- b) simultaneously, unless otherwise instructed by the AFIS unit, vacate the landing area, taxiway, or other part of the manoeuvring area, to a safe distance as expeditiously as possible, and then stop the vehicle.

3.4.4.4 In the event the AFIS unit becomes aware of an aircraft or vehicle that is lost or uncertain of its position on the manoeuvring area, appropriate information should be provided immediately to other pilots affected and assistance provided to the aircraft or vehicle concerned to determine its position.

3.4.5 WAKE TURBULENCE AND JET BLAST HAZARDS

3.4.5.1 The responsibility for wake turbulence avoidance rests entirely with the pilot-in-command. AFIS units should, to the extent practicable, advise aircraft of the expected occurrence of hazards caused by wake turbulence. Such information will be provided by the warning 'caution wake turbulence' and may also include relevant information on the aircraft concerned.

Note. Occurrence of wake turbulence hazards cannot be accurately predicted and AFIS units cannot assume responsibility for the issuance of advice on such hazards at all times, nor for its accuracy.

3.4.5.2 In providing information, AFIS units should take into account the hazards caused by jet blast, helicopter downwash turbulence and propeller slipstream to taxiing aircraft, to aircraft taking off or landing, particularly when intersecting runways are being used, and to vehicles and personnel operating on the aerodrome.

Note. Jet blast, helicopter downwash turbulence and propeller slipstream can produce localized wind velocities of sufficient strength to cause damage to other aircraft, vehicles and personnel operating within the affected area. Further guidance on these effects are contained in the ICAO Air Traffic Services Planning Manual (Doc 9426), Part II, Section 5, Chapter 3.

3.4.6 ESSENTIAL INFORMATION ON AERODROME CONDITIONS

3.4.6.1 Essential information on aerodrome conditions is information necessary to safety in the operation of aircraft, which pertains to the movement area or any facilities usually associated therewith. For example, construction work on a taxi strip not connected to the runway-in-use would not be essential information to any aircraft except one that might be taxied in the vicinity of the construction work. As another example, if all traffic must be confined to runways, that fact should be considered as essential aerodrome information to any aircraft not familiar with the aerodrome.

3.4.6.2 Essential information on aerodrome conditions should include information relating to the following:

- a) construction or maintenance work on, or immediately adjacent to the movement area;
- b) rough or broken surfaces on a runway, a taxiway or an apron, whether marked or not;
- c) snow, slush or ice on a runway, a taxiway or an apron;
- d) water on a runway, a taxiway or an apron;

- e) snow banks or drifts adjacent to a runway, a taxiway or an apron;
- f) other temporary hazards, including parked aircraft and birds on the ground or in the air;
- g) failure or irregular operation of part or all of the aerodrome lighting system;
- h) any other pertinent information.

Note. Up-to-date information on the conditions on aprons may not always be available to the AFIS unit. The responsibility of the AFIS unit in relation to aprons is, with respect to the provisions of 3.4.6.1 and 3.4.6.2, limited to the transmission to aircraft of the information which is provided to it by the authority responsible for the aprons.

3.4.6.3 Essential information on aerodrome conditions should be given to every aircraft, except when it is known that the aircraft already has received all or part of the information from other sources. The information should be given in sufficient time for the aircraft to make proper use of it, and the hazards should be identified as distinctly as possible.

Note. "Other sources" include NOTAM, ATIS broadcasts, and the display of suitable signals.

3.4.6.4 When a condition not previously notified pertaining to the safe use by aircraft of the manoeuvring area is reported to or observed by the AFIS unit, the appropriate aerodrome authority should be informed and, if necessary, operations on that part of the manoeuvring area terminated until otherwise advised by the appropriate aerodrome authority.

3.4.7 ABNORMAL AIRCRAFT CONFIGURATION AND CONDITION

3.4.7.1 Whenever an abnormal configuration or condition of an aircraft, including conditions

3.5.2 DEPARTURE INFORMATION

3.5.2.1 Prior to taxiing for take-off, aircraft should be advised of the following elements of information, in the order listed, with the exception of such elements which it is known the aircraft has already received:

- a) the runway in use;
- b) the surface wind direction and speed, including significant variations therefrom;
- c) the QNH altimeter setting and, if requested, the QFE altimeter setting;
- d) Where required or upon request, the air temperature for the runway to be used, in the case of turbine- engine aircraft;
- e) Traffic information including both aircraft and ground traffic where required;
- f) Supplementary information such as;
 - 1) the correct time,
 - 2) equipment status,
 - 3) wake turbulence cautionaries,
 - 4) visibility or RVR where required,
 - 5) aerodrome conditions,
 - 6) weather conditions,
 - 7) Any other information required to ensure flight safety

3.5.2.2 Prior to take-off aircraft should be advised of:

- a) any significant changes in the surface wind direction and speed, the air temperature where required, and the visibility or RVR value(s)
- b) significant meteorological conditions in the take-off and climb-out area, except when it is known that the information has already been received by the aircraft. This information may have been provided with the standard departure information or via electronic means.
- c) updates on any significant changes to previously provided information.

Note. Significant meteorological conditions in this context include the occurrence or expected occurrence of cumulonimbus or thunderstorm, moderate or severe turbulence, wind shear, hail, moderate or severe icing, severe squall line, freezing precipitation, severe mountain waves, sandstorm, dust storm, blowing snow,

3.6.1.2 Arriving IFR traffic that intends to conduct an instrument approach may also receive additional meteorological elements of information, where required by the appropriate ATS authority, with the exception of such elements which it is known the aircraft has already received:

- a) present weather;
- b) cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available;
- c) air temperature;
- d) dew point temperature, inclusion determined on the basis of a regional air navigation agreement;
Note 1. Regarding the provision of altimeter setting, see paragraph 3.8.3.2.
- e) significant meteorological phenomena in the approach area; and
- f) trend-type landing forecast, when available.

3.6.1.3 In applying the provisions in 3.6.1 and 3.6.2, it should be recognized that information published by NOTAM or disseminated by other means may not have been received by the aircraft prior to departure or during en-route flight.

3.6.1.4 At the commencement of final approach, the following information should be transmitted to aircraft:

- a) significant changes in the mean surface wind direction and speed if determined by the appropriate ATS authority.
Note. Significant changes are specified in ICAO Annex 3, Chapter 4. However, if the AFISO possesses wind information in the form of components, the significant changes are
— Mean headwind component: 19 km/h (10 kt)
- b) reports of any wind shear and/or turbulence in the final approach area;
- c) the current RVR value(s) and the trend where required.
- d) Any

in such a time as being relevant and should be revised as necessary. The ATC unit should relay the information to the arriving aircraft if required.

3.7.2.3 AFIS aerodrome below or in close proximity to controlled airspace

3.7.2.3.1 Where relevant, the AFIS unit should provide the ATC unit with QNH and transition level. The ATC unit should relay this information to the aircraft.

3.7.2.3.2 Transfer of communications should be achieved not later than when the aircraft passes the controlled airspace boundary, if no other agreement has been made between the units concerned or in local instructions.

Note. See also 3.7.3.3 a).

3.7.2.3.3 Should the aircraft fail to establish communications with the AFIS unit within 5 minutes after the latest received ETA, the AFIS unit should inform the ATC unit concerned.

3.7.2.3.4 When the AFIS aerodrome is situated below a TMA or CTA, the AFIS unit should as soon as possible inform the ATC unit about local traffic concerned as follows:

- a) when necessary, inform the ATC unit when the first aircraft in a sequence is in contact with and is seen by the AFIS unit and there is a reasonable assurance that it will land or has landed, depending on what occurs first;
- b) missed approach, if the aircraft will leave the area of responsibility of the AFIS unit or when the missed approach may affect other arriving traffic;

- a) as soon as safely possible and not more than 2 minutes after departure when the AFIS unit is located below or in close proximity to a terminal control area (TMA) and the aircraft will climb into this TMA;
- b) in other cases, at a time suitable taking into consideration the traffic in the area; and
- c) in all cases, transfer of communication should be made not later than when the aircraft is estimated to exit the AFIS area.

3.7.4 READ-BACK OF CLEARANCE

3.7.4.1 When relaying ATC clearances, the AFISO should ensure that the flight crew reads back the safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items should always be read back:

- a) ATC route clearances; and
- b) runway-in-use, altimeter settings, SSR codes, level instructions, heading and speed instructions and, whether issued by the ATS unit or contained in automatic terminal information service (ATIS) broadcasts, transition levels.

Note. If the level of an aircraft is reported in relation to standard pressure 1013.2 hPa, the words “FLIGHT LEVEL” precede the level figures. If the level of the aircraft is reported in relation to QNH/QFE, the figures are followed by the word “METRES” or “FEET”, as appropriate.

3.7.4.1.1 Other clearances or instructions should be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.

3.

3.8.3 PROVISION OF ALTIMETER SETTING INFORMATION

3.8.3.1 Where required, the flight crew should be provided with the transition level in due time prior to reaching it during descent. This may be accomplished by voice communications, ATIS broadcast or data link.

3.8.3.2 A QNH altimeter setting should be provided before descent to an altitude below the transition level or before entering the AFIS area, and before taxiing for departing aircraft, except when it is known that the aircraft has already received the information in a direct transmission.

3.8.3.3 A QFE altimeter setting should be provided to aircraft on request or on a regular basis in accordance with local arrangements; it should be the QFE for the aerodrome elevation except for:

- a) non-precision approach runways, if the threshold is 2 m (7 ft) or more below the aerodrome elevation; and
- b) precision approach runways;

in which cases the QFE for the relevant runway threshold should be provided.

3.8.3.4 Altimeter settings provided to aircraft should be rounded down to the nearest lower whole hectopascal.

3.9 RECORDING AND RETENTION OF DATA FOR INVESTIGATIVE PURPOSES

3.9.1 Paper flight progress strips should normally be retained for a period of at least 30 days. Radio-telecommunications, electronic flight progress, coordination and ATS surveillance system data should be recorded and retained for at

CHAPTER 4. AERODROME TRAFFIC

4.1 GENERAL

4.1.1 As the view from the flight deck of an aircraft is normally restricted, information provided by the AFISO which require the flight crew to employ visual detection, recognition and observation will be phrased in a clear, concise and complete manner.

4.2 TRAFFIC ON THE MANOEUVRING AREA

4.2.1 TAXIING AIRCRAFT

4.2.1.1 On receiving information that an aircraft is about to taxi, the AFIS unit should determine where the aircraft concerned is parked. Relevant information on local traffic and aerodrome conditions should be provided to assist the flight crew in selecting taxi routes to avoid collision with other aircraft or objects. Information should include other factors affecting safety such as turbulence generated by other aircraft.

Note. When hovering in ground effect or air taxiing, helicopters generate downwash producing high velocity outwash vortices to a distance of approximately three times the diameter of the rotor.

4.2.1.2 Taxiing on a runway

4.2.1.2.1 If the AFISO is unable to determine that a vacating or crossing aircraft has cleared the runway, the aircraft should be requested to report when it has vacated the runway. The report is to be made when the entire aircraft is beyond

maintenance personnel. Arrangements for the management of constructional and maintenance personnel should be detailed within local instructions.

4.2.3 TAKE-OFF

4.2.3.1 When a pilot reports 'ready for departure' AFISOs should provide pilots with pertinent information on local traffic, aerodrome conditions and any other factors likely to affect the safety of the departing aircraft. Such information should be updated by the AFISO when required or when requested by the pilot.

4.2.3.2 When an AFIS unit is required to obtain or relay an ATC clearance prior to take-off (see Chapter 3), it should be requested and, once received, forwarded to the aircraft with the least possible delay either after receipt of a request made by a pilot, or prior to such request if practicable. The AFISO should ensure that the ATC clearance has been transmitted to and acknowledged by the aircraft concerned either before, or immediately after, the pilot has reported 'ready for departure', and before the AFISO has provided the information detailed in 4.2.3.1.

4.2.3.3 On the basis of the information received from the AFIS unit, combined with their own knowledge and observations, the pilot will determine when to proceed past the runway-holding position and will take-off at their own discretion.

4.2.4 ARRIVING AIRCRAFT

4.2.4.1 When a pilot reports 'final', AFISOs should provide pilots with pertinent information on local traffic, aerodrome conditions and any other factors likely to affect the safety of the aircraft. Such information should be updated by the AFISO when required or when requested by the pilot.

7.4 AFIS CONTINGENCIES

The various circumstances surrounding each contingency situation preclude the establishment of exact detailed procedures to be followed. The procedures outlined below are intended as a general guide to AFIS personnel.

7.4.1 RADIO-COMMUNICATIONS CONTINGENCIES

7.4.1.1 General

AFIS contingencies related to communications, i.e. circumstances preventing a AFISO from communicating with aircraft in its area of responsibility, may be caused by either a failure of ground radio equipment, a failure of airborne equipment, or by the frequency being inadvertently blocked by an aircraft transmitter. The duration of such events may be for prolonged periods and appropriate action to ensure that the safety of aircraft is not affected should therefore be taken immediately.

7.4.1.2 Ground radio failure

7.4.1.2.1 In the event of complete failure of the ground radio equipment used , the AFISO should:

- a) where aircraft are required to keep a listening watch on the emergency frequency 121.5 MHz, attempt to establish radio-communications on that frequency;
- b) without delay inform the associated FIC or ATC unit, as applicable, of the failure;
- c) appraise such units of the current traffic situation

APPENDIX A

USE OF ATS SURVEILLANCE SYSTEMS IN THE AERODROME FLIGHT INFORMATION SERVICE

1. GENERAL

1.1 Some States are using or are planning to use an ATS surveillance system in the provision of AFIS. In order to harmonise the application of such service, the procedures shown below should be applied.

2. FUNCTIONS

2.1 When authorized by and subject to conditions prescribed by the appropriate authority, the information presented on a situation display may be used in the provision of AFIS to perform the following functions:

- a) flight path monitoring of aircraft on final approach;
- b) flight path monitoring of other aircraft in the vicinity of the aerodrome;
- c) providing navigation assistance to VFR flights.

2.2 In addition, the information presented on a situation display may be used to provide identified aircraft with:

- a) information regarding any aircraft observed to be on a conflicting path with the identified aircraft;
- b) information on the position of significant weather;
- c) information to assist the aircraft in its navigation.

2.2 In prescribing conditions and procedures for the use of ATS surveillance systems in the provision of AFIS, the appropriate authority should ensure that the availability and use of an ATS surveillance system will not be detrimental to visual observation of aerodrome traffic.

3. IDENTIFICATION METHODS

Note. The procedures described below are only intended as guidance for those appropriate authorities intending to develop procedures for local use of an ATS surveillance service. Other methods of identification are described in PANS-ATM.

3.1 Before providing an ATS surveillance service to an aircraft, identification should be established and the pilot informed. Thereafter, identification should be maintained until termination of the ATS surveillance service.

3.2 If identification is subsequently lost, the pilot should be informed accordingly.

3.3 Identification should be established by at least one of the methods specified in 3.4 and 3.5.

3.4 Where ADS-B is used for identification, aircraft may be identified by one or more of the following procedures:

- a) direct recognition of the aircraft identification in an ADS-B label;
- b) transfer of ADS-B identification;
- c) observation of compliance with an instruction to TRANSMIT ADS-B IDENT.

Note. In automated systems, the "IDENT" feature may be presented in different ways, e.g. as a flashing of all or part of the position indication and associated label.

3.5 Where SSR is used for identification, aircraft may be identified by one or more of the following procedures:

- a) recognition of the aircraft identification in a radar label;
Note. The use of this procedure requires that the code/call sign correlation is achieved successfully, taking into account the Note following b) below.
- b) recognition of an assigned discrete code, the setting of which has been verified, in a radar label;
Note. The use of this procedure requires a system of code assignment which ensures that each aircraft in a given portion of airspace is assigned a discrete code.
- c) direct recognition of the aircraft identification of a Mode S-equipped aircraft in a radar label;
- d) by transfer of identification;
- e) observation of compliance with an instruction to set a specific code;
- f) observation of compliance with an instruction to squawk IDENT.

3.6 When a discrete code has been assigned to an aircraft, a check should be made at the earliest opportunity to ensure that the code set by the pilot is identical to that assigned for the flight. Only after this check has been made should the discrete code be used as a basis for identification.

4. PILOT RESPONSIBILITIES

4.1 The use of an ATS surveillance system in the provision of aerodrome flight information service does not relieve the pilot-in-command of an aircraft of any responsibilities.

APPENDIX B

AFIS REQUIREMENT FOR INFORMATION

1. METEOROLOGICAL INFORMATION

1.1 General

1.1.1 AFIS units should be supplied with up-to-date information on existing and forecast meteorological conditions as necessary for the performance of their respective functions. The information should be supplied in such a form as to require a minimum of interpretation on the part of AFIS personnel and with a frequency which satisfies the requirements of the AFIS units concerned.

1.1.2 AFIS units should be supplied with available detailed information on the location, vertical extent, direction and rate of movement of meteorological phenomena in the vicinity of the aerodrome, and particularly in the climb-out and approach areas, which could be hazardous to aircraft operations.

1.2 AFIS units

1.2.1 AFIS units should be supplied with meteorological information listed in 1.2.1 below for the aerodrome with which they are concerned. Special reports and amendments to forecasts should be communicated to the AFIS units as soon as they are necessary in accordance with established criteria, without waiting for the next routine report or forecast.

1.2.2 The following meteorological information should be supplied, as necessary, to an AFIS unit by its associated meteorological office:

- a) Local routine and special reports, METAR and SPECI, TAF and trend forecasts and amendments thereto, for the aerodrome concerned;
- b) SIGMET and AIRMET information, wind shear warnings and alerts and aerodrome warnings;
- c) any additional meteorological information agreed upon locally, such as forecasts of surface wind for the determination of possible runway changes.

1.2.3 AFIS units should be provided with current pressure data for setting altimeters for the aerodrome concerned.

1.2.4 AFIS units should be equipped with surface wind display(s). The display(s) should be related to the same location(s) of observation and be fed from the same sensor(s) as the corresponding display(s) in the meteorological station, where such a station exists. Where multiple sensor(s) are used, the displays to which they are related should be clearly marked to identify the runway and section of the runway monitored by each sensor.

1.2.5 AFIS units at aerodromes where runway visual range values are measured by instrumental means should be equipped with display(s) permitting read-out of the current runway visual range value(s). The display(s) should be related to the same location(s) of observation and be fed from the same sensor(s) as the corresponding display(s) in the meteorological station, where such a station exists.

1.2.6 AFIS units at aerodromes where the height of cloud base is assessed by instrumental means should be equipped with display(s) permitting read-out of the current value(s) of the height of cloud base. The displays should be related to the same location(s) of observations and be fed from the same sensor(s) as the corresponding display(s) in the meteorological station, where such a station exists.

1.2.7 AFIS units should be supplied with information on wind shear, when available, which could adversely affect aircraft on the approach or take-off paths or during circling approach and aircraft on the runway during the landing roll or take-off run.

2. INFORMATION ON AERODROME CONDITIONS AND THE OPERATIONAL STATUS OF ASSOCIATED FACILITIES

AFIS units should be kept currently informed of the operationally significant conditions of the movement area, including the existence of temporary hazards, and the operational status of any associated facilities at the aerodrome(s) with which they are concerned.

3. INFORMATION ON THE OPERATIONAL STATUS OF NAVIGATION AIDS

3.1 AFIS units should be kept currently informed of the operational status of non-visual navigation aids, and those visual aids essential for take-off, departure, approach and landing procedures within their area of responsibility and those visual and non-visual aids essential for surface movement.

3.2 Information on the operational status, and any changes thereto, of visual and non-visual aids as referred to in 3.1 should be received by the appropriate AFIS unit on a timely basis consistent with the use of the aid(s) involved.

APPENDIX C

TRAINING AND COMPETENCY

Note The procedures described below are only intended as guidance for the appropriate ATS authority in developing training and competency requirements.

1. COMPETENCY

1.1 Under the safety management systems all personnel having operational safety related activities have to be properly trained and competent and, if necessary, licensed.

1.2 Aerodrome flight information service should be provided by a certified ATS provider employing appropriately skilled personnel to ensure the provision of services in a safe, efficient, continuous and sustainable manner.

1.3 Initial training for AFIS Officers comprises theoretical training designed to impart fundamental knowledge and AFIS specific training which is designed to impart knowledge and practical skills related to the role of the AFISO.

1.4 Initial training should contain a number of disciplines (as provided below) for which a training plan and programme should be established. The training plan and programme has to be approved by the appropriate ATS authority and designated regulator. At the end of the initial training programme an examination should be carried out to confirm the successful completion of the training.

1.5 The ATS authority should determine medical fitness requirements appropriate to the AFIS position. A medical certificate should be issued by an authorized medical examiner to prove that AFIS personnel are medically fit.

1.6 Following initial training, the person will continue with the training at the AFIS unit (pre-OJT and on-the-job training (OJT)). The training at the unit should be approved by the appropriate ATS authority and designated regulator. The OJT part of the unit training will be carried out by the OJT Instructors (OJTI).

1.6.1 Initial training and OJT should provide a balance of theoretical and practical training which includes the use of simulators where applicable.

Note. In cases involving the starting up of a new service provision, the OJT would be substituted with equivalent training in accordance with a plan approved by the appropriate ATS Authority.

1.6.2 After completion of the unit training an examination/assessment should be carried out to confirm the successful completion of the training. The AFISO must continue to be medically fit to undertake the tasks of an AFISO.

1.6.3 All examinations/assessments should be carried out by appropriately qualified persons approved by the certified ATS provider. In approving persons to perform examinations/assessments the ATS provider should use the conditions for OJTI qualification as the basis for the criteria to determine whether an individual is appropriately qualified.

1.7 To be able to maintain their competence, AFISOs should complete the unit competence scheme which should contain:

- a mandatory number of hours on the operational position which is commensurate with the traffic at the aerodrome.
- periodical refresher training;
- periodical emergency/unusual situations/security training;
- provisions to regain the competence to work as an AFISO after extended periods of absence; and
- medical fitness.

1.8 Before a certified ATS service provider grants the OJTI qualification to an AFISO the following conditions should be fulfilled:

- successfully completed an appropriate OJTI course;
- has passed any associated examinations/assessment;
- has a minimum 1,5 years experience in the unit and on the operational position;
- is a qualified AFISO;
- is medically fit and/or any other similar national requirements.

OJTIs should maintain his/her competence by undertaking regular and appropriate OJTI refresher courses.

1.9 Age, knowledge, experience and skill required from AFIS personnel should be determined by the appropriate ATS Authority. The following may be used as a general guide:

- a) **Age** – Not less than 18 years of age;
- b) **Knowledge** –
 - (i) Demonstrate a theoretical knowledge of the following subjects:
 - Air law – rules and regulations relevant to the AFISO;
 - ATS equipment – principles, use and limitations of equipment used in AFIS;
 - General knowledge - principles of flight; principles of operation and functioning of aircraft, engines and systems; aircraft performance relevant to air traffic control operations;
 - Human performance - human performance including principles of threat and error management;
Note. Guidance material to design training programmes on human performance, including threat and error management, can be found in the Human Factors Training Manual (Doc 9683).
 - Meteorology – aeronautical meteorology, use and appreciation of meteorological documentation and information, origin and characteristics of weather phenomena affecting flight operations and safety, altimetry;
 - Navigation - principles of air navigation, limitation and accuracy of navigation systems and visual aids, performance-based navigation (PBN);

- Operational procedures – ATS, communication, radiotelephony and phraseology procedures (routine, non-routine and emergency), use of the relevant aeronautical documentation, safety practices associated with flight;
- (ii) Demonstrate knowledge in the following subjects related to the role of the AFISO:
- rules of the air and air traffic procedures pertinent to aerodrome operations;
 - procedures and practices pertaining to flight information service and alerting service;
 - local aerodrome rules;
 - characteristics of local traffic;
 - local terrain and prominent landmarks;
 - local air navigation facilities;
 - procedures for coordination between the AFIS unit and the associated FIC or ACC;
 - pertinent data regarding meteorological reports and effect of significant local weather characteristics; and
 - local procedures for emergency response and alerting of emergency services.
- c) **Experience** – Satisfactory:
- completion of an approved training course; and
 - service under a qualified AFISO for not less than an established period of time.
- d) **Skill** – Demonstrated competency in:
- the manipulation and operation of typical transmit/receiver equipment and controls, including ancillary facilities, and radio direction-finding apparatus in use;
 - the visual inspection and daily operational check of the radio equipment in use;
 - the transmission of telephony messages, including correct microphone technique, enunciation and speech quality; and
 - the reception of telephony messages and the ability to relay messages correctly.
- e) **Language** – Demonstrate the ability to speak and understand the language used for radiotelephony communications to a level specified by the appropriate ATS authority in accordance with the language proficiency requirements in ICAO Annex 1 – Personnel Licensing, Appendix 1.

APPENDIX D

PILOT PROCEDURES ON AFIS AERODROMES

1. GENERAL

1.1 A pilot-in-command, prompted by safety concerns, can refuse a runway offered.

1.2 For aircraft in the heavy wake turbulence category, the word “Heavy” should be included in all communications with AFIS.

1.3 An air traffic incident report should be submitted, normally to the air traffic services unit concerned, for incidents specifically related to the provision of air traffic services involving such occurrences as aircraft proximity (AIRPROX), or other serious difficulty resulting in a hazard to aircraft, caused by, among others, faulty procedures, non-compliance with procedures, or failure of ground facilities.

2. INITIAL CALL TO AFIS

2.1 For aircraft being provided with aerodrome flight information service, the initial call should contain:

- a) designation of the station being called;
- b) call sign and, for aircraft in the heavy wake turbulence category, the word “Heavy”;
Note. See also paragraph 1.2.
- c) position;
- d) level;
- e) intention; and
- f) additional elements, as required by the appropriate ATS authority.

3. ALTIMETER SETTING PROCEDURES

3.1 *Expression of vertical position of aircraft*

3.1.1 For flights in the vicinity of aerodromes and within the AFIS area, the vertical position of aircraft should, except as provided for in 3.7.1.2, be expressed in terms of altitudes at or below the transition altitude and in terms of flight levels at or above the transition level. While passing through the transition layer, vertical position should be expressed in terms of flight levels when climbing and in terms of altitudes when descending.

3.1.2 When an aircraft is completing its approach using atmospheric pressure at aerodrome elevation (QFE), the vertical position of the aircraft should be expressed in terms of height above aerodrome elevation during that portion of its flight for which QFE may be used, except that it should be expressed in terms of height above runway threshold elevation:

- a) for instrument runways, if the threshold is 2 m (7 ft) or more below the aerodrome elevation; and
- b) for precision approach runways.

4. AERODROME TRAFFIC

4.1 Taxiing aircraft

4.1.1 Use of runway-holding positions

4.1.1.2 Aircraft should not hold closer to a runway-in-use than at a runway-holding position.

Note. Runway-holding position locations in relation to runways are specified in ICAO Annex 14, Volume I, Chapter 5.

4.1.1.3 Aircraft should not line up and hold on the approach end of a runway whenever another aircraft is effecting a landing, until the landing aircraft has passed the point of intended holding.

4.1.2 Uncertainty of position on the manoeuvring area

4.1.2.1 Except as provided for in 4.1.2.2 below, a pilot in doubt as to the position of the aircraft with respect to the manoeuvring area should immediately:

- a) stop the aircraft; and
- b) simultaneously notify the AFIS unit of the circumstances (including the last known position).

4.1.2.2 In those situations where a pilot is in doubt as to the position of the aircraft with respect to the manoeuvring area, but recognizes that the aircraft is on a runway, the pilot should immediately:

- a) notify the AFIS unit of the circumstances (including the last known position);
- b) if able to locate a nearby suitable taxiway, vacate the runway as expeditiously as possible, unless otherwise informed by the AFIS unit; and then,
- c) stop the aircraft.

4.2 Order of priority for arriving and departing aircraft

4.2.1 An aircraft landing or in the final stages of an approach to land should normally have priority over an aircraft intending to depart from the same or an intersecting runway.

4.2.2 When necessary or desirable, e.g. due to low visibility conditions, a landing or a taxiing aircraft may be requested to report when a runway has been vacated. The report should be made when the entire aircraft is beyond the relevant runway-holding position.

5. READ-BACK OF CLEARANCE

5.1 The flight crew should read back to the AFIS unit safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items should always be read back:

- a) ATC route clearances; and
- b) runway-in-use, altimeter settings, SSR codes, level instructions, heading and speed instructions and, whether issued by the ATS unit or contained in automatic terminal information service (ATIS) broadcasts, transition levels.

Note. If the level of an aircraft is reported in relation to standard pressure 1 013.2 hPa, the words "FLIGHT LEVEL" precede the level figures. If the level of the aircraft is reported in relation to QNH/QFE, the figures are followed by the word "METRES" or "FEET", as appropriate.

5.2 Other clearances or instructions, including conditional clearances, should be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.

– END –