FINAL REPORT
ON THE SAFETY OVERSIGHT AUDIT
OF THE
CIVIL AVIATION SYSTEM
OF THE
FEDERAL REPUBLIC OF GERMANY

(11 to 17 May 2005)
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1. **INTRODUCTION**

1.1 **Background**

1.1.1 The 32\textsuperscript{nd} Session of the ICAO Assembly (Assembly Resolution A32-11 refers) resolved the establishment of the ICAO Universal Safety Oversight Audit Programme (USOAP), comprising regular, mandatory, systematic and harmonized safety audits of all Contracting States. The mandate for regular audits foresaw the continuation of the Programme, and the term “safety audits” suggested that all safety-related areas should be audited. The expansion of the Programme “at the appropriate time”, as recommended by the 1997 Directors General of Civil Aviation Conference on a Global Strategy for Safety Oversight, had thus been accepted as an integral part of the future of the Programme.

1.1.2 The 35\textsuperscript{th} Session of the ICAO Assembly considered a proposal of the Council for the continuation and expansion of the USOAP as of 2005 and resolved that the Programme be expanded to cover all safety-related Annexes (Assembly Resolution A35-6 refers). The Assembly also requested the Secretary General to adopt a comprehensive systems approach for the conduct of safety oversight audits.

1.1.3 Assembly Resolution A35-6 further directed the Secretary General to ensure that the comprehensive systems approach maintain as core elements the safety provisions contained in Annex 1 — Personnel Licensing, Annex 6 — Operation of Aircraft, Annex 8 — Airworthiness of Aircraft, Annex 11 — Air Traffic Services, Annex 13 — Aircraft Accident and Incident Investigation and Annex 14 — Aerodromes; to make all aspects of the auditing process visible to Contracting States; to make the final safety oversight audit reports available; and to provide access to all relevant information derived from the Audit Findings and Differences Database (AFDD) through the secure website of ICAO to all Contracting States.

1.1.4 In accordance with Assembly Resolution A35-6, safety oversight audit reports have been restructured to reflect the critical elements of a safety oversight system, as presented in ICAO Doc 9734 — Safety Oversight Manual, Part A — The Establishment and Management of a State’s Safety Oversight System. ICAO Contracting States, in their effort to establish and implement an effective safety oversight system, need to consider these critical elements.

1.2 **ICAO audit team composition**

1.2.1 The safety oversight audit team was composed of: Mr. Haile Belai, team leader; Mr. Henry Gourdji, assistant team leader; Mr. Mostafa Hoummady, audit coordinator, personnel licensing (PEL) and aircraft operations (OPS); Mr. Dave Van Ness, PEL and OPS/on-the-job training (OJT); Mrs. Elizabeth Gnehm, team member, airworthiness (AIR); Mr. Daniel Lapointe, AIR/OJT; Mr. Nicolas Rallo, team member, accident and incident investigation and prevention (AIG); Mr. Chris Dalton, team member, Air Navigation Services (ANS); Mrs. Martine Blaize, ANS/OJT; Mr. Dhiraj Ramdoyal, ANS/OJT; Mr. Yong Wang, team member, Aerodromes and Ground Aids (AGA); and Mr. Geoffrey Caton, AGA/OJT.
1.3 Acknowledgements

1.3.1 ICAO expresses its sincere appreciation for the assistance provided to the audit team during the preparation and conduct of the audit. The professionalism and enthusiasm of all personnel who interacted with the audit team greatly contributed to the success of the audit mission.

2. OBJECTIVES AND ACTIVITIES OF THE AUDIT MISSION

2.1 The comprehensive systems approach for the conduct of safety oversight audits consists of three phases. In the first phase, the level of implementation of Annex provisions is assessed and differences from ICAO Standards and Recommended Practices (SARPs) are identified for each Contracting State through a review of a duly completed State Aviation Activity Questionnaire (SAAQ) and Compliance Checklists (CCs) for all safety-related Annexes, as well as through a review of documents developed by the State to assist it in implementing SARPs and in maintaining an effective safety oversight system. In the second phase, the State being audited is visited by an ICAO audit team to validate the information provided by the State and to conduct an on-site audit of the State’s overall capability for safety oversight. The third phase of the audit process consists of the activities following the completion of the on-site audit.

2.2 The safety oversight audit of Germany was carried out from 11 to 27 May 2005 in accordance with the standard auditing procedures provided for in ICAO Doc 9735 — Safety Oversight Audit Manual and the Memorandum of Understanding (MOU) agreed to on 25 April 2005 between Germany and ICAO. The audit was carried out with the objective of fulfilling the mandate given which requires ICAO to conduct a safety oversight audit of all Contracting States (Assembly Resolutions A32-11 and A35-6 refer), reviewing a State’s compliance with ICAO SARPs set out in all safety-related Annexes and their associated guidance material, as well as with related Procedures for Air Navigation Services (PANS). Furthermore, the objective was also to offer advice, as applicable, to Germany in implementing these provisions.

2.3 The audit team reviewed the SAAQ and the CCs submitted by Germany prior to the on-site audit in order to have a preliminary understanding of the civil aviation system established in the State, to determine its various functions as well as to assess the status of implementation of relevant Annex provisions. Information provided and assessed prior to the conduct of the audit was validated during the on-site audit phase. In this regard, particular attention was given to the presence of an adequate organization, processes, procedures and programmes established and maintained by Germany to assist it in fulfilling its safety oversight obligations.

2.4 On 15 July 2002, the European Community adopted Regulation (EC) No 1592/2002 of the European Parliament and of the Council on common rules in the field of civil aviation and establishing a European Aviation Safety Agency (EASA). This regulation provides for the transfer of regulatory competencies in the fields of airworthiness, continuing airworthiness and environmental certification from the Member States of the European Union (EU) to EASA. On 1 October 2004, Germany advised ICAO in writing of the transfer of such competencies to EASA.

2.5 Since the transfer of competencies to EASA reflects on the scope of the ICAO safety oversight audits under the comprehensive systems approach, ICAO, on 29 November 2005, performed an audit of EASA. The audit results will be made available following the established timelines as set forth in the Safety Oversight Audit Manual (Doc 9735). It should be noted that Germany will always maintain the responsibility for all audit results that are derived from the audits carried out on EASA from time to time. As a result, the latest EASA safety oversight audit report should be reviewed together with this report.
2.6 The audit results including the findings and recommendations contained in this report reflect the capabilities and limitations of the civil aviation system of Germany as assessed by the audit team. They are thus based on evidence gathered during interviews conducted by the audit team with Germany’s technical experts and background information provided by such personnel, review and analysis of civil aviation legislation, specific regulations, related documentation and file records. Considering the time that was available to conduct the audit and the fact that the safety oversight audit team members could only review and analyse information and documentation made available by the State, it is possible that some safety concerns may not have been identified during the audit. The findings and recommendations related to each audit area are found in Appendix 1 to this report. The acronyms listed in the document reference box of each finding and recommendation form are defined as follows: A = Annex; AR = Assembly Resolution; CC = Chicago Convention; CE = Critical element; CIR = Circular; GM = Guidance material; PANS = Procedures for Air Navigation Services; RP = Recommended Practice; STD = Standard; and SUPPS = Regional Supplementary Procedures.

3. AUDIT RESULTS

3.1 Critical element 1 — Primary aviation legislation

“The provision of a comprehensive and effective aviation law consistent with the environment and complexity of the State’s aviation activity, and compliant with the requirements contained in the Convention on International Civil Aviation.”

3.1.1 Germany is a Federation of sixteen States (Länder), all enjoying official “State” status. The term “Federation,” when used in legislation and regulations, refers to Germany as a single overall entity with powers extending across the entire national territory.

3.1.2 Germany has established a comprehensive legislative system, which complies with its international obligations and environment. The primary legislation in Germany includes the Basic Law (Germany’s constitution) which describes the legal competence and roles of the Federal Government (Bundesregierung) and the Länder; several Federal Acts which are either promulgated by the Federal Parliament (Bundestag) with the intervention of the representation of all sixteen Federal States (Bundesrat) or prepared and introduced directly by the Federal Government; and European Commission (EC) regulations.

3.1.3 The basic aviation law in Germany is the Federal Aviation Act (Luftverkehrsgesetz or LuftVG) as revised on 27 March 1999 and last amended on 11 January 2005. As far as the Länder have been made competent by federal law, the Länder are acting on federal commission, according to Article 85 of the Basic Law. This means that the Länder are subject to federal oversight, which extends to the legality and appropriateness in the execution of federal laws. The Land authorities are subject to instructions from the highest competent federal authorities. These instructions shall be addressed to the highest Land authorities, unless the Federal Government considers the related matter to be urgent. Implementation of the instructions shall be ensured by the highest Land authorities. For this purpose, the Federal Government may require the submission of reports and documents and may also send commissioners to all Land authorities. Otherwise, the establishment of the relevant authorities remains the concern of the Länder, unless otherwise provided for by federal laws enacted with the consent of the Bundesrat. With the consent of the Bundesrat, the Federal Government may issue general administrative rules, which are binding upon Länder administrations.

3.1.4 Article 32 of the LuftVG confers upon the Federal Ministry of Transport, Building and Urban Affairs (BMVBW) comprehensive competence to issue regulations, to be passed in principle with the consent
of the *Bundesrat*, in nearly every area of aviation. However, these regulations do not require the consent of the *Bundesrat* when they address the implementation of ICAO SARPs. Issuing such regulations and drafting legislation and administrative rules is the major field of activity of the BMVBW, under which the Directorate General for Civil Aviation, Aerospace and Shipping (LS) is established. The BMVBW is also the competent authority in charge of international relations and exercises general oversight functions for the implementation of federal laws by the *Länder*.

3.1.5 The Chicago Convention and its Annexes are considered internationally binding upon Germany but have to be transposed into the national law for them to be directly applicable at the national level. This transposition is achieved through laws, regulations and administrative rules, which are drafted to conform to international obligations. It is also a recognized principle of legal interpretation to use the discretionary powers of legal provisions to apply and interpret national laws in conformity with international obligations. For example, in the area of aerodromes, the major mechanism for the transposition of pertinent international obligations derived from Annex 14 of the Chicago Convention involves the enactment of administrative rules (or directives) by the Federal Government that have been passed with the consent of the *Bundesrat* in accordance to Article 85, Section 2 of the Basic Law. Administrative rules which adhere to Annex 14 as closely as possible are mandatory for the *Länder* administrations when licensing airports.

3.1.6 The basic division of competences in the aviation field between the Federation and the *Länder* is specified in the Basic Law. According to Article 73 (6) of the Basic Law, the federal authorities have exclusive competence to legislate. In principle, according to Article 87d, Section 1 of the Basic Law, the federal authorities also have the power to administer. However, Section 2 of the same Article states that federal laws requiring the consent of the *Bundesrat* may delegate responsibilities related to air transport administration to the *Länder* acting on federal mandate. Based on this authorization, competences have thus been conferred to the *Länder* authorities, especially under Article 31 (2) of the *LuftVG*, which constitutes the central legislative act in the area of aviation. Accordingly, among its minor responsibilities, the *Länder* are responsible for general aviation policing activities (i.e. maintaining and guaranteeing public security and order) and for administration and licensing of aerodromes. The administration of other aviation areas (such as licensing of both aircraft and airlines, air control services etc.) remains at the federal level, to be administered by the Federal Office of Civil Aviation (*Luftfahrt-Bundesamt* or LBA), with the exception of air control services, which are currently administered by a limited liability company owned completely by the federal government, the *Deutsche Flugsicherung GmbH* (DFS).

3.1.7 The central administrative authority at the federal level is the Federal Office of Civil Aviation (*Luftfahrt-Bundesamt* or LBA), created by a special act, the Civil Aviation Act (*Gesetz über das Luftfahrt-Bundesamt*). The assignments are contained in the regulations based on Article 32 of the *LuftVG* and in instructions by the BMVBW. This office is in charge of safety oversight in the areas of personnel licensing and training, aircraft operations, transport of dangerous goods by air, and airworthiness of aircraft. It is also authorized to issue secondary regulations (*Durchführungsverordnungen*) which are operational and technical in nature.

3.1.8 Personnel licensing activities in Germany are governed by the broad provisions of Articles 70 and 71 of the *LuftVG*, which provides the BMVBW the authority to regulate and issue licences as well as to delegate said authority. The authority to issue licences, except for PPL (VFR only), has been delegated to the LBA, while the authority to issue the PPL (VFR only), glider pilots and free balloon pilots licences has been delegated specifically by the Basic Law to the *Länder*, which in turn must exercise oversight responsibilities in this area over the district licensing offices in their jurisdiction.

3.1.9 Aircraft operations are also governed by the broad provisions of Articles 70 and 71 of the *LuftVG*, which provides the BMVBW the authority to regulate aircraft operations, to issue various operators’
authorizations, and to delegate said authority. The authority to issue these authorizations, approvals and permissions has been delegated to the LBA (except for certification of VFR-only air carriers which is under the jurisdiction of the Länder according to the Basic Law). Germany has also established a comprehensive legislative framework addressing the area of safe transport of dangerous goods by air. The Dangerous Goods Transportation Act covers all modes of transport.

3.1.10 With respect to airworthiness and maintenance of aircraft, the adoption on 15 July 2002 of Regulation (EC) No 1592/2002 of the European Parliament and of the Council opened the way for a new European Community system of air safety and environmental regulation and for the establishment of the European Aviation Safety Agency (EASA), which was launched in September 2003. The mission of this Agency is to assist Member States (Germany) in establishing and maintaining a uniform level of civil aviation safety and environmental protection in Europe, promoting cost efficiency in the regulatory and certification processes, and assisting European Commission Member States in fulfilling their ICAO obligations. In this connection, Regulation (EC) No 1592/2002 states that EASA shall assist the Commission by preparing measures to be taken for the implementation of the same Regulation. Furthermore, EASA is tasked with assisting the Commission by preparing proposals for basic principles, applicability and essential requirements to be presented to the European Parliament and to the Council. Regulations drafted by EASA are submitted, as opinions, to the Commission and are then issued by the Commission as EC Regulations that are binding to all member States.

3.1.11 Germany has also established a comprehensive aviation legislative system for its air navigation services, which complies, on the whole, with the requirements contained in the Convention on International Civil Aviation. These include Aeronautical Information Services (AIS), Airspace Management (ASM), Air Traffic Flow Management (ATFM), Air Traffic Services (ATS), Communications and Navigation Services (CNS), Meteorological Services (MET), and Search and Rescue Services (SAR). With regard to AIS, ATS, CNS and MET, Germany is also directly legislated by the four Single European Sky (SES) Regulations of the European Parliament and of the Council, promulgated in March 2004. These are:

a) (EC) No 549/2004 of the European Parliament and of the Council, which laid down the framework for the creation of the Single European Sky;


3.1.12 The SES Regulations require, in particular, the nomination by all EU Member States of a national supervisory authority (NSA) to monitor the safe and efficient provision of air navigation services (air navigation is defined in the SES Regulations as ATS, CNS, MET and AIS), to certify providers of ATS, CNS, MET and AIS against common requirements established at European Community level, and to control compliance by providers of ATS, CNS, MET and AIS of these requirements. Similarly, in case of non-compliance, NSAs are required to take appropriate measures, which may include revocation of the certificate. Germany has nominated the BMVBW as its NSA, but complementary actions necessary to support the NSA have not been completed.
3.1.13 The LuftVG also allows the BMVBW to promulgate aviation regulations in the areas of air navigation (AIS, ASM, ATFM, ATS, CNS and MET) and SAR; to designate/delegate authority to a service provider in the area of air navigation (AIS, ASM, ATFM, ATS and CNS) while retaining legal and technical supervision; and to approve an individual as an independent provider of ATS at Regional Airports. The Deutsche Flugsicherung GmbH (DFS) has been designated accordingly by the BMVBW as an air navigation service provider. The designation of EUROCONTROL as another air navigation service provider at the Maastricht Upper Area Control Centre takes the form of an inter-State Treaty signed by Germany, Luxembourg, Belgium, the Netherlands and EUROCONTROL. However, the legislative framework does not clearly establish the respective authorities of BMVBW and DFS with regard to supervision, certification and licensing in air navigation.

3.1.14 With respect to meteorological services for aviation, the LuftVG establishes the BMVBW as the authority responsible for the supervision of meteorological services in aviation, and designates the German Meteorological Service or Deutscher Wetterdienst (DWD) as the provider of meteorological services in aviation for the national airspace. The basis of DWD authority is legislated in the Law on the National Meteorological Service which establishes the DWD as the supervisory and licensing authority for regional meteorological services.

3.1.15 The provision of SAR by the Federal Ministry of Defence (MOD) is subject to a Memorandum of Cooperation (MOC) between the BMVBW and MOD. A second MOC between the BMVBW and Länder also establishes their respective responsibilities with regard to SAR.

3.1.16 The LuftVG, together with the Regulation on the Operational Services Provided by the Air Navigation Services (FSBetrV) and the Regulation on Licensing and Training of Air Traffic Control (ATC) Personnel (FISichPersAusV), establishes the enforcement powers of the BMVBW, the Länder, as well as Administrative Department V of the Federal Office of Civil Aviation (LBA-V) to issue and renew air traffic controllers’ licences.

3.1.17 In the case of aerodromes, the LuftVG also provides for the certification of aerodromes as well as the safety oversight of aerodrome operators. All aerodromes in Germany are required to be licensed. Article 87d of the Basic Law provides for the Federation to mandate the Länder with the implementation of Federal Legislation in some specific areas, while Article 31 (2) of the LuftVG delegates specific administrative tasks to the Länder.

3.1.18 In the case of aerodromes, it is the responsibility of the Länder to license and conduct safety oversight of aerodrome operators within their own jurisdictions, based on the regulations promulgated by the BMVBW. However, the granting of exemptions to aerodrome operators from complying with specific provisions of the certification requirements is subject to review by the BMVBW prior to issuance of exemptions.

3.1.19 With respect to accident and incident investigation, Germany has adopted the Federal Act on Investigation of Civil Aviation Accidents (Flugunfalluntersuchungsgesetz or the FLUUG Law), promulgated on 26 August 1998. The FLUUG Law was developed in order to transpose the European Council Directive 94/56/EC of 21 November 1994, which outlined the fundamental principles governing the investigation of civil aviation accidents and incidents. The FLUUG Law also established the Federal Bureau of Aircraft Accidents Investigation (Bundesstelle für Flugunfalluntersuchung or BFU) as Germany’s functionally independent government agency for investigating civil aircraft accidents and incidents. The FLUUG Law provides the BFU and its investigators with the proper authority and legal tools to conduct investigations in compliance with Annex 13 provisions.
3.1.20 Germany has established a legislative system which includes the Basic Law (Constitution), a set of Federal Acts addressing various areas, and a basic aviation law supported by specific federal laws, in addition to European Commission and European Parliament provisions. However, the complexity of this legislative system, where legal interventions are made at different levels, requires additional formal coordination and procedures to ensure Germany’s compliance of the *Convention on International Civil Aviation* under all conditions. Provisions adopted by European bodies such as EU directives or regulations as well as EASA provisions need to be assessed to ensure their conformance to relevant ICAO provisions. Any potential differences between the national legislation and ICAO SARPs should be corrected or notified to ICAO.

### 3.2 Critical element 2 — Specific operating regulations

“The provision of adequate regulations to address, at a minimum, national requirements emanating from the primary aviation legislation and providing for standardized operational procedures, equipment and infrastructures (including safety management and training systems), in conformance with the Standards and Recommended Practices (SARPs) contained in the Annexes to the *Convention on International Civil Aviation*.

*Note.—* The term ‘regulations’ is used in a generic sense to include instructions, rules, edicts, directives, sets of laws, requirements, policies, orders, etc.”

3.2.1 The German legislative framework is supplemented by a comprehensive and well-structured set of regulations promulgated by the BMVBW, LBA and Länder, depending on the subject and the jurisdictional competency. As a European Commission Member State, Germany has the obligation to transpose in a timely manner the European Council Directives in its federal regulations and to prepare the mechanism for the implementation of EC regulations that are binding on all EC members.

3.2.2 The German civil aviation regulatory framework is derived partially from JARs transposed in the national regulations and ICAO Annex provisions which are implemented by specific regulations or only used as reference. In addition, Administrative Orders which normally supplement the basic regulations are issued by LBA. A formal coordination process for the introduction of new regulations as well as amendment of existing regulations is established and takes into consideration the amendments of ICAO provisions. The initiation of draft regulations is shared between specific Sections of the BMVBW and other operational entities depending on their areas of competence. However, procedures established have to be reviewed to encompass all entities involved in the rule-making process and to ensure that differences with ICAO Standards will be identified and notified to ICAO, with additional attention to regulations initiated in the context of European Commission bodies.

3.2.3 To support its legislative framework in the areas of personnel licensing and training, the BMVBW has promulgated regulations supplemented by Administrative Orders issued by LBA. The process of initiating and drafting regulations is shared between Section LS17 (Air Traffic, Operations, Personnel, Accidents) of the Directorate for Civil Aviation and Aeronautics (LS1) and LBA. Rule-making relating to personnel licensing and aircraft operations is one of the tasks and responsibilities of LS17. In this respect, various regulations were in effect and were mainly contained in the *Regulation on Certification and Licensing in Aviation* (Luftverkehrs-Zulassung-Ordnung or LuftVZO), the *Regulation on Personnel Licensing* (Verordnung über Luftfahrtpersonal or LuftPersV), as well as the JAR-FCL Deutsch. The LBA has issued implementing orders to support regulations promulgated by the BMVBW. For personnel licensing, these are the Administrative Orders *DV LuftVZO* and the *DV LuftPersV*. 
3.2.4 The BMVBW has also promulgated technical regulations to support its legislative framework that govern aircraft operations. The process of initiating and drafting regulations is shared between LS17 and LBA. Various regulations relating to aircraft operations were contained in the *LuftVZO*; the *Regulation on Operation of Aircraft (Betriebsordnung für Luftfahrzeug oder LuftBO)*; and the JAR-OPS 1 and 3 Deutsch. The LBA has also issued Administrative Orders *DV LuftVZO* and *DV LuftBO* to supplement regulations promulgated by the BMVBW.

3.2.5 Two sets of regulations prevail in the area of airworthiness of aircraft in Germany, each dealing with different areas of competence: 1) national regulations issued by BMVBW and implementing orders issued by LBA, and 2) EC regulations issued by European Commission bodies, which are supranational. At the national level, in addition to the *LuftPersV*, the *Regulation on Aviation (LuftVO)* and the *LuftVZO*, specific secondary national legislation have been promulgated by the BMVBW to enable the implementation of ICAO SARPs related to airworthiness. These are the *Regulation on Manufacturing of Aircraft (Bauordnung für Luftfahrzeug oder LuftBauO)* and the *Regulation on Certification of Aircraft (Verordnung zur Prüfordnung für Luftfahrzeug oder LuftGerPV)*. In addition, JAR-OPS 1 and 3 have been transposed and promulgated as JAR-OPS 1 and 3 Deutsch as part of the *Regulation on Operation of Aircraft (LuftBO)*.


3.2.7 *Regulation (EC) No 1592/2002* transfers the majority of the rule-making process concerning airworthiness and maintenance of aircraft to EASA, and states that “EASA shall assist the Commission by preparing measures to be taken for the implementation of the said regulations.” EASA is tasked with assisting the Commission by preparing proposals for basic principles, applicability and essential requirements to be presented to the European Parliament and to the Council.

3.2.8 With respect to Air Navigation Services (ANS), Germany has promulgated a comprehensive set of regulations where but for a few exceptions, many of ICAO’s provisions associated with ANS have been promulgated in German law. These regulations emanate from the relevant primary aviation legislation and for the most part, provide for standardized operational procedures, equipment and infrastructures in conformance with the SARPs contained in the Annexes to the *Convention on International Civil Aviation*. A case in point includes the *LuftVG* and the *LuftVO*, which, to a large extent, provide for standardized implementation of Annex 2 — *Rules of the Air*. The German ANS-related regulations also provide for the delegation of authority to an air navigation service provider; the operational services provided by the air navigation service provider; a meteorological service; design certification for air navigation equipment; and personnel licensing and training.

3.2.9 Where there are no specific operating regulations, many ANS-related ICAO provisions are enabled through the use of manuals, guidelines, implementing decrees, orders, letters of agreement, notices and administrative procedures. Their application may be enforced through binding regulations, accords, frameworks, contracts and agreements concluded between Germany and other States and/or international organizations and/or service providers as well as between DFS and other service providers and/or international organizations.

3.2.10 This combination of regulatory and non-regulatory operating requirements and their interrelationships are complex. For example, while the regulations assign air navigation services to DFS and
describe the tasks in general terms, it is the binding yet non-regulatory Master Agreement (Framework) between Germany and DFS that defines more specifically the functions and conditions by which the activities of DFS are carried out. These functions include some regulatory roles as well as the role of provider of AIS, ASM, ATFM, ATS, and CNS. The Master Agreement is also used by the BMVBW to require DFS to comply with ICAO SARPs, except where deviations are approved by the BMVBW. DFS consequently promulgates the Manual of Operations, Air Traffic Control Services (Betriebsanweisung Flugverkehrskontrolle or BA-FVK), which is binding on providers of ATS in airspace over Germany. Germany therefore relies on DFS to discharge not only its service provision responsibilities but also certification, supervision/oversight and support to licensing responsibilities, as delegated by BMVBW to DFS through regulation, and more implicitly, through the aforementioned Master Agreement.

3.2.11 The legislation enacted to govern the provision of SAR services includes Article 32 (1) No. 6 of the LuftVG and Article 29 of the FLUUG Law. Associated regulations are the Joint Guidelines on Search and Rescue Activities of the Federal Government and the Länder and the Agreement of the Federal Ministry of Defence and the BMVBW on the Performance of Search and Rescue Activities in the Field of Civil Aviation (NIL I – 103/01). The legislation provides for the entering of agreements with other SAR service providers. An integral working relationship with the COSPAS-SARSAT satellite alert and location system has also been established.

3.2.12 Concerning CNS, the Regulation on Design Certification for Air Navigation Equipment (Flugsicherungs-Anlagen und Geräte-MusterzulassungsVerordnung or FSMusterzuV) as well as a decree for its implementation regulate the type certification of CNS equipment and establish DFS as the type certification authority. In addition, the Regulation on Certification and Licensing in Aviation (LuftVZO) establishes the Länder as the supervisory and approval authority for the installation and operation of CNS equipment at Regional Airports (airports where ATS is not provided by DFS). According to the LuftVG and the LuftVZO, the Länder must consult DFS with regard to the installation of communications equipment and receive a technical approval from DFS with regard to navigation and surveillance equipment, prior to approving the operations of CNS equipment at Regional Airports.

3.2.13 Section LS11 (Aerodromes and Airport, Local Air Police) of the Directorate for Civil Aviation and Aeronautics (LS1) is responsible for rule-making relating to aerodromes. A plethora of regulatory documents covering most aspects of Annex 14 are available and published in the form of guidelines. A comprehensive process including consultation with the Länder has been established for drafting regulations. However, formal procedures have not been developed to support the practice. The general criteria for aerodrome certification are contained in the Regulation on Certification and Licensing in Aviation (LuftVZO). A series of technical guidelines addressing different aspects of aerodrome/heliport design and operations provide detailed specifications that reflect the implementation of Annex 14 provisions, including some Recommended Practices. Some guidelines contain a general statement that reference should be made to Annex 14, where no specific State regulations exist.

3.2.14 With respect to aircraft accident and incident investigation, the legal authority and legal tools to conduct such investigations are provided for in the FLUUG law. In addition, the obligation to report accidents and serious incidents to the BFU is stated in the Regulation on Aviation (LuftVO).

3.3 Critical element 3 — State civil aviation system and safety oversight functions

“The establishment of a civil aviation authority (CAA) and/or other relevant authorities or government agencies, headed by a Chief Executive Officer, supported by the appropriate and adequate technical and non-technical staff and provided with adequate financial resources.
The State authority must have stated safety regulatory functions, objectives and safety policies.

Note.— The term ‘State civil aviation system’ is used in a generic sense to include all aviation-related authorities with aviation safety oversight responsibility which may be established by the State as separate entities, such as: CAA, airport authorities, air traffic service authorities, accident investigation authority, meteorological authority, etc.”

3.3.1 The civil aviation system in Germany is composed of several entities which have been conferred with clearly defined responsibilities in safety oversight by national or European legal instruments. At the national level, the BMVBW exercises the main and central role; jurisdictional competence of the BMVBW and Länder are defined in the Basic Law; and subordinated authorities (LBA, BFU, DFS, and DWD) have also been delegated some safety oversight functions and tasks under the responsibility of the BMVBW. These safety oversight functions, tasks and responsibilities are defined by Federal Acts. In addition, some functions have been transferred to EASA and are defined by relevant EC regulations. The administrative tasks and functions of the Federation have been assigned to the BMVBW which is responsible for the implementation and promulgation of civil aviation-related regulations, safety objectives and policies.

3.3.2 The BMVBW is composed of eight departments, one of them being the Directorate General for Civil Aviation, Aerospace and Shipping (LS), headed by a Director General and two deputies, one for civil aviation and one for shipping. The department in charge of civil aviation is named the Directorate for Civil Aviation and Aeronautics (LS1) and is made up of the following eight Sections (Referat):

a) Referat LS10 — Air Traffic, Aviation Law, Legislation, and Bilaterals;
b) Referat LS11 — Aerodromes and Airports, Local Air Police;
c) Referat LS12 — Aviation Security;
d) Referat LS13 — Aviation Policy and Economy, International Co-operation in Aviation, ICAO, ECAC;
e) Referat LS14 — Meteorological Service;
f) Referat LS15 — Aviation Technology, Aviation Research;
g) Referat LS16 — Air Navigation Service; and
h) Referat LS17 — Air Traffic Operations, Personnel, Accidents.

3.3.3 The Directorate for Civil Aviation and Aeronautics (LS1) employs qualified personnel and has established a coordination mechanism among the technical sections, corresponding subordinated authorities, and Länder District Offices. LS1 is mainly in charge of the promulgation of civil aviation regulations and the oversight of the subordinated authorities. It also acts as the representative of the German civil aviation system in international civil aviation organizations such as ICAO, the European Civil Aviation Conference (ECAC) and the JAA. These LS1 tasks are included in the tasks of the technical sections which exercise the legal oversight in their respective areas of competence to ensure the effective implementation of applicable rules. The rule-making process and establishment of policies is centralized at the federal level, and the operational responsibility for certification and surveillance of various aviation activity rests with specific designated entities.

3.3.4 Safety oversight operational activities in the areas of personnel licensing and training, operations of aircraft, airworthiness and maintenance of aircraft, and transport of dangerous goods by air are mainly carried out by the LBA. Some of these activities have been transferred to the Länder or EASA, or have been delegated to DFS and DWD. The LBA is composed of five departments and an Administrative Department (LBA-V), located at Langen, which is in charge of personnel licensing for air traffic controllers. The five LBA departments are:
• Department B, in charge of matters related to commercial operators;
• Department L, in charge of personnel licensing matters for flight crew members;
• Department S, in charge of air traffic safety and security and located at Frankfurt Airport;
• Department T, in charge of certification and environmental protection; and
• Department Z, in charge of the administrative matters.

The LBA employs a total staff of 430, complemented by six Regional Offices located in Berlin, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart. Each Regional Office has a different field of expertise, depending on the overall activities carried out in its jurisdiction, and acts under the authority of the relevant LBA Headquarters Department.

3.3.5 Germany has established a structured system for personnel licensing in aviation that fully complies with ICAO provisions. For flight crew members, the regulatory functions and related tasks are divided between the BMVBW Section LS17 (Air Traffic Operations, Personnel, Accidents) and the LBA. The LS17 exercises legal oversight of the system and has the responsibility of coordinating the implementation of related regulations. The technical licensing functions are carried out by LBA Department L except for the licensing of PPL VFR, glider, and hot air balloon licences as well as related oversight of training organizations and examination activities, which are by law under the responsibility of the Länder. Each Land has established District Offices to this effect.

3.3.6 Both the LBA and the Länder have established an adequate organization for personnel licensing in their areas of competence. All divisions of the LBA and the Länder involved in personnel licensing have adequate resources and staff to accomplish their functions. Within LBA Department L, in charge of personnel licensing matters for flight crew members, there are five divisions.

a) Division L1 is responsible for the approval and supervision of training organizations (TRTOs);

b) Division L2 develops and administers all theoretical (written) examinations;

c) Division L3 oversees the administration of skill and practical tests for flight crew as well as designation of examiners;

d) Division L4 performs the administrative function of issuing the licences after ensuring that all required documentation and processes are satisfactory; and

e) Aviation Medicine oversight matters are carried out by Division L5, which is responsible for the drafting of regulations, designation of Medical Examiners, approval of Aviation Medicine Centres, review of restrictions on the medical certificate, and approval of waivers to established medical standards.

3.3.7 In the area of aircraft operations, the regulatory functions and related tasks are also divided between the BMVBW and the LBA. The BMVBW Section LS17 (Air Traffic Operations, Personnel, Accidents) exercises legal oversight of aircraft operations and coordinates the implementation of related regulations. The certification and surveillance of commercial air operators is carried out by the LBA Headquarters at Braunschweig and its six Regional Offices located in Berlin, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart. Certification of VFR-only air carriers is the responsibility of the Länder and each Land has established District Offices to this effect. Both the LBA and relevant Districts of the Länder are
responsible for all aspects relating to their areas of competence and there is no breakdown or overlap in the certification processes.

3.3.8 Both the LBA and the Länder have established comprehensive and detailed task descriptions which reflect their adequate organization for the certification of air operators in their respective areas of competence. Within the LBA, Department B, “Commercial Operators,” is charged with the certification and surveillance of air operators, and is made up of four divisions:

a) Division B1 is responsible for the administration part of the certification of German air carriers and for granting entry permission to foreign carriers;

b) Division B2 (Flight Operations) is responsible for the technical part of the certification and surveillance processes, including but not limited to ground and flight inspections, approval of training programmes, all weather operations, special operations (such as ETOPS) and simulator qualification. There are 25 technical personnel in Division B2, assisted by 6 regional officers, to accomplish all certification, approvals and surveillance functions for approximately 120 air operator’s certificate (AOC) holders located in various bases in Germany, including several large air carriers;

c) Division B3 oversees maintenance organizations, qualification and training of technical staff, and approval and supervision of corresponding training organizations; and

d) Division B4 is responsible for the assessment and monitoring of the financial aspects of air carriers, flight training organizations and type rating training organizations.

3.3.9 Safety oversight obligations in the area of transport of dangerous goods by air are carried out by Department S of LBA (Air Safety and Security). The Department is composed of two groups: 1) a Group Aviation Security tasked with inspection of security measures at German airports as well as review and approval of training manuals of air operators in this area, and 2) a Group Air Traffic Safety Inspection responsible for transport of dangerous matters. The Group Air Traffic Safety Inspection is staffed with five inspectors. Its overall tasks address all areas in the transport of dangerous goods by air, such as the issuance of the necessary permission for the transport of dangerous goods, the accreditation of training operators and approval of training manuals, the monitoring of German air operators in Germany and abroad, the monitoring of handling agents and training operators, the issuance of permissions for the transportation of dangerous goods for overflight in Germany, the monitoring of foreign air operators in Germany, and the prosecution of offences.

3.3.10 With regard to airworthiness and maintenance, tasks are carried out by the LBA or EASA, depending on the area of competence. Tasks transferred to EASA as of 28 September 2003 include type certification and approval of design organizations. EASA’s tasks also include the approval of manufacturing and maintenance organizations outside of the European Community. Pursuant to Article 46 of Regulation (EC) No 1592/2002, EASA and the LBA have signed a service contract establishing the conditions under which the LBA will assist EASA in the execution of certain tasks in the fields of certification and standardization inspections. The LBA is also delegated the task of performing technical investigations for the continuing airworthiness of products for which it is the State of Design and of third country products allocated to it by EASA. In addition, the LBA is responsible for the approval and supervision of manufacturing and maintenance organizations in Germany, and for complying with Germany’s responsibilities as the State of Registry. The LBA Headquarters’ office in Braunschweig also supervises the six Regional Offices and they are responsible for planning and executing the surveillance programmes for production and maintenance organizations. The LBA is provided with adequate resources and technical personnel to accomplish its tasks.
3.3.11 The main air navigation service provider in Germany is the DFS which is state-owned. DFS is responsible for the provision of ATS, CNS (en route and at seventeen international airports), AIS, ASM, ATFM, training, and flight procedures design. Regional Airports also operate their own CNS infrastructure whenever the service is not provided by DFS. DFS Regional Offices undertake some operational and technical supervision of ATS when provided by Regional Airports, while the sixteen Länder are formally responsible for the approval of the installation and operation of CNS equipment. DFS issues type approval for CNS equipment and ensures that CNS facilities at Regional Airports comply with DFS specifications prior to their installation and formal approval by the Länder.

3.3.12 The BMVBW LS16 is responsible for the legal and technical supervision of DFS. Administrative Department V of the LBA (LBA-V) is responsible for issuing/endorsing licences and ratings for air traffic controllers and other ANS personnel employed by DFS, as well as for individuals providing air navigation services at Regional Airports not operated by DFS. LBA-V is also responsible for the pursuit of administrative offences related to ATC. The BMVBW does not employ sufficient technical and clerical staff to carry out its safety oversight activities and both the BMVBW LS16 and LBA-V have a limited number of personnel to perform the supervision and licensing obligations of the State and to undertake their enforcement duties.

3.3.13 Other ATS service providers located outside of Germany provide air traffic services in the German airspace under various arrangements. These include EUROCONTROL (a European organization for the Maastricht Upper Area Control Centre, established on the basis of a multilateral agreement ratified by Belgium, Germany, Luxembourg and the Netherlands). Service providers Skyguide (Switzerland), LVNL (the Netherlands), and Belgocontrol (Belgium) also operate in other sectors of German airspace, on the basis of “Operational Letters of Agreement” concluded individually with DFS.

3.3.14 DWD has been established as a public authority working under the BMVBW. It is structured into five different areas of activities, one of which is “Forecasts and Media” where the aviation section belongs. Meteorological services for civil aviation are provided by seven regional aeronautical meteorological offices that provide guidance for those meteorological units that provide the necessary weather information to airspace users. The DWD also supervises licences and contracts out provision of MET services at some Regional Airports. DWD is adequately established and staffed, and has been ISO 9000/2000-certified since 2004. Search and Rescue (SAR) services are adequately provided by the Federal Ministry of Defence on the basis of an MOC signed with the BMVBW. Provision of maritime SAR services are ensured by the Glücksburg ACC and the SAR services for the continental part of the German Search and Rescue Region (SRR) are provided from the Münster RCC, supported by other sub-centres. Other entities (including the Länder, the LBA, DFS, and the BFU) also have a role in SAR activities.

3.3.15 In the area of aerodromes, responsibilities are shared between the Federation and the Länder. Safety regulations are the responsibility of BMVBW Section LS11 (Aerodrome and Airports, Local Air Police), which is tasked with maintaining the policy and technical guidelines for aerodrome design and operations, while certification and surveillance of aerodromes are delegated to the Länder. Exemptions from aerodrome certification requirements submitted by the Länder are reviewed by LS11. A “Federation – Länder Joint Committee” which is a legal and technical sub-committee has been established to ensure the coordination between the BMVBW and the Länder, and to address issues of common interest, including interpretation of Annex 14 provisions. LS11 currently has five full-time staff members, only one of whom is a technical personnel. Given the extent of its core tasks and supervisory functions, the Section has engaged the services of three staff members in key positions on loan from the industry to assist in accomplishing its functions.

3.3.16 The audit also involved one of the Länder authorities, the Ministry for Transport, Energy and Land Use Planning of the Land of North Rhine-Westphalia (NRW), which has direct supervision of three
international airports in the region. The responsibility for overseeing the remaining aerodromes in the Land is delegated to two of the five District Governments, each with approximately sixty staff members dealing with a variety of issues, including aerodrome safety. The aerodrome safety oversight system within the Land of North Rhine-Westphalia was found to be adequately structured and staffed, and the coordination level between this Land authority and the Federation was found satisfactory.

3.3.17 The authority in charge of accident and incident investigation is the BFU, a permanent bureau established within the BMVBW but separate from the LBA, the DFS and all bodies responsible for the licensing, certification and surveillance of civil aviation activities. The BFU is appropriately established and organized. It has its own investigators and technical experts, with various backgrounds, as well as a network of representatives to provide assistance across Germany. However, the number of investigators in the BFU has decreased over the years while the responsibilities and scope of the BFU have increased. As a result, the BFU has not been able to complete its investigation reports within the established target dates.

3.4 **Critical element 4 — Technical personnel qualification and training**

“The establishment of minimum requirements for knowledge and experience of the technical personnel performing safety oversight functions and the provision of appropriate training to maintain and enhance their competence at the desired level. The training should include initial and recurrent (periodic) training.”

3.4.1 Requirement for staff training in personnel licensing are contained in JAR-FCL related material. It addresses both technical and administrative staff. Department L of LBA, in charge of personnel licensing matters for flight crew members, has established an adequate training programme for its technical and administrative staff according to their individual tasks and needs. The training provided is carried out mainly under the auspices of the JAA and includes initial, recurrent and specialized training as required. Those involved in flight examinations are given ample opportunity to maintain currency and proficiency as appropriate to their assigned duties. Resources for training of technical personnel involved in personnel licensing are provided for in the yearly budget and staff work distribution in accordance with an agreement between the LBA and the BMVBW.

3.4.2 In the area of aircraft operations, minimum requirements for skill and experience of all staff are set out in the job description and/or in the recruitment policy. The technical staff of LBA’s Department B, in charge of commercial operators’ matters, and the Regional Offices involved in the oversight of aircraft operations are provided appropriate training, including initial, recurrent and specialized training as required. Those involved in certification and surveillance related to flight operations are given ample opportunity to maintain currency and proficiency appropriate to their assigned duties and allowed to fly with specific operators for 20 per cent of their work programme. However, the initial and recurrent training is established by each Section Head and a formal training programme is not established.

3.4.3 In the area of airworthiness, the LBA has established minimum requirements for knowledge and experience of its technical personnel and provides appropriate initial, recurrent and specialized training as required. The LBA airworthiness inspectors’ training records are available and adequately maintained.

3.4.4 With respect to ANS, the BMVBW Section LS16 (Air Navigation Service) and the LBA-V have not established minimum requirements for knowledge and experience of their technical personnel performing safety oversight functions. Neither the LS16 nor the LBA-V has established a training policy for their technical staff. They do not ensure that staff are provided with appropriate training, both initial and recurrent, to maintain and enhance their competence at the desired level. The training provided is limited to ad
hoc on-the-job training. With regard to the regulatory, supervisory and licensing tasks delegated to DFS, DFS has established minimum requirements for knowledge and experience of its technical personnel performing safety oversight functions as well as training policies for its staff. Through an annual staff appraisal scheme, DFS ensures that staff are provided with appropriate training (initial or recurrent) to maintain and enhance their competence at the desired level.

3.4.5 Concerning the safety oversight of aerodromes, BMVBW Section LS 11 (Aerodromes and Airport, Local Air Police) has established adequate qualification criteria for the recruitment of its technical staff and has appropriate input in the selection processes for its personnel. In addition, a policy covering the training of BMVBW personnel has been developed. However, whilst management training is provided to managerial personnel, no initial and recurrent technical training is provided to the technical staff of LS11, nor has a structured training plan been developed. As for the Länder, each of them is required to establish and adhere to its own directives in the area of training. The Ministry for Transport, Energy and Land Use Planning of the Land of North Rhine-Westphalia (NRW) has established minimum qualification criteria for its aerodrome inspectors, and has also developed its own directive which details the initial and recurrent training to be accomplished by all technical staff. All new technical staff receive a four-week training course, of which two weeks comprise on-the-job training. Refresher training is also provided on a periodic basis. Records of training are kept in each inspector’s personnel file. District Governments that receive functional direction from the NRW also provide training to all of their technical staff in accordance with the directive issued by the NRW.

3.4.6 In the area of aircraft accident and incident investigation, the BFU has established appropriate qualification criteria for the recruitment of its technical personnel. The BFU technical personnel is appointed as a result of a selection process including the advertisement of the vacancy, the review of candidates’ qualifications and interviews of selected candidates. The BFU has a training policy for all its technical personnel. A training programme is in place but its implementation is not yet formally monitored.

3.5 Critical element 5 — Technical guidance, tools and the provision of safety critical information

“The provision of technical guidance (including processes and procedures), tools (including facilities and equipment) and safety critical information, as applicable, to the technical personnel to enable them to perform their safety oversight functions in accordance with established requirements and in a standardized manner. In addition, this includes the provision of technical guidance by the oversight authority to the aviation industry on the implementation of applicable regulations and instructions.”

3.5.1 In the area of personnel licensing, the LBA and the Länder have established a comprehensive and detailed technical guidance and procedures for the personnel licensing and approval of training organization functions. Most of this technical guidance are based on JAR-FCL regulations and guidance material, and are available to LBA staff on Intranet. LBA and the District Offices of Länder have established an adequate and secured filing system and all German licence records are available both in hard copy and in an electronic database. The electronic database has sufficient security safeguards to protect personal information and is used as back-up to retrieve individual information and historical background. It also gives read or read/write access to the appropriate personnel for data fields that are necessary to accomplish their job. All licensing personnel at LBA Department L (in charge of personnel licensing matters for flight crew members) and Länder have adequate facilities and equipment to effectively perform their duties. The Aviation Medicine matters are also managed at both LBA and the Länder. LBA maintains a comprehensive public web site in German and in English, which includes personnel licensing application forms; a list of designated examiners including their qualifications, location and contact information; and a list of approved training organizations,
including their approved courses and equipment as well as their locations.

3.5.2 With respect to aircraft operations, both the Länder and LBA have also established a comprehensive and detailed guideline and procedures to document air operator’s certification and surveillance system. Procedures are based on JAR-OPS 1 and 3 and on implementing standards, depending on the operator’s scope of activity, and they are commonly used. The LBA Division B2 (Flight Operations) has established a comprehensive library which include relevant regulations, ICAO Annexes and documents, JAA documents and operators’ operations manuals. Most of this technical guidance are available on Intranet to the LBA staff at Headquarters and Regional Offices. Operations inspectors and technical staff at LBA and Länder level have adequate facilities and equipment to effectively perform their duties. The LBA maintains a comprehensive public web site in German and in English, with application forms for aircraft operations matters, guidance and instructions.

3.5.3 With regards to airworthiness, LBA regulations are up-to-date and available to the public on the Internet. Airworthiness inspectors have access to the technical library, which includes the State laws, regulations, orders, instructions, ICAO Annexes and guidance material. Procedures used by the Airworthiness Inspection Division (AID) and Airworthiness Engineering Division (AED) staff are compiled into the LBA Intranet system and are accessible to all LBA staff. Processes are in place, with mechanisms to ensure that applicants are made aware of the requirements to be met and of the approval process.

3.5.4 Some guidance material for airworthiness approvals have been developed at the EC level and included as part of the Regulations (EC) No 1702/2003 and (EC) No 2042/2003. Additional guidance has been developed by EASA in EASA Certification Directorate Exposition, Part 2, Subpart 1 — Internal Working Procedures Type Certification (TCP); Part 3, Subpart 1 — Internal Working Procedures Design Organization Approval (DOAP); and Part 3, Subpart 3 — Internal Working Procedures Production Organization Approval (POAP).

3.5.5 With respect to ANS, the BMVBW Section LS16 (Air Navigation Service) does not provide technical guidance, tools and safety critical information to regulatory or supervisory staff or to air traffic service providers in German airspace or the aviation industry as a whole. LS16 relies on the Aeronautical Information Publication (AIP) and DFS interface arrangements to formulate and distribute operational regulations and guidance material on civil air navigation regulations to all air traffic service providers (including foreign providers and Regional Airports) in the German airspace as well as to operators and users. The promulgation of the operational regulations in ANS, including safety critical information, normally originates at the DFS level, unless there is a difference with ICAO SARPs that has already been notified to ICAO by the BMVBW. LS16 and LBA-V both rely on DFS interface arrangements to formulate, communicate and implement guidance to DFS staff involved in operational and technical supervisory functions as well as in licensing and certification activities. LBA-V operates a database to administer the licensing scheme in Germany. However, LBA-V and LS16 have not developed licensing-related guidance material or technical procedure for the safety regulatory staff in ANS.

3.5.6 National regulations on the licensing of aerodromes and technical guidance to assist in the certification process are available and published through various means, including the National Gazette. ICAO Annex 14 and related guidance material are accessible to aerodrome regulatory staff, inspectors as well as operators. The BMVBW issues instructions and directives to the Länder, as necessary, on the implementation of certain Annex 14 provisions, especially following an amendment to the Annex. Aerodrome regulatory staff and inspectors are provided with necessary tools, including sufficient office equipment and transportation, to conduct their duties. In North Rhine-Westphalia, a complete inspection list was shown as guidance to aerodrome inspectors for the inspection of different facilities at an aerodrome. As for the provision and
dissemination of safety critical information about aerodrome operations, NOTAMs are issued whenever needed, and it was noted that the German AIP, in the form of a CD, is widely referenced by regulatory staff and aerodrome inspectors.

3.5.7 With respect to accident/incident notification, investigation and prevention, the BFU has developed various manuals and instructions, available in hard copy as well as on the BFU Intranet. The BFU manuals are fully controlled and provide adequate and comprehensive guidance for the various functions related to the investigation process. At the level of the State, there is no formal process or criteria to determine which cases of air traffic-related incidents (e.g. separation infringements and runway incursions) should be investigated by the BFU.

3.6 Critical element 6 — Licensing, certification, authorization and/or approval obligations

“The implementation of processes and procedures to ensure that personnel and organizations performing an aviation activity meet the established requirements before they are allowed to exercise the privileges of a licence, certificate, authorization and/or approval to conduct the relevant aviation activity.”

3.6.1 Certification activities in Germany and related processes are carried out by LBA Departments, District Offices of the Länder, DFS, LBA-V, and EASA. Coordination is established between the technical sections of the Directorate for Civil Aviation and Aeronautics (LS1), LBA and the District Offices of the Länder, with extensive use of a centralized Intranet system for the control of certification activities in their areas of competence.

3.6.2 Flight crew licensing issues are divided between LBA and the Länder. Both LBA and Länder have established a comprehensive and effective system for flight crew licensing, based on the JAR-FCL, for the initial issuance, renewal, validation and conversion of foreign licences; medical assessment and approval of Aviation Medical Centres; designation of flight examiners; and the approval of training organizations. A system for assessment of initial applications is established by LBA and the District Offices of the Länder, and theoretical examinations are centralized at LBA Headquarters or the District Offices of the Länder, depending on the licence to be issued or renewed. The designation of examiners for practical tests and flight examinations is also centralized, and both LBA and the Länder established an adequate system as well as a database for compiling and assessing information related to activities for which they are responsible. The practical tests and flight examinations related to CPL, ATPL, pilot proficiency checks, aircraft type ratings, and instruments ratings are controlled by LBA and conducted by LBA flight examiners from Division L3 (Skill Test) or by flight test examiners designated by L3 for a specific examination.

3.6.3 Medical examiners are appointed according to the JAR-FCL 3 Deutsch by Division L5 of the LBA for Class 1 Medical Assessment or by the relevant District Office for Class 2 Medical Assessment. All initial medical assessments have to be done in Aviation Medicine Centres approved by Division L5. Details of examinations conducted are kept by the medical examiners and Division L5 ensures that they have appropriate secured storage to that effect.

3.6.4 With respect to commercial air transport operators, an effective system for certification and surveillance has been established by LBA and District Offices of the Länder in their respective areas of competence. The system in place in Germany for certification and surveillance of air operators is based mainly on the principle of shared responsibilities between the Authority and the operator. A practice of delegating approved check airmen to carry out some safety oversight tasks (such as routine flight crew competency
checks) is implemented and controlled by LBA. Procedures are in place for coordination of the approval process with other LBA divisions in their respective areas, such as transport of dangerous goods, air operator’s finances, and maintenance arrangements. The AOC and final approvals are also issued by Division B1 when all items are satisfactory.

3.6.5 In the area of airworthiness, the LBA is responsible for the licensing of aircraft maintenance engineers (AME) and has established an adequate system for meeting its personnel licensing responsibilities, which includes the implementation of the new EASA Regulation (EC) No 2042/2003, Part 66 — Aircraft Maintenance Engineer (AME) Licensing. The LBA has established an effective, interconnected computer database system that allows for the tracking of information on activities related to personnel licensing.

3.6.6 The LBA requires that each applicant for a Certificate of Airworthiness (C of A) (EASA Form 25) for an aircraft being imported from an EC Member presents a C of A issued in accordance with Regulation (EC) No 1702/2003, Part 21, Subpart H, as well as an Airworthiness Review Certificate (ARC). For aircraft being imported from a non-EC Member State, Circular RS-13-03/04-2 applies. If a bilateral agreement exists with the exporting country, a Certificate of Airworthiness for Export (C of AE) is accepted with a simplified inspection conducted by an approved maintenance organization (AMO). If a bilateral agreement does not exist with the exporting country, an AMO must perform a comprehensive inspection, successful completion of which will result in the issuance of an ARC. The C of A is issued once the LBA receives an ARC for the aircraft. The LBA issues Noise Certificates (EASA Form 45) based on a database established by the JAA on noise compliance levels for aircraft, and all the information required by ICAO Annex 16 is included in the certificate.

3.6.7 AMO approval is addressed in Regulation (EC) No 2042/2003, Annex II, Part 145. AMOs are required to provide the competent authority with a maintenance organization exposition (MOE) manual specifying the scope of work deemed to constitute approval and showing how the AMO intends to comply with Part 145. If the AMO’s principal place of business is in Germany, the LBA issues the certificate based on the approval of the MOE and a satisfactory inspection of the facility. The AMO certificate remains valid as long as the AMO continues to comply with Part 145.

3.6.8 As of 28 September 2003, EASA has undertaken the certification tasks incumbent upon it pursuant to Article 15 of Regulation (EC) No 1592/2002. During an additional transition period of 42 months from September 2003, Germany may continue to issue certificates and approvals under the conditions specified in the service contract. Annex III of the service contract signed between the LBA and EASA contains a list of possible products, parts and appliances for which Germany may execute certification and continuing airworthiness tasks, including products for which Germany is the State of Design and for third country products. Annex IV of the contract contains a list of possible organizations for which the LBA may execute approval and continued oversight tasks.

3.6.9 EASA approvals have been issued for Design Organization Approvals (DOAs) in Germany based on technical investigations conducted by the LBA in accordance with EASA procedures. Approval Certificates (EASA Form 55) have been issued by the LBA for Production Organization Approvals (POAs) in Germany based on a review of compliance with the requirements of Regulation (EC) No 1702/2003, Part 21, Section A, Subpart G.

3.6.10 With respect to ANS, the LBA-V is the licensing authority (including ratings) for all air navigation services staff (ATC, ATC engineering and maintenance, AIS, Flight Data Processing, and Flight Information Service) employed by all providers of services in Germany, with operational support from DFS in the licensing and ratings of air navigation service staff (including Regional Airports). The DFS Academy is the
training provider in Germany. DFS trains all operational staff subject to licensing at its academy in Langen. Upon completion of this initial training, a licence is issued. The following on-the-job training is supervised by a qualified person approved by LBA-V. At the end of the training period and successful examination, a licence endorsement (including ratings for air traffic controllers provided by DFS) is issued by LBA-V on the recommendation of DFS. Examination questions are defined by DFS; examiners are proposed by DFS and approved by LBA-V. DFS is charged with the operational supervision of ATS staff on behalf of LBA-V, including ensuring currency of ratings/licences. DWD is ISO-certified and its staff are licensed by the World Meteorological Organization.

3.6.11 The Länder are the supervisory and approval authorities for the installation and operation of CNS equipment at Regional Airports. They must, on the one hand, consult DFS with regard to the initial installation of communications equipment, and, on the other hand, get technical approval from DFS with regard to navigation and surveillance, prior to approving the installation and operations of CNS at Regional Airports. DFS’s role includes coordination for the frequency assignment, site acceptance, approval of maintenance manuals, and verification that maintenance staff is licensed to maintain equipment to be installed. DFS also approves the companies entitled to undertake flight calibration in Germany and produces guidelines for flight inspections, which include a requirement for flight inspection reports to be communicated to DFS, even in the case of Regional Airports. Furthermore, the Regulation on Design Certification for Air Navigation Equipment (FSMusterzulV) as well as a decree of implementation regulate the type certification of CNS equipment and establish DFS as the type certification authority for CNS.

3.6.12 DFS is authorized to provide ATS, as designated by BMVBW. Additionally, the BMVBW commissions individuals to provide ATS at Regional Airports, and the relationships between Regional Airports and DFS are regulated through contracts. According to the State Treaty between the Benelux States and Germany regulating the delegation of service provision to EUROCONTROL, EUROCONTROL has been designated to provide ATS in the upper airspace of North-West Germany. The designation of Skyguide (Switzerland), LVNL (The Netherlands), and Belgocontrol (Belgium) as ATS service providers in the German airspace has been arranged via Operational Letters of Agreement between DFS and each service provider and, in the case of Skyguide, by an additional agreement.

3.6.13 Responsibility for aerodrome certification is delegated to the Länder and District Governments. To be licensed, an aerodrome operator is required to address a number of safety and other issues (including environmental impact and emergency planning, etc.) in a series of manuals and to gain approvals from various bodies. However, a formal certification process encapsulating the intent of Annex 14, Volume I SARPs and the Manual on Certification of Aerodromes (Doc 9774) has not been established. In particular, no requirement has been developed for an aerodrome operator to submit and maintain an aerodrome manual that should include all pertinent information on the aerodrome site, facilities, services, equipment, operating procedures, organization and management including a safety management system (SMS). A draft SMS guidance document and a model aerodrome manual have been produced; however, the legislative requirement for an aerodrome to have an SMS in place is still in the process of development.

3.7 Critical element 7 — Surveillance obligations

“The implementation of processes, such as inspections and audits, to proactively ensure that aviation licence, certificate, authorization and/or approval holders continue to meet the established requirements and function at the level of competency and safety required by the State to undertake an aviation-related activity for which they have been licensed, certified, authorized and/or approved to perform. This includes the surveillance of designated personnel who perform safety oversight functions on behalf of the CAA.”
3.7.1 Germany has established a wide-ranging and well-coordinated safety oversight system for surveillance of aviation activities, taking into consideration national and international obligations (such as the Safety Assessment of Foreign Aircraft [SAFA] programme) and also addressing all civil aviation areas. The continued surveillance of civil aviation activities in Germany is carried out mainly by entities in charge of their certification. In addition, some continued surveillance tasks have been delegated to AOC holders, controlled by LBA.

3.7.2 LBA has established a system for the surveillance of personnel licensing training and examinations activities as well as the continued surveillance of training organizations. Surveillance of examiners is accomplished by LBA Headquarters examiners or senior examiners designated by LBA. Licences issued are of the expiring type and their renewal requires medical assessment and proof of experience. Instructor ratings are renewed upon demonstration by the licence holder that the privileges of the licence were exercised for at least the minimum period of time required by regulation within the preceding validity period. Pilot’s proficiency checks for those employed by an AOC holder are conducted by operator’s check airmen designated by LBA and an overall system is established by LBA to ensure the consistency of the system established by the operator.

3.7.3 The LBA has also developed a comprehensive system for the control and supervision of AOC holders which addresses in general all areas of operations, and it has delegated some of its oversight and inspection tasks to certificated commercial air transport operators. The surveillance programme carried out by Division B2 (Flight Operations) allows for monitoring of AOC holders through their quality system, in addition to some spot ground and flight inspections. Procedures employed by the LBA are effective in determining the competence, record of compliance, and overall capability of air operators. The LBA bases its surveillance programme on its technical staff acting as Principal Operations Inspectors (POI). Each POI from LBA Headquarters or Regional Offices has a certain number of air operators in his or her portfolio and is responsible for the planning and conduct of routine inspections. Given the complexity of the aviation system in Germany and the number of air operators, including several large operators, the LBA does not have the staff necessary to carry out its surveillance obligations with the necessary frequency. This is evidenced by the fact that there is no annual surveillance programme established by the LBA, whose stated goal for surveillance is to visit each operator at least once a year. Some operators are visited only once in every two years.

3.7.4 The C of A remains valid as long as all airworthiness requirements continue to be fulfilled and the aircraft remains on the German registry. An AMO performs the annual renewal inspection and issues an ARC. The owner/operator must attach this ARC to the C of A to ensure its validity. A copy of the ARC is sent to the LBA for a review of the acceptability and quality of the work performed by AMOs.

3.7.5 The AMO audit inspection programme developed and implemented by the LBA complies with and, in some cases, exceeds the requirements established in the Regulations (EC) No 2042/2003, Subpart F for a complete review of the compliance with the certification requirements in a 24-month period.

3.7.6 The development of the continued surveillance programme for DOAs in Germany is accomplished in accordance with EASA Certification Directorate Exposition, Part 3, Subpart 1 — Internal Working Procedure Design Organization Approval (DOAP) which contains detailed guidance for the provision of continuing surveillance. For POAs, the provision of continuing surveillance is accomplished in accordance with Regulation (EC) No 1702/2003, Subpart G.

3.7.7 BMVBW Section LS14 (Meteorological Service) is the authority responsible for the supervision of meteorological services in aviation, using essentially performance-based tools for this supervision. DWD is the supervisory and licensing authority for regional meteorological services.
3.7.8 BMVBW Section LS16 (Air Navigation Service) has eight staff members, five of whom have a technical ANS background. LS16 staff conduct a variety of tasks, including verifying the adequacy of service provision by DFS. The means by which this is achieved includes:

a) reviewing Air Proximity (AIRPROX) reports and occasional requests for further information on individual AIRPROX reports;

b) customer feedback, relying essentially on coordination meetings;

c) target setting;

d) benchmarking (limited to a review of periodic reports from ATS providers and review of AIRPROX reports and safety trends, as provided by ATS providers);

e) the use of an inspection team (evidence submitted indicates that this has been limited to one audit of the DFS SMS by a third party organization under contract to BMVBW);

f) participation as observer to one TRINET audit of the DFS SMS (TRINET audits form part of the safety assurance process implemented by the three service providers Skyguide, Austrocontrol and DFS as part of their SMS and is not a State’s safety regulatory audit); and

g) approval of changes in ANS when they deviate from ICAO Standards or are financially important.

3.7.9 The Federal Ministry of Defence (MOD) participates in the supervision of the DFS via a Joint Ministerial Steering Committee. In addition, staff integration occurs with the MOD providing individual military personnel to the BMVBW Section LS16 (Air Navigation Service) for limited periods. The Länder are the supervisory and approval authorities for the installation and operation of CNS equipment at Regional Airports.

3.7.10 The Länder are the entities responsible for asking DFS (as AIS provider) to issue a NOTAM for airports under their responsibilities. The other ATS supervisory functions of Regional Airports have been delegated to DFS. DFS therefore supervises operations, the competency of air traffic controllers and technical/maintenance staffs and the upkeep of CNS maintenance manuals. The relationships between these Regional Airports (where independent entities provide ATS) and DFS are regulated through contracts, which establish the rights and obligations under which services ought to be provided as well as the respective responsibilities, including supervisory, of each party. However, no arrangements have been established for the supervision of foreign ATS providers.

3.7.11 Pursuant to Article 31 (2) of the LuftVG, the BMVBW has delegated the licensing of aerodromes to the Länder; however, it maintains supervisory responsibility (Article 85 of the LuftVG refers). Article 47 of the Regulation on Certification and Licensing in Aviation (LuftVZO) authorizes aerodrome inspectors of the Länder to conduct audits and inspections of its certificate holders. The Ministry for Transport, Energy and Land Use Planning of the Land of North Rhine-Westphalia (NRW) conducts inspections, including ad hoc inspections of its aerodromes at least once per year. Detailed checklists have been developed and a mechanism to follow up on deficiencies identified in place. Inspection results are published on the Intranet, allowing other inspectors to see the inspection results. Inspection results are also tracked to ensure that follow-up action is conducted as required. Furthermore, inspections are carried out whenever an aerodrome operator requests any change or amendment to its aerodrome operations manual or carries out any modification.
3.8 Critical element 8 — Resolution of safety concerns

“The implementation of processes and procedures to resolve identified deficiencies impacting aviation safety, which may have been residing in the aviation system and have been detected by the regulatory authority or other appropriate bodies.

Note.— This would include the ability to analyse safety deficiencies, forward recommendations, support the resolution of identified deficiencies as well as take enforcement action, when appropriate.”

3.8.1 The foundation of the system established by Germany for the resolution of safety concerns is contained in the LuftVG, supplemented by regulation established by BMVBW and by several federal laws and regulations. The LuftVG provides for inspection and control in various areas of civil aviation and contains enforcement provisions and penalties in case of infringement or deviations from the established rules. The system is centralized and the process is divided into three parts:

a) The finding, always done by an accredited inspector (staff from LBA or a District Office, in addition to SAFA inspectors in various airports) and followed by an official correspondence detailing the case and requesting for an explanation or an action plan;

b) The follow-up, which consists of an assessment of the progress made or the validity of the explanation; and

c) The prosecution, as the ultimate authority action to submit the case to the appropriate jurisdiction. Suspension of an aviation document is done by the authority but revocation of aviation documents may need to be decided through a prosecution process.

3.8.2 There are also comprehensive and effective procedures and processes in effect for the enforcement of aviation safety regulations in Germany with respect to aircraft operations. With respect to the transport of dangerous goods by air, the LBA Department S located at Frankfurt airport is responsible for ensuring the enforcement of German regulations on German territory. Department S’s responsibility covers German AOC holders (including their line stations in Germany and abroad), foreign operators flying to or over Germany, air shippers, and the public travellers. Department S has also established a system for the investigation of deficiencies and violations, and for the promotion of public awareness.

3.8.3 During an inspection of an AMO, DOA or POA, any findings are identified as level 1 or level 2. The action to be taken by the responsible inspector depending on the severity of findings is clearly defined. For AMOs, DOAs and POAs in Germany, there were no instances of enforcement action necessary as all findings were resolved in a timely manner.

3.8.4 With respect to ANS-related safety concerns made known to BMVBW, BMVBW has the right to suspend its designation of DFS or of an entity as ATS provider. There is, however, no clear enforcement in relation to ATS provided by foreign service providers or by EUROCONTROL.

3.8.5 BFU recommendations are only communicated to DFS (rather than to the BMVBW), which is implicitly expected to further communicate recommendations to, and ensure implementation by, all other ATS providers. Incidents, such as AIRPROX reports occurring at Regional Airports, are communicated to the
supervising DFS Regional Office. Those occurrences are then analysed by DFS and processed in a way similar to occurrences reported at a DFS facility. Where remedial action is required by the DFS Regional Office, and there is a lack of implementation of this remedial action, the Regional Office raises the issue to the level of DFS Headquarters in Langen, which would then intervene. AIRPROX Board composition does not include BFU.

3.8.6 When undertaking its supervision of ATS at Regional Airports, DFS may identify technical issues which, if not acted upon, would invalidate the technical advice/approval provided by DFS to the Länder/Regional Airport concerning normal operation of CNS equipment. While the Länder have their own supervisory responsibilities with respect to CNS equipment, DFS communicates related findings to the appropriate Länder/Regional Airport for action.

3.8.7 In the case of aerodromes’ safety oversight, an effective system for the resolution of safety concerns has been established. When safety deficiencies are reported directly to the BMVBW, the BMVBW sends an instruction letter to the Länder concerned, for them to take appropriate action against the aerodrome operator. Both the Länder and District Governments give instructions to aerodrome operators on remedial actions whenever a safety concern is identified and if necessary, operating limitations are imposed. In addition, aerodrome on-site offices of the Länder can take immediate action to resolve any safety concern identified.

3.8.8 The BFU issues safety recommendations to appropriate authorities in the course of or at the completion of its investigations. Occurrences notified to the BFU are entered into two BFU databases, one of which uses the ADREP/ECCAIRS taxonomy. Germany has a number of mandatory incident reporting systems and is about to establish a single integrated mandatory incident reporting scheme, as a result of the transposition by Germany of the EC Directive 2003/42. This mandatory reporting system will be managed by the LBA. Germany has not yet established a voluntary incident reporting system.

4. VISITS TO THE INDUSTRY/SERVICE PROVIDERS

4.1 Accompanied by staff members of the State’s civil aviation system, the audit team visited aviation service providers, operations and maintenance departments of operators and maintenance organizations, aeronautical product/equipment manufacturers, aviation training institutes, etc. The objective of the visits was to validate the capability of the State to supervise the activities of these service providers, airlines and organizations. The audit team visited the following organizations:

1) *Elbe Flugzeugwerke* (EFW) in Dresden, Germany, a subsidiary of the European Aeronautic Defence and Space Company (EADS)
2) DFS Headquarters at Langen
3) Frankfurt Tower
4) Meteorological observation site at Frankfurt aerodrome
5) DFS AIS office at Frankfurt
6) EUROCONTROL Headquarters at Brussels
7) Maastricht Upper Area Control Centre, situated in the Netherlands
8) TFC GmbH Kaufer
9) LTU at Düsseldorf
10) Düsseldorf airport
11) Cologne airport
5. **AUDIT FINDINGS AND DIFFERENCES DATABASE (AFDD)**

5.1 The general objective of the AFDD is to assist States in identifying the elements that need attention in the implementation of the proposed corrective action plan. The information is also intended to assist States in establishing a priority of actions to be taken to resolve safety concerns identified by the audits. Appendix 2 to this report contains a graphic representation of the lack of effective implementation of the critical elements of the safety oversight system (ICAO Doc 9734, Part A refers) in Germany, reflecting as well the results of the latest audit carried out on EASA at the time of the audit of Germany. The graphic representation enables the audited State to prioritize the necessary corrective actions and to identify assistance requirements based on its personnel, technical and financial capabilities in consideration of its safety oversight obligations.

6. **STATE AVIATION ACTIVITY QUESTIONNAIRE (SAAQ)**

6.1 The SAAQ is one of the major tools required for conducting a comprehensive systems approach-based safety oversight audit. As such, all Contracting States are required to complete the SAAQ and submit it to ICAO for proper evaluation and recording. The submitted information enables ICAO to maintain an up-to-date database on the State’s activities. Germany has submitted its SAAQ to ICAO, which can be found at www.icao.int/soa.

7. **COMPLIANCE CHECKLISTS (CCs)**

7.1 The CCs are one of the main tools used in the conduct of safety oversight audits under the comprehensive systems approach. As such, all Contracting States are required to complete the CCs and submit them to ICAO for evaluation and recording. The submitted information will enable ICAO to maintain an up-to-date database on the State’s level of compliance to the ICAO SARPs and assist in facilitating the conduct of a standardized audit of all Contracting States. As a result, States will be enabled to have a clear picture of the implementation status of the relevant SARPs. Germany has submitted its CCs to ICAO, which can be found at www.icao.int/soa.

8. **FOLLOW-UP ACTION**

8.1 In accordance with the MOU agreed to between Germany and ICAO, Germany submitted an action plan on 31 October 2005 and an update to the action plan on 30 November 2005 addressing all the findings and recommendations contained in this report. The action plan submitted was reviewed by the Safety Oversight Audit (SOA) Section and was found to be satisfactory. The proposed action plan, including comments and clarifications provided by the State, are attached as Appendix 3 to this report. Comments by ICAO on each corrective action are found in Appendix 1 to this report.
APPENDIX 1
## APPENDIX 1-1-01

FINDINGS AND RECOMMENDATIONS RELATED TO PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS

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### DOCUMENT REFERENCE:

CC Art. 37; Doc 9734, Part A, 3.3

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### FINDING:

In the course of the audit, some differences between ICAO Standards and applicable regulations and practices in Germany have been identified that had not been previously notified to ICAO. Some of these differences are related to areas addressed by European regulations, directives or requirements. The BMVBW has established procedures for the amendment of German regulations that take into consideration a review of ICAO State letters and an assessment of new ICAO amendments.

However, most departments and delegated authorities have not documented their own procedures for amending the appropriate regulations and/or identifying differences between ICAO Standards and associated regulations in Germany, including the applicable European texts. In addition, no procedures are available for identifying, listing and notifying differences which may exist with foreign ATS providers.

### RECOMMENDATION:

The BMVBW departments and delegated authorities should document their procedures for amending the appropriate regulations and/or identifying differences between ICAO Standards and associated regulations in Germany, including the applicable European texts. When establishing procedures for identification, listing and notification of differences, account should be taken of procedures implemented by all ATS providers in the German airspace.

### CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:

Corrective action plan and comments submitted by the State are found at Appendix 3-1-1 of this report.

Estimated Implementation Date: 31/12/2006

### COMMENTS BY ICAO:

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
**APPENDIX 1-1-02**

**FINDINGS AND RECOMMENDATIONS RELATED TO PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS**

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**DOCUMENT REFERENCE:**

CC Art. 83 *bis*; CIR 295

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**FINDING:**

Procedures and guidelines related to the implementation of Art. 83 *bis* of the Chicago Convention have been drafted but not yet finalized.

**RECOMMENDATION:**

The BMVBW should finalize these guidelines and take into consideration the possible implication of the involvement of EASA with respect to the transfer of responsibilities related to airworthiness.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-1-2 of this report.

Estimated Implementation Date: 01/01/2006

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-1-03
FINDINGS AND RECOMMENDATIONS RELATED TO
PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS

Auditee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:
Doc 9734, Part A, 3.4, Part B

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FINDING:
Except for the agreement that establishes EUROCONTROL, no evidence could be provided by the BMVBW or DFS of legal agreements with States of foreign providers of ATS in the German airspace (specifically Belgium, the Netherlands and Switzerland), and which would establish/confirm the entity(ies) responsible for the oversight/supervision or licensing with regard to ATS provided by these foreign service providers.

RECOMMENDATION:
The BMVBW should clarify the legal basis which would establish/confirm the entity(ies) responsible for the oversight/supervision or licensing with regard to ATS provided by foreign service providers in German airspace.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-1-3 of this report.

Estimated Implementation Date: 31/12/2007

COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-1-04
FINDINGS AND RECOMMENDATIONS RELATED TO
PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS

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**DOCUMENT REFERENCE:**

CC Art. 12; CC Art. 16; Doc 9734, Part A, C3, 3.2, 3.9; Doc 8335, 9.6; Doc 9774, C2 & 3

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**FINDING:**

The *Federal Aviation Act* or *LuftVG* (Article 63) establishes the enforcement authority of the BMVBW and *Länder* in their areas of competence. However, no evidence could be provided by LBA-V or BMVBW (LS16) or DFS that the primary legislation has established a clear delegation of enforcement responsibility to inspectors. In addition, there is no evidence indicating that clear delegation of enforcement responsibility, authority to suspend or revoke aviation documents, authority to prohibit any person from exercising the privileges of any aviation licence, certificate or document for just cause has been given to inspectors. In addition, inspectors are not issued with official inspectorate credentials.

**RECOMMENDATION:**

The BMVBW should develop and promulgate regulatory provisions enabling clear delegation of enforcement authority to designated persons and entities. BMVBW should also promulgate provisions that allow air navigation inspectors to be issued with appropriate credentials authorizing them to access and inspect air navigation installations and documentation. This should include an empowerment to directly prohibit any person from exercising the privileges of any aviation licence, certificate or document for just cause.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-1-4 of this report.  
Estimated Implementation Date: 31/12/2006

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-2-01
FINDINGS AND RECOMMENDATIONS RELATED TO CIVIL AVIATION ORGANIZATION

Auditee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

ORG/01  2.021;  7.051;

DOCUMENT REFERENCE:

Doc 9734, Part A, 3.4;  Doc 9734, Part A, 2.4.9

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FINDING:

The Regulation on Design Certification for Air Navigation Equipment (FSMusterzulV) as well as a decree of implementation regulate the type certification of CNS equipment and establish DFS as the type certification authority.

The Regulation on Certification and Licensing in Aviation (LuftVZO) requires the Länder to consult DFS with regard to the installation of communications equipment and get technical approval with regard to navigation and surveillance, prior to approving the operations of CNS at Regional Airports.

The Regulation on Licensing and Training of Air Traffic Control (ATC) Personnel (FISichPersAusV) defines DFS support role to LBA-V with regard to licensing of all air navigation staff subject to licensing in Germany.

In addition, there is a binding, yet non-regulatory Master Agreement (Framework) between Germany and DFS which defines more specifically the functions and conditions under which the activities of DFS shall be carried out. These functions include responsibilities of Germany as a regulator and an ATS service provider.

RECOMMENDATION:

The BMVBW should ensure that there is a distinct separation between the regulatory body and the provision of services such as that provided by aviation training centres, operators, ATC service providers or aerodrome owners, particularly where the functions of a regulatory body and service provider are vested within the civil aviation authority.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:

Corrective action plan and comments submitted by the State are found at Appendix 3-2-1 of this report.

Estimated Implementation Date: 31/12/2006

COMMENTS BY ICAO:

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-4-01
FINDINGS AND RECOMMENDATIONS RELATED TO
AIRCRAFT OPERATIONS CERTIFICATION AND SUPERVISION

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Doc 8335, 9.7.2; Doc 9734, Part A, 3.5

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**FINDING:**
LBA has not established a formal written training programme for ground and flight operations inspectors in Department B “Commercial Operators” of LBA, specifying initial and recurrent training required.

**RECOMMENDATION:**
The President of LBA should establish a formal written training programme detailing the required competency as well as initial and recurrent training to be provided to ground and flight operations inspectors before their assignment within Department B “Commercial Operators” of LBA.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**
Corrective action plan and comments submitted by the State are found at Appendix 3-4-1 of this report.

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**COMMENTS BY ICAO:**
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-4-02
FINDINGS AND RECOMMENDATIONS RELATED TO
AIRCRAFT OPERATIONS CERTIFICATION AND SUPERVISION

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STD A6, Part I, 3.2.3, 3.3, 4.2.1.3, 4.2.1.3, 4.2.2, C9, 11.1, Att. H & App. 2, 2.1.34, 2.4.1, 2.4.2; Doc 8335, C5; Doc 9376, 2.2.4, C4

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**FINDING:**
The air operators’ certification regulations and procedures do not ensure that German operators implement the following systems, procedures and programmes before they are issued an AOC as well as related authorizations and approvals:

a) flight safety document system as per Annex 6, Part I, 3.3 and Attachment H;
b) procedures to ensure that update of the AFM will be reflected and consistent with the aircraft operating manual; and
c) a flight data analysis programme.

**RECOMMENDATION:**
The President of LBA should ensure that the air operators’ certification regulations and procedures are amended to require AOC applicants to establish:

a) flight safety document system as per Annex 6, Part I, 3.3 and Attachment H;
b) procedures to ensure that update of the AFM will be reflected and consistent with the aircraft operating manual; and

c) a flight data analysis programme.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**
Corrective action plan and comments submitted by the State are found at Appendix 3-4-2 of this report.

Estimated Implementation Date: 31/07/2006

**COMMENTS BY ICAO:**
The corrective action plan submitted by the State partially addresses this ICAO finding and recommendation. The State has not addressed item a) of the ICAO finding and recommendation.
APPENDIX 1-4-03
FINDINGS AND RECOMMENDATIONS RELATED TO
AIRCRAFT OPERATIONS CERTIFICATION AND SUPERVISION

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**DOCUMENT REFERENCE:**
STD A6, 4.2.1.6; Doc 8335, C 8 & 9; Doc 9734, Part A

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**FINDING:**
LBA Division B2 (Flight Operations) is understaffed and unable to establish or implement a yearly surveillance programme commensurate with the level of aviation activities in Germany. There are 25 technical staff, including 13 flight operations inspectors and 6 Regional Officers, to conduct both certification, approvals, exemptions and continued surveillance of the 120 AOC holders authorized for international operations, including a number of large international operators. Despite the good quality of the inspections carried out by the B2 inspectors, the overall surveillance activity remains at a very low level and does not allow for sufficient inspections to be carried. As a result, the objective to address all inspection items in a two-year period could not be achieved.

**RECOMMENDATION:**
The BMVBW should ensure that the LBA is provided with sufficient staff necessary to enable it to ensure continuing compliance and fitness of air operators and also be able to meet the objective of addressing all inspection items as contained in JAR-OPS 1.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**
Corrective action plan and comments submitted by the State are found at Appendix 3-4-3 of this report.

Estimated Implementation Date: 31/08/2006

**COMMENTS BY ICAO:**
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
## FINDINGS AND RECOMMENDATIONS RELATED TO
**AIRWORTHINESS OF AIRCRAFT**

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### DOCUMENT REFERENCE:

Doc 9734, Part A, 3.5

### CE-1 CE-2 CE-3 CE-4 CE-5 CE-6 CE-7 CE-8

### FINDING:

The LBA has not established a formal training programme that adequately identifies the initial, recurrent and specialized training necessary for its technical personnel to maintain and enhance their competence.

### RECOMMENDATION:

The LBA should develop a formal training programme to identify the initial, recurrent and specialized training necessary for its technical personnel to maintain and enhance their competence.

### CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:

Corrective action plan and comments submitted by the State are found at Appendix 3-5-1 of this report. 

**Estimated Implementation Date: 31/12/2006**

### COMMENTS BY ICAO:

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
# APPENDIX 1-5-02
## FINDINGS AND RECOMMENDATIONS RELATED TO AIRWORTHINESS OF AIRCRAFT

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### FINDING:

Although adequate guidelines for the control of unserviceable parts have been developed in Regulation (EC) No. 2042/2003, Annex 1, Subpart E, M.A. 504, and an LBA Technical Circular RS 18 has been issued to provide industry guidelines on the requirement and procedures for the reporting of suspected unapproved parts, this information has not been incorporated into the Maintenance Procedures Manuals for all AMOs nor in the inspection checklists used by airworthiness inspectors.

### RECOMMENDATION:

The LBA should establish a method for confirming that a procedure for the reporting of suspected unapproved parts has been incorporated into the Maintenance Procedures Manuals for all AMOs and in the checklists used by airworthiness inspectors in order to ensure proper implementation of LBA Technical Circular RS 18.

### CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:

Corrective action plan and comments submitted by the State are found at Appendix 3-5-2 of this report.

Estimated Implementation Date: 31/12/2006

### COMMENTS BY ICAO:

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-5-03
FINDINGS AND RECOMMENDATIONS RELATED TO
AIRWORTHINESS OF AIRCRAFT

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**DOCUMENT REFERENCE:**

Doc 9760, Vol. I, 6.12; Doc 9734, Part A, 3.8; Doc 8335, 8.1 & 8.2

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**FINDING:**

The audit inspection programme developed and implemented by the LBA complies with and, in some cases, exceeds the requirements established in the European Commission Regulations for a complete review of the compliance with the certification requirements within a 24-month period with respect to approvals to be issued to AMOs. However, guidance has not been developed to ensure that the surveillance programme developed by each inspector is standardized and provides for continuing supervision, including the conduct of random inspections.

**RECOMMENDATION:**

The LBA should develop guidance for its inspectors on the planning and implementation of a surveillance programme necessary for adequate continuing supervision of AMOs in order to ensure that the requirements under which the initial approvals were issued continue to be met.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-5-3 of this report.

Estimated Implementation Date: 31/03/2006

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-6-01
FINDINGS AND RECOMMENDATIONS RELATED TO
AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

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**DOCUMENT REFERENCE:**

Doc 9734, Part A, C3, 3.6;  Doc 9756, Part I, C2

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**FINDING:**

The number of BFU investigators has decreased over the years while the responsibilities and scope of the BFU have increased. As a result, established target dates for the production of investigation reports have not been met.

**RECOMMENDATION:**

Germany should establish a mechanism to guarantee that the BFU has and keeps adequate human resources to meet its national and international obligations.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-6-1 of this report.

Estimated Implementation Date: 30/11/2006

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State fully addresses the ICAO finding and recommendation.
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**DOCUMENT REFERENCE:**

Doc 9734, Part A, 3.5; CIR 298

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**FINDING:**

The BFU has established a training policy for all its technical personnel. A training programme is in place but its implementation is not formally monitored.

**RECOMMENDATION:**

The BFU should establish a formal monitoring of the implementation of its training programme.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-6-2 of this report.

Estimated Implementation Date: 31/03/2006

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State partially addresses this ICAO finding and recommendation. The action plan does not address the need for a formal mechanism to monitor the implementation of the training programme on a continuous basis.
APPENDIX 1-6-03
FINDINGS AND RECOMMENDATIONS RELATED TO
AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

Auditee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:
RP A13, 5.1.1, A13, Att. C; Doc 9756, Part I, 3.1

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FINDING:
The BFU has established general guidelines in order to assess occurrences notified to it and decide on the type of investigation to conduct. In addition, a daily meeting is set up to review outstanding issues, including the assessment of accidents and incidents notified to the BFU. However, at the level of the State, there is no formal process or criteria to determine which cases of air traffic incidents (e.g. separation infringements and runway incursions) should be investigated by the BFU.

RECOMMENDATION:
Germany should establish criteria and a formal process to determine which air traffic-related incidents (e.g. separation infringements and runway incursions) notified to the BFU should be investigated by the BFU.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-6-3 of this report.

Estimated Implementation Date: 31/08/2006

COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-6-04
FINDINGS AND RECOMMENDATIONS RELATED TO
AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

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**DOCUMENT REFERENCE:**
RP A13, 8.2; Doc 9422

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**FINDING:**
Germany has not implemented a voluntary incident reporting system.

**RECOMMENDATION:**
Germany should implement a voluntary incident reporting system to facilitate the collection of safety information that may not be captured by a mandatory reporting system. The voluntary reporting system should be non-punitive and ensure the protection of the reporter, as provided for in Chapter 8 of Annex 13.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**
Corrective action plan and comments submitted by the State are found at Appendix 3-6-4 of this report.

Estimated Implementation Date: 05/07/2005

**COMMENTS BY ICAO:**
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-01
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

Audittee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:

CC Art. 12; Doc 9734, Part A

CE-1 CE-2 X CE-3 CE-4 CE-5 CE-6 CE-7 CE-8

FINDING:

The BMVBW (LS16) and DFS have not developed specific regulations which would implement the provisions of ICAO Annex 11, other than DFS manuals (e.g. Manual of Operations, Air Traffic Control Services [Betriebsanweisung Flugverkehrskontrolle or BA-FVK], Operational Letters of Agreement (LOAs), and internal procedures. In airspace where Germany has delegated ATS provisions to foreign service providers, Germany could not provide evidence of treaties or other mechanism that ensure compliance with Annex 11 in all cases.

Neither the BMVBW nor DFS could provide evidence (beyond the LOAs) of contract(s) or agreement(s) with service providers from outside Germany providing ATS within airspace above the territories of Germany (specifically, ATS providers from Belgium, the Netherlands and Switzerland), which establish all rights and obligations under which services ought to be provided in the German airspace. Specifically, no evidence could be provided that the Manual of Operations, Air Traffic Control Services, issued by DFS, is binding on all foreign service providers and available to them. In addition, no evidence could be provided that service providers from the Netherlands or Belgium are required by Germany to comply with requirement 2.26 of Annex 11. No mechanism exists to enable and enforce implementation of the Annex at Regional Airports, e.g. implementation of safety management systems (Annex 11, Amendment 40).

RECOMMENDATION:

The BMVBW should promulgate ATS regulations, procedures and/or agreements (e.g. treaties) to ensure that all providers of ATS in the territories of Germany meet the provisions of Annex 11. The BMVBW should develop and document processes, procedures and agreements which would allow it to ensure that ATS providers fully comply with international and national requirements. These should include provisions establishing the rights and obligations under which services ought to be provided in the German airspace and which should be binding on all foreign ATS providers. Germany should establish regulations complying specifically with requirement 2.26 of Annex 11 and Amendment 40, and thus meet international Standards for air traffic control in all of its airspace.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:

Corrective action plan and comments submitted by the State are found at Appendix 3-7-1 of this report.

Estimated Implementation Date: 31/12/2006

COMMENTS BY ICAO:

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
### APPENDIX 1-7-02
### FINDINGS AND RECOMMENDATIONS RELATED TO AIR NAVIGATION SERVICES

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### DOCUMENT REFERENCE:
Doc 9734, Part A, 3.8

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### FINDING:
ANS training in Germany today is predominantly at one facility (DFS Academy in Langen). However, the BMVBW has not established a system for the control and supervision of its training organizations.

### RECOMMENDATION:
The BMVBW should establish a system for the control and supervision of training organizations providing training to applicable ANS personnel.

### CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-7-2 of this report.

 Estimated Implementation Date: 31/12/2006

### COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-03
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

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**DOCUMENT REFERENCE:**

Doc 9734, Part A, 3.1 & 3.4

**FINDING:**

The BMVBW could not provide an organizational structure depicting the responsibilities and relationships of all entities which provide ANS within the German airspace and containing sufficient details to facilitate an understanding of how the different parts of the ANS system function, specifically highlighting their regulatory authority and service provision responsibilities within the civil aviation organization.

**RECOMMENDATION:**

The BMVBW should establish an organizational structure depicting the responsibilities and relationships of all providers of ANS and indicating the lines of responsibility for certification, licensing, rule-making, authorization and approval obligations, surveillance obligations, investigation obligations, and service provision (ATS, ASM, ATFM, AIS, CNS, MET, SAR, regional service provider, etc.).

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-7-3 of this report.

Estimated Implementation Date: 31/12/2006

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-04
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

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**DOCUMENT REFERENCE:**

STD A11, 2.26, 2.26.2, 2.26.5; PANS Doc 4444, C2

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**FINDING:**

The BMVBW has not developed a system to ensure that objective, systematic, appropriate and impartial safety management programmes (policy, procedure, guidance and/or acceptable level of safety) are established in relation to the provision of ATS.

**RECOMMENDATION:**

The BMVBW should develop a system to ensure that objective and impartial safety management programmes are established in relation to the provision of ATS. These safety management programmes should apply to all providers of ATS throughout German airspace. Germany should also identify required resources to support the programmes’ implementation.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-7-4 of this report.

Estimated Implementation Date: 31/12/2007

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
## APPENDIX 1-7-05
### FINDINGS AND RECOMMENDATIONS RELATED TO AIR NAVIGATION SERVICES

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### DOCUMENT REFERENCE:

AR A33-14, App. W; Doc 9758; PANS Doc 4444, 2.5.2, 3.1; Doc 9734, Part A, 3.7; Doc 9379, C4

### CE-1 CE-2 CE-3 CE-4 CE-5 CE-6 X CE-7 CE-8

### FINDING:

The BMVBW has not established requirements for service providers to adopt policies and procedures based on human factors principles.

### RECOMMENDATION:

The BMVBW should ensure, through appropriate mechanisms and by taking into account that ATS in German airspace is provided from within and outside Germany, that its service providers adopt policies and procedures based on human factors principles.

### CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:

Corrective action plan and comments submitted by the State are found at Appendix 3-7-5 of this report.

Estimated Implementation Date: 31/12/2007

### COMMENTS BY ICAO:

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-06
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

| Auditee: GERMANY | ANS/06 7.091 |
| Audit Period: 11/05/2005 - 27/05/2005 |

**DOCUMENT REFERENCE:**

PANS Doc 4444, 2.5.2; Doc 9734, Part A, 3.7

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**FINDING:**

Although procedures have been developed by DFS for the frequent and recurring verification of the competency of air traffic controllers, the BMVBW has not established requirements or procedures to ensure the frequent and recurring verification of competency of air traffic controllers by all service providers.

**RECOMMENDATION:**

The BMVBW should ensure that all ATS service providers implement procedures for the frequent and recurring verification of the competency of air traffic controllers.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-7-6 of this report.

Estimated Implementation Date: 31/12/2008

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-07
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

Auditee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:

PANS Doc 4444, 3.1Doc 9734, Part A, 3.8

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FINDING:

The BMVBW has not established a mechanism to ensure that the providers responsible for ATS and AIS have developed policy and procedures for determining staffing requirements.

RECOMMENDATION:

The BMVBW should ensure that the service providers responsible for ATS and AIS have developed policy and procedures for determining the staffing requirements to ensure the provision of an adequate ATS system.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:

Corrective action plan and comments submitted by the State are found at Appendix 3-7-7 of this report.

Estimated Implementation Date: 31/12/2008

COMMENTS BY ICAO:

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-08
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

Auditee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:
STD A11, 3.4.1; PANS Doc 4444, C5 & C6; SUPPS Doc 7030

CE-1  CE-2  CE-3  CE-4  CE-5  CE-6 X  CE-7  CE-8

FINDING:
Where DFS deviates from the separation minima contained in the PANS-ATM or uses a minima not contained in the PANS-ATM, the BMVBW must review and approve the procedure concerned (Master Agreement). A case in point includes the reduced diagonal (2.0 NM) separation minima at Frankfurt Airport where a safety assessment by a private entity had been conducted and was subsequently reviewed and approved by LS16. However, no evidence has been provided to indicate that mechanisms had been put in place to ensure, or report upon, effective implementation of the reduced diagonal separation.

RECOMMENDATION:
Criteria should be established under which LS16 can review applicable supporting material and approve separation minima not covered by the provisions contained in the PANS-ATM.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-7-8 of this report.

Estimated Implementation Date: 31/12/2007

COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-09
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

Auditee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:
STD A15, 4.1.2 c); PANS Doc 4444, C5 & C6

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FINDING:
The BMVBW has listed in its AIP that it differs from the procedure involving clearances to fly maintaining own separation while in visual meteorological conditions (ATM - Air Traffic Management, PANS-ATM, Doc 4444, 5.9 refers). However, information provided by Germany indicates that, in fact, ICAO provisions are applied without any deviation. Furthermore, significant differences listed in the AIP and the differences notified to ICAO do not take into account procedures used by all service providers.

RECOMMENDATION:
The BMVBW should review the procedures applied by all service providers and ensure that they are consistent with the significant differences listed in the AIP and with the differences notified to ICAO.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-7-9 of this report.

Estimated Implementation Date: 31/12/2006

COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-10
FINDINGS AND RECOMMENDATIONS RELATED TO AIR NAVIGATION SERVICES

<table>
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<tr>
<th>Auditee: GERMANY</th>
<th>ANS/10 7.189</th>
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<td>Audit Period: 11/05/2005 - 27/05/2005</td>
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**DOCUMENT REFERENCE:**

PANS Doc 4444, 2.5.2

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**FINDING:**

DFS has established a runway safety programme called the Runway Incursion Monitoring Programme. This programme includes a reporting methodology for all aerodromes. However, the BMVBW has not developed an overall runway safety programme at all aerodromes in Germany, including those where the aerodrome control service is not provided by DFS.

**RECOMMENDATION:**

The BMVBW should establish and implement a runway safety programme applicable to all aerodromes.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-7-10 of this report.

Estimated Implementation Date: 31/12/2006

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-11
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

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DOCUMENT REFERENCE:
STD A11, 2.28, Att. D

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</table>

FINDING:
Annex 11 requires that the ATS authority develop and promulgate contingency plans for implementation in the event of disruption or potential disruption of ATS and related supporting services in the airspace for which they are responsible. While a comprehensive contingency plan has been drawn up (in the form of a “Draft Four States/EUROCONTROL Contingency Plan”), the plan concentrates on degradation of equipment or technical malfunction at an area control centre (ACC). Furthermore, a safety assessment indicated that the plan could have been made more effective if a wider range of scenarios had been taken into account. In addition, no evidence has been provided to indicate that contingency plans have been developed and implemented by all ACCs and towers responsible for service provision in Germany, and no evidence has been provided to indicate that the BMVBW has reviewed the contingency plan in terms of oversight or approval.

RECOMMENDATION:
The BMVBW should ensure that comprehensive contingency plans are developed in accordance with Annex 11 and that they apply to all ATS units in German airspace.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-7-11 of this report.

COMMENTS BY ICAO:
The corrective action plan submitted by the State partially addresses this ICAO finding and recommendation. The State has not defined an estimated implementation date.
APPENDIX 1-7-12
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

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<th>Auditee: GERMANY</th>
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<td>Audit Period: 11/05/2005 - 27/05/2005</td>
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**DOCUMENT REFERENCE:**
Doc 9734, Part A, 3.7

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</thead>
</table>

**FINDING:**
The *Regulation on Licensing and Training of Air Traffic Control (ATC) Personnel (FISichPersAusV)* as well as an Organizational Decree (1993) establish LBA-V as the personnel licensing authority in ATS, AIS and CNS. However, ATC personnel providing ATS in one sector of the German airspace have not been issued licences in accordance to the regulations, although they are provided with certificate of competence by the service provider.

**RECOMMENDATION:**
The BMVBW should ensure that all air traffic controllers providing ATS in German airspace be issued with licences in accordance with Annex 1 provisions and the *Regulation on Licensing and Training of Air Traffic Control (ATC) Personnel (FISichPersAusV)*.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**
Corrective action plan and comments submitted by the State are found at Appendix 3-7-12 of this report.

Estimated Implementation Date: 30/06/2006

**COMMENTS BY ICAO:**
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-7-13
FINDINGS AND RECOMMENDATIONS RELATED TO 
AIRCRAFT NAVIGATION SERVICES

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<th>Auditee: GERMANY</th>
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<td>Audit Period: 11/05/2005 - 27/05/2005</td>
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**DOCUMENT REFERENCE:**

Doc 9734, Part A, 3.4, 3.5, 3.5.2

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**FINDING:**

The BMVBM could not demonstrate its organizational capability to ensure that all ATS providers in German airspace comply with ICAO provisions. In particular, the capability of LS16 to exercise the appropriate oversight in ANS is limited due to a number of factors, including:

a) inability to attract, recruit and retain sufficient technical and clerical staff;
b) oversight being predominantly limited to coordination meetings and the review of periodic reports from ATS providers; and
c) a lack of qualification and competency requirements, written Terms of Reference, guidance and technical procedures for safety regulatory staff, and training programme.

**RECOMMENDATION:**

BMVBM should ensure that relevant entities in charge of safety oversight of ANS providers are adequately staffed, provided with sufficient resources, written Terms of Reference, policies, procedures and guidance material for carrying out their functions.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-7-13 of this report.

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State partially addresses this ICAO finding and recommendation. The State has not defined an estimated implementation date.
APPENDIX 1-7-14
FINDINGS AND RECOMMENDATIONS RELATED TO
AIR NAVIGATION SERVICES

Auditee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:
Doc 9734, Part A, 3.4, 3.5

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<th>CE-6</th>
<th>CE-7</th>
<th>CE-8</th>
</tr>
</thead>
</table>

FINDING:
The technical process of oversight of training and licensing of air traffic controllers is functionally handled by the DFS. LBA-V, the federal entity involved in this process, is only an administrative licensing office that issues the licence when requested by DFS, with no technical capability to assess the process for licensing of personnel.

RECOMMENDATION:
The BMBVW should ensure that relevant entities in charge of safety oversight of ANS providers are adequately staffed, provided with sufficient resources, written Terms of Reference, policies, procedures and guidance material for carrying out their functions.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-7-14 of this report.

COMMENTS BY ICAO:
The corrective action plan submitted by the State partially addresses this ICAO finding and recommendation. The State has not defined an estimated implementation date.
APPENDIX 1-8-01
FINDINGS AND RECOMMENDATIONS RELATED TO AERODROMES

<table>
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<tr>
<th>Auditee: GERMANY</th>
<th>ÁGA/01 8.039</th>
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<td>Audit Period: 11/05/2005 - 27/05/2005</td>
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**DOCUMENT REFERENCE:**

Doc 9734, Part A, 3.4 & 3.5; Doc 9774, 5.4, 5.5

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</table>

**FINDING:**

BMVBW Section LS11 (Aerodromes and Airports, Local Air Police) does not have sufficient technical staff to carry out its supervisory functions. LS11 currently has five full-time professional staff, only one of whom is considered technical. Given the extent of its core tasks and supervisory functions, the Section has engaged the services of three staff members in key positions on loan from the industry to assist in accomplishing its functions.

**RECOMMENDATION:**

The BMVBW should ensure that LS11 is appropriately staffed to effectively conduct its core tasks and supervisory functions.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**

Corrective action plan and comments submitted by the State are found at Appendix 3-8-1 of this report.

**COMMENTS BY ICAO:**

The corrective action plan submitted by the State partially addresses this ICAO finding and recommendation. The State has not defined an estimated implementation date.
APPENDIX 1-8-02
FINDINGS AND RECOMMENDATIONS RELATED TO AERODROMES

<table>
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<th>Auditee: GERMANY</th>
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<td>Audit Period: 11/05/2005 - 27/05/2005</td>
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**DOCUMENT REFERENCE:**
Doc 9734, Part A, 3.5; Doc 9774, 5.5

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<th>CE-6</th>
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</thead>
</table>

**FINDING:**
Policies and directives on training of technical staff have been developed for the BMVBW and the Länder, including District Governments. However, training plans have not been developed to ensure that all technical staff of Section LS11 receives initial, recurrent, and specialized training.

**RECOMMENDATION:**
The BMVBW and each of the 16 Länder, including District Governments where applicable, should develop training plans to ensure that all technical staff receive initial, recurrent and specialized training.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**
Corrective action plan and comments submitted by the State are found at Appendix 3-8-2 of this report.

Estimated Implementation Date: 31/12/2005

**COMMENTS BY ICAO:**
The corrective action plan submitted by the State fully addresses the ICAO finding and recommendation.
APPENDIX 1-8-03
FINDINGS AND RECOMMENDATIONS RELATED TO AERODROMES

Auditee: GERMANY

Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:
Doc 9774, 3D.6, 2.2 g)

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<th>CE-6</th>
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<th>CE-8</th>
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</table>

FINDING:
Article 47 of the Regulation on Certification and Licensing in Aviation (LuftVZO) provides aerodrome inspectors of the Länder with the legal authority to conduct audits and inspection of its certificate holders. However, the Länder have not developed credentials for its aerodrome inspectors, which also identify their regulatory powers.

RECOMMENDATION:
Each of the 16 Länder should develop credentials for its aerodrome inspectors that should, as a minimum, identify the legal authority granted to them.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-8-3 of this report.

Estimated Implementation Date: 28/02/2006

COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
### APPENDIX 1-8-04
### FINDINGS AND RECOMMENDATIONS RELATED TO AERODROMES

<table>
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<td>Audit Period: 11/05/2005 - 27/05/2005</td>
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#### DOCUMENT REFERENCE:

CC Art. 15; STD A14, Vol. I, 1.4.1 & 1.4.3; RP A14, Vol. I, 1.4.2; Doc 9774, 3B.2, 3B.3.2, 3B.9, 3D.2, 4.1.2, 4.4, 4.7; Doc 9734, Part A, 3.7

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<th>CE-7</th>
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#### FINDING:

Responsibility for aerodrome certification is delegated to the Länder and District Governments. This is effected through a relatively complex process which requires a series of wide-ranging, designated approvals gathered by the applicant from various bodies. The whole certification package forms an aerodrome licensing document rather than a formal certification process encapsulating the intent of Annex 14, Volume I provisions and the Manual on Certification of Aerodromes (Doc 9774). In particular, provisions and procedures covering the whole process of the application, evaluation, assessment, issuance, amendment and transfer of a certificate to operate an aerodrome have not been developed.

#### RECOMMENDATION:

The BMVBW should institute a documented process and develop appropriate guidance material covering the certification of aerodromes, based on the relevant provisions of Annex 14, Volume I and Doc 9774. The certification process should also ensure that aerodrome operators employ an adequate number of qualified and skilled personnel to perform all critical activities for aerodrome operation and maintenance.

#### CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:

Corrective action plan and comments submitted by the State are found at Appendix 3-8-4 of this report.  

Estimated Implementation Date: 31/01/2006

#### COMMENTS BY ICAO:

The corrective action plan submitted by the State partially addresses this ICAO finding and recommendation. The State has not specifically addressed the need to establish a documented process and develop appropriate guidance material covering the certification of aerodromes.
APPENDIX 1-8-05
FINDINGS AND RECOMMENDATIONS RELATED TO AERODROMES

Auditee:  GERMANY

Audit Period: 11/05/2005 - 27/05/2005

AGA/05  8.111;  8.113;  8.115;  8.361;  8.363;  8.365;

DOCUMENT REFERENCE:
STD A14, Vol. I, 1.4.5;  STD & RP A14, Vol. I, 1.4.4, 1.4.5 & 1.4.6; SARPs A14, Vol. I, 1.4.4, 1.4.5 & 1.4.6; Doc 9774, 1.2.3, 2.2 d), C3, 3.2, 3B.2, 3B.3.e), 3C.2, 3C.3, 3C.4, 3C.6, 3D.2.1, 3D.4, 3D.5 & 3D.6, Sect. C, Intro Notes, App. 1, Part 5; Doc 9734, Part A, 3.8.2 & 3.9.6

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FINDING:
Prior to certification, an aerodrome should have in place, and subsequently maintain, an organized and orderly approach in the management of aerodrome safety, the cornerstone of which is the production of an aerodrome manual. Accordingly, ICAO has published requirements about the need for an aerodrome manual and the implementation of a safety management system (SMS) prior to certification.

Although BMVBW requires aerodromes to address a number of safety and other issues in a series of manuals which form part of the licensing document, and has produced a draft SMS guidance document as well as a model aerodromes manual, the development of legislative requirements for a comprehensive aerodrome manual and SMS as part of the certification requirements is still in process.

RECOMMENDATION:
The BMVBW should develop requirements for aerodromes to have a comprehensive aerodrome manual and an effective SMS in place as part of its certification requirements. In addition, the BMVBW should ensure that a training and awareness programme for appropriate regulatory staff and all aerodrome operating staff is instituted as soon as possible as part of the culture change process.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-8-5 of this report.

Estimated Implementation Date: 31/12/2006

COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-8-06
FINDINGS AND RECOMMENDATIONS RELATED TO AERODROMES

Auditee: GERMANY
AGA/06 8.403;
Audit Period: 11/05/2005 - 27/05/2005

DOCUMENT REFERENCE:
Doc 9774, Sect. D, 3D.6, 2.2 d), 5.2.3 & 5.2.5; Doc 9734, Part A, 3.8

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FINDING:
An inspection and surveillance policy has not been developed to guide each of the 16 Länder and its District Governments on the minimum frequency of inspection to be conducted on each aerodrome certificate holder.

RECOMMENDATION:
The BMVBW should develop a surveillance and inspection policy to be implemented by each of the 16 Länder and the District Governments. The policy should detail the minimum frequency of inspection to be conducted on each certificate holder, including the principal elements to be inspected. Each delegated authority should develop an annual inspection plan and report the results periodically to the BMVBW and Länder, as applicable.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-8-6 of this report.

Estimated Implementation Date: 31/12/2006

COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
APPENDIX 1-8-07
FINDINGS AND RECOMMENDATIONS RELATED TO
AERODROMES

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**DOCUMENT REFERENCE:**
RP A14, Vol. I, 2.6.7

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**FINDING:**
The BMVBW has established requirements for the determination and reporting of pavement strength by using the aircraft classification number-pavement classification number (ACN-PCN) method. However, neither a regulation nor complementary industry guidelines have been established to regulate the use of a pavement by an aircraft with an ACN higher than the PCN reported for that pavement.

**RECOMMENDATION:**
The BMVBW should establish criteria to regulate the use of a pavement by an aircraft with an ACN higher than the PCN reported for that pavement.

**CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:**
Comments submitted by the State are found at Appendix 3-8-7 of this report.

**COMMENTS BY ICAO:**
No action plan was submitted by the State to address this ICAO finding and recommendation.
APPENDIX 1-8-08
FINDINGS AND RECOMMENDATIONS RELATED TO AERODROMES

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DOCUMENT REFERENCE:
STD A14, Vol. I, 9.2.3; RP A14, Vol. I, 9.2.4

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FINDING:
The BMVBW has established national requirements for the level of protection provided at an aerodrome for rescue and firefighting, utilizing the remission factor as specified in 9.2.3 of Annex 14, Volume I. However, 9.2.4 of Annex 14, Volume I specifies that from 1 January 2005, the remission factor should not be used. Although in practice, some aerodromes do not utilize the remission factor, the BMVBW has not established such a requirement in its national regulations.

RECOMMENDATION:
The BMVBW should establish a requirement in its national regulations to remove the remission factor relating to the level of protection provided at an aerodrome for rescue and firefighting.

CORRECTIVE ACTION PLAN PROPOSED BY THE STATE:
Corrective action plan and comments submitted by the State are found at Appendix 3-8-8 of this report.

Estimated Implementation Date: 31/12/2006

COMMENTS BY ICAO:
The corrective action plan submitted by the State fully addresses this ICAO finding and recommendation.
Note: The results of the audit carried out on EASA are also reflected on this chart.
APPENDIX 3
APPENDIX 3-1-1

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS

<table>
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<th>AUDIT FINDING LEG/01</th>
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<tr>
<td>In the course of the audit, some differences between ICAO Standards and applicable regulations and practices in Germany have been identified that had not been previously notified to ICAO. Some of these differences are related to areas addressed by European regulations, directives or requirements. The BMVBW has established procedures for the amendment of German regulations that take into consideration a review of ICAO State letters and an assessment of new ICAO amendments. However, most departments and delegated authorities have not documented their own procedures for amending the appropriate regulations and/or identifying differences between ICAO Standards and associated regulations in Germany, including the applicable European texts. In addition, no procedures are available for identifying, listing and notifying differences which may exist with foreign ATS providers.</td>
</tr>
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</table>

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<thead>
<tr>
<th>STATE’S COMMENTS AND OBSERVATIONS*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In general:</strong> Section LS13 has issued administrative instructions on the procedure of how to deal with ICAO state letters identifying differences, assessing their necessity and the scope for their amendment. Section LS13 as focal point is determined to list differences which may exist and notify those to ICAO.</td>
</tr>
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<tr>
<td>Up to now, Section LS16 started out from the principle to monitor the observance of “hard” ICAO standards and to notify derogations thereof. The findings and results of the audits performed by the USOAP team suggest that an “overall survey” of any kind of documentation up to the manuals is required. It is to be ensured in the future that the observance of standards will first of all be verified and in the case of derogations notified. By means of a procedure to be newly established, action is to be taken, if necessary, to counteract any derogation in order to ensure the observance of ICAO standards. The planning for such a procedure will be taken up in the fourth quarter of 2005. Owing to the work load connected with this, the performance of this task will have to be delayed until the national supervisory authority can assume it. The scope of the documentation to be pursued exceeding the standards has to be clarified with ICAO.</td>
</tr>
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* Text reproduced as submitted by Germany
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS

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<th>CORRECTIVE ACTION (S) PROPOSED*</th>
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<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
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<tr>
<td>BMVBW departments and delegated authorities develop and implement the following processes:</td>
<td>BMVBW/BAF</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>- Establish a focal point ATS for collecting national differences to ICAO standards incl. documentation of these differences</td>
<td>BAF</td>
<td>July 2006</td>
</tr>
<tr>
<td>- Review the process for implementing new ICAO standards or changes of ICAO standards</td>
<td>BAF</td>
<td>October 2006</td>
</tr>
<tr>
<td>- Communication/notification of national differences to ICAO standards</td>
<td>BMVBW</td>
<td>ongoing; redesign end of 2006</td>
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* Text reproduced as submitted by Germany
APPENDIX 3-1-2

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS

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<tbody>
<tr>
<td>Procedures and guidelines related to the implementation of Art. 83 bis of the Chicago Convention have been drafted but not yet finalized.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE’S COMMENTS AND OBSERVATIONS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the time being there is no involvement of EASA foreseen on this issue. The implementation of Art. 83 bis is regarded to be a task of Contracting States only.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures and guidelines related to the implementation of Art. 83 bis of the Chicago Convention will be finalized until end of October 2005. Subsequent to this, the Foreign Office will have to approve these final versions of the documents.</td>
<td>LBA</td>
<td>01 January 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-1-3
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS

AUDIT FINDING LEG/03

Except for the agreement that establishes EUROCONTROL, no evidence could be provided by the BMVBW or DFS of legal agreements with States of foreign providers of ATS in the German airspace (specifically Belgium, the Netherlands and Switzerland), and which would establish/confirm the entity(ies) responsible for the oversight/supervision or licensing with regard to ATS provided by these foreign service providers.

STATE’S COMMENTS AND OBSERVATIONS*

The delegation of airspace serves the creation of border crossing ATC-sectors in order to allow a safe and efficient traffic flow. It can hardly be expected that the controller of a border crossing sector applies two different sets of rules depending on which side of the border the aircraft is flying.

Our neighbouring states are all members of ICAO. BMVBW concludes that air traffic control in these states apply the same principles. According to current knowledge, ICAO documents do, against this background, not require to secure operational arrangements between the air traffic control organisations by an international agreement and to supervise the licensing of foreign ATS personnel performing ATS services in the border area and even on the other side of the border. There is an understanding with the neighbouring states to inform each other about any changes which may have an impact on the air traffic control procedures in the border area.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMVBW will implement the SES (Single European Sky) regulation <em>EC No. 550/2004 of the European Parliament and of the Council on the provision of air navigation services in the Single European Sky</em></td>
<td>BMVBW</td>
<td>in progress</td>
</tr>
<tr>
<td>— including the corresponding directives and common requirements.</td>
<td>BMVBW</td>
<td>2006 / 2007</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO PRIMARY AVIATION LEGISLATION AND CIVIL AVIATION REGULATIONS

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with the privatisation of the DFS BMVBW will establish a national supervisory authority “BAF” (<em>Bundesaufsichtsamt für Flugsicherung</em>), which will be the responsible entity for licensing and which will have to co-operate with the neighbouring states in respect to air traffic services.</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>Implement the EUROCONTROL Safety Regulatory Requirement ESARR-1 <em>Safety Oversight in ATM.</em></td>
<td>BAF</td>
<td>Second half of 2006</td>
</tr>
</tbody>
</table>
The Federal Aviation Act or LuftVG (Article 63) establishes the enforcement authority of the BMVBW and Länder in their areas of competence. However, no evidence could be provided by LBA-V or BMVBW (LS16) or DFS that the primary legislation has established a clear delegation of enforcement responsibility to inspectors. In addition, there is no evidence indicating that clear delegation of enforcement responsibility, authority to suspend or revoke aviation documents, authority to prohibit any person from exercising the privileges of any aviation licence, certificate or document for just cause has been given to inspectors. In addition, inspectors are not issued with official inspectorate credentials.

General remark: The proposed creation of an appropriate regulatory framework is based on the Anglo Saxon legal system (case law) and is considered to be dispensable.

<table>
<thead>
<tr>
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<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with the process of privatising the air navigation services BMVBW will establish a national supervisory authority “BAF” (Bundesaufsichtsamt für Flugsicherung).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>The national supervisory authority “BAF” will get the legal rights to conduct inspections of air navigation installations and documentation.</td>
<td>BAF</td>
<td>mid 2006</td>
</tr>
</tbody>
</table>
APPENDIX 3-2-1
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO CIVIL AVIATION ORGANIZATION

AUDIT FINDING ORG/01

The Regulation on Design Certification for Air Navigation Equipment (FSMusterzulV) as well as a decree of implementation regulate the type certification of CNS equipment and establish DFS as the type certification authority.

The Regulation on Certification and Licensing in Aviation (LuftVZO) requires the Länder to consult DFS with regard to the installation of communications equipment and get technical approval with regard to navigation and surveillance, prior to approving the operations of CNS at Regional Airports.

The Regulation on Licensing and Training of Air Traffic Control (ATC) Personnel (FISichPersAusV) defines DFS support role to LBA-V with regard to licensing of all air navigation staff subject to licensing in Germany.

In addition, there is a binding, yet non-regulatory Master Agreement (Framework) between Germany and DFS which defines more specifically the functions and conditions under which the activities of DFS shall be carried out. These functions include responsibilities of Germany as a regulator and an ATS service provider.

STATE’S COMMENTS AND OBSERVATIONS*

The today’s distinction of responsibilities is governed by the Framework Agreement between BMVBW and DFS and the FISichPersAusV.

A much stricter separation of responsibilities between regulation and service — as defined by the proposal of the audit team — will be realized with the forthcoming setting up of the “Federal Supervisory Office for Air Traffic Control” which will perform the functions of a “National Supervisory Authority” in Germany.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with the privatisation of the DFS, BMVBW will establish a national supervisory authority “BAF” (Bundesaufsichtsamt für Flugsicherung). There will be an organizational separation between the BMVBW and the BAF and a distinct separation between the BAF and service providers.</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
### AUDIT FINDING OPS/01

LBA has not established a formal written training programme for ground and flight operations inspectors in Department B “Commercial Operators” of LBA, specifying initial and recurrent training required.

### STATE’S COMMENTS AND OBSERVATIONS*

The LBA is going to amend the POI-handbook with a view to include the entire initial and continuing education/training programme in order to provide more transparency and to address the formal aspects of the finding.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
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</tr>
</thead>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-4-2
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIRCRAFT OPERATIONS CERTIFICATION AND SUPERVISION

<table>
<thead>
<tr>
<th>AUDIT FINDING OPS/02</th>
</tr>
</thead>
<tbody>
<tr>
<td>The air operators’ certification regulations and procedures do not ensure that German operators implement the following systems, procedures and programmes before they are issued an AOC as well as related authorizations and approvals:</td>
</tr>
<tr>
<td>a) flight safety document system as per Annex 6, Part I, 3.3 and Attachment H;</td>
</tr>
<tr>
<td>b) procedures to ensure that update of the AFM will be reflected and consistent with the aircraft operating manual; and</td>
</tr>
<tr>
<td>c) a flight data analysis programme.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE’S COMMENTS AND OBSERVATIONS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany partially agrees to the findings.</td>
</tr>
<tr>
<td>Explanations:</td>
</tr>
<tr>
<td>a) Germany believes the intent of Annex 6, Part I, Chap. 3.3, and Attachment H is being met by the national provisions in place, i.e. JAR-OPS 1 deutsch.</td>
</tr>
<tr>
<td>Annex 6, Part I, Chap. 3.3 introduces a standard requiring operators to establish a “flight safety document system”, which as a generic term does not appear in JAR terminology. A careful study of JAR-OPS 1 deutsch, however, clearly shows that all aspects and features of such a system, as described in general terms in the guidance material (Annex 6, part I, Attachment H), are met. In fact the provisions of JAR-OPS 1 deutsch, especially Subparts C and P are more specific than the ICAO provisions.</td>
</tr>
<tr>
<td>b) Germany agrees to this finding.</td>
</tr>
<tr>
<td>c) Germany agrees to this finding.</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
## CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIRCRAFT OPERATIONS CERTIFICATION AND SUPERVISION

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) no action required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) LBA section B2 is currently looking into the matter with a view to identify possible procedures in order to include them into the surveillance process.</td>
<td>LBA</td>
<td>July 2006</td>
</tr>
<tr>
<td>c) LBA is currently translating and promulgating the latest amendments to JAR OPS 1 which cover the aspect of flight data analysis.</td>
<td>LBA/BMVBW</td>
<td>January 2006</td>
</tr>
<tr>
<td>d) no action required</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-4-3

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIRCRAFT OPERATIONS CERTIFICATION AND SUPERVISION

AUDIT FINDING OPS/03

LBA Division B2 (Flight Operations) is understaffed and unable to establish or implement a yearly surveillance programme commensurate with the level of aviation activities in Germany. There are 25 technical staff, including 13 flight operations inspectors and 6 Regional Officers, to conduct both certification, approvals, exemptions and continued surveillance of the 120 AOC holders authorized for international operations, including a number of large international operators. Despite the good quality of the inspections carried out by the B2 inspectors, the overall surveillance activity remains at a very low level and does not allow for sufficient inspections to be carried. As a result, the objective to address all inspection items in a two-year period could not be achieved.

STATE’S COMMENTS AND OBSERVATIONS*

In the near future LBA will be assigned with new, additional responsibilities. In that respect and in the light of this USOAP finding LBA has been tasked to perform an organizational analysis with a view to identify the number of staff actually necessary to carry out its obligations commensurate with the level of aviation activities in Germany.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>completion of organizational analysis</td>
<td>LBA</td>
<td>October 2005</td>
</tr>
<tr>
<td>clarification of allocation/funding of additional posts</td>
<td>BMVBW/LBA</td>
<td>January 2006</td>
</tr>
<tr>
<td>recruitment of personnel</td>
<td>LBA</td>
<td>February to August 2006</td>
</tr>
<tr>
<td>training of new staff</td>
<td>LBA</td>
<td>subsequent to hiring</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-5-1
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIRWORTHINESS OF AIRCRAFT

AUDIT FINDING AIR/01

The LBA has not established a formal training programme that adequately identifies the initial, recurrent and specialized training necessary for its technical personnel to maintain and enhance their competence.

STATE’S COMMENTS AND OBSERVATIONS*

The initial training requirements for inspectors of DOAs and POAs are listed in the DOA Handbook, Chapter 9 and POA Handbook, Chapter 9 (plus Procedural Directive B2-G/B-005).

Recurrent, Specialized, Technical, Upgrading Training:
Constitutive to the existing personnel management training programme the LBA performs an annual 3-4 Day maintenance and production surveillance inspector training concerning new developments in aviation law, technics and procedures (Procedural Directive B3-VA-018).

The individual training schedule is listed in an attached form “Anhang A, Anlage 3 der Dienstvereinbarung über die Fort- und Weiterbildung im Luftfahrt — Bundesamt vom 04.12.1996”.

Every year the training schedule is reviewed and authorized for each inspector regarding the retraining specification: airmanship, technical, IT, administration, foreign languages and other topics. The LBA should develop a formal training program to identify the introductory, recurrent and specialized training necessary for its technical personnel to maintain and enhance their competence.

CORRECTIVE ACTION (S) PROPOSED*

<table>
<thead>
<tr>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AID</td>
<td>Before March 2006</td>
</tr>
</tbody>
</table>

Develop a formal policy document, which contains: minimum qualifications, knowledge and skills, and required training for all technical staff within the AID.

Develop an annual training plan to reflect the new policy and programme and commence training as required in accordance with the established training plan.

* Text reproduced as submitted by Germany
### Corrective Action Plan Proposed by Germany

**Corrective Action (s) Proposed**

<table>
<thead>
<tr>
<th>Corrective Action</th>
<th>Action Office</th>
<th>Estimated Implementation Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish individual training files for all technical staff within the <strong>Personnel Management (PM)</strong> to reflect the new policy.</td>
<td>PM</td>
<td>Before September 2006</td>
</tr>
<tr>
<td>Provide training to all technical staff of the AID to achieve the minimum level of training as specified in the new policy and in accordance with the training programme.</td>
<td>AID</td>
<td>Before December 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-5-2
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIRWORTHINESS OF AIRCRAFT

### AUDIT FINDING AIR/02

Although adequate guidelines for the control of unserviceable parts have been developed in Regulation (EC) No. 2042/2003, Annex 1, Subpart E, M.A. 504, and an LBA Technical Circular RS 18 has been issued to provide industry guidelines on the requirement and procedures for the reporting of suspected unapproved parts, this information has not been incorporated into the Maintenance Procedures Manuals for all AMOs nor in the inspection checklists used by airworthiness inspectors.

### STATE’S COMMENTS AND OBSERVATIONS*

Unfortunately, the existing aviation law does not regularize the dealing of aviation part sellers. At least the installer is in full responsibility of using the correct materials or components.

### CORRECTIVE ACTION (S) PROPOSED*

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<thead>
<tr>
<th>ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The maintenance inspector’s checklist will be supplemented.</td>
<td>AID</td>
<td>Before March 2006</td>
</tr>
<tr>
<td>In addition to circular letters 18-01/03-2, 18-03/02-0 and 18-05/03-0 the LBA is in progress together with the industry to provide better information regarding the treatment of SUPs.</td>
<td>AID</td>
<td>Before December 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-5-3

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIRWORTHINESS OF AIRCRAFT

AUDIT FINDING AIR/03

The audit inspection programme developed and implemented by the LBA complies with and, in some cases, exceeds the requirements established in the European Commission Regulations for a complete review of the compliance with the certification requirements within a 24 month period with respect to approvals to be issued to AMOs. However, guidance has not been developed to ensure that the surveillance programme developed by each inspector is standardized and provides for continuing supervision, including the conduct of random inspections.

STATE’S COMMENTS AND OBSERVATIONS*

Due to the lack of human resources the inspections were carried out by one inspector in most cases. Therefore it is no space to implement a full scale random AMO inspection programme.

<table>
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<tr>
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<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMOs: The LBA will develop in accordance with regulation (EC) 2042/2003 Part 145.B.30 an audit and surveillance schedule for all Part 145 AMOs. In addition the existing LBA procedures will be improved to give more guidance to all inspectors.</td>
<td>AID</td>
<td>Before March 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-6-1

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

<table>
<thead>
<tr>
<th>AUDIT FINDING AIG/01</th>
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</thead>
</table>

The number of BFU investigators has decreased over the years while the responsibilities and scope of the BFU have increased. As a result, established target dates for the production of investigation reports have not been met.

<table>
<thead>
<tr>
<th>STATE’S COMMENTS AND OBSERVATIONS*</th>
</tr>
</thead>
</table>

BMVBW partially agrees to the finding of the ICAO audit team.

It is correct that at the time of the ICAO audit 12 investigator (in charge) posts were filled, compared to 18 posts in the year 2000. However, this finding was a snapshot of a situation which has already become obsolete, since in the meantime two additional posts could be filled, and another two posts are allotted to the BFU and will become available within a year time, bringing the number of investigators to 16. Any further allocation of posts would necessitate an organizational review, which is a well established and documented process. Moreover, there is a formal review mechanism in place, whereby a Federal Financial Auditor assesses the situation in a governmental institution, such as the BFU, with a view to verify that the allocated resources and the processes by which tasks are being accomplished are adequately balanced with its responsibilities and scope of the organization.

It is the responsibility of the director of the BFU to monitor the way and pace at which work is being accomplished, and if he deemed an organizational review to be necessary, he would have to initiate such review process.

Recent and repetitive changes at the helm of the organization might have had an effect on the continuity in exercising this responsibility. With the new person in place we anticipate more continuity and a more timely accomplishment of tasks and production of reports.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>hiring of two investigators</td>
<td>BFU</td>
<td>completed</td>
</tr>
<tr>
<td>hiring of two more investigators</td>
<td>BFU</td>
<td>November 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-6-2

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

<table>
<thead>
<tr>
<th>AUDIT FINDING AIG/02</th>
</tr>
</thead>
<tbody>
<tr>
<td>The BFU has established a training policy for all its technical personnel. A training programme is in place but its implementation is not formally monitored.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE’S COMMENTS AND OBSERVATIONS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany agrees to this finding.</td>
</tr>
<tr>
<td>A programme for training related to occupational health and safety is being developed but not yet completed. Support will be given by medical institutions for health.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of training program</td>
<td>BFU</td>
<td>March 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-6-3

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

AUDIT FINDING AIG/03

The BFU has established general guidelines in order to assess occurrences notified to it and decide on the type of investigation to conduct. In addition, a daily meeting is set up to review outstanding issues, including the assessment of accidents and incidents notified to the BFU. However, at the level of the State, there is no formal process or criteria to determine which cases of air traffic incidents (e.g. separation infringements and runway incursions) should be investigated by the BFU.

STATE’S COMMENTS AND OBSERVATIONS*

Due to the fact that air traffic incidents are handled differently in European States, BFU and other investigation bodies of European Member States are discussing this item with a view to find and establish harmonized criteria for these kinds of incidents. A formal process will be developed based on the outcome of those discussions.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment of harmonized criteria</td>
<td>BFU</td>
<td>June 2006</td>
</tr>
<tr>
<td>Establishment of formal process</td>
<td>BFU</td>
<td>August 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
**APPENDIX 3-6-4**

**CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION**

<table>
<thead>
<tr>
<th>AUDIT FINDING AIG/04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany has not implemented a voluntary incident reporting system.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE’S COMMENTS AND OBSERVATIONS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the time of the audit, there was no voluntary incident reporting system in Germany. Therefore Germany agrees to finding 1-6-4.</td>
</tr>
<tr>
<td>Germany was, however, already in the process of transposing European Directive 2003/42/EC on occurrence reporting in Civil Aviation into national law.</td>
</tr>
<tr>
<td>The newly implemented system is non-punitive and anonymous, thereby creating an environment that facilitates the collection of information in the same way as intended by ICAO’s voluntary reporting system, namely to capture such information that otherwise may not be captured by a mandatory incident reporting system.</td>
</tr>
<tr>
<td>The relevant German legislation avoids both terms, “voluntary” and “mandatory”, alike. An anonymous system that does not stipulate any punishment protects the source and practically has the character of a, so called, voluntary system, since it creates the necessary environment for a wide acceptance throughout the aviation community. Therefore, Germany considers the intent of Recommendation 8.2 in Annex 13 as being met with the system being fully operational.</td>
</tr>
<tr>
<td>Further information and reporting forms can be found on the LBA web-site:</td>
</tr>
<tr>
<td><a href="http://www.lba.de/cln_002/nn_54090/DE/Betrieb/Flugbetrieb/Stoerungsmeldungen/Stoerungsmeldungen__node.html__nnn=true">http://www.lba.de/cln_002/nn_54090/DE/Betrieb/Flugbetrieb/Stoerungsmeldungen/Stoerungsmeldungen__node.html__nnn=true</a></td>
</tr>
</tbody>
</table>

**Note:** The establishment of a voluntary incident reporting system (Annex 13, para. 8.2) is a “Recommendation”, the implementation of which is deemed desirable, but not necessary.

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CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>implement European Directive 2003/42/EC by amending <em>LuftVO</em></td>
<td>BMVBW</td>
<td>15.06.05</td>
</tr>
<tr>
<td>Publication (<em>Bundesgesetzblatt</em>)</td>
<td>Min of Justice (BMJ)</td>
<td>24.06.05</td>
</tr>
<tr>
<td>provide resources</td>
<td>LBA</td>
<td>before 01.07.05</td>
</tr>
<tr>
<td>prepare admin. procedures</td>
<td>LBA</td>
<td>before 01.07.05</td>
</tr>
<tr>
<td>inform aviation community via NFL (Notice to airmen)</td>
<td>LBA</td>
<td>NFL-189/05 05.07.05</td>
</tr>
<tr>
<td>symposium/workshops with operators</td>
<td>LBA</td>
<td>ongoing</td>
</tr>
<tr>
<td>evaluation of data/experience</td>
<td>LBA/BMVBW</td>
<td>ongoing</td>
</tr>
<tr>
<td>amend regulations</td>
<td>BMVBW/EU-KOM</td>
<td>if necessary</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
**APPENDIX 3-7-1**

**CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIR NAVIGATION SERVICES**

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**AUDIT FINDING ANS/01**

The BMVBW (LS16) and DFS have not developed specific regulations which would implement the provisions of ICAO Annex 11, other than DFS manuals (e.g. *Manual of Operations, Air Traffic Control Services* [Betriebsanweisung Flugverkehrskontrolle or BA-FVK], Operational Letters of Agreement (LOAs), and internal procedures. In airspace where Germany has delegated ATS provisions to foreign service providers, Germany could not provide evidence of treaties or other mechanism that ensure compliance with Annex 11 in all cases.

Neither the BMVBW nor DFS could provide evidence (beyond the LOAs) of contract(s) or agreement(s) with service providers from outside Germany providing ATS within airspace above the territories of Germany (specifically, ATS providers from Belgium, the Netherlands and Switzerland), which establish all rights and obligations under which services ought to be provided in the German airspace. Specifically, no evidence could be provided that the *Manual of Operations, Air Traffic Control Services*, issued by DFS, is binding on all foreign service providers and available to them. In addition, no evidence could be provided that service providers from the Netherlands or Belgium are required by Germany to comply with requirement 2.26 of Annex 11. No mechanism exists to enable and enforce implementation of the Annex at Regional Airports, e.g. implementation of safety management systems (Annex 11, Amendment 40).

---

**STATE’S COMMENTS AND OBSERVATIONS**

The delegation of airspace serves the creation of border crossing ATC-sectors in order to allow a safe and efficient traffic flow. It can hardly be expected that the controller of a border crossing sector applies two different sets of rules depending on which side of the border the aircraft is flying.

Germany’s neighbouring states are also members of ICAO, the application of the ICAO standards must, therefore be implied. An obligation to conclude international agreements beyond the LOA’s is not known to us.

Regional airports are currently subject to the technical and operational supervision of the DFS. Thus, it is ensured that the aerodrome control services at regional airports are performed according to ICAO standards. Contractual regulations provide for the withdrawal of a commissioning if an employee of a regional airport disregards the standards.

In line with the privatisation of the DFS the supervision of regional airports will be transferred to the new national supervisory authority (“BAF”).

* Text reproduced as submitted by Germany
### CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIR NAVIGATION SERVICES

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The BMVBW establishes a national supervisory authority “BAF” (<a href="#">Bundesaufsichtsamt für Flugsicherung</a>).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>BAF will establish procedures to ensure that all providers of ATS in the territories of Germany meet the provisions of Annex 11, specifically with requirement 2.26 of this Annex.</td>
<td>BAF</td>
<td>end of 2006</td>
</tr>
<tr>
<td>BAF will establish a procedure to assure that all LOA’s and amendments to LOA’s are presented for review.</td>
<td>BAF</td>
<td>end of 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-7-2

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIR NAVIGATION SERVICES

<table>
<thead>
<tr>
<th>AUDIT FINDING ANS/02</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANS training in Germany today is predominantly at one facility (DFS Academy in Langen). However, the BMVBW has not established a system for the control and supervision of its training organizations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STATE’S COMMENTS AND OBSERVATIONS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>The standards provided in the “Ordinance on ATS personnel which is subject to licensing and the training of such personnel” with regard to the training of personnel are, in our opinion, sufficient. The Air Traffic Control Academy is controlled by a safety management system according to the Common Core Content Standard set by EUROCONTROL. The training results will be checked by the examinator of the student in the licensing process and, if it deems necessary, reactions against the training institute will be initiated.</td>
</tr>
<tr>
<td>Since no shortcomings have been detected with the DFS in this area, the existing practice applied for the training of ATS personnel is considered to be sufficient.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with the privatisation of air traffic services BMVBW will establish a national supervisory authority “BAF” (<em>Bundesaufsichtsamt für Flugsicherung</em>).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>BAF will establish procedures for the supervision (oversight) of training organizations providing training to applicable ANS personnel.</td>
<td>BAF</td>
<td>end of 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-7-3
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIR NAVIGATION SERVICES

**AUDIT FINDING ANS/03**

The BMVBW could not provide an organizational structure depicting the responsibilities and relationships of all entities which provide ANS within the German airspace and containing sufficient details to facilitate an understanding of how the different parts of the ANS system function, specifically highlighting their regulatory authority and service provision responsibilities within the civil aviation organization.

**STATE’S COMMENTS AND OBSERVATIONS**

General Air Law (*LuftVG*) defines the responsibilities for supervision and execution of the services from which the organisational structure is self-evident (including the lines of responsibility for certification, licensing, rule-making, authorization and approval obligations, surveillance obligations, investigation obligations, and service provision).

The safety management system applicable within the DFS is considered to be an essential element. The implementation of the national supervisory authority (BAF) is in line with the recommendation.

**CORRECTIVE ACTION (S) PROPOSED**

<table>
<thead>
<tr>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>BAF</td>
<td>in progress</td>
</tr>
<tr>
<td></td>
<td>2006 – 2007</td>
</tr>
</tbody>
</table>

In line with the privatisation of air navigation services BMVBW will establish a national supervisory authority “BAF” (*Bundesaufsichtsamt für Flugsicherung*).

By implementing the SES (Single European Sky) regulation *EC No. 550/2004 of the European Parliament and of the Council on the provision of air navigation services in the Single European Sky* — including the corresponding directives and common requirements

and establishment of the BAF the organizational structure and the lines of responsibility for certification, licensing, rule-making, authorization and approval obligations, surveillance obligations, investigation obligations, and service provision (ATS, ASM, ATF, AIS, CNS, MET, SAR, regional service provider, etc.) are defined.

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APPENDIX 3-7-4

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIR NAVIGATION SERVICES

AUDIT FINDING ANS/04

The BMVBW has not developed a system to ensure that objective, systematic, appropriate and impartial safety management programmes (policy, procedure, guidance and/or acceptable level of safety) are established in relation to the provision of ATS.

STATE'S COMMENTS AND OBSERVATIONS

Germany is member of EUROCONTROL. EUROCONTROL has established the SRC (Safety Regulatory Commission) and SRU (Safety Regulatory Unit) to prepare the necessary safety management processes, i.e. ESARR-1 to 5. These ESARR’s are endorsed by the governing bodies of EUROCONTROL, and by this the approval is binding for its member states. The DFS is — by the framework agreement with the BMVBW — obliged to apply these decisions.

BMVBW sees the need to enhance its effort in relation to a.m. finding.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with the privatisation of the DFS BMVBW will establish a national supervisory authority “BAF” (Bundesaufsichtsamt für Flugsicherung), taking into account the need for adequate resources.</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>By implementing the SES (Single European Sky) regulation EC No. 550/2004 of the European Parliament and of the Council on the provision of air navigation services in the Single European Sky — including the corresponding directives and common requirements</td>
<td>BAF</td>
<td>in progress</td>
</tr>
<tr>
<td>Implement the EUROCONTROL Safety Regulatory Requirement ESARR-1 Safety Oversight in ATM.</td>
<td>BAF</td>
<td>2006 – 2007</td>
</tr>
<tr>
<td></td>
<td>BAF</td>
<td>second half of 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-7-5

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIR NAVIGATION SERVICES

AUDIT FINDING ANS/05

The BMVBW has not established requirements for service providers to adopt policies and procedures based on human factors principles.

STATE’S COMMENTS AND OBSERVATIONS*

By means of the framework agreement with the DFS, the Federal Ministry of Transport, Building and Housing has ensured that in the air traffic control services have to be performed in accordance with ICAO standards.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with privatising the air navigation service providers BMVBW will establish a national supervisory authority “BAF” (Bundesaufsichtsamt für Flugsicherung).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>Implement the SES (Single European Sky) regulation EC No. 550/2004 of the European Parliament and of the Council on the provision of air navigation services in the Single European Sky — including the corresponding directives and common requirements</td>
<td>BAF</td>
<td>in progress</td>
</tr>
<tr>
<td>Ensure that policies and procedures based on human factor principles are known and applied by all air navigation service providers.</td>
<td>BAF</td>
<td>2006 – 2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2007</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-7-6

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIR NAVIGATION SERVICES

**AUDIT FINDING ANS/06**

Although procedures have been developed by DFS for the frequent and recurring verification of the competency of air traffic controllers, the BMVBW has not established requirements or procedures to ensure the frequent and recurring verification of competency of air traffic controllers by all service providers.

**STATE’S COMMENTS AND OBSERVATIONS***

Though, for the time being, there is no formal regulation of BMVBW for a frequent and recurring verification of competency of air traffic controllers this is being practised by the DFS.

Nevertheless BMVBW has taken up the recommendation.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with the privatisation of DFS BMVBW will establish a national supervisory authority “BAF” (<em>Bundesaufsichtsamt für Flugsicherung</em>).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>Implement the SES (Single European Sky) regulation <em>EC No. 550/2004 of the European Parliament and of the Council on the provision of air navigation services in the Single European Sky</em> — including the corresponding directives and common requirements.</td>
<td>BAF</td>
<td>in progress</td>
</tr>
<tr>
<td>Implement the EUROCONTROL Safety Regulatory Requirement ESARR-5 <em>ATM Services’ Personnel</em>.</td>
<td>BAF</td>
<td>2007 – 2008</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
**APPENDIX 3-7-7**

**CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AIR NAVIGATION SERVICES**

### AUDIT FINDING ANS/07

The BMVBW has not established a mechanism to ensure that the providers responsible for ATS and AIS have developed policy and procedures for determining staffing requirements.

### STATE’S COMMENTS AND OBSERVATIONS*

Staffing regulations for all sectors of air traffic control rely on scientific studies which were taken as a basis for collectively agreed arrangements. Potentially necessary updating of these regulations is being observed.

### CORRECTIVE ACTION (S) PROPOSED*

<table>
<thead>
<tr>
<th>Corrective Action</th>
<th>Action Office</th>
<th>Estimated Implementation Date(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In line with privatising the air navigation service providers BMVBW will establish a national supervisory authority “BAF” (<em>Bundesaufsichtsamt für Flugsicherung</em>).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>Implement the SES (Single European Sky) regulation <em>EC No. 550/2004 of the European Parliament and of the Council on the provision of air navigation services in the Single European Sky</em> — including the corresponding directives and common requirements.</td>
<td>BAF</td>
<td>in progress</td>
</tr>
<tr>
<td>Implement the EUROCONTROL Safety Regulatory Requirement ESARR-5 <em>ATM Services’ Personnel.</em></td>
<td>BAF</td>
<td>2006 – 2007</td>
</tr>
<tr>
<td></td>
<td>BAF</td>
<td>2007 – 2008</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-7-8
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIR NAVIGATION SERVICES

AUDIT FINDING ANS/08

Where DFS deviates from the separation minima contained in the PANS-ATM or uses a minima not contained in the PANS-ATM, the BMVBW must review and approve the procedure concerned (Master Agreement). A case in point includes the reduced diagonal (2.0 NM) separation minima at Frankfurt Airport where a safety assessment by a private entity had been conducted and was subsequently reviewed and approved by LS16. However, no evidence has been provided to indicate that mechanisms had been put in place to ensure, or report upon, effective implementation of the reduced diagonal separation.

STATE’S COMMENTS AND OBSERVATIONS*

Since the procedure applied in connection with the introduction of the 2 NM diagonal separation is, from the point of view of the USOAP team, considered to be sufficient, ICAO should develop a catalogue of criteria containing standards for the review of new air traffic control procedures.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Review the existing process Risk assessment and mitigation in ATM and include a reporting system to monitor daily operation during implementation phase of new procedures and systems.</td>
<td>BMVBW</td>
<td>in progress</td>
</tr>
<tr>
<td>The BMVBW will establish a national supervisory authority “BAF” (Bundesaufsichtsamt für Flugsicherung).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>BAF will be responsible for a.m. process and approve the acceptance of procedures/systems after completion of implementation phase.</td>
<td>BAF</td>
<td>2007</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
The BMVBW has listed in its AIP that it differs from the procedure involving clearances to fly maintaining own separation while in visual meteorological conditions (ATM — Air Traffic Management, PANS-ATM, Doc 4444, 5.9 refers). However, information provided by Germany indicates that, in fact, ICAO provisions are applied without any deviation. Furthermore, significant differences listed in the AIP and the differences notified to ICAO do not take into account procedures used by all service providers.

**STATE’S COMMENTS AND OBSERVATIONS**

The mentioned difference to PANS-ATM (ICAO Doc 4444) has been cleared. Possible other differences will be cleared immediately when identified.

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>In line with the privatisation of the air navigation service providers BMVBW will establish a national supervisory authority “BAF” (<a href="https://www.baf.de">Bundesaufsichtsamt für Flugsicherung</a>).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
<tr>
<td>Establish a focal point for collecting national differences to ICAO standards incl. documentation of these differences.</td>
<td>BAF</td>
<td>end of 2006</td>
</tr>
<tr>
<td>Review the procedures applied by all service providers and ensure that they are consistent with difference listed in the AIP and noted to ICAO.</td>
<td>BAF</td>
<td>end of 2006</td>
</tr>
</tbody>
</table>
**AUDIT FINDING ANS/10**

DFS has established a runway safety programme called the Runway Incursion Monitoring Programme. This programme includes a reporting methodology for all aerodromes. However, the BMVBW has not developed an overall runway safety programme at all aerodromes in Germany, including those where the aerodrome control service is not provided by DFS.

**STATE’S COMMENTS AND OBSERVATIONS***

The RWY safety programme which specifically addresses the subject of runway incursion prevention has been established by DFS at all aerodromes where the ATC service is provided by DFS — including a reporting methodology called the runway incursion monitoring programme.

The BMVBW agrees to expand the a.m. safety programme to be available besides the international airports at all aerodromes with IFR traffic.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>The BMVBW will advise air traffic service providers at all aerodromes with IFR traffic where ATC is not provided by DFS to establish a runway safety programme (including a runway safety team).</td>
<td>BMVBW</td>
<td>October 2005</td>
</tr>
<tr>
<td>BMVBW will monitor the implementation and supervise actions taken at regular intervals. (This task will be transferred to the national supervisory authority “BAF” after the latter has come into operation.)</td>
<td>BMVBW</td>
<td>from 2006 onwards</td>
</tr>
<tr>
<td>In line with the privatisation of DFS BMVBW will establish a national supervisory authority “BAF” (<em>Bundesaufsichtsamt für Flugsicherung</em>).</td>
<td>BMVBW</td>
<td>BAF will have initial operational capability in July 2006 and will be fully operational by the end of 2006.</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-7-11

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIR NAVIGATION SERVICES

AUDIT FINDING ANS/11

Annex 11 requires that the ATS authority develop and promulgate contingency plans for implementation in the event of disruption or potential disruption of ATS and related supporting services in the airspace for which they are responsible. While a comprehensive contingency plan has been drawn up (in the form of a “Draft Four States/EUROCONTROL Contingency Plan”), the plan concentrates on degradation of equipment or technical malfunction at an area control centre (ACC). Furthermore, a safety assessment indicated that the plan could have been made more effective if a wider range of scenarios had been taken into account. In addition, no evidence has been provided to indicate that contingency plans have been developed and implemented by all ACCs and towers responsible for service provision in Germany, and no evidence has been provided to indicate that the BMVBW has reviewed the contingency plan in terms of oversight or approval.

STATE’S COMMENTS AND OBSERVATIONS*

The introduction of comprehensive contingency plans involves a substantial cost element. Currently, talks are being held with the airspace users concerning the conditions which have to be complied with in a contingency case. Initial assessments with regard to a cost-benefit ratio are expected.

For each of the 17 international airports for which ATC is provided by DFS, contingency plans have been developed and are in place.

As all German aerodromes are run as private entities the development of contingency plans is done between the airport operator and the ANS-provider.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Continue with the development of contingency plans in accordance with Annex 11 to be applied in all ATS units in German airspace, taking in to account cost-benefit considerations.</td>
<td>BMVBW</td>
<td>in progress</td>
</tr>
</tbody>
</table>

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APPENDIX 3-7-12

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AIR NAVIGATION SERVICES

AUDIT FINDING ANS/12

The Regulation on Licensing and Training of Air Traffic Control (ATC) Personnel (FISichPersAusV) as well as an Organizational Decree (1993) establish LBA-V as the personnel licensing authority in ATS, AIS and CNS. However, ATC personnel providing ATS in one sector of the German airspace have not been issued licences in accordance to the regulations, although they are provided with certificate of competence by the service provider.

STATE’S COMMENTS AND OBSERVATIONS*

The control personnel in the UAC Maastricht is being issued licenses from the Director-General of EUROCONTROL on behalf of the four states involved and in compliance with the requirements of ICAO Annex 1.

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>The system will be changed in line with the development of a common European ATCO licence*) which is valid in all EU member states. The legislative process for such a directive is in progress to be finalized in 2006. * ) Directive of the European Parliament and of the Council on a Community Air Traffic Controller Licence in connection with the SES (Single European Sky) regulation EC No. 550/2004 of the European Parliament and of the Council on the provision of air navigation services in the Single European Sky and the EUROCONTROL Safety Regulatory Requirement ESARR-5 ATM Services’ Personnel.</td>
<td>BMVBW (EU commission)</td>
<td>mid 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
The deficits detected by the USOAP team with regard to the staffing of positions in the area of “safety oversight of ANS providers” are acknowledged. With the setting up of the “BAF” it is attempted to remedy this shortcoming as quickly and extensively as possible.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BMVBS is in the process of establishing a national supervisory authority “BAF” (Bundesaufsichtsamt für Flugsicherung). “BAF” will be responsible for conduction of (safety) oversight functions of all air navigation service providers.</td>
<td>BMVBS</td>
<td>1.1.2006.</td>
</tr>
<tr>
<td>2. An implementation team has been established.</td>
<td>BMVBS</td>
<td>target date: 31.12.2006</td>
</tr>
<tr>
<td>3. Develop terms of reference, policies and guidance material to carry out supervisory functions.</td>
<td>BMVBS with “BAF” implementation team</td>
<td>31.12.2007</td>
</tr>
<tr>
<td>4. “BAF” to be fully operational.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
The technical process of oversight of training and licensing of air traffic controllers is functionally handled by the DFS. LBA-V, the federal entity involved in this process, is only an administrative licensing office that issues the licence when requested by DFS, with no technical capability to assess the process for licensing of personnel.

### STATE’S COMMENTS AND OBSERVATIONS

The procedures for the oversight of “training and licensing of air traffic controllers” are correctly described.

<table>
<thead>
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<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BMVBS is in the process of establishing a national supervisory authority “BAF” (<em>Bundesaufsichtsamt für Flugsicherung</em>). “BAF” will be responsible for oversight of training and licensing of air traffic controllers. The involvement of DFS and LBA-V in this process will be terminated.</td>
<td>BMVBS</td>
<td>1.1.2006.</td>
</tr>
<tr>
<td>2. An implementation team has been established.</td>
<td>BMVBS with “implementation team”</td>
<td>target date: 31.12.2006</td>
</tr>
<tr>
<td>3. Develop terms of reference, policies and guidance material to carry out supervisory functions.</td>
<td>BMVBS with BAF-“implementation team”</td>
<td>31.12.2007</td>
</tr>
<tr>
<td>4. “BAF” to be fully operational.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-8-1

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AERODROMES

AUDIT FINDING AGA/01

BMVBW Section LS11 (Aerodromes and Airports, Local Air Police) does not have sufficient technical staff to carry out its supervisory functions. LS11 currently has five full-time professional staff, only one of whom is considered technical. Given the extent of its core tasks and supervisory functions, the Section has engaged the services of three staff members in key positions on loan from the industry to assist in accomplishing its functions.

STATE’S COMMENTS AND OBSERVATIONS*

Germany agrees to the finding.

<table>
<thead>
<tr>
<th>CORRECTIVE ACTION (S) PROPOSED*</th>
<th>ACTION OFFICE</th>
<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Human Resources Department of BMVBW has been asked to remedy the staff situation of LS11. Respective administrative steps are being taken.</td>
<td>BMVBW</td>
<td>As soon as possible, taking account of the formation of the new German Government and possible reorganisation within the Ministry due to this.</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-8-2
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AERODROMES

AUDIT FINDING AGA/02

Policies and directives on training of technical staff have been developed for the BMVBW and the Länder, including District Governments. However, training plans have not been developed to ensure that all technical staff of Section LS11 receives initial, recurrent, and specialized training.

STATE’S COMMENTS AND OBSERVATIONS*

The possibility of LS11 technical staff’s participation in the already established training of the Länder will be examined. In addition, Germany will assess the need for the establishment of a standardized formal training plan for all technical staff within LS11 and the Länder, including District Governments.

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<th>CORRECTIVE ACTION (S) PROPOSED*</th>
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<th>ESTIMATED IMPLEMENTATION DATE(S)</th>
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<tbody>
<tr>
<td>The training requirements and guidelines already established for the aviation supervision staff of the Länder will be adopted and adjusted to be valid for the LS11 technical staff as well.</td>
<td>BMVBW</td>
<td>December 2005</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
APPENDIX 3-8-3

CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AERODROMES

AUDIT FINDING AGA/03

| Article 47 of the Regulation on Certification and Licensing in Aviation (LuftVZO) provides aerodrome inspectors of the Länder with the legal authority to conduct audits and inspection of its certificate holders. However, the Länder have not developed credentials for its aerodrome inspectors, which also identify their regulatory powers. |

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<tr>
<th>STATE’S COMMENTS AND OBSERVATIONS*</th>
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<tr>
<td>Germany has never experienced any problems regarding this point. Usually, the delegates of the Länder authorities are well known among the airport operators. They always get unlimited access to the airport facilities by presenting both their authority-officer card (Dienstausweis) and their airport ID card.</td>
</tr>
<tr>
<td>However, the recommended credentials for aerodrome inspectors will be given to each individual inspector by the appropriate authority, specific to the aerodrome concerned and in a written and formalized way.</td>
</tr>
<tr>
<td>Based on the experience from a pilot project regarding the modification of the Dienstausweis, the implementation of a nation-wide standardized Dienstausweis will be considered.</td>
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<tr>
<td>A standardized template for the development of the credentials will be sent to the Länder.</td>
<td>BMVBW</td>
<td>November 2005</td>
</tr>
<tr>
<td>To notify the airport operators about the new credentials, a formal information will be addressed.</td>
<td>Länder</td>
<td>December 2005</td>
</tr>
<tr>
<td>The results of the pilot project will be assessed.</td>
<td>BMVBW</td>
<td>February 2006</td>
</tr>
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* Text reproduced as submitted by Germany
APPENDIX 3-8-4
CORRECTIVE ACTION PLAN PROPOSED BY GERMANY
RELATED TO AERODROMES

AUDIT FINDING AGA/04

Responsibility for aerodrome certification is delegated to the Ländere and District Governments. This is effected through a relatively complex process which requires a series of wide-ranging, designated approvals gathered by the applicant from various bodies. The whole certification package forms an aerodrome licensing document rather than a formal certification process encapsulating the intent of Annex 14, Volume I provisions and the Manual on Certification of Aerodromes (Doc 9774). In particular, provisions and procedures covering the whole process of the application, evaluation, assessment, issuance, amendment and transfer of a certificate to operate an aerodrome have not been developed.

STATE'S COMMENTS AND OBSERVATIONS*

Germany has established a comprehensive licensing/certification process and implemented this process into its legal framework. This framework addresses all issues related to Annex 14 SARPs and other relevant ICAO SARPs. The whole process is delegated to the Ländere and entirely documented. Germany considers the Doc. 9774 as guiding material that does not require a one-to-one implementation. This interpretation is in line with §38 of the Chicago Convention.

However, after the Manual was published in 2001, Germany established a working group analysing the current status in Germany and the actions proposed in Doc. 9774. As a result, it was decided to adopt the requirements regarding the aerodrome manual and the SMS implementation. In issuing an aerodrome certificate according to the example in Doc. 9774 – in addition to the already established licensing/certification process – no safety benefit could be identified.

The aerodrome operators are obliged to maintain their aerodrome in a safe condition and to operate it orderly. This includes as well the employment of qualified personnel and the establishment of a reporting system. Following the recommendation stated above, Germany will include a formal process of approval of the technical staff in key functions at the aerodrome into its legal framework.

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<tr>
<td>Germany will enhance its legal framework for the licensing/certification of aerodromes (German Air Transport Licensing Regulation LuftVZO) regarding the necessary official confirmation of technical staff in key functions.</td>
<td>BMVBW</td>
<td>January 2006</td>
</tr>
</tbody>
</table>

* Text reproduced as submitted by Germany
**APPENDIX 3-8-5**

**CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AERODROMES**

**AUDIT FINDING AGA/05**

Prior to certification, an aerodrome should have in place, and subsequently maintain, an organized and orderly approach in the management of aerodrome safety, the cornerstone of which is the production of an aerodrome manual. Accordingly, ICAO has published requirements about the need for an aerodrome manual and the implementation of a safety management system (SMS) prior to certification.

Although BMVBW requires aerodromes to address a number of safety and other issues in a series of manuals which form part of the licensing document, and has produced a draft SMS guidance document as well as a model aerodromes manual, the development of legislative requirements for a comprehensive aerodrome manual and SMS as part of the certification requirements is still in process.

**STATE’S COMMENTS AND OBSERVATIONS**

Germany confirms that the legislative requirements regarding the aerodrome manual and the SMS are still in process. However, Germany believes that the guiding material published in Doc. 9774 is not sufficient and mature enough and is not covering all relevant aspects. Guiding material related to the implementation of SMS is still in preparation and not yet published by ICAO.

Therefore, the development of national guidelines seemed to be required for the uniform application in Germany. This process was completed in March 2005 and the German Manual for Safety Management Systems at Aerodromes was published. It seems reasonable that aerodrome operators require and request sufficient time for the implementation within their organisations. All international airports in Germany intend to complete the implementation process by 24 November 2005 in line with Annex 14, Vol. I, Chapter 1, 1.4.6. To accomplish that process, Germany is enhancing its legal framework.

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<tr>
<td>The requirement for providing an aerodrome manual as an element of the licensing process will be established within the German Air Transport Licensing Regulation (LufTVZO).</td>
<td>BMVBW</td>
<td>January 2006</td>
</tr>
<tr>
<td>To establish the requirement for providing an SMS, an administrative direction will be prepared to stipulate requirement details and to improve the awareness for appropriate regulatory and aerodrome operating staff.</td>
<td>BMVBW</td>
<td>end of 2006</td>
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* Text reproduced as submitted by Germany
An inspection and surveillance policy was drafted in March 2003 after having analysed the recommendations contained in Doc. 9774. This policy details the items and elements to be inspected, as well as the frequency of inspection related to each item. The inspection intervals are to be determined for each item individually because of their interrelation with local conditions (traffic density, …) or technical specifications of facilities and equipment.

The requirement to apply this policy will be stipulated in foreseen changes of the legal framework (the German Air Transport Licensing Regulation LuftVZO) and more detailed in an administrative direction.

### CORRECTIVE ACTION (S) PROPOSED

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<td>BMVBW</td>
<td>January 2006</td>
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<td>BMVBW</td>
<td>end of 2006</td>
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The requirement to apply the inspection policy will be established by a change of the German Air Transport Licensing Regulation (LuftVZO).

To specify the details of the inspection policy, an administrative direction will be prepared.

* Text reproduced as submitted by Germany
The BMVBW has established requirements for the determination and reporting of pavement strength by using the aircraft classification number-pavement classification number (ACN-PCN) method. However, neither a regulation nor complementary industry guidelines have been established to regulate the use of a pavement by an aircraft with an ACN higher than the PCN reported for that pavement.

Germany does **not agree** to this finding. For all licensed/certified aerodromes in Germany, the method of calculating the strength of pavement (as specified in Annex 14, Vol. I, Chapter 2, 2.6) is applied during design/maintenance and published in accordance.

In foreseeable cases when aircraft operators intend to operate aircraft with high ACN on a paved surface with lower PCN, prior permission by the airport operator is required (PPR). Additional requirements to regulate these rare occurrences are not considered as a necessity, as safety is not compromised.

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* Text reproduced as submitted by Germany
### APPENDIX 3-8-8

**CORRECTIVE ACTION PLAN PROPOSED BY GERMANY RELATED TO AERODROMES**

### AUDIT FINDING AGA/08

The BMVBW has established national requirements for the level of protection provided at an aerodrome for rescue and fire fighting, utilizing the remission factor as specified in 9.2.3 of Annex 14, Volume I. However, 9.2.4 of Annex 14, Volume I specifies that from 1 January 2005, the remission factor should not be used. Although in practice, some aerodromes do not utilize the remission factor, the BMVBW has not established such a requirement in its national regulations.

### STATE’S COMMENTS AND OBSERVATIONS*

Germany does **not fully agree** with this finding.

The German national regulation for the level of protection provided at an aerodrome for rescue and fire fighting does not utilize the remission factor, as specified in Annex 14, 9.2.3.

A recently conducted survey confirms that the described remission factor is not used by German aerodromes.

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<tbody>
<tr>
<td>The appropriate regulation will be updated by removing all passages related to the remission factor.</td>
<td>BMVBW</td>
<td>end of 2006</td>
</tr>
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* Text reproduced as submitted by Germany